

Institute for Sustainable Futures

University of Technology Sydney

Investigating changes related to gender equality in water, sanitation and hygiene: Transformative approaches and opportunities

by Jess MacArthur

Thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

under the supervision of Professor Juliet Willetts and Dr Naomi Carrard

December 2022

Certification of original authorship

I, Jessica (Jess) MacArthur declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy through the Institute for Sustainable Futures at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

This research was supported by the Australian Government's Water for Women Fund under Grant WRA-034. This research is supported by the Australian Government Research Training Program.

Signature:

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I owe a great deal of thanks to the research collaborators at iDE in Cambodia. Tyler Kozole for the wonderful WhatsApp calls and brainstorming sessions. Veasna Toeur for your detailed and heartfelt feedback. Vandy Moung for agreeing to my crazy idea to try personas in a whole new way. Samrach Koh for helping me facilitate photovoice remotely. And Rana Abdel Sattar for jumping into this project midway through and helping me create sense from all our insights.

My warmest thanks to the research collaborators in iDE Global: Chris Nicoletti, Jenn Roglà and Lauren Riley – for stretching my thinking and helping me to examine my assumptions.

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Many thanks to my colleagues and friends at the Institute for Sustainable Futures for walking alongside me in this journey. A great thanks to Diana Gonzalez Botero, Avni Kumar, Simone Soeters, and Caitlin Leahy for being an unfailing source of reassurance and advice. And my collaborators in helping me untangle gender-transformative change: Federico Davila, Melita Grant, Tamara Megaw, and Keren Winterford. My sincere thanks to Chris Riedy, my responsible academic officer, for his continued encouragement and support.

A big thanks to my doctoral colleagues. Firstly, to Simon Ross for helping me to refine and re-refine my ideas over many calls. And to the other members of my GAS groups for their advice and optimism: Fiona Lord, Karina Kallio, Tani Khara, Deepu Krishnan, Jason Graham-Nye, Louise Boronyak, Donna Lopata, Zaheer Allam, Deyvid Barreto Rosa and Nina Frankowski.

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Format of thesis

This thesis has been prepared as a compilation of seven academic manuscripts and one visual report woven together through narrative and visuals to explore methodological approaches to assessing gender equality. I provide a visual overview of the thesis structure on the following page.

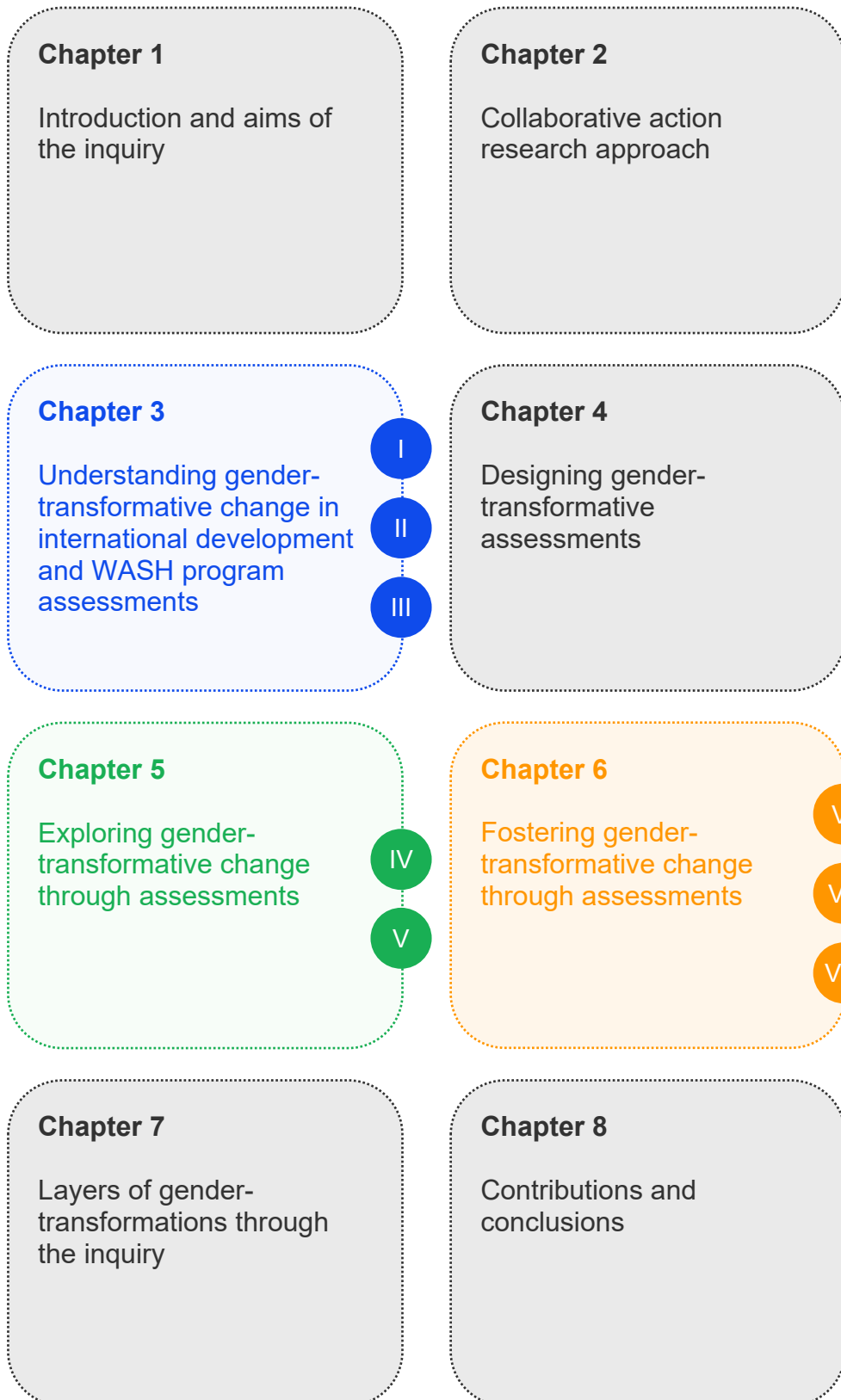
The thesis is structured into eight chapters which broadly align with the phases of a collaborative action research process focused on transforming qualitative assessment practices in development programs. The inquiry has sought to understand how assessment approaches can be used to explore and foster gender-transformations in the water, sanitation and hygiene (WASH) sector. In particular, I have selected the creative approach of visual storytelling as a form of qualitative assessment which holds resonance in investigations of gender-transformative change.

Each of the outputs (seven manuscripts and one visual report) is introduced within the narrative and then included in full within the body of the thesis. As the outputs were prepared over a 3-year period, my own language and understanding evolved in the drafting and synthesis of the insights. Hence, there are times where I use different phrasing to represent similar ideas. The inquiry's results chapters (Chapters 3, 5 and 6) include syntheses which draw out insights from the chapter's outputs.

Each chapter is introduced by a visual reflection from my personal experiences. This process of visual sensemaking reinforced the creative lens through which I have conducted this inquiry. I also use visuals throughout the thesis not as redundancies to the text, but to develop my own analytical insights.

The thesis is written in Australian English; however, it should be noted that I have followed the relevant protocols for each journal in the preparation of the manuscripts; which has led to several articles in British English and several in American English.

Additionally, to simplify the referencing, the references at the end of the thesis are those included in the main body of the thesis, and not in each of the separate outputs, which include their own reference lists. Figure numbers, table numbers, footnotes and endnotes have adopted the same approach.



A summary overview of this thesis in eight chapters and eight outputs.

Relevant publications and outputs

Journal articles

This thesis includes seven manuscripts prepared for publication in academic journals.¹ Five manuscripts have been published and two are under review. Notably, the papers have been published in journals from the relevant fields of study including international development, evaluation and WASH.

- **Paper I** (published) - MacArthur, J., Carrard, N., & Willetts, J. (2021). Exploring gendered change: Concepts and trends in gender equality assessments. *Third World Quarterly*, 42(9), 2189–2208. <https://doi.org/10.1080/01436597.2021.1911636>
- **Paper II** (published) - MacArthur, J., Carrard, N., & Willetts, J. (2020). WASH and gender: A critical review of the literature and implications for gender-transformative WASH research. *Journal of Water, Sanitation and Hygiene for Development*, 10(4), 818–827. <https://doi.org/10.2166/washdev.2020.232>
- **Paper III** (published) MacArthur, J., Carrard, N., Davila, F., Grant, M., Megaw, T., Willetts, J., & Winterford, K. (2022). Gender-transformative approaches in international development: A brief history and five unifying principles. *Women's Studies International Forum*, 95(2022), 102635.
- **Paper IV** (published) - MacArthur, J., Carrard, N., Toeur, V., Kozole, T., & Willetts, J. (2022). Eliciting stories of gender-transformative change: Investigating the effectiveness of question prompt formulations in qualitative gender assessments. *Evaluation*. 28(3), 308–329. <https://doi.org/10.1177/13563890221105537>
- **Paper V** (submitted for publication to *Evaluation and Program Planning*) - MacArthur, J., Mounq V., Carrard, N., & Willetts, J. (2021). Using personas for program evaluation and planning: Insights from a gender-focused evaluation in Cambodia. [Manuscript submitted for publication]

¹ Note that output VII is introduced on the next page. For clarity, I label the outputs in order from I to VIII, but use the terms 'Paper' and 'Report' to describe the output type.

- **Paper VI** (published) - MacArthur, J., Abdel Sattar, R., Carrard, N., Kozole, T., Nicoletti, C., Riley, L., Roglà, J., Toeur, V., & Willetts, J. (2022). Six principles to strengthen qualitative assessments in development interventions. *Development in Practice*. <https://doi.org/10.1080/09614524.2022.2065245>
- **Paper VIII** (published) - MacArthur, J., Koh, S., Carrard, N., & Willetts, J. (2022). Fostering the transformative potential of participatory photography: Insights from water and sanitation assessments. *PLOS Water*. 1(8), e0000036. <https://doi.org/10.1371/journal.pwat.0000036>

Visual reports

To reinforce the value of visual forms of communication in the analysis of complex forms of data, the final output is included as a visual report and included as a novel sub-chapter.

- **Report VII** (published through ISF) - MacArthur, J., Carrard, N., & Willetts, J. (2021). Effectiveness and inclusivity of audio data collection: Insights from a Cambodia-based assessment. Visual Report. Institute for Sustainable Futures, University of Technology Sydney. <http://hdl.handle.net/10453/159031>

Supplementary visual reports

As a methodological doctorate, the results of the pilot assessments in Cambodia using photovoice and micronarratives in collaboration with iDE are not included as findings in this thesis. However, they are included as supplementary materials for reference and clarity.

- **SM.1** (published through ISF) - MacArthur, J., & Moung, V. (2021). Exploring gender transformations for staff members of iDE Cambodia's SMSU3 WASH Program. Visual Persona Report. Institute for Sustainable Futures, University of Technology Sydney. <http://hdl.handle.net/10453/151932>
- **SM.2** (published through ISF) - MacArthur, J., & Koh, S. (2021). Exploring gendered experiences within iDE Cambodia's SMSU3 WASH Program: Photo-stories. Institute for Sustainable Futures, University of Technology Sydney. <http://hdl.handle.net/10453/159765>

Additional journal articles

The material presented in this thesis has also been strengthened and influenced by my parallel work on the development of a quantitative measure to investigate gender equality in WASH programs – the WASH-GEM. The quantitative measure development was a co-component in the same research grant as this doctoral work. Two papers have been published of this work thus far and one further manuscript is under development.

- Carrard, N., MacArthur, J., Leahy, C., Soeters, S., & Willetts, J. (2022). The water, sanitation and hygiene gender equality measure (WASH-GEM): Conceptual foundations and domains of change. *Women's Studies International Forum*, 91(2022), 102563. <https://doi.org/10.1016/j.wsif.2022.102563>
- Gonzalez, D., Abdel Sattar, R., Budhathoki, R., Carrard, N., Chase, R. P., Crawford, J., Halcrow, G., Kozole, T., MacArthur, J., Nicoletti, C., Toeur, V., Basnet, M. P., Chhetri, A., Gurung, H., Yadav, A., Vourchnea, P., & Willetts, J. (2022). A partnership approach to the design and use of a quantitative measure: Co-producing and piloting the WASH gender equality measure in Cambodia and Nepal. *Development Studies Research*, 9(1), 142–158. <https://doi.org/10.1080/21665095.2022.2073248>
- MacArthur, J., Chase, R.P., Gonzalez, D., Kozole, T., Nicoletti, C., Toeur, V., Willetts, J., & the SNV Beyond the Finish Line Team. (2022). Investigating impacts of gender-transformative interventions in water, sanitation, and hygiene: The water, sanitation, and hygiene – gender equality measure (WASH-GEM). [Unpublished manuscript].

Lastly, emerging from this inquiry will be one final paper to clarify a definition of gender-transformative WASH published in partnership with the Water for Women Fund in the upcoming special issue of *Frontiers in Water* focused on gender and social inclusion in WASH. I was asked to contribute this paper which will draw from the literature reviews presented in this thesis as well as empirical examples of gender-transformative WASH from the Water for Women Fund. A portion of this draft manuscript is included in supplementary materials (**SM.6**)

- (submitted for publication to *Frontiers in Water*) MacArthur, J., Carrard, N., Mott, J., Raetz, S., Siscawati, M., & Willetts, J. (2022). A spectrum of gender equality approaches in WASH: Towards gender-transformative practice. [Manuscript submitted for publication]

Resources developed for practitioners

As action research, this doctoral project has also focused on strengthening the practices of the international development community and in particular the WASH sector in the exploration of gender equality outcomes. As such, I have published five methods for practitioners in a web portal focused on qualitative practices (the [qualKit](#)) and also funded by the same overarching grant as this inquiry.

1. **Photovoice.** Included in the qualKit as an assessment approach, I provide step by step instructions for practitioners implementing a photovoice activity within a WASH program. The webpage includes video and PowerPoint orientation materials, sample consent forms, a sample participant information sheet, and a competition certificate.
 - <https://waterforwomen.uts.edu.au/qualkit/approaches/photovoice>
2. **Micronarratives.** Also included as an assessment approach in the qualKit, I provide detailed instructions on how to use micronarratives to explore gender equality and social inclusion outcomes in WASH programming. The webpage includes a sample micronarrative generation worksheet and participant information sheet.
 - <https://waterforwomen.uts.edu.au/qualkit/approaches/micronarratives>
3. **Personas.** Described in the qualKit as a data analysis technique, I have created a simple strategy to support practitioners in applying personas for different forms of quantitative and qualitative data. The website includes a PowerPoint persona template and detailed instructions on how to use R Studio to conduct structural topic modelling with textual data.
 - <https://waterforwomen.uts.edu.au/qualkit/tools/personas>
4. **Audio Surveys.** Supporting information on the use of audio surveys has been included in the qualKit as a technique for data collection/generation. The website includes a link to the visual report on the effectiveness and inclusivity of audio surveys (**Report VII**) and a set of recommended software tools.
 - <https://waterforwomen.uts.edu.au/qualkit/tools/audio-surveys>
5. **VOICE Coding.** Unpacking significance. Described in the qualKit as a technique for enriching responses through user interpretation, I have included a blogpost co-written with Tamara Megaw describing and justifying the technique. The blogpost also includes a printable handout with suggested questions and applications and is included in supplementary materials (**SM.5**).
 - <https://waterforwomen.uts.edu.au/qualkit/tools/significance>

Declaration of co-authorship

Paper I

MacArthur, J., Carrard, N., & Willetts, J. (2021). Exploring gendered change: Concepts and trends in gender equality assessments. *Third World Quarterly*, 42(9), 2189–2208.

<https://doi.org/10.1080/01436597.2021.1911636>

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> Led all aspects including conceptualisation, research, writing and revisions. Defined research questions, approach and methodology. Undertook systematic review and analysis. Identified implications and recommendations based on research findings. 	90%	Production Note: Signature removed prior to publication. August 2, 2022
Naomi Carrard	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Juliet Willetts	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022

Paper II

MacArthur, J., Carrard, N., & Willetts, J. (2020). WASH and Gender: A critical review of the literature and implications for gender-transformative WASH research. *Journal of Water, Sanitation and Hygiene for Development*, 10(4), 818–827.

<https://doi.org/10.2166/washdev.2020.232>

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> Led all aspects including conceptualisation, research, writing and revisions. Defined research questions, approach and methodology. Undertook systematic review and analysis. Identified implications and recommendations based on research findings. 	90%	Production Note: Signature removed prior to publication. August 2, 2022
Naomi Carrard	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Juliet Willetts	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022

Paper III

MacArthur, J., Carrard, N., Davila, F., Grant, M., Megaw, T., Willetts, J., & Winterford, K. (2022). Gender-transformative approaches in international development: A brief history and five uniting principles. *Women's Studies International Forum*, 95(2022), 102635.

Authors listed in alphabetical order apart from first author.

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> Led all aspects including conceptualisation, research, writing and revisions. Conducted systematic review of gender transformative literature. Drafted insights and led monthly discussion and analysis groups. 	53%	Production Note: Signature removed prior to publication. August 2, 2022
Naomi Carrard	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. Actively participated in monthly discussion groups. Provided strategic and writing input on the methodology. General editing of the paper. 	8%	Production Note: Signature removed prior to publication. August 2, 2022
Federico Davila	<ul style="list-style-type: none"> Actively participated in monthly discussion groups. Provided strategic and writing input on socio-technical transformations. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 8, 2022
Melita Grant	<ul style="list-style-type: none"> Drafted the gender-transformative framework Actively participated in monthly discussion groups. 	6%	Production Note: Signature removed prior to publication. August 2, 2022

	<ul style="list-style-type: none"> • Provided strategic and writing input on practical applications. • General editing of the paper. 		
Tamara Megaw	<ul style="list-style-type: none"> • Co-conducted the review of 2019-2022 Q1 literature. • Actively participated in monthly discussion groups. • Provided strategic and writing input with a lens on intersectionality, decolonising research and countering a binary definition of gender. • General editing of the paper. 	15%	<p>Production Note: Signature removed prior to publication.</p> <p>August 2, 2022</p>
Juliet Willetts	<ul style="list-style-type: none"> • Provided feedback and input during supervision meetings and critical review of drafts. • Provided strategic and writing input on the five principles and applications. • General editing of the paper. 	8%	<p>Production Note: Signature removed prior to publication.</p> <p>August 2, 2022</p>
Keren Winterford	<ul style="list-style-type: none"> • Actively participated in monthly discussion groups. • Provided strategic and writing input on practical applications. • General editing of the paper. 	5%	<p>Production Note: Signature removed prior to publication.</p> <p>August 2, 2022</p>

Paper IV

MacArthur, J., Carrard, N., Toeur, V., Kozole, T. & Willetts, J. (2022). Eliciting stories of gender-transformative change: Investigating the effectiveness of question prompt formulations in qualitative gender assessments. *Evaluation*. 28(3) 308–329.

<https://doi.org/10.1177/13563890221105537>.

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> Led all aspects including conceptualisation, research, writing and revisions. Conducted semantic and systematic literature reviews. Conducted analysis of prompt effectiveness. Drafted insights and led monthly discussion and analysis groups. 	80%	Production Note: Signature removed prior to publication. August 2, 2022
Veasna Touer	<ul style="list-style-type: none"> Participated in the co-design of question prompts. Provided strategic and pragmatic review of the prompts for the Cambodian context. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Tyler Kozole	<ul style="list-style-type: none"> Participated in the co-design of question prompts. Provided strategic and pragmatic review of the prompts for the Cambodian context. 	5%	Production Note: Signature removed prior to publication. August 3, 2022
Naomi Carrard	<ul style="list-style-type: none"> Participated in the co-design of question prompts. Provided feedback and input during supervision meetings and critical review of drafts. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022

Juliet Willetts	<ul style="list-style-type: none"> • Participated in the co-design of question prompts. • Provided feedback and input during supervision meetings and critical review of drafts. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
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Paper V

MacArthur, J., Moug V., Carrard, N., & Willetts, J. (2021). Using personas for program evaluation and planning: Insights from a gender-focused evaluation in Cambodia. [Manuscript submitted for publication]

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> • Led all aspects including conceptualisation, research, writing and revisions. • Defined research questions, approach and methodology. • Conducted review and synthesis of persona-focused literature. • Collaboratively developed personas from micronarrative data. • Identified implications and recommendations based on research findings. 	80%	Production Note: Signature removed prior to publication. August 2, 2022
Vandy Moug	<ul style="list-style-type: none"> • Actively participated in the analysis of micronarratives. • Collaboratively developed themes through qualitative thematic analysis. • Supported the design of personas. 	10%	Production Note: Signature removed prior to publication. August 2, 2022

Naomi Carrard	<ul style="list-style-type: none"> • Critically reviewed thematic analysis codebook. • Provided feedback and input during supervision meetings and critical review of drafts. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Juliet Willetts	<ul style="list-style-type: none"> • Critically reviewed thematic analysis codebook. • Provided feedback and input during supervision meetings and critical review of drafts. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022

Paper VI

MacArthur, J., Abdel Sattar, R., Carrard, N., Kozole, T., Nicoletti, C., Riley, L., Roglà, J., Toeur, V. & Willetts, J. (2022). Six principles to strengthen qualitative assessments in development interventions. *Development in Practice*.

<https://doi.org/10.1080/09614524.2022.2065245>

Authors listed in alphabetical order apart from first author.

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> • Led all aspects including conceptualisation, research, writing and revisions. • Conducted review of qualitative research principles. • Led collaborative discussion and analysis workshops. • Identified implications and recommendations based on research findings. 	60%	Production Note: Signature removed prior to publication. August 2, 2022
Rana Abdel Sattar	<ul style="list-style-type: none"> • Actively participated in collaborative discussion groups. 	5%	Production Note: Signature removed prior to publication. August 3, 2022

	<ul style="list-style-type: none"> • General editing of the paper. 		
Naomi Carrard	<ul style="list-style-type: none"> • Provided input into the identification and naming of principles. • Provided feedback and input during supervision meetings and critical review of drafts. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Tyler Kozole	<ul style="list-style-type: none"> • Actively participated in collaborative discussion groups. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 3, 2022
Chris Nicoletti	<ul style="list-style-type: none"> • Actively participated in collaborative discussion groups. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Lauren Riley	<ul style="list-style-type: none"> • Actively participated in collaborative discussion groups. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Jennifer Roglà	<ul style="list-style-type: none"> • Actively participated in collaborative discussion groups. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Veasna Toeur	<ul style="list-style-type: none"> • Actively participated in collaborative discussion groups. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Juliet Willetts	<ul style="list-style-type: none"> • Provided input into the identification and naming of principles. • Provided feedback and input during supervision meetings and critical review of drafts. • General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022

Visual Report VII

MacArthur, J., Carrard, N. & Willetts, J. (2021). *Effectiveness and inclusivity of audio data collection: Insights from a Cambodia-based assessment*. Visual Report. Institute for Sustainable Futures, University of Technology Sydney. <http://hdl.handle.net/10453/159031>

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> Led all aspects including conceptualisation, research, writing and revisions. Defined research questions, approach and methodology. Conducted mixed-methods analysis of reflection data and meta-data. Identified implications and recommendations based on research findings. 	90%	Production Note: Signature removed prior to publication. August 2, 2022
Naomi Carrard	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the visual report. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Juliet Willetts	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the visual report. 	5%	Production Note: Signature removed prior to publication. August 2, 2022

Paper VIII

MacArthur, J., Koh, S., Carrard, N., & Willetts, J. (2022). Fostering the transformative potential of participatory photography: Insights from water and sanitation assessments. *PLOS Water*.

1(8), e0000036 <https://doi.org/10.1371/journal.pwat.0000036>

Co-author	Nature of contribution	Extent of contribution (%)	Signature and Date
Jess MacArthur	<ul style="list-style-type: none"> Led all aspects including conceptualisation, research, writing and revisions. Defined research questions, approach, and methodology. Undertook curation of the photo-stories. Identified implications and recommendations based on research findings. 	85%	Production Note: Signature removed prior to publication. August 2, 2022
Samrach Koh	<ul style="list-style-type: none"> Facilitated the research process in Cambodia including the workshops and photographer support. Coordinated all photo-story generation and follow-up. 	5%	Production Note: Signature removed prior to publication. August 3, 2022
Naomi Carrard	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022
Juliet Willetts	<ul style="list-style-type: none"> Provided feedback and input during supervision meetings and critical review of drafts. General editing of the paper. 	5%	Production Note: Signature removed prior to publication. August 2, 2022

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List of acronyms

ACFID	Australian Council for International Development
CEADW	Convention on the Elimination of All forms of Discrimination Against Women
FFP	Food for Peace
GAD	Gender and Development
GESI	Gender equality and social inclusion
HREC	Human Research Ethics Committee
IDE	International Development Enterprises
IGWG	International Gender Working Group
ISF	Institute for Sustainable Development
JMP	Joint Monitoring Program of the WHO and UNICEF
MDGs	Millennium Development Goals
MSC	Most Significant Change
qualKit	Online toolkit to support explorations of GESI outcomes in WASH programs
RDI	Research for Development Impact
SDGs	Sustainable Development Goals
SMSU3	Sanitation Marketing Scale-Up Program 3
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UTS	University of Technology Sydney
WAD	Women and Development
WASH	Water, sanitation and hygiene
WASH-GEM	Water, sanitation and hygiene – gender equality measure
WHO	World Health Organization
WID	Women in Development

Abstract

The (re-)emergence of a gender-transformative model of development has challenged the narrow women's empowerment paradigm to engage in a more nuanced conversation in development research and practice. Gender-transformative programs aim to transform gender dynamics and structures within and through development interventions. In parallel, the evaluation field has been considering opportunities to apply gender-transformative approaches to assessments.

Hence, there is both opportunity and imperative to investigate how assessments can meaningfully explore and foster gender-transformative change in the development sector. This inquiry focused on a particular subsector of development – water, sanitation, and hygiene (WASH), which is in the early stages of engagement with gender-transformative approaches.

This methodological inquiry adopted a collaborative action research approach and partnered with a sanitation program in Cambodia to investigate opportunities for innovative and qualitative forms of gender-transformative assessments. Through a compilation of eight studies, the inquiry reviewed, designed, piloted and evaluated practitioner-focused gender-transformative assessment approaches. The inquiry focused on the creative use of two visual storytelling assessment practices: micronarratives and photovoice.

Firstly, the inquiry critically reviewed relevant literature from international development and the WASH sector, to investigate methodological and conceptual alignment with a gender-transformative approach. Second, the inquiry clarified the extent to which assessments can be designed to meaningfully explore gender-transformative forms of social change. Lastly, the inquiry considered how assessments can foster gender-transformative change by strengthening their transformative potential.

Together the eight studies clarify definitions of a gender-transformative approach in the WASH sector and provide insights on how to strengthen the transformative potential of assessments. The studies indicate that design considerations such as respondent-led interpretation and centring embodiment, can help programs to meaningfully explore gendered change. The studies suggest that gender-transformative potential in an assessment approach requires: (1) assessment quality, in terms of overall assessment rigour; (2) efficacy to ensure elicitation of gender-related insights; (3) inclusivity throughout all stages of the assessment process; (4) reflexivity to be cognisant of power dynamics and structures; and lastly, (5) a purposefully transformative objective in pursuit of gender-transformative change.

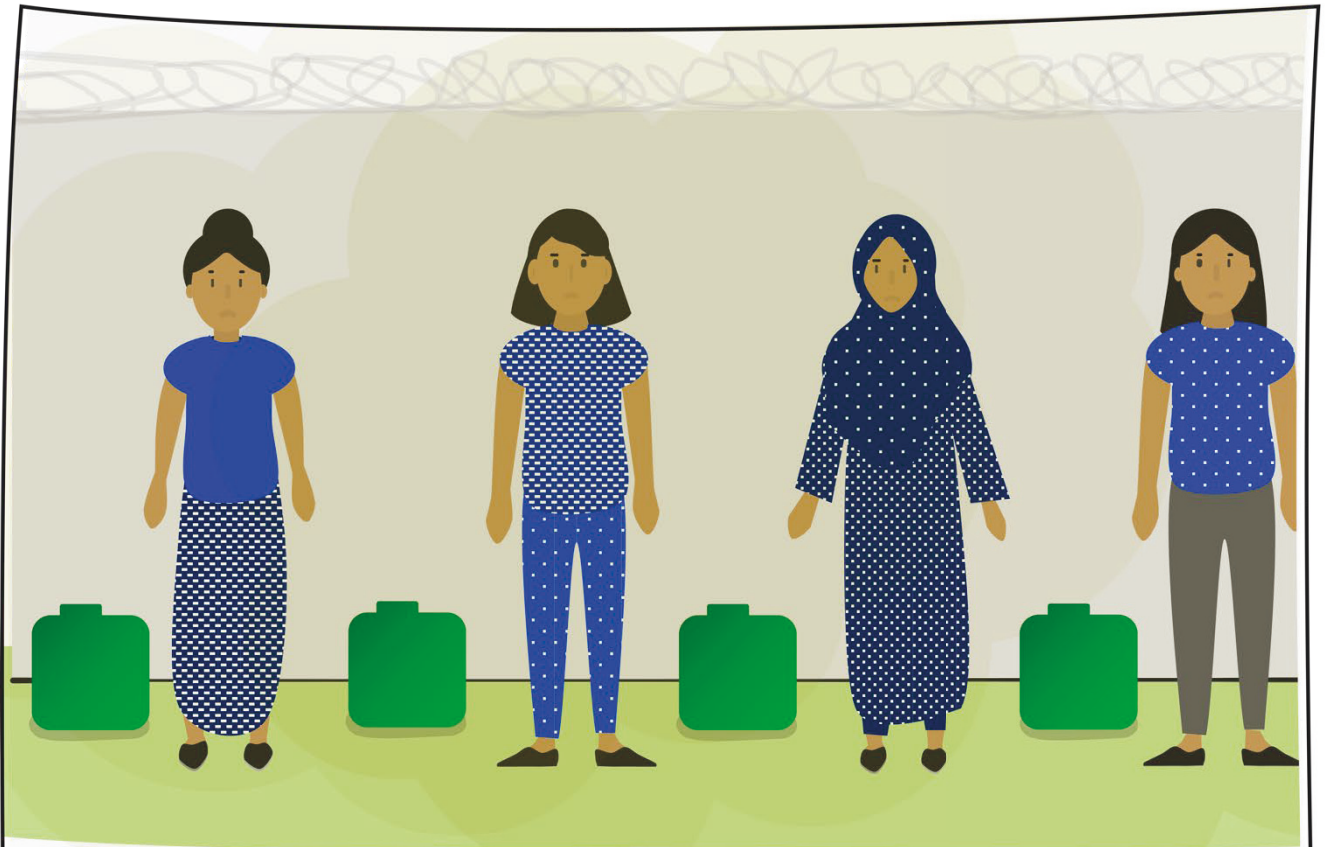
Throughout the thesis, I argue for the purposeful integration of investigation and intervention, in an expanded definition of the transformative paradigm of research and evaluation. I suggest that gender-related assessments provide a distinct opportunity to raise critical reflection and catalyse critical action amongst both participants and evaluators. Adopting the methodological advancements and insights generated through this thesis, the WASH sector has potential to better explore and support gender-transformative change.



Visual abstract. This inquiry emphasises the value of creative forms of communication in bridging the academic–practitioner divide. Used in my own sensemaking, this visual abstract highlights the methodological focus of the inquiry and the use of creative and visual forms of communication to support inclusive processes of data generation, interpretation, synthesis and utilisation.

Chapter 1

Introduction and aims of the inquiry



Just before I turned ten, my family moved to the island of Borneo. My father, a chemical engineer, was recruited to support the exploration of gas in the deep waters between the Indonesian isles of Kalimantan and Sulawesi. We arrived during a devastating drought, and the air was thick with the smoke of forest fires. The image of women queued outside the walls of our gated compound with buckets, bags, tins—anything that could hold water—still clings to my memory. I was struck by how unfair it all was. I still remember the feeling of the first rain that broke the drought; the rain that introduced me to the convergence of water and women; and the rain that fell on both sides of the wall.

1.1 Overview

This inquiry sought to strengthen gender-focused assessment practices in international development, with a particular emphasis on the water, sanitation, and hygiene (WASH) sector. Adopting a collaborative action research approach, the inquiry generated insights from each phase of an action-oriented process (review → design → practice → evaluate). The inquiry focused on the design and use of visual storytelling assessment techniques. These storytelling techniques both explore and foster gender-transformative change. The research piloted these assessment approaches in collaboration with iDE Cambodia focusing on a sanitation program. This introductory chapter begins by clarifying the context and motivation for this research. I then describe the three interconnected fields of study related to gender equality that have shaped this inquiry: international development, evaluation practice, and the WASH sector. Lastly, I introduce the research questions that have guided the action research process and present an overview of how each of the eight outputs (seven academic articles and one visual report) are compiled in this thesis.

1.2 Inquiry context and modality

This inquiry was embedded in the Australian Government's Water for Women Fund, a multi-country research and implementation program supporting inclusive WASH in Asia and the Pacific.² Situated within a Water for Women research grant (WRA-034), this doctorate was designed to support development partners in the meaningful exploration of gender-transformations through qualitative methodological innovations. The inquiry was conducted in parallel to a complementary research activity on quantitative methodological innovations and the development of the Water, Sanitation and Hygiene Gender Equality Measure (WASH-GEM) (Carrard et al., 2022; Gonzalez et al., 2022). The initial research aims were formulated before I joined the project and were articulated in the research grant which provided funding for this work.

The Sanitation Marketing Scale-Up Program 3 (SMSU3) provided the setting to experiment with innovative methodological approaches. SMSU3 was also funded by Water for Women and implemented in rural Cambodia by iDE, an international development organisation with long-term presence in the country.

While the project began with a specific focus on approaches to explore changes for beneficiaries of WASH programs, constraints due to the COVID-19 pandemic led me to reconsider my research approach. This in turn led to richer engagement within emerging literature on the importance of staff and change agents in fostering inclusive change, since these groups remained accessible to me remotely, unlike beneficiaries. Ultimately, the pandemic resulted in a focus on staff members of the SMSU3 program who were themselves

² I use the term 'inquiry' to refer to the doctoral research project conducted through collaborative action research.

participants in a gender mainstreaming intervention.³ Since 2012, iDE Cambodia's sanitation programming has worked through sanitation sales agents, to build awareness and link sanitation business owners with community members. These agents operate as both program staff and community-based change agents. The agents and their managers were the central participants of the research and SMSU3 leadership participated collaboratively in the action research process.

The multi-phase action research process encompassed two layers of engagement: (1) a meta layer to explore and tailor innovative assessment techniques in collaboration with SMSU3 program leadership, and (2) a pilot assessment layer to explore and foster gender-transformative practice for staff members of the SMSU3 program.⁴ Both layers focused on the use of visual storytelling methodologies in a collaborative action research process. The pilot included two visual storytelling approaches: micronarratives and photovoice. Visual storytelling was selected based on its documented connections in both exploring and fostering transformative change (Ali, 2014a; Cornwall and Sardenberg, 2014; Nazneen and Sultan, 2014; Nazneen et al., 2014). Both layers of the study were conducted with strict ethical protocols developed in collaboration with iDE and considering the sensitive nature of gender equality inquiries.

Rather than designing new overarching approaches, led by the collaborative process, the inquiry innovated on emergent challenges in the design of tools and techniques used in the generation, interpretation, synthesis and utilisation of qualitative datasets for two established visual storytelling approaches. Throughout the thesis, I draw on my experiences in the WASH sector and my personal interest in visual forms of communication. As practice-based research undertaken in direct collaboration with civil society, this study ultimately aims to increase the confidence and ability for organisations to use qualitative forms of assessment in their programs to strengthen gender mainstreaming strategies and encourage gender-transformative change.

³ I use the term 'intervention' to refer to a programmatic activity conducted as part of development programming to influence behavior, attitudes, and practices. For example, a gender mainstreaming intervention or sanitation marketing intervention. In this thesis I propose that assessments can also be interventions in themselves.

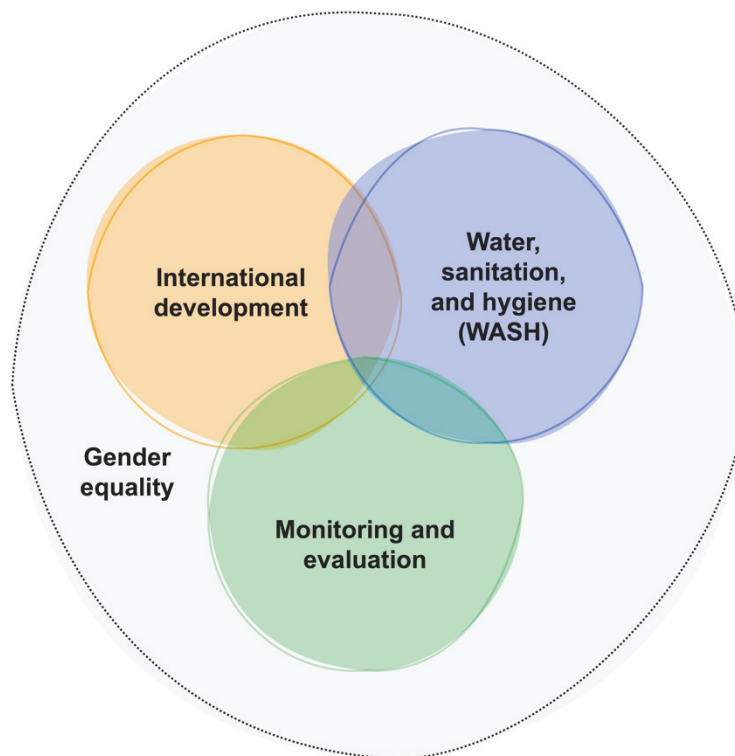
⁴ I use the term 'assessment' throughout this thesis to refer to research practices conducted within or alongside program interventions. This could include aspects of formative research, monitoring and evaluation.

⁵ I adopt the word 'technique' to refer to a component of an assessment – for example a technique used for analysis or data generation. I use the word 'tool' to refer to a particular technology, platform, or object – for example the use of a software or a mobile phone. Lastly, I use the word 'approach' to refer to an overarching methodology – for example photovoice or micronarratives. For clarity, I have avoided the word 'method' in this thesis. However, it should be mentioned that as the papers were developed throughout the inquiry, there are instances where this syntax is not aligned.

1.3 Interconnected fields of study and their theoretical foundations

This inquiry sits at the intersection of three fields of study through a cross-cutting focus on gender equality: international development; monitoring and evaluation; and water, sanitation, and hygiene (WASH) as can be seen in Figure 1. Each of these fields has epistemological, paradigmatic, and disciplinary tendencies. Over the last 70 years there have been significant academic and practice-based contributions within each of these fields and in the relevant overlapping spaces. There is also a growing corpus of literature on gender and evaluation within other development sectors such as agriculture, nutrition, health, microfinance, and education. However, at the nexus of gender, WASH, and evaluation there is significantly less existing scholarly research. Researchers have speculated that this is due to the historical focus on engineering and technology transfer in the WASH sector, rather than issues of social inclusion and equality (Willetts et al., 2010; UNICEF, 2019).

Figure 1. This inquiry's fields of study



I begin this section by clarifying my conceptualisation of gender equality as it relates to theory and practice. In the three sections that follow, I briefly detail how gender equality has shaped practices within international development, monitoring and evaluation, and WASH. These fields are more thoroughly introduced in Chapter 3 in Papers I, II and III. Therefore, here I describe how gender-transformative approaches are shaping the direction of future practice and identify areas where there is opportunity and imperative for further inquiry – responded to in this thesis.

1.3.1 Defining gender equality

Grounded in feminist development (Kabeer, 1994; Cornwall and Rivas, 2015) and theories of human flourishing (Nussbaum, 2000), I conceptualise gender equality as the state of “equal rights, responsibilities and opportunities of women and men and girls and boys [and individuals of other genders]” (Hannan, 2001, 1). As such, I recognise that gender equality can contribute to development outcomes, as well as being an outcome in and of itself as acknowledged in both the Millennium and Sustainable Development Goals (MDGs and SDGs) and promoted by UN Women.⁶

I define gender as the socially constructed dynamics and structures which govern modes of masculinity and femininity in societies and are often saturated in patriarchal norms (Butler, 1999; Pierce et al., 2004). Importantly, gender is linked to other intersectional areas of historical oppression. Collins (2015) highlights that “race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive entities, but rather as reciprocally constructing phenomena” (p. 2). As such, I have incorporated principles of intersectionality and decolonisation throughout the inquiry both in the design of the pilot approaches and in my personal sensemaking. Future work could benefit from further engagement with theories of decolonisation and intersectionality. I have aimed to adopt more inclusive language where appropriate, while remaining accurate to the scholars to whom I refer and responses from research participants.

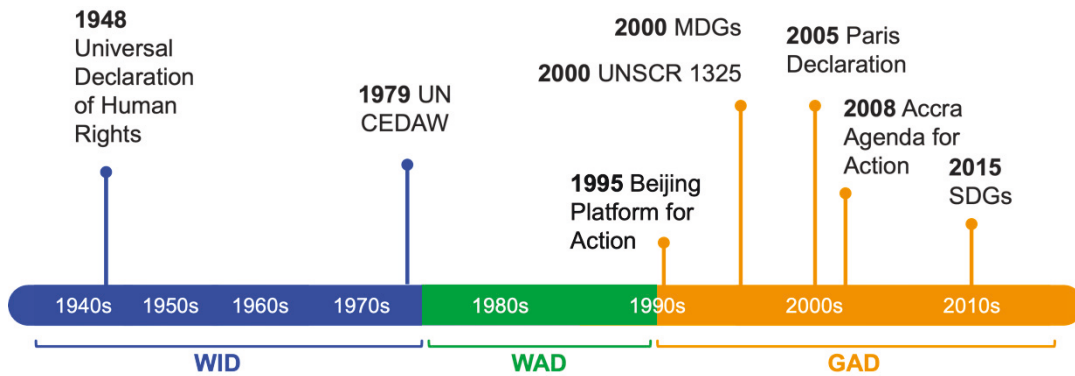
Gender equality is closely linked with women’s empowerment and gender equity, as articulated in the Beijing Platform for Action (United Nations, 1995; UNESCO, 2000), yet the three concepts are often conflated (Kabeer, 2005; Cornwall and Rivas, 2015). Therefore, I define gender equity as the “fairness of treatment...” for individuals of all genders... “according to their respective needs” (UNESCO, 2000, 5) and empowerment as “the processes by which those who have been denied the ability to make choices acquire such an ability” (Kabeer, 1999, 437).

1.3.2 Field 1: Gender equality in international development

Within the field of international development, aspects of gender equality have been and continue to be incorporated into programs, projects and policies in many different ways. These distinct modalities often align with various disciplinary backgrounds and visions of human flourishing. Highlighting this breadth, I build on Rathgeber’s (1989) historical analysis of the different operational paradigms of gender equality as visualised alongside key gender-related policy declarations and global mandates in Figure 2.

⁶ UN Women (also known as the United Nations Entity for Gender Equality and the Empowerment of Women) is the United Nations entity focused on gender equality and the empowerment of women.

Figure 2. Three operational paradigms of gender equality in international development



These three paradigms are: Women in Development (WID), Women and Development (WAD), and Gender and Development (GAD). As described by Moser, the WID approach centred on the perspective that “women are an untapped resource who can provide an economic contribution to development” (Moser, 1993, 2).⁷ WAD acknowledged that women’s involvement can be a pathway to further development goals, but also is an outcome in itself (Rathgeber, 1989). The GAD approach challenged the WID and WAD frames by expanding the dialogue on gender equality from welfare, equity, anti-poverty, and efficiency to include empowerment (Moser, 1993; Bamberger and Podems, 2002). The GAD approach also refocused efforts from being strictly about women to engaging more broadly with gender relations and prompted a gender mainstreaming focus (Molyneux, 1985; Moser, 1989).

Adapting Rathgeber’s historical analysis and in alignment with other scholarship (Kabeer, 1994; Moser, 2021), I suggest that these three operational paradigms continue to operate today in parallel, as interventions adopt WID, WAD or GAD framings driven by their disciplinary tendencies.⁸ Additionally, I suggest that WID, WAD and GAD framing has been incorporated into other gender equality spectrums using framings related to gender-specific, gender-instrumental, gender-responsive and gender-transformative formats (as I will discuss in more detail in the coming sections).

More radical modalities of gender equality highlighted a need to bridge practical gender needs to strategic gender interests (Molyneux, 1985; Moser, 1989). Practical needs are concerned with living conditions such as WASH and health care. Strategic gender interests focus on transforming the unequal power between women and men connected to themes such as legal rights, leadership, domestic violence, and participation. These categories are inherently blurry and feminist practitioners such as Naila Kabeer (1994) and Sara Longwe (1991) have argued that all practical interventions have impacts on strategic interests.

⁷ This is not Moser’s personal perspective, but rather her description of the WID approach.

⁸ I explore this concept more fully in **Paper I**.

Recent conceptualisations of gender equality have loosely (re-)adopted language of gender-transformative development (Cornwall and Rivas, 2015) and a more intersectional approach to gender (Stephens et al., 2018; Soeters et al., 2019). I argue that this is a readoption as transformative modalities were first introduced by Kate Young (1993) and Naila Kabeer (1994). However, academic scholarship defining a gender-transformative approach to development interventions is nascent.

Within the field of gender equality in international development, there is both opportunity and incentive to: (a) clarify how visions of human flourishing and disciplinary tendencies shape conceptualisations of gender equality – Paper I; and (b) formulate a definition of gender-transformative approaches in international development – Paper III.

1.3.3 Field 2: Gender equality in WASH interventions

I now briefly introduce the field of gender equality and WASH, noting that a more detailed discussion is provided in Paper II.

Relevant declarations and global goals have influenced the direction, focus and strategy of gender equality in WASH (Willetts et al., 2010). Notably, the International Decade for Women and the International Decade for Water and Sanitation overlapped from 1975 to 1981, catalysing the nexus of gender-WASH research and practice. Early studies focused on women's roles as users, managers and change agents within water collection, utilisation, and management (White et al., 1972; Elmendorf and Isely, 1981, 1983; van Wijk-Sijbesma, 1985; Curtis, 1986) laying a strong foundation for future research – including this inquiry. However, the historical focus on engineered solutions in WASH have limited the sector's ability to fully mainstream gender (Willetts et al., 2010; Fisher et al., 2017)

Improvements in WASH have important consequences for women and girls including addressing practical gender needs alongside strategic gender interests (Willetts et al., 2010, 2013; Carrard et al., 2013). These impacts can influence wellbeing, status in society, health, education, and safety (Fisher et al., 2017; Caruso et al., 2022). However, the WASH sector has historically been slow to move from a WID and WAD approach towards a GAD approach to WASH (Elmendorf, 1981; Elmendorf and Isely, 1983; Carrard et al., 2013; Fisher et al., 2017; Caruso et al., 2022). In other words, gender integration in the WASH sector has historically adopted instrumental or specific modalities rather than transformative approaches. As such there is both opportunity and incentive to define a gender-transformative modality of WASH programming for the academic and practitioner communities.

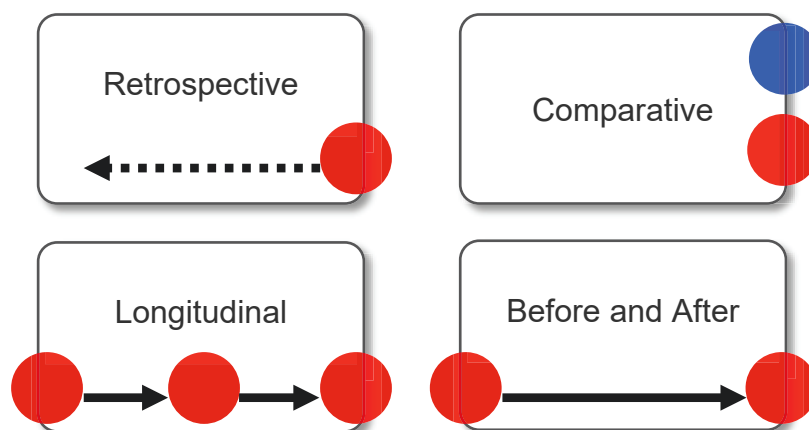
1.3.4 Field 3: Assessments of gender equality outcomes in international development

Shaped, often implicitly, by the aforementioned modes of gender engagement, the monitoring and evaluation of gendered change primarily seeks to assess the effectiveness of interventions in promoting gender equality. Here I briefly define my use of the terms 'assessment' and

'gendered change' before describing how I conceptualise a gender-transformative approach to evaluation – and therefore assessment – practices.

Assessments can adopt different modalities, frequencies and timings within an intervention. For example, monitoring is typically embedded throughout a program intervention, while evaluations are typically conducted at critical stages of an intervention (baseline, midline, endline) and include statements of judgement about a program's progress. Therefore, I adopt the word assessment to remain inclusive and relevant to all forms of research practice conducted within change-focused interventions. As illustrated in Figure 3, some assessments are retrospective (looking back over time), others compare different groups, some longitudinally follow a small group of individuals over time, and some assessments analyse the status of groups before and after an intervention.

Figure 3. Four typical assessment modalities



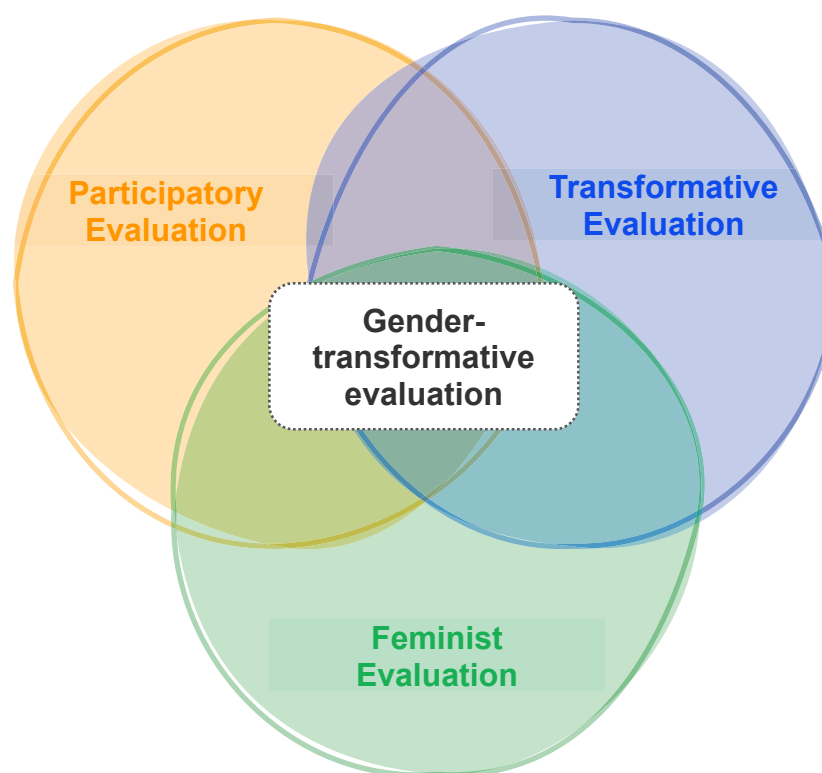
Robust assessments of gendered change are critical to mitigate risks, increase transparency, and communicate results of development interventions (Bamberger and Podems, 2002).⁹ Gendered change arising from interventions can be intended or unintended; foreseen or unforeseen; positive, negative, or neutral; affecting all or some of participants, non-participants, and the system; and immediately or after some time (Jabeen, 2018). These assessment modalities are situated within broader philosophical approaches to evaluation such as a gender-transformative approach.

Recently, practitioners have been investigating opportunities to bridge gender-transformative development approaches into evaluation practice (Murthy, 2018). However, discussions on gender-transformative assessments have for the most part remained in practitioner-focused grey literature (Morgan, 2014; Hillenbrand et al., 2015; Khanna et al., 2016; Mullinax et al., 2018). This grey literature typically focuses on the challenges of selecting methods and

⁹ I adopt the phrase 'gendered change' to represent a breadth of changes related to gender equality, equity empowerment arising both from societal change and from program interventions.

techniques to ‘measure’ gender-transformative change (Morgan, 2014; Hillenbrand et al., 2015).¹⁰ Aiming to create a more scholarly foundation for these grey-literature applications, I propose that a gender-transformative approach to evaluation melds together aspects of participatory, feminist, and transformative evaluation as illustrated in **Figure 4**, drawing on the work of Guijt and Gaventa (1998), Murthy (2018), Mertens (1999) and Podems (2010).

Figure 4. *A gender-transformative approach as participatory, feminist and transformative*



- 1 Participatory Evaluation** draws from participatory research approaches which seek to flip the balance of power in inquiries – placing more power in the hands of participants, and often women. “Participatory monitoring and evaluation is not just a matter of using participatory techniques within a conventional monitoring and evaluation setting. It is about radically rethinking who initiates and undertakes the process, and who learns or benefits from the findings” (Guijt and Gaventa, 1998). Participatory research and evaluation have been connected with WASH programming since the 1990s (Narayan, 1993; WHO, 1998).
- 2 Feminist Evaluation** aims to challenge women’s subordinate positions in society, exploring why differences exist. The approach does not have a specific framework or analysis methodology but is a philosophy of evaluation. It is responsive, reflective, inclusive, participatory, and focused on social justice through the voices of the most disadvantaged (Bamberger and Podems, 2002; Podems, 2010). The approach broadens gender-sensitive approaches to evaluation acknowledging that gender equality is systematic and structural,

¹⁰ I purposefully avoid the term ‘measure’ to signal opportunity for qualitative and quantitative forms of assessment.

and evaluation is political (Sielbeck-Bowen et al., 2002). Feminist evaluators are critical of gender-sensitive approaches adopted in the use of gender-analysis frameworks (Podems, 2010).¹¹ However, my use of gender-transformative language aligns with feminist conceptualisations and some practitioners use the wording of gender-transformative and feminist evaluation interchangeably (Khanna et al., 2016).

- 3 Transformative Evaluation** has emerged as a distinct research paradigm, distinguishing itself from positivist and constructivist paradigms. The transformative paradigms contends that research and evaluation are important tools to address injustice and inequalities (Creswell, 2014; Mertens, 2009). As an evaluation practice, transformative evaluation is focused on promoting social justice rather than the generation of knowledge (Mertens, 2007). It is built on the premise that assessments, and in particular assessments on power-laden topics such as gender equality, can and should be a tool for transforming the status quo. Transformative evaluation is less concerned about the methodological debate and focuses more on the outcomes and purposes of assessments.

These three related evaluation approaches represent philosophies of evaluation rather than particular methods or techniques. They all seek to address issues of power, injustice and inequalities, but have slightly different foci. Where, participatory evaluation foregrounds the aspects of empowerment for participants of an evaluation (Gujit and Gaventa, 1998), feminist evaluation highlights the structural inequalities which perpetuate patriarchal norms (Bamberger and Podems, 2002; Podems, 2010), and transformative evaluation concentrates how an evaluation can address injustices (Mertens, 2009).

Wieringa (1994) argues that true transformative practice requires a welding together (integration) of investigation and intervention. As such, gender-transformative assessments could be used to both explore and foster gender-transformative change within international development. Inspired by Wieringa's conceptualisation and these three modalities of evaluation there is both opportunity and incentive to define and pilot the gender-transformative models of assessment for the academic community.

1.3.5 Gender-transformative approaches

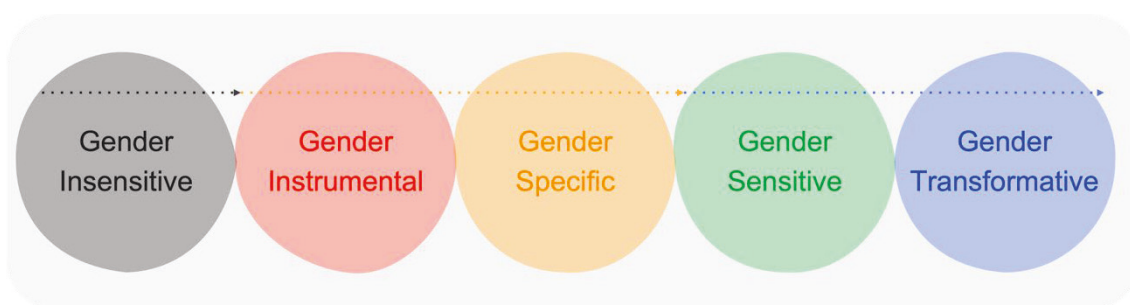
As indicated in the last three sections, gender-transformative approaches have recently been gaining importance in both scholarship and practice within international development, WASH and evaluation. Yet there remains opportunity to define and refine a gender-transformative approach in each of these fields. At its core, this inquiry is focused on gender-transformative approaches to evaluation as assessment, yet throughout the thesis, I will reengage with gender-

¹¹ Podems (2010) provides five reasons for distinguishing feminist evaluation from gender evaluation, primarily related limitations around a binary definition of gender, a focus on women, and the use of evaluation frameworks. Yet I believe her analysis is more applicable to traditional forms of gender analysis (March et al., 1999), rather than the more recent literature on gender-transformative evaluation. I suggest that a gender-transformative modality addresses her concerns related to binary definitions and a focus on women, while moving away from framework-based analysis.

transformative approaches to development (foregrounded in **Paper I**), and WASH (explored in **Paper II**).

Gender-transformative approaches are often described in contrast to other forms of practice which do not meet transformational objectives. For example, policies, interventions, and assessments can be placed onto a spectrum first conceptualised by Naila Kabeer (1994), promoted by USAID's International Gender Working Group (IGWG, 2017) and adapted to evaluation practice by Khanna et al. (2016).¹² Often the spectrum adopts three or four steps, however this inquiry adopts a five-step spectrum as visualised in **Figure 5**, purposefully delineating between gender-specific and gender-sensitive approaches – which both occur frequently in the WASH sector.

Figure 5. *A spectrum of gender engagement in development*¹³



In **Table 1**, on the next page, I summarise how each stage of this spectrum can be applied to development interventions broadly, WASH interventions more specifically, and to assessments. The application of the spectrum to the WASH sector emerged from the inquiry's sensemaking and a more detailed description can be found in **SM.6**. Its inclusion in supplementary materials rather than within the narrative of this thesis is to maintain the inquiry's focus on gender-transformative assessment approaches.

¹² This spectrum and its breadth of iterations are further explored in **Paper III**. I purposefully do not adopt Geeta Rao Gupta's (2001) version of the spectrum which problematically places women's empowerment as a higher achievement level than gender-transformation.

¹³ I have chosen to use the wording 'gender-insensitive' to be more conscious of individuals with vision impairment.

Table 1. Definitions of the five modes of gender engagement in development practice

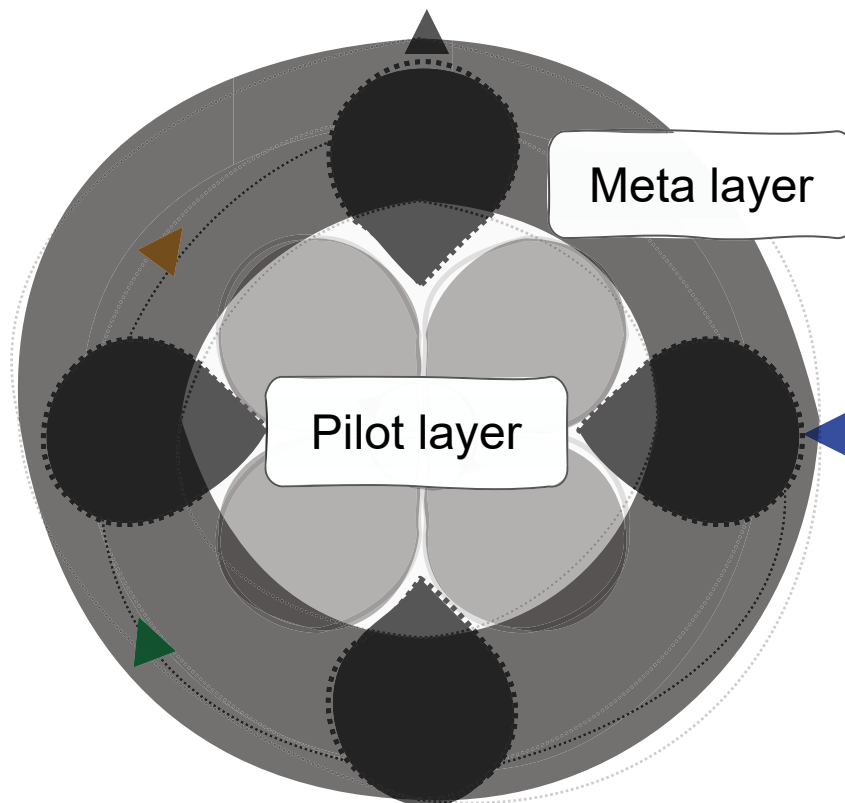
Mode	Development program interventions (drawing on Kabeer 1994)	WASH interventions (arising from this inquiry's sensemaking, details and references in SM.6)	Intervention assessments (drawing from Khanna et al. 2016)
Gender-insensitive	Sometimes referred to as gender blind or harmful, gender-insensitive programs do not consider any gender dynamics.	Gender-insensitive WASH interventions are often associated with technology transfer programs, such as the installation of wells or latrines without considerations of gender dynamics.	Gender-insensitive assessments do not assess changing gender relations but focus on program efficiency and effectiveness.
Gender-instrumental	Sometimes referred to as gender exploitative, gender-instrumental programs utilise traditional gender roles to progress programmatic objectives.	Instrumental approaches to WASH often focus on the functionality, efficiency and sustainability of WASH systems and services.	Gender-instrumental assessments rely on gender analysis to clarify how a program has utilised traditional gender roles.
Gender-specific	Gender-specific programs target a single gender. For example, only engaging with women.	Gender-specific approaches in the WASH sector often focus only on women and girls and are common in topics such as menstruation.	Gender-specific assessments focus only the experiences of members of one gender – for example only on men.
Gender-sensitive	Gender-sensitive programs consider gender dynamics in the development of interventions; however, do not aim to address any inequalities.	Gender-sensitive approaches consider the gender dynamics which perpetuate traditional WASH roles of women and girls including, water collection, cooking, cleaning.	Gender-sensitive assessments consider gender dynamics in their design, but do not assess changes in gender dynamics.
Gender-transformative	Sometimes referred to as gender-responsive, or gender-redistributive programming, gender-transformative approaches actively seek to transform the structures and dynamics which perpetuate inequalities.	Gender-transformative approaches to WASH adopt a synergistic approach to strengthening both WASH outcomes and gender equality simultaneously.	As argued through this inquiry, gender-transformative assessments both explore and foster gender-transformative change.

Connecting these aspects of gender-transformative approaches to development, evaluation and WASH, this thesis seeks to strengthen academic understandings of how gender-transformative change can be both explored and fostered through assessments by focusing on sanitation programming in Cambodia.

1.4 Research questions

Focusing on gender-transformative modes of development practice, this inquiry explored the extent to which assessment approaches can be both tools of investigation and intervention through a multi-layered action research process (**Figure 6**). Research questions aligned with the inquiry's two layers and multiple phases. This included an overarching meta question, a pilot assessment question, and sub-questions for each of the research phases. Research questions were intentionally framed concisely to ensure clarity for collaborators. In this section, I first describe the overarching research questions and then introduce the sub-questions. The meta (outer) and pilot (inner) layers will be described more fully in **Chapter 2** and **Chapter 4** respectively. Findings from the pilot assessment in Cambodia are outside the scope of this thesis and are included as supplementary materials (**SM.1**, **SM.2**).

Figure 6. *The meta (outer) and pilot (inner) layers of this action research project*

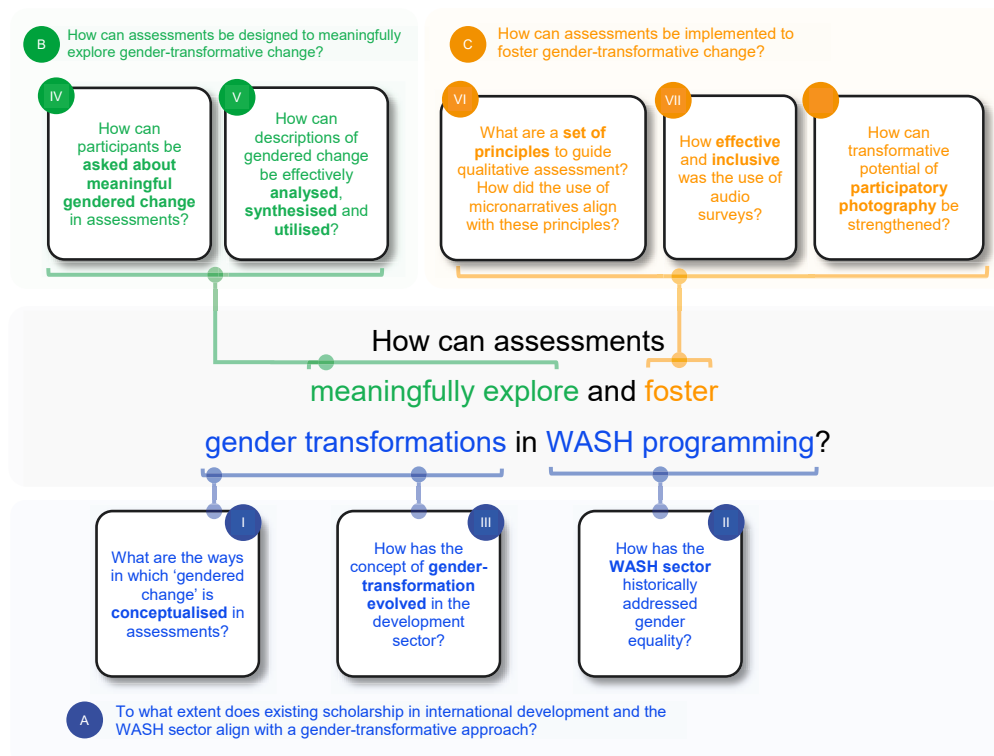


The overarching meta-research question was:

How can assessments meaningfully explore and foster gender-transformations in WASH programming?

This question was then articulated through a series of sub-questions answered both within chapters and outputs of this thesis and as visualised in **Figure 7**.

Figure 7. How the meta-research question was investigated



In the overarching question, while focusing on the WASH sector, I aimed to situate the work within the development sector more broadly. Hence all but two of the journal articles which make up this thesis are not specifically tied to the WASH sector, but rather use the SMSU3 pilot assessment as a context through which to consider gender-transformative change. The question also emphasises the value of assessments in in the 'welding' together of program interventions and research to shape development programming.

1.5 Research overview

Three of the chapters within this thesis can be considered 'results' chapters (Chapters 3, 5, and 6). Chapter 3 also has similarities with a traditional literature review chapter. However, each of the results chapters explored its own angle of the overarching research question, which is answered in a synthesis section. The chapters are made up of a series of outputs¹⁴, each with their own research questions. This multi-dimensional process is summarised in Table 2 and the thesis has been prepared as a compilation of seven academic manuscripts and one visual report.

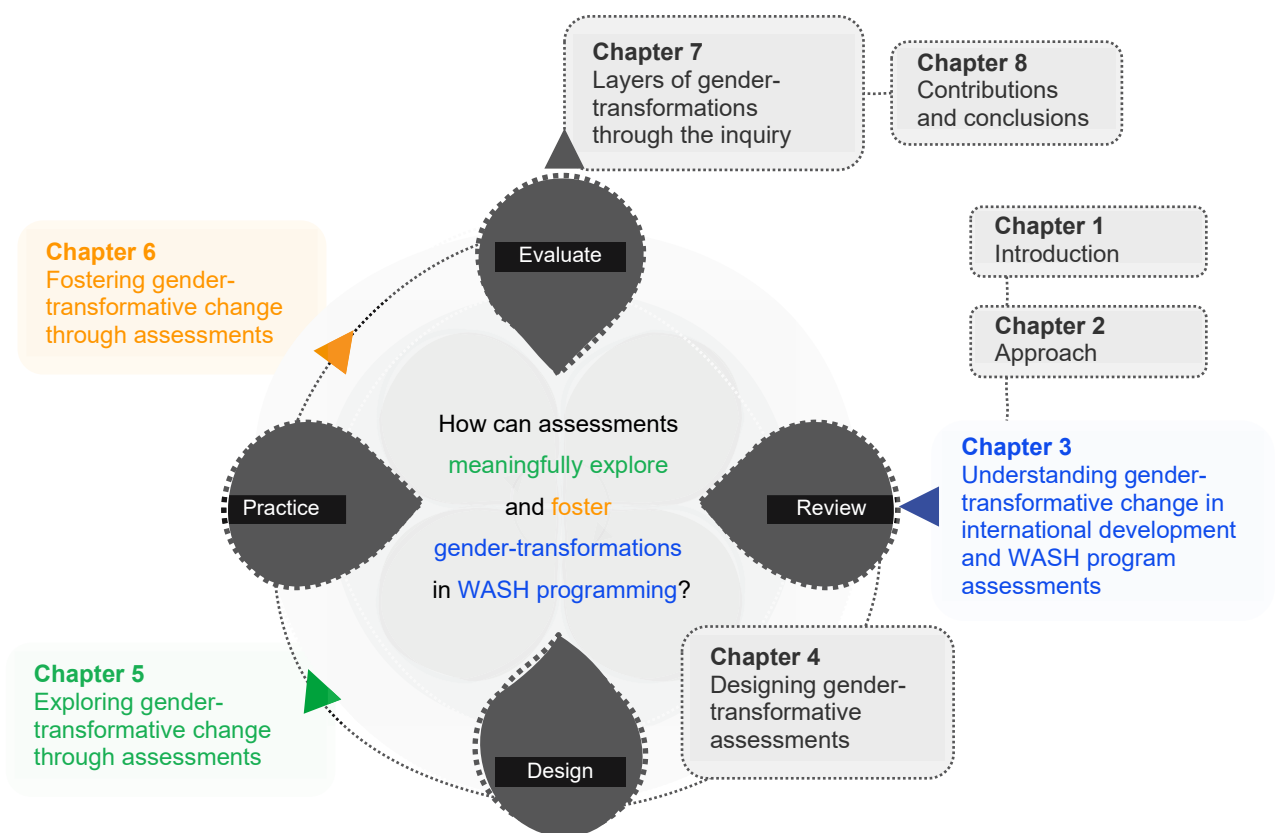
Table 2. Summary of the sub-research questions

Chapter	Phase(s)	Chapter Questions	Output Questions
Chapter 3	→ review	A. To what extent does existing scholarship in international development and the WASH sector align with a gender-transformative approach?	I. What are the ways in which 'gendered change' is conceptualised in assessments in the development sector as seen in published academic literature? II. How has the WASH sector historically addressed gender equality as seen in published academic literature? III. How has the concept of gender-transformation evolved in the development sector?
Chapter 5	design → practice	B. How can assessments be designed to meaningfully explore gender-transformative change?	IV. How can participants be asked about meaningful gendered change in assessments? V. How can descriptions of gendered change be effectively analysed, synthesised, and utilised?
Chapter 6	practice → evaluate	C. How can assessments be implemented to foster gender-transformative change?	VI. What are a set of principles to guide qualitative assessment? How did the use of micronarratives align with these principles? VII. How effective and inclusive was the use of audio surveys? VIII. How can the transformative potential of participatory photography be strengthened?

¹⁴ I use the term 'output' to reflect inclusion of academic papers and a visual report.

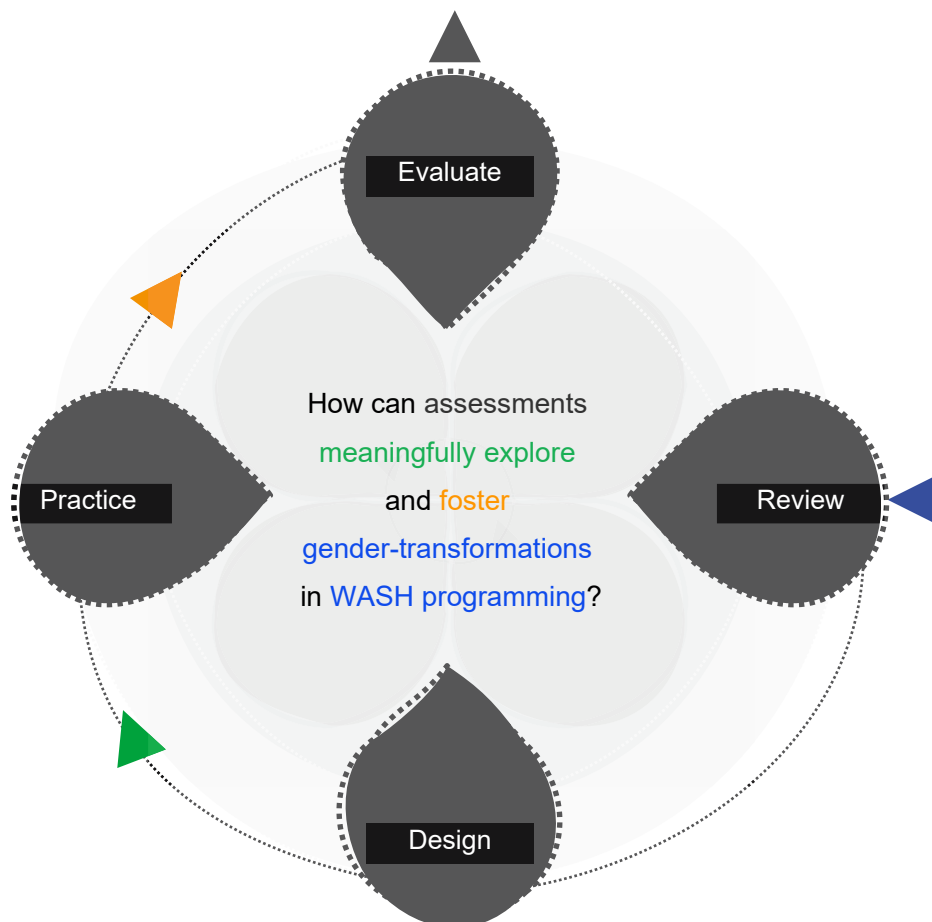
The structure of the thesis is illustrated below in **Figure 8**, with colour-coding used to show how the different sections correspond with components of the overarching research question and the inquiry's process. In **Chapter 2**, I introduce the inquiry's collaborative action research approach and the four scholarly foundations which have framed this research. The blue chapter, **Chapter 3**, comprises three literature reviews and synthesises insights from international development and WASH-related to gender-transformative practice. **Chapter 4** describes the collaborative design process of the two piloted approaches and the pilot context in Cambodia. **Chapter 5**, the green chapter, presents two empirical studies that consider how assessments can be designed to meaningfully explore change and concludes by discussing two critical design considerations for gender-transformative assessments. In the orange **Chapter 6**, I analyse the potential for assessments to foster gender-transformations through a visual report and two publications and describe four tenets of gender-transformative assessments that arise from the inquiry. **Chapter 7** considers how the action research has changed assessment practices. Finally, **Chapter 8** summarises the contributions of the inquiry and identifies future research priorities.

Figure 8. Flow of the thesis around the meta-overarching research question



Chapter 2

Collaborative action research approach



Several years ago, I had the privilege of working on a formative assessment of women's engagement in the sanitation supply chain in the southern plains of Nepal. During the data analysis for this assessment, I realised just how little I understood about gender dynamics in the development sector. I was saddened that the men made almost all the decisions for aspects so closely related to the traditional gender roles of women. I pondered the value and tensions of gender parity in a sector dominated by masculine attitudes. And I lamented seeing women enter the WASH workforce to be relegated to menial roles. This personal self-reflection and realisation, about just how little I knew, led me to do this doctorate; I wanted to understand how I could best support true equality in the WASH sector.

“...transformational work requires intimate engagement and self-awareness, which brings the whole person to the work; it is not just about changing something ‘out there’, but it is also about both changing ourselves and our mental models, and our relationships between the out there and the in here.” (Bradbury et al., 2019, 9)



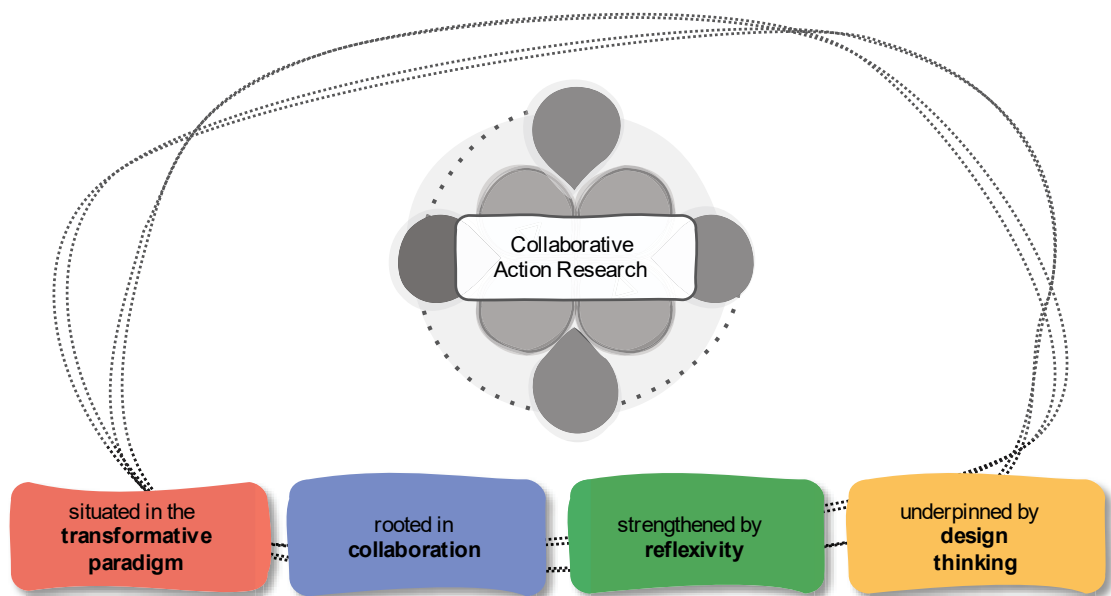
2.1 Overview

In this chapter, I describe the collaborative action research process used to investigate how assessment approaches can meaningfully investigate gender-transformations. The action research comprised two interconnected layers to enable a methodological focus on assessment practices while also conducting a pilot assessment. The inner (pilot) layer will be further explored in **Chapter 4**, while this chapter describes the outer (meta) layer. I begin this chapter by introducing and justifying the four foundations which drove the approach (**2.2**). The inquiry was situated in the transformative research paradigm, rooted in collaboration, strengthened by reflexivity and underpinned by design thinking. Next, I present my use of collaborative action research and introduce the multiple layers of transformed assessment practices – from sectoral to personal transformation (**2.3**). Lastly, I clarify my own positionality (**2.4**), the ethical aspects of this inquiry (**2.5**), and the influence of the COVID-19 pandemic on the inquiry (**2.6**)

2.2 Four research foundations

This doctoral inquiry was framed by four interconnected foundations, depicted in **Figure 9**. These four foundations clarify and provide a rationale for the methodological decisions throughout the action research process. The inquiry was (1) situated in the *transformative paradigm*, (2) rooted in *collaboration*, (3) strengthened by *reflexivity*, and (4) underpinned by *design thinking*. In the following section, I briefly describe each of these four foundations before clarifying the inquiry as collaborative action research.

Figure 9. *The four theoretical foundations which framed this doctoral inquiry*



2.2.1 Situated in the transformative paradigm

From an epistemological, theoretical, and philosophical standpoint, this research was situated in the transformative paradigm. Championed by Donna Mertens, the transformative paradigm “provides a framework for addressing inequality and injustice in society using culturally competent, mixed methods strategies” (Mertens, 2007, 212). As a theoretical and philosophical lens, “it provides a framework that is grounded in an ethical stance that is defined in terms of supporting social, economic, and environmental justice. In practice, it directs evaluators to incorporate into their designs strategies for supporting positive transformative change” (Mertens and Catsambas, 2021, 166). The transformative paradigm has been distinguished against positivist, constructivist, and pragmatic paradigms in an explicit focus on research which promotes social justice and a stance towards advocacy (Creswell, 2014). Research within the transformative paradigm prioritises researcher reflexivity and methodological decisions which are expected to lead to strong uptake and use of results for advocacy (Mertens, 2007, 2009, 2022). Transformative research is also connected to a transformative theoretical framework (Mertens, 2009, 2022), such as the gender-transformative model of development, introduced in **Chapter 1**.

A transformative research approach sits in alignment with forms of situational change sought in transdisciplinary research. Transdisciplinary research remains a core approach of the Institute for Sustainable Futures and I engaged frequently with transdisciplinary research concepts during this inquiry. Transdisciplinary approaches aim to transcend traditional disciplinary silos and advocate for collaborative purposeful research to address real-world challenges (Wickson et al., 2006; Mitchell et al., 2015). As such, transdisciplinarity features epistemological pluralism, recognising that “in any given research context, there may be several valuable ways of knowing, and that accommodating this plurality can lead to more successful integrated study” (Miller et al., 2008, 1). Transdisciplinary research aims to foster transformative change in three outcome spaces: situation, knowledge, and learning; all within the bounds of a research project or program (Mitchell et al., 2015).

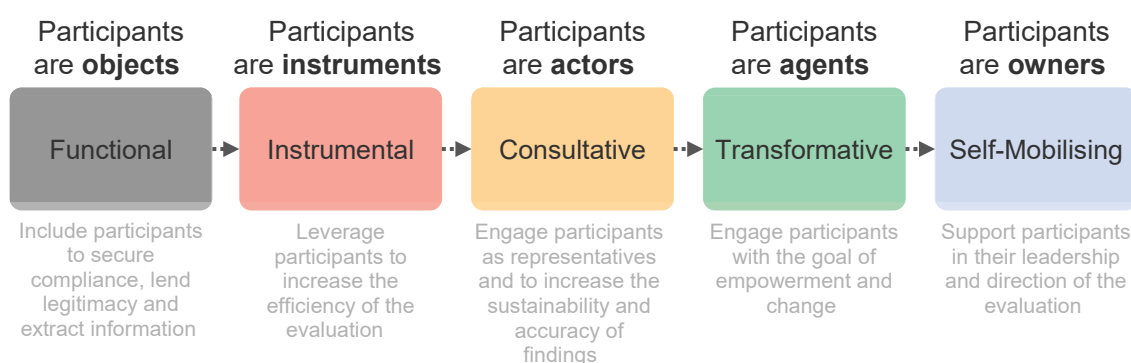
Transdisciplinarity implicitly shaped my doctoral inquiry in three ways. First, it encouraged me to seek outcomes across all three of the outcome spaces (Mitchell et al., 2015) – improving the situation as well as contributing to knowledge and fostering learning related to qualitative assessments of gender equality in WASH. Secondly, it inspired strong engagement and co-production with the research collaborators. Lastly, the importance of epistemological pluralism in transdisciplinary research informed efforts to identify the breadth of disciplinary and theoretical lenses which shape gender-related assessment practice in international development (see for example **Paper III**).

2.2.2 Rooted in collaboration

To operationalise a transformative paradigm, I foregrounded collaboration in my research process. Ultimately, this research aimed to engage with the program leadership of the SMSU3

project to shape, inform and utilise the insights generated from the pilot assessment. These leaders included both men and women primarily from Cambodia. Several American nationals based in Cambodia and the USA also participated in the process (iDE is an American Civil Society Organisation with a head office in Denver, Colorado). My research adopted a transformative modality of participatory collaboration, as described in **Figure 10**. In this modality, participants (the leaders of iDE) were active agents in the process, with the goals of empowerment and change. I distinguish this group of contributing participants (hereon: collaborators) from those who participated as participants in the pilot assessment (hereon: participants). Notably research collaborators were co-authors on several of the journal articles and co-presenters at conferences and workshops, illustrating the nature and importance of collaborative engagement.

Figure 10. *A spectrum of engagement in participatory research and evaluation approaches*¹⁵



2.2.3 Strengthened by reflexivity

To be a responsive collaborator, it was important to ensure reflexivity in the research process and to explore opportunities to decolonise my research practice. To define a reflexivity process, I relied on the aspects of (a) personal reflexivity and (b) peer debriefing. These two aspects have been identified by Creswell and Miller (2000) as opportunities to increase validity in the transformative paradigm. Here I explore how both personal reflexivity and peer debriefing strengthened my inquiry. In particular, I highlight how recent explorations of decolonising literature (Ladner, 2009; Smith, 2012; Chouinard, 2016; Archibald et al., 2019; Czarnecki, 2021; Thambinathan and Kinsella, 2021) have given language to my experiences and processes of reflexivity. While decolonising my practice was not central to the theoretical foundations of the thesis, it was a thread throughout my personal doctoral journey. Richer engagement with the decolonisation literature was deemed outside the focus of the inquiry but is a space for future exploration.

¹⁵ Adapted from Cornwall (2003) and White (1996). This spectrum also appears in Paper VIII. Coloring adapted to show similarities with **Figure 5**.

Personal reflexivity for myself and the collaboration team required a critical appraisal of the power and privilege that influence research practices and gender dynamics in international development. Reflexivity requires researchers to acknowledge their own “assumptions, values and biases that may shape their inquiry” (Creswell and Miller, 2000, 127). In addition to my personal reflexivity, the inquiry also encouraged personal reflexivity within the collaboration team. For example, during the collaborative workshops in March 2020, I facilitated an identity wheel exercise (UN Women, 2022) which explored dynamics of power and privilege for the leadership team of SMSU3. My personal reflexivity encountered aspects related to religion and race which I discuss in more detail in **Section 2.4** and encouraged me to reflect on the colonial influences in international development research and opportunities to decolonise my own research practice (Chouinard, 2016; Thambinathan and Kinsella, 2021). My personal reflexivity approach also drew from the work of Paulo Freire, who advocated for blending research and intervention into a single cyclical practice of action-reflection-action (Freire, 2000).

Peer debriefing, which overlapped with processes of collaboration, helped to ground my emergent findings and to pursue space for critical feedback. Peer debriefing “provides support, plays devil’s advocate, challenges the researchers’ assumptions, pushes the researchers to the next step methodologically, and asks hard questions about methods and interpretations” (Creswell and Miller, 2000, 129). Peer debriefing took place at various levels, stages and in various formats throughout the research process. This included weekly debriefs with my doctoral supervisors, monthly discussions with the other doctoral researchers at ISF focused on Cambodia, quarterly discussions with the leadership of the SMSU3 team in Phnom Penh, and collaborative manuscript writing. Emergent findings were also presented at international conferences and to Asia- and Pacific-based partners of the Water for Women Fund through webinars eliciting feedback on the tools, techniques, frameworks and approaches piloted in this inquiry. This multi-pronged peer-debriefing approach aimed to create different levels and arenas for dialogue, critical questioning, support and stronger synthesis.

2.2.4 Underpinned by design thinking

My research was also underpinned by the techniques and purposes of design thinking through a focus on designing qualitative assessment practices to be used by practitioners. Design thinking has historically been used within the context of industrial design, however more recently, research institutes have been applying a design thinking lens to address social challenges (Brown, 2019; Clark & Smith, 2010). Design thinking leverages processes such as *understand* → *improve* → *apply* (Plattner et al., 2011), and *hear* → *create* → *deliver* (IDEO, 2013) and is characterised by three core aspects. First, problems and solutions co-evolve in tandem (Dorst and Cross, 2001). Second, it prioritises solution-focused strategies for complex problems using abductive reasoning (Cross, 1990). Third, design thinking often relies on creative visual, non-verbal, and graphical techniques in a similar fashion to participatory methods (Cross, 1990).

Inspired by my time as a sanitation designer (described in more detail in **Section 2.4**), the approaches, tools, and techniques adopted throughout this inquiry leveraged design thinking practices. This is seen in three ways aligned with the core aspects of design thinking: (1) a co-evolution of the research objectives and methodological approaches, (2) the development of tools and techniques for practitioners, and (3) the use of creative visual forms of communication. In particular, **Paper V**, brings the design thinking technique of personas into qualitative assessment practice. In this sense, my previous experiences as a designer underpinned the ways in which I conducted this inquiry: once a designer, always a designer (Cross, 1990).

2.3 Collaborative action research to shape assessment practices

For my methodological inquiry, action research was selected as the overarching approach because of its focus on the creation of new practices; practices of the researcher, participants, and even organisations (Kemmis et al., 2013). Bradbury and colleagues (2019) advocate for the value of action research in transforming the “structural forces that inhibit thriving” (p. 9). Action research prioritises practical life experiences in connection with the more traditional forms of academic knowledge and values the network of relationships which ground research practice (Wicks et al., 2008). Within the process of action research, data is not found or uncovered, but is generated in connection with collaboration partners and critical friends.

“The major advantage of action research compared to the production of ‘words alone’ is the creation of practices. While words often have a slippery relationship to reality, forms of practices are reality. Intentions, meanings, goals, and values are expressed in patterns of organization, behaviour and action” (Gustavsen et al., 2008, 63),

The particular form of action research known as ‘collaborative’ or ‘second person’ action research, was selected for this inquiry in alignment with the importance of collaboration, design thinking and changed practices. Action research can adopt first, second or third person modalities, depending on whose practices are the focus of the inquiry.¹⁶ Second person (collaborative) research involves a small group of people “inquiring together about questions of mutual concern” (Coghlan and Brydon-Miller, 2014a, 699). Freire (2000) frames the idea of changing practices as critical consciousness and the cyclical movement between reflection and action.¹⁷ The collaborative action research process aimed to strengthen practices for myself, the participants, the SMSU3 program, and for organisations focused on gender equality in WASH

¹⁶ In first person action research, researchers conduct inquiry on their own practices, while third person research situates inquiry within a wider community of practice or collective (Coghlan and Brydon-Miller, 2014b).

¹⁷ Freire (2000) calls this process of reflection and action ‘praxis’. While his conceptualisation focuses primarily on the praxis of the oppressed, I believe this has resonance in a gender-transformative approach which sees patriarchal norms as oppressive for individuals of all genders.

more broadly, as illustrated in **Figure 11**. These layers of practice are summarised in **Table 3** and I revisit these strengthened practices in **Chapter 7** of the thesis.

Figure 11. *Multiple layers of practice targeted by the collaborative action research approach*

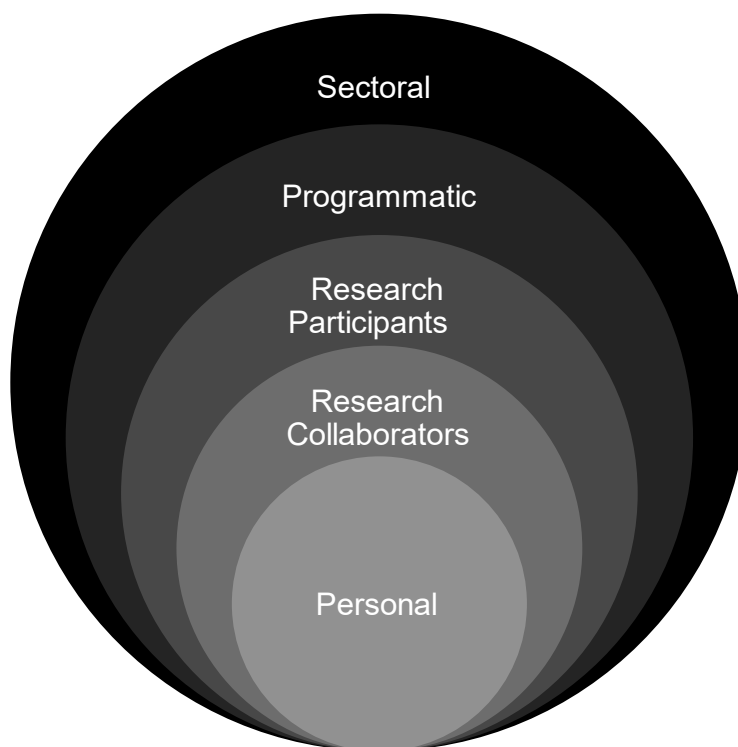
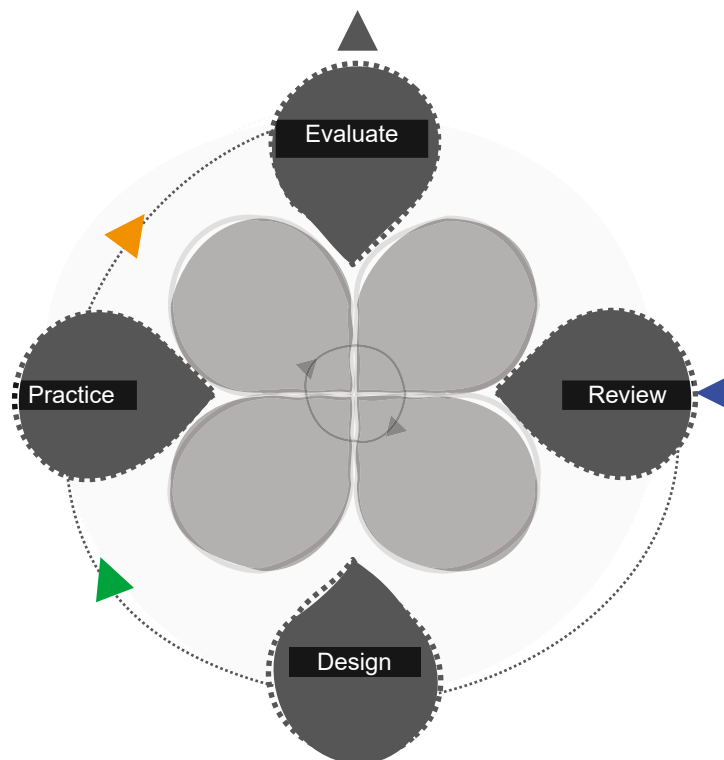


Table 3. *Five layers of action research objectives as strengthened practice*

Layer	Transformed practice objectives
Personal	For myself as the lead-researcher, the action research process fostered a practice of considered engagement in my work with civil society organisations. In particular, this involved reflection on the power dynamics embedded into the process of external assessments and related to my outsider status.
Research Collaborators	For my co-researchers, the process aimed to strengthen qualitative assessment practices associated with gender equality outcomes and increase confidence in the process and results of qualitative forms of assessment.
Research Participants	For the SMSU3 participants both in Phnom Penh and in the six provincial field offices, the research aimed to strengthen the critical consciousness of gender inequalities within the program and encourage movement from critical observation to critical action.
Program Design	For the SMSU3 program, the action research sought to support future gender mainstreaming interventions through reflections on the impact of gender training within the first half of the program.
Sectoral	For organisations focused on WASH and gender equality more broadly, and connected with the Water for Women Fund, the research aimed to create accessible visual storytelling tools and techniques for use in future qualitative assessment of gender-transformative change.

Beyond the changed practices for myself and the participants of the action research, the process can be most succinctly expressed in a dual layer research process. I have visualised this in **Figure 12**, as two concentric levels of study: the meta study (outer layer) and the pilot assessment in collaboration with iDE Cambodia's SMSU3 (inner layer). Each layer comprised four phases. The outer layer followed a *review* → *design* → *practice* → *evaluate* process. The inner layer will be described in **Chapter 4**. The four phases align with the action research process of *observe* → *reflect* → *act* → *evaluate* (McNiff, 2017) and reflect aspects of the design thinking process *hear* → *create* → *deliver* (IDEO, 2013).

Figure 12. *Dual layers of the collaborative action research process*



The key research activities which were conducted in the meta layer are summarised in **Table 4**; aligned with each phase of the action research process: review, design, practice and evaluate. For clarity, each paper introduces and provides further details on its relevant research activities and meta-limitations are discussed in the summary section of each results chapter (Chapters 3, 5 and 6).

Table 4. Key research activities in the meta layer of the action research process

Action Research Phase	Research Activity	Description	Participants	Timeline	Key Tools and Techniques
Ongoing	Informal communication	Ongoing discussions with the core eight members of the collaboration team in Phnom Penh and Denver. This included phone calls, emails, and online discussions.	8 Core collaborators	March 2020 – May 2022	<ul style="list-style-type: none"> • Email • Phone calls • Zoom
Review	Collaborative learning workshop	Conducted in-person prior to the COVID-19 global lockdowns, this half-day workshop aimed to create a collaborative understanding of the research aims and objectives of the pilot assessment.	15 Collaborators (SMSU3 Leadership team)	March 2020	<ul style="list-style-type: none"> • PowerPoint • Projector • Handouts
Refine	Co-design workshop	Also conducted in-person, this two-day workshop focused on the collaborative design of visual storytelling tools and techniques. These were then adapted for remote use in July 2020.	15 Collaborators (SMSU3 Leadership team)	March 2020	<ul style="list-style-type: none"> • PowerPoint • Projector • Handouts
	Tool piloting (rapid pilot)	Conducted remotely and focused on the micronarrative approach, six collaborators and four additional colleagues supported the rapid pilot of the digital survey tool.	10 Collaborators and colleagues	July 2020	<ul style="list-style-type: none"> • Qualtrics
	Tool refinement interviews	Based on feedback from the rapid piloting of the micronarrative approach, I conducted five semi-structured interviews focused on refining the tools.	5 Collaborators	July–September 2020	<ul style="list-style-type: none"> • Zoom
Practice	Debrief dialogues	During the scaled pilot of the micronarratives and photovoice, I had debrief dialogues with the researchers supporting the process. For micronarratives, two research assistants were hired and an additional two staff collaborators supported the process. For photovoice one staff collaborator supported the process.	5 Researchers	July–October 2020	<ul style="list-style-type: none"> • Zoom • Skype
	Reflection surveys	Embedded into the photo-story and micronarrative generation forms, I included a reflection section focused on potential distress, effectiveness, and feedback.	196 Participants	October 2020	<ul style="list-style-type: none"> • Qualtrics

Action Research Phase	Research Activity	Description	Participants	Timeline	Key Tools and Techniques
	Reflection interviews	Alongside the micronarrative generation, a research assistant and myself conducted semi-structured interviews with 16 participants who had just completed a micronarrative sharing. These interviews elicited further detail on shared stories and collected reflections. Interviews were conducted in Khmer and live translated into English by the research assistant. Audio recordings were transcribed.	16 Participants	October 2020	<ul style="list-style-type: none"> • Skype • Google Slides • Dovetail
	Reflection diaries	During the synthesis phase, myself and one other researcher completed reflection diaries on the process of the analysis. These were focused on opportunities and techniques to support practitioners with future synthesis.	2 Researchers	July 2020 – June 2021	<ul style="list-style-type: none"> • Airtable
	Emerging insights workshop	Focused on insights relevant to the midline reporting timeline, an emergent insights workshop was held online with the core collaboration team.	5 Core collaborators	November 2020	<ul style="list-style-type: none"> • Zoom
	Sensemaking workshop	Once all the synthesis was completed, a hybrid three-hour workshop was held with the main collaborator team to support sensemaking and reflections on the process for both photovoice and micronarratives.	14 Collaborators (SMSU3 Leadership team)	June 2021	<ul style="list-style-type: none"> • Zoom • Google Slides
Evaluate	Reflection workshops (2)	Reflecting on the entire pilot process, two workshops were held with core collaboration team and focused on eliciting feedback on the whole process and the transformative potential of the approaches.	10 Core collaborators	September 2021	<ul style="list-style-type: none"> • Zoom • Google Slides
	Collaborative manuscript drafting	As part of the wider collaboration strategy, eight iDE collaborators participated in the development of the manuscripts for Papers IV, V, VI, and VIII.	8 Collaborators	November 2021 – May 2022	<ul style="list-style-type: none"> • Google Doc
	Synthesis of meta-findings	Sensemaking and reflection looking at insights across each phase of the process (review, design, practice and evaluate).	Personal	May – July 2022	<ul style="list-style-type: none"> • Word • PowerPoint

2.3.1 Literature review as collaborative action practice

As I chose to purposefully use literature not only as background material, but also as findings within the inquiry, my thesis does not contain a traditional literature review section. However, explicitly in **Chapter 3** and implicitly in each subsequent output, I have prioritised a rigorous review of the existing scholarship and practice in which to ground my own work. This approach to reviewing and synthesising literature had three main objectives. First, this approach to the review of literature allowed the research collaborators (defined in **Table 3**) more access to recent scholarship, as I shared literature findings during collaborative discussions, in visual summaries and within the co-production processes. Second, I adopted creative tools and techniques from the digital humanities and bibliometrics used to analyse large volumes of literature and publication trends respectively. These tools allowed me to explore and visualise a wide conceptual, theoretical and epistemological breadth and identify areas of novel or nascent scholarship. Third, the inclusion of rigorous review methods in each output sought to increase the inquiry's overall validity by situating my work against a broader backdrop of scholarship and practice.

2.4 Positionality: Identity, experiences and beliefs

Embedded within the practice of personal reflexivity, understanding one's positionality is fundamental in action, feminist, and cross-cultural research (England, 1994; Nazneen and Sultan, 2014). As such in this section, I describe my own positionality seeking to go beyond "confessions of privilege" (Lockard, 2016, 2) to identify how this privilege has influenced my inquiry.

2.4.1 Influence of my identity on this inquiry

Foremost, I am a white, well-travelled and well-educated woman in my mid-thirties.

My cultural background and travel history is complex. Born in Canada, I have lived more than half of my life in other nations and a third in the Global South. Nonetheless, I hold a Canadian passport and am a resident of Switzerland, both which endow me with significant privileges such as freedom of movement and expression. This was highlighted during the height of the COVID-19 pandemic, when I was able to travel to Canada from Cambodia amidst significant global uncertainty. I have spent substantial time living in Bangladesh, Indonesia, Thailand, and Turkey, and although I have continuously made efforts to learn language and culture, spend time within communities, and connect across cultural and racial differences, I have always remained a privileged outsider. I believe my experiences of living and working in countries similar to Cambodia, as well as several trips to Cambodia prior to this doctorate, allowed me to connect more easily with the SMSU3 collaborators. However, my lack of rich understanding of the Cambodian context continued to be a barrier throughout this research.

My educational background is also broad and multinational. In particular, I hold a chemical engineering degree from the University of Calgary (Canada) alongside a master's degree in

Water, Science, Policy and Management from the School of Geography and Environment at the University of Oxford (United Kingdom). As such, I approached this doctorate (based in Australia) from multiple disciplinary backgrounds and theoretical perspectives. Notably, I did not previously have an academic background in gender studies and therefore I had much to learn. However, I believed that this allowed me to be more empathetic with collaborators who found discussions of gender equality and qualitative research beyond their expertise.

2.4.2 Influence of my experiences on this inquiry

Beyond my own identity, the inquiry has also been shaped by my experiences as a woman, as well as my experiences in international development and qualitative research.

Although I identify as a cisgender heterosexual woman, I have experienced my own challenges related to patriarchy and gender inequalities in the workplace and academy. Both engineering and WASH are strongly male-dominated fields (Worsham et al., 2021) and I have experienced both explicit and implicit forms of sexism. I believe this has given me an insider understanding of the ways in which gender inequalities can shape workplace dynamics – which was a core focus of the pilot assessment.

Prior to beginning my doctoral studies, I was based in Bangladesh and worked for iDE Bangladesh in a variety of roles, most recently the Director of WASH, Women's Empowerment and Nutrition. My prior professional experience with the iDE team in Bangladesh, placed me in a position spanning the insider–outsider divide. In one sense, I was an insider: with rich understanding of the organisational processes, procedures, and dynamics. In another sense, I was an outsider: situated within an external academic institution. I believe this created safe spaces for honest and open feedback with the collaborators about the direction of the research. However, in another sense, these personal connections could also have created barriers in sharing open responses.

Also within my role at iDE, I supported formative qualitative research on women's empowerment in the sanitation sector in Bangladesh, Nepal and Ghana. These experiences have unquestionably shaped my perspectives, provided me with a rich foundation, and have coloured the ways in which I have undertaken this research. For example, I came to the doctoral project with preconceived notions of the strengths and challenges of qualitative research in development organisations and on the effectiveness of interventions in shaping gender dynamics. From this experience, and from my explorations into decolonising research practice, I have come to recognise that research by white researchers from Western countries can often be extractive (Smith, 2012; Thambinathan and Kinsella, 2021), and at the same time to value external viewpoints (Corbin Dwyer and Buckle, 2018). To avoid extractive research processes and optimise mutual benefits, I sought to practice beneficence (Pieper and Thomson, 2016) with the inquiry's participants, collaborators and with the SMSU3 program.

2.4.3 Influence of my beliefs on this inquiry

Lastly, the research was also shaped by my personal and religious views on gender equality, inspired by Christian feminists and First Wave Feminism. I have drawn on Paulo Freire's own Catholic faith journey and his often-overlooked Liberation Theology perspectives advocating for a "spirituality of human action aimed at dismantling oppressive forces and structures" (Harvard Divinity School). Much of the foundations of feminist history and Freire's work emerged from and were aligned with their own faith journeys. As such, these perspectives have an opportunity to address the common yet hidden barriers between religion and gender equality. This doctoral research has significantly shaped my own Christian perspective.

In particular, I (now) believe that all people are created *imago dei* (in the image of God) endowing all of humankind with intrinsic value. I believe that gender inequalities are a part of the fall – or curse, as evidenced in the first book of the Hebrew Bible. Yet, I also believe that humankind is tasked with undoing the curse of inequalities as evidenced by the revolutionary way that Christ interacted with and treated women and the marginalised. His treatment of women showed that cultural, social and gender inequalities must be actively contested. I do not believe (as many outspoken Christians do) in perspectives of gender hierarchy which limit the roles and abilities of women in society. I see the household codes which govern women's roles as more closely aligned with Aristotle's extreme patriarchal views which saturated not only the ancient world, but much of society today (Pierce et al., 2004).

I recognise that my Christian viewpoint may not fully align with the Buddhist perspectives predominant in Cambodia and have therefore explored Buddhist standpoints on gender equality in dialogue with Buddhist colleagues at iDE Cambodia. This included taking an *Introduction to Buddhism* course and examining gender norms through three workshops with the iDE Cambodia team alongside reading on gender dynamics in Cambodia (e.g., Brickell, 2007; Ebihara & Ledgerwood, 2002; Ledgerwood, 1990).

2.5 Ethical considerations

The ethical considerations for this research were aligned with the Australian Code for the Responsible Conduct of Research, the Australian Council for International Development (ACFID), Research for Development Impact (RDI), and university guidelines. In particular, the approach aligned with ACFID Principles and Guidelines for Ethical Research and Evaluation in Development (ACFID, 2021). Ethical clearance for both the meta and pilot studies was obtained through the University of Technology Sydney's Human Research Ethics Committee (UTS HREC ETH19-4343) in early March 2020, prior to beginning any field activities. Additional clearance for the ethical considerations during the pandemic was obtained in April 2020. Local Institutional Review was not required in Cambodia, yet written approval was obtained from the Country Director of iDE Cambodia prior to the initiation of the pilot within SMSU3.

The research actively sought a 'do-no-harm' strategy while balancing the appropriate requirement of heightened consciousness of gender inequalities. As such, the research had the possibility of distress, and all tools were partnered with distress protocols tailored to the types of challenges anticipated in the research. A trained gender-point person in iDE was available for support as required. All research activities included a separate informed consent process obtained through digital signatures and stored in a secure UTS server. Further ethical considerations are detailed as relevant to each individual journal paper.

2.6 COVID-19 considerations

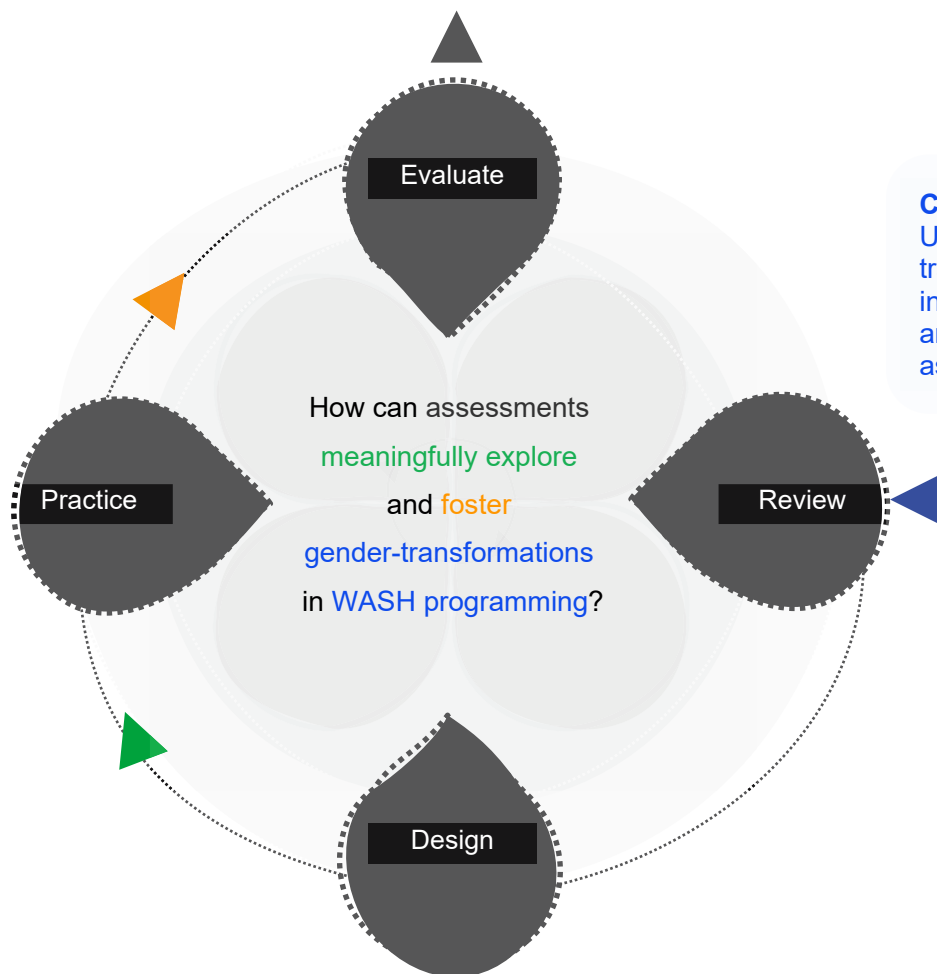
As this inquiry (2019–2022), was completed during the COVID-19 pandemic (2020–2021), I highlight several ways in which restrictions influenced the scope and direction of the research. Firstly, restrictions in travel and suspension of ethical clearance to conduct in-person research in Cambodia in March 2020, led to a shift from in-person collaboration to a remote modality. The inquiry relied heavily on the collaborator team and research assistants, who became responsible for facilitating the pilot. Notably, the height of the pandemic in Cambodia did not occur until after data was generated for both piloted approaches – allowing for some in-person connections between the research assistants, collaborators, and participants. I worked closely with collaborators to determine what levels of engagement were safe and appropriate due to the diverse guidance and restrictions. Second, this remote modality led to the use of digital methods, which significantly influenced the selection and refinement of approaches and techniques (see **Section 4.5**). Lastly, the pandemic necessitated a shift in focus from beneficiaries of the program to staff members, more easily accessible through remote and digital methods. Despite the need to reformulate the inquiry right at the beginning of data generation, the COVID-19 pandemic provided an opportunity to focus on self-administered approaches and to explore new techniques.

2.7 Summary

In this chapter, I have described and justified my use of collaborative action research as the basis for this methodological inquiry. I began by introducing four research foundations and clarifying how these shaped my selection of action research as an overarching approach. The inquiry has been situated in the *transformative research paradigm*, rooted in *collaboration*, strengthened by *reflexivity*, and underpinned by *design thinking*. I then clarified my positionality and its influence on this inquiry, with reference to my identity, experiences and beliefs. I then summarised considerations related to ethics and the COVID-19 pandemic. In the next chapter, I present the results from the *review* phase of the action research process to understand the breadth of conceptual and methodological approaches in the exploration of gender equality in development programs.

Chapter 3

Understanding gender-transformative change in international development and WASH program assessments



Chapter 3
Understanding gender-transformative change in international development and WASH program assessments

Before beginning my doctoral studies, I had the opportunity to support a strategy aimed at increasing women's involvement in the sanitation supply chain in Nepal. Evidence highlighted the increased efficiency of women-led supply chains, and more sustained latrine use with women latrine sellers. During this process I began to interrogate the value of such an intervention. My experience in Bangladesh had shown me that many women who led latrine businesses did so not out of choice, but of necessity and often out of tragedy such as the death of a husband.

This reflection encouraged me to question the aims of increasing women's involvement. Cornwall (2001) described this tension well: "it is hard to know where to draw the line between what ultimately boils down to a rather 'top-down' insistence on women's involvement...when dealing with the 'bottom-up' perceptions of women themselves that this would be unseemly and irrelevant" (p. 15)

In this case, improved health impacts, sustainability and efficiency seemed to be in tension with what was best for women. **Chapter 3** reviews this tension and provides a potential way forward as a gender-transformative approach.



3.1 Overview

This chapter presents the findings from the *review* stage of the collaborative action research cycle through three literature reviews prepared as journal articles, and a subsequent synthesis. The chapter interrogates three related realms of development practice: program assessments (**Paper I**), academic research (**Paper II**) and interventions (**Paper III**). Ultimately, the chapter aims to clarify the conceptual breadth of gender-related development practice, by responding to the first research question:

To what extent does existing scholarship in international development and the WASH sector align with a gender-transformative approach?

Recognising that different perspectives of gender equality shape gender-related assessment practices, the first article (**Paper I**) published in *Third World Quarterly*, identifies four distinct conceptualisations of gendered change within international development program assessments. These four viewpoints tended to align with disciplinary views of a flourishing society.

In the second article (**Paper II**) published in the *Journal of Water, Sanitation and Hygiene for Development*, I investigate how gender equality has been integrated into academic studies within the WASH sector. I highlight how trends in the WASH sector have led to a dilution of potentially gender-transformative research outcomes.

Building on the importance of gender-transformative practice, in the third review (**Paper III**), under review with *Women's Studies International Forum*, I trace the evolution of gender-transformative intervention approaches within the international development sector. The review identified three distinct streams of practice and led to the development of five principles of gender-transformative interventions.

Finally, in the chapter's synthesis section (**Section 3.5**), I reflect on the extent to which a gender-transformative approach has been evidenced in international development and the WASH sector, by examining the findings from Papers I and II with reference to the principles identified in **Paper III**. I conclude the chapter by describing the limitations of the *review* phase.

3.2 Paper I – Exploring gendered change: Concepts and trends in gender equality assessments

Paper I has been published in *Third World Quarterly* and is available online at <https://doi.org/10.1080/01436597.2021.1911636>. The article answers the following research question: *What are the ways in which 'gendered change' is conceptualised in assessments in the development sector as seen in published academic literature?*

In this paper, I use the phrase 'gendered change' to represent a breadth of changes related to gender equality and empowerment. Ultimately, these changes have gender-transformative potential as I will explore in **Paper III**.



Exploring gendered change: concepts and trends in gender equality assessments

Jess MacArthur , Naomi Carrard  and Juliet Willetts 

Institute for Sustainable Futures, University of Technology Sydney, Ultimo, NSW, Australia

ABSTRACT

More than a quarter century after the Beijing Platform for Action solidified the importance of gender equality in international development, it is timely to review the conceptual approaches used to assess the gendered impacts of interventions. This paper presents a systematic review of recent investigations of gender equality from development-related academic literature (2009–2019) using two analytical approaches. First, we visualise trends based on bibliographic, methodological, contextual and conceptual aspects (n=150). Second, we explore the theoretical approaches used to conceptualise gendered change through co-citation analysis (n=61). Our trend analysis shows a breadth of relevant disciplinary perspectives but limited geographic and content foci. Additionally, very few studies explore gender equality dynamics that involve men and boys. Our exploration of theoretical foundations identifies four conceptualisations of gendered change, each reflecting the divergent disciplines, actors and interests that operate in the gender and development space. These conceptualisations each rely on and expand the concept of empowerment. By critically reflecting on feminist principles, future studies can transcend narrower empowerment framings and contribute more meaningfully to the aim of gender transformative development.

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Introduction

In 1995, during the Fourth World Conference on Women, academics, practitioners, donors and policymakers from around the world gathered to establish a common objective to 'advance the goals of equality, development, and peace for all women everywhere in the interest of all humanity' (United Nations 1995, para. 3). The conference highlighted a shift in development discourse about the engagement of women – from women as a tool for development to a focus on strategic change addressing perceptions of gender through social relations (Kabeer 1994) and gender roles (Molyneux 1985; Moser 1993). This objective has been further articulated in the Sustainable Development Goals as Goal 5, seeing to 'achieve gender equality and empower all women and girls' (UN General Assembly 2015).

CONTACT Jess MacArthur  jessica.macarthur@uts.edu.au

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Tasked with pursuing these goals in the developing world, relevant government bodies, donors and civil society organisations intensified their focus on designing interventions to address gender inequalities through policies, programmes and projects. Alongside these new initiatives, it became critical to demonstrate and evaluate change against global and programmatic goals. This focus prompted the development of a wide range of approaches for investigating gendered change (Bowman and Sweetman 2018; Malhotra, Schuler, and Boender 2002). These approaches reflect the methodological principles of different research communities and different conceptualisations of gender equality (Kabeer 2019; Malhotra, Schuler, and Boender 2002; White 2015; Worthen 2012).

Within this context, there has been increasing academic interest in examining outcomes associated with gender equality and women's empowerment in international development. Such interest has led to a series of existing literature reviews on the topic. Many of these reviews take a sectoral focus (Laszlo et al. 2020; Pereznieta and Taylor 2014; Taukobong et al. 2016; Winther et al. 2017). Other reviews explore quantitative measures of agency or empowerment (Ibrahim and Alkire 2007; Pratley and Sandberg 2018; Richardson 2018). Further reviews examine best practices for such evaluations (Espinosa 2013; Gram, Morrison, and Skordis-Worrall 2018a; Lam et al. 2019). Each of these reviews discusses gendered outcomes by distilling theoretical concepts into practical frameworks.

This paper contributes to and extends the academic literature by exploring the conceptual breadth of gender equality and related themes with a focus on interventions in international development. We study this conceptual breadth by investigating how gendered outcomes associated with interventions are assessed within the academic literature. We take an assessment to be any programme-based study that explores changes associated with programme interventions. This can include but is not limited to the design or application of evaluations, impact assessments, audits, formative research and summative research. Assessments offer a unique perspective into the practical application of theory, as they require the distillation of theoretical underpinnings into practical relevance. This article does not review the impacts of policy interventions and also does not report aggregated gendered impacts of interventions through a meta-analysis, both of which are areas for future research.

As a starting point, we describe the foundations of gender equality and women's empowerment within international development and introduce our systematic review methodology. We identify English-language academic literature focussed on assessing gendered changes in international development interventions (2009–2019). We then present findings on the trends and themes within this literature over the last decade ($n = 150$). We also present findings regarding the four theoretical conceptualisations of gendered change ($n = 61$), critically exploring how theoretical ideas significantly shape what is investigated in programme-based assessments. Lastly, we address key implications of the study.

Gender equality in international development

The monitoring and evaluation of gendered aspects of development programmes is rooted in the theoretical foundations of gender and development. Led by feminist practitioners challenging dominant views of the development sector, the 1995 Beijing Declaration ushered in a new sectoral discourse, from women in development (WID) to gender and development (GAD). The WID approach centred on the perspective that 'women are an untapped resource who can provide an economic contribution to development' (Moser 1993, 2). The GAD

approach expanded the dialogue around gender equality from welfare, equity, anti-poverty and efficiency to include *empowerment*, ultimately calling for societal transformation (Bamberger and Podems 2002; Moser 1993). Aspects such as critical consciousness, collective action, social structures and gender norms were considered foundational to gender transformations (Rowlands 1997). GAD was championed by Development Alternatives for Women in a New Era (DAWN), a network of feminist development practitioners, primarily based in the South and founded in 1984 (Sen and Grown 1987). DAWN aimed to strengthen political and collective underpinnings of the empowerment agenda within the GAD paradigm, for and by women in the South.

The inclusion of the concept of empowerment opened up the gender and development dialogue to the fields of psychology, management, human development and education – as summarised in Table 1 – all of which were already exploring aspects of empowerment in parallel to feminist development studies. These disciplinary-specific conceptualisations of empowerment built on philosophers and sociologists who explored aspects of power, such as Weber, Dahl, Lukes, Rappaport, Freire and Foucault (Batiwala 2007; Cornwall 2016; Rowlands 1997). These unique perspectives expanded the ways in which gender equality and women's empowerment can be understood and explored in international development research and interventions.

This focus on empowerment was a powerful addition to the GAD mandate; however, many authors began to use the concepts of gender equality and empowerment interchangeably. Still today, they are often grouped together, as is the case with Sustainable Development Goal 5 (UN General Assembly 2015). While empowerment, equity and equality are the three interrelated goals of GAD (Moser 1993), many authors conceptualise equity and empowerment as leading to gender equality (Kabeer 2005; Nussbaum 2000). Women's empowerment focusses on the changes in power within and around women as individuals or in groups (Rowlands 1995). Gender equality is more broadly concerned with gender dynamics, relations and structures. It aims to transform inequalities between men and women through equal rights, responsibilities and access to resources (United Nations 1995). For the purposes of

Table 1. Foundational definitions of empowerment utilised in development.

Field	Definition of empowerment
Psychology	Empowerment is a contextual psychological construct shaped by individual knowledge, decision-making processes and the interactions between individuals and their environment, as measured through individual skill development, collective action, cultural awareness and internal psychological aspects such as motivation to control, locus of control and self-efficacy (Zimmerman 1990, 174–175).
Economics	The empowerment of women accelerates economic development by improving women's access to the fundamental elements of development such as health, education and earning opportunities (Boserup 1970; Dufflo 2012).
Management	Empowerment is 'a process, a mechanism by which people, organizations, and committees gain mastery over their affairs' (Rappaport 1987, 122).
Education	Empowerment requires conscientisation – the process of becoming aware of social, economic and political inconsistencies and then acting against such oppression through participation and engagement (Freire 1970).
Human development	Empowerment is an 'expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them' (Kabeer 1999, 437).
Gender and development	Empowerment is a personal, relational and collective process in which oppressive power structures are challenged. It begins with a process that 'leads people to perceive themselves as able and entitled to make decisions' (Rowlands 1997, 14) It often relies on organisations that 'must crystallize visions and perspectives that will move them beyond their present situation' (Sen and Grown 1987, 89).

this paper, we use the term ‘gendered changes’ to represent changes that encompass both empowerment and gender equality.

Since the Beijing Platform for Action, policies, intervention designs and academic debates have aimed to extend the focus on empowerment to include wider gender-equality changes, such as those articulated in gender transformative language (Batiwala 2007; Cleaver 1999, Cornwall and Brock 2005). As the policy, practice and academic discourses have evolved, with this paper we take the opportunity to explore the evolution of programme-based gendered change assessments.

Study approach – systematic literature review

This systematic review explored empirical studies of gender equality and related themes with a focus on international development interventions. Three databases were used for the search: Scopus, ProQuest and Web of Science. We explored articles in academic journals published between 2009 and 2019 in the English language. Our search string included: (gender OR women OR girls OR men OR boys) AND (empower* OR equality OR equit* OR agency, etc.) AND (impact* OR research OR eval* OR assess etc.) AND (development phrasing and a set of 164 low- and middle-income country names or name derivations). From these selected terms, 1704 articles were identified. We removed irrelevant articles, duplicates and blanks (697 remained). Next, we screened abstracts for relevance and connection to a development intervention using DistillerSR (Evidence Partners, Ottawa, Canada), identifying 150 articles for a trend analysis. This ensured a focus on programme, project or intervention-based studies with the systematic review. Further refinement by study quality identified 61 articles for a more thorough conceptual analysis. Details on search terms, screening criteria, a visual schematic of the approach, and the selected articles can be found in the [Supplementary material](#).

Our analysis utilised two distinct lenses, drawing on methods from the digital humanities that rely on processes of distant and close readings to better understand a corpus of literature (Burdick 2012). Our first lens engaged with a distant reading analysis (Moretti 2013) of 150 articles to identify patterns and trends by coding and visualising the literature based on titles and abstracts.¹ These codes included bibliographic, methodological, contextual and conceptual aspects. Our second lens used a process of inductive content analysis focusing on the unique conceptualisations of gendered change within 61 articles. In parallel, we conducted a co-citation analysis (using VOSViewer) to triangulate and situate these emerging insights concerning the foundational theories and theorists. We then engaged with these foundational texts to enrich our understanding of how the conceptualisations have been applied to relevant studies and the implications of these applications.

This study should be interpreted within the context of its operational boundaries and limitations. These limitations reflect the complexity of the topic and the iterative challenge in drawing practical boundaries around a systematic review. The study was focussed on assessments alongside interventions, and therefore covered a breadth of sectors and methodologies. The practical foci on the English language and on academically published literature over grey literature are also limitations. These linguistic and academic-focussed limitations preclude a full picture of the sector, and this study would be complemented by future analyses of more diverse material. Formal evaluations of interventions that are required by donor organisations were also excluded, as they are much less accessible and comparable.

Finally, to identify a practical number of studies, the search terms were narrowed early in the review, excluding possibly relevant terms including female, male, children, confidence, esteem and participation. We recommend that future studies explore research in different languages, grey literature, evaluations, assessments and/or conference proceedings to enrich our findings.

Trends in assessing gendered change

By conducting a distant reading analysis of 150 articles, we explored the current trends and themes within a broader corpus of gender and development literature. Our analysis generated an alluvial chart, as seen in Figure 1, which shows the relative proportions of pertinent themes within the articles. The analysis fields are grouped into four broad sets of study characteristics, as identified at the top of the figure (and reading from left to right): bibliographic, methodological, contextual and conceptual aspects. An almost seven-fold increase in the annual number of publications over the decade of analysis highlights the growing interest in gendered change in international development interventions. Articles were published in a wide range of journals, with a breadth of disciplinary backgrounds and intervention sectors indicating the diversity of researchers focussing on the topic of gender equality, but also signifying the potential risk of disparate and disconnected conceptualisations. The studies were from 108 unique journals, 86 of which contain only one relevant article. Journals were most commonly within the disciplines of development (12 unique journals), public health (16), gender studies (nine) and geography (10).

Although previous literature reviews have indicated a stronger prevalence of quantitative literature (Bamberger and Podems 2002; Malhotra, Schuler, and Boender 2002; Perezniето and Taylor 2014), our analysis indicates that qualitative approaches are gaining popularity for programme-based studies. Of the sample, 40% were qualitative, 40% quantitative and

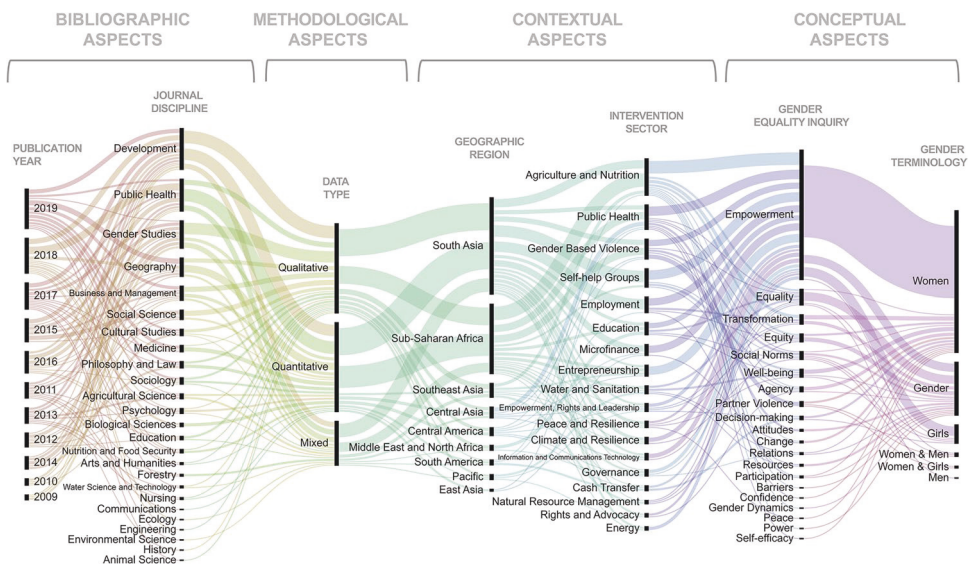


Figure 1. Alluvial visualisation of gendered change landscape (n = 150).

20% used mixed data collection. The number of qualitative and mixed-method studies could be a response to the 'frequently criticized ... more quantitative, economic analysis-focused research methods used by bilateral and multilateral development' (Bamberger and Podems 2002, 84).

The reviewed studies engaged a diversity of intervention sectors, but a relatively narrow geographic scope. Interventions were widespread, with the largest groupings in agriculture and nutrition (17%), public health (11%), women's groups (9%), violence prevention (8%) and employment (7%). Other sectors such as water and sanitation, energy, information and communication technologies, microfinance, entrepreneurship and climate resilience also featured. As the number of studies increased over time, so did the breath of interventions, from three types in 2009 to 12 in 2019. Geographically, the studies were spread over 46 countries and clustered in South Asia (43%) and sub-Saharan Africa (31%). Of the papers focussed in South Asia, 22% of the sample ($n = 150$) were from India, 6% from Bangladesh and 6% from Nepal. The papers from sub-Saharan Africa were more dispersed, across Kenya (5% of the total 150), Tanzania (4%), Uganda (4%), South Africa (3%), Ethiopia (3%) and Nigeria (3%). This geographic clustering broadly aligns with donor spending over the decade (OECD 2019). Areas such as North Africa, Southeast Asia, Central America and South America are less common foci within the wider development literature (Malhotra, Schuler, and Boender 2002). It also aligns with academic publication trends in which India represents 3.5% of global scientific publishing and is the only developing country to feature on the top 20 publishing countries list (OECD 2015). With gender equality requiring constructed and contextual definitions (Richardson 2018), this underrepresentation could have significant impacts on interventions and investigations.

Lastly, the majority of investigations were focussed on women and empowerment. Nearly two-thirds (63%) of the articles focussed solely on women, and 58% of studies utilised empowerment as the key gender inquiry (as articulated in the title or abstract). Other important inquiries of gendered change were much less visible in the sample. For instance, 'gender equality' (7%) more broadly, transformation (5%), gender norms (4%), well-being (4%) and gender equity (4%) together only made up a quarter of the sample. Very few articles addressed girls or men, while not a single article focussed on boys. Articles that did focus on men tended to explore themes of hegemonic masculinity and violence but did not review changes in men's perspective on gender equality more broadly. This narrow framing of gender equality as women's empowerment does not engage holistically with gendered change, excludes men and boys, and avoids the complexity of gender relations.

Conceptualisations of gendered change

Our second analytical lens revealed four main conceptualisations of gendered change, drawing on inductive content analysis and co-citation analysis. These conceptualisations highlight the expansions and extensions of empowerment thinking within programmes focussed on academic research. Figure 2 displays these theoretical clusters through the co-citation of referenced authors using VOSviewer (van Eck and Waltman 2014). The clusters and their relevant conceptual foci are: (1) human development (individual capability); (2) economic development (household resources); (3) psychology and development (individual mindsets); and (4) feminist development (societal transformations). We mapped the network of citations

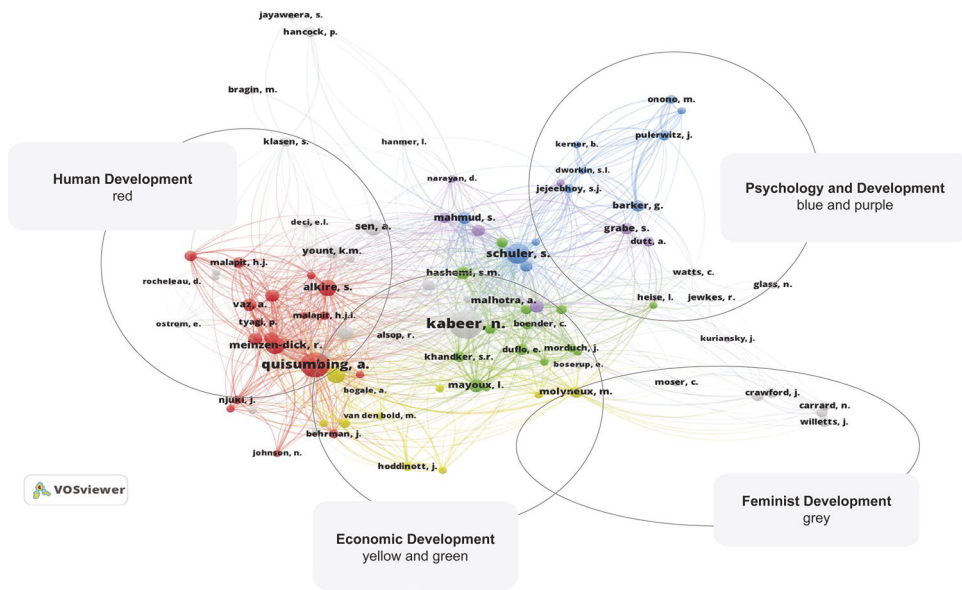


Figure 2. Co-citation network map of sampled studies ($n = 61$).

($n = 61$ articles), identifying 97 authors and theorists who influence gender equality inquiries in development.²

Enriching the four clusters identified from the network analysis, [Table 2](#) reviews key foundational theorists (in the far left column), definitions of change and key literature for further reading. Following the visual and table, we introduce each cluster with consideration to its conceptual foundations, provide a description of the cluster's salience within the 2009–2019 literature, and reflect critically on the strengths and limitations of each cluster. While the four clusters are interconnected and not mutually exclusive, each draws from a unique body of literature and has a distinct approach to the conceptualisation of gendered change.

The assessed interventions and the identified theoretical foundations occur in different temporal stages, with interventions taking place between 2009 and 2019 and the theoretical foundations primarily occurring before 2009. Additionally, the bulk of foundational theories arise shortly before and after the Beijing Platform for Action in 1995, reinforcing the importance of the event for the sector. In light of this, several foundational authors, such as Kabeer, Sen and Malhotra, were cited in multiple clusters and therefore had grey nodes in the analysis ([Figure 2](#)). Uniquely, Kabeer has foundational texts in feminist development (Kabeer 1994), economic development (Kabeer 2001), and human development (Kabeer 1999), illustrating Kabeer's broad influence in the gender and development space.

Human development – individual capability

The first conceptualisation cluster, human development, was strongly associated with the capability approach as articulated by Sen (1992) and Nussbaum (2000). Drawing from the Aristotelian concept of the flourishing life, the capability approach identifies gender inequalities as philosophically counter to holistic human flourishing (Nussbaum 2000). The approach, described by Robeyns (2005), is not meant to be a theory per se; rather, it is a framework to

Table 2. Dominant conceptualisations of gendered change in sample studies (n = 61).

Theoretical cluster	Focus	Definition of gendered change	Key literature
Human Development (Nussbaum 2000; Robeyns 2005; Sen 1992)	Individual capability	Changes in 'empowerment focus not only upon the person's freedom to act, but upon the concrete material, social and institutional preconditions required to exert agency' (Ibrahim and Alkire 2007, 385), leading to flourishing lives (Nussbaum 2000).	(Ibrahim and Alkire 2007)
		'[E]mpowerment is about change, it refers to the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them' (Kabeer 1999, 437).	(Kabeer 1999)
Economic development (Boserup 1970; Duflo 2012; Qisumbing and Maluccio 1999)	Household resources	Changes in 'production and consumption decisions in household allocation ... inform the determinants of household decision-making processes' (Bonilla et al. 2017, 56; see also Doss 2013).	(Duflo 2012; Kabeer 2001)
		Changes 'aim not only to increase the incomes, but also the bargaining power, of poor producers through group activities' leading to empowerment (Mayoux 1995, 4).	(Hashemi, Schuler, and Riley 1996; Mayoux 1995)
Psychology and development (Bandura 1989; Freire 1970; Zimmerman 1990)	Individual mindsets	'Changes in attitudes toward gender norms ... those related to intimate relationships, sexual and reproductive health, and disease and violence prevention' (Pulerwitz and Barker 2008, 324).	(Pulerwitz and Barker 2008)
		Both changes in gender power relations and 'changes in the norms of masculinity with which IPV [intimate partner violence] is typically associated' (Schuler, Field, and Bernholc 2018, 670).	(Glick et al. 2000; Jejeebhoy 1995)
		'[P]sychological processes of empowerment such as self-capacity, agency, control and competence accompany the opening up of mental spaces' (Eger, Miller, and Scarles 2018, 209).	(Cattaneo and Chapman 2010)
Feminist development (Kabeer 1994; Molyneux 1985; Moser 1993)	Societal transformations	Changes that engage with both practical gender needs and strategic gender interests that challenge oppressive gender structures (Molyneux 1985; Moser 1993).	(Batliwala 1993; Rowlands 1997)
		Changes in the performance and negotiations of gender roles and gender relationships as expressed through changing space and resources (Van Houweling 2015).	(McDowell 1999)
		Changes in local power dynamics, 'rules, norms, perceptions and endowments in a gender-progressive direction' (Agarwal 2001, 1641), primarily through equitable participation in governance.	(Agarwal 2001, 1997; Cleaver 1998)

help conceptualise and evaluate the phenomena of poverty, inequality and well-being. In the framework, well-being, justice and development are understood through people's capability to function as enabled by freedom of choice. As such, the capability approach focusses on individuals. The approach has a long history of engagement with gender inequality and entered the discourse of empowerment through Kabeer's foundational work defining women's empowerment in 1999.

Within the selected articles (n = 61), 18 studies were most closely aligned with the human development approach. Kabeer's framing of empowerment as three interrelated dimensions

of resources, agency and achievements remained the most-cited theoretical framework within our sample, with 12 studies utilising the framework to conceptualise gendered change and 26 studies citing the work. Kabeer's resources and agency explicitly draw from Sen's conceptualisation of capabilities (Kabeer 1999, 438). Although aspects of agency and critical consciousness have been included in several studies (Burney et al. 2017; Gram et al. 2018b; O'Hara and Clement 2018), those articles more often focus on resources or outcomes, as these are more straightforward to measure, missing critical process and agency dynamics (as articulated by Garikipati 2013; Kabeer 2019).

Turning now to critical reflection, the capability approach can be challenging to understand, and many concepts have layered meanings as expressed through processes, outcomes, capabilities and functionings. This leads some authors to engage lightly with the concepts and often utilise more easily identifiable aspects of the approach, such as the three pillars of Kabeer's empowerment. While useful to capture the essence of empowerment, much of the depth and nuance remains lost in the analyses, often with only a statement of the three pillars or a brief definition, a challenge also identified by Batliwala (2007). The approach's focus on the individual can also exclude relevant and important aspects of collective agency and action, which are highlighted by academics seeking to expand empowerment (Batliwala 2007). Researchers who draw on the capability approach could benefit from greater consideration of collective forms of change and reflection on possible reductionism due to complex philosophical underpinnings.

Economic development – household resources

The second cluster focussed on the economic aspects of gender equality, a contrast to the objective of human flourishing found in the human development approach. The cluster is built on Boserup's (1970) foundational text on the economic interaction of women in development. Her efforts ultimately identified that economic burdens fall disproportionately on women. Boserup's work was foundational to the field of WID, which employed principles of welfare, equity, anti-poverty and efficiency to connect economic and women's development (Moser 1993). Early connections between economics and gender in development come from studies connecting microfinance with women's empowerment (Mayoux 1995; Hashemi, Schuler, and Riley 1996) and intrahousehold allocation and control of assets (Quisumbing and Maluccio 1999).

Represented in 11 studies within our sample, the economic development approach is most closely linked with microfinance, cash transfer programmes and intra-household decision-making. Today this conceptualisation often focusses on empowerment through 'smart economics' and has left its roots of welfare, equity and efficiency. As Duflo argues, '[t]here is a bidirectional relationship between economic development and women's empowerment defined as improving the ability of women to access the constituents of development – in particular health, education, earning opportunities, rights and political development ... empowerment can accelerate development' (Duflo 2012, 1053).

Reflecting critically, the economic development approach is often critiqued by the feminist development approach for being instrumentalist – utilising women as instruments leading into a broader development agenda and focussing on individual- and household-level indicators (Chant and Sweetman 2012). Within our sample, economic development studies concentrated on outcomes for individuals and households through indicators of control or decision-making as measured through large surveys (see Bonilla

et al. 2017; de Brauw et al. 2014; Huis et al. 2019). Such studies use standardised indicators and prioritise comparability across geographies. They also exclude structural, cognitive and collective aspects associated with feminist forms of empowerment and equality.

Psychology and development – individual mindsets

The third cluster of conceptualisations was associated with constructs of empowerment from psychology and, more recently, public health. The cluster was less connected, both externally from the core literature on gender equality and internally within the cluster. Early work by Rappaport (1987) and Zimmerman (1990) drew from Friere's (1970) concept of conscientisation or critical understanding of one's environment. Concurrently, Bandura's (1989) concept of self-efficacy explored belief in one's own capability to complete actions, while Diener (1984) codified aspects of subjective well-being. Cattaneo and Chapman (2010) connected these concepts in a process model of empowerment, which explored aspects of 'personally meaningful and power-oriented goals, self-efficacy, knowledge, competence, action, and impact' (646). While none of these concepts were explicitly designed for women, they have recently been applied to explore aspects of women's empowerment in the development context, as seen within our sample (see de Hoop et al. 2014; Eger, Miller, and Scarles 2018; Grabe 2012).

Complementary to but disconnected from psychological approaches in the mid-1990s, researchers including Schuler and Hashemi (Hashemi, Schuler, and Riley 1996; Schuler et al. 1996; Schuler and Hashemi 1994) published a series of articles connecting micro-credit, contraceptive use and violence against women. These articles launched a sub-cluster of literature reviewing gendered power and violence with a specific focus on South Asia and South Africa. The literature often considered aspects of reproductive health and behaviour (Jejeebhoy 1995). Recent research has continued to expand this into conceptualisations of masculinity and sexism (Glick et al. 2000; Jewkes et al. 2017; Shefer 2014) and measures of gender-equitable attitudes (Pulerwitz and Barker 2008).

The psychology and development cluster contained 12 articles within our sample, over three sub-clusters: gender-equitable attitudes (Glass et al. 2019; Newmann et al. 2016), power and violence (Schuler, Field, and Bernholc 2018), and psychological empowerment (Bragin et al. 2015; de Hoop et al. 2014; Eger, Miller, and Scarles 2018; Grabe 2012). The studies focussed on women or male–female intimate partnerships and was the only subset of the literature that framed aspects of gendered change unfavourably – for example, hegemonic masculinity, insecurity, distress and violence.

The psychological approach is broadly separate from the ongoing dialogue of gender and development, and the depth and nuance given to empowerment-related themes within psychology show a significant expansion of gender equality ideas. Concepts such self-efficacy, autonomy and behaviour open a wealth of knowledge to the GAD space. However, the focus on changing individual beliefs, attitudes and mindsets, as in Cattaneo and Chapman (2010), may overlook the communal and collective forms of change inherent in the GAD formulation. The studies also, by focussing on the individual mind, separate gendered outcomes from social structures.

Feminist development – societal transformations

The fourth cluster represents a wave of feminist philosophers and practitioners ushered into the international development space by Molyneux (1985) and the work of DAWN (Sen and Grown 1987). These early writings focussed on women's mobilisation and emancipation as a pathway to overcome 'sexual inequalities' in the developing world, often for and by women in the South. Moser (1993) built on Molyneux's delineation between practical and strategic gender interests and helped to solidify the sectoral shift to a GAD approach. In parallel, influential feminists Kabeer (1994) and Batliwala (1993) drew on their personal perspectives to shape conceptualisations of empowerment centred around the value of women in society. These conceptualisations recognised the value of 'informed choice within an expanding framework of information, knowledge and analysis' (Batliwala 1993, 7). Rowland's (1997) work in Honduras helped to establish personal, relational and collective aspects of this perspective, which broadened traditional definitions. The feminist concepts in Rowland's work were politically motivated towards justice and rights. It leveraged concepts of collective empowerment towards radical societal transformations.

Similarly inspired by feminist philosophy, researchers in geography, political economy and natural resource management established parallel approaches, adopting feminist principles towards equality in gender roles and equity of participation. Agarwal (1997) and Cleaver (1998) explored the equitable participation of women with regards to land rights, forestry and water governance, utilising conceptualisations of collective action for governing common-pool resources. These studies investigated the inclusion and representation of women for better governance outcomes that move beyond nominal and passive participation to interactive and empowering participation (Agarwal 2001) with voice and influence over group decisions. In a similar manner, geographers such as McDowell (1999) expanded feminist theory to explore how gender norms are negotiated in dynamic physical spaces – gendered space.

Although less well represented within the network map, feminist development theory has shaped 17 articles within our sample of literature over aspects of governance, geography and gender roles. While the articles pull from a variety of conceptual frameworks and illustrative cases, they all draw from common formative texts (such as Kabeer 1994; Molyneux 1985; Moser 1993; Rowlands 1997, 1995) and express an objective to challenge gender inequalities through the emancipation of women.

Reflecting critically, feminist approaches are inherently laden with political nuance and values about the role of women within society, which brings strengths and challenges to their application in the evaluation of development interventions. Cornwall and Rivas (2015) argue that terms such as empowerment and equality 'have been eviscerated of conceptual and political bite' (396), in their reflection on how non-feminist related development work has treated these concepts first introduced by feminists. There is also ongoing debate about the universality of western conceptualisations of women's rights and gender equality, especially in traditionally communal cultures. Western feminists have been critiqued for introducing Western feminist ideologies that can be insensitive to family structures and the roles of women. Additionally, even the concept of 'feminism' can be difficult for mainstream programming to adopt, with several feminist practitioners identifying resistance to the use of the word 'feminist' for political reasons (Bamberger and Podems 2002). Longwe (1997)

describes this as the 'evaporation of gender policies in a patriarchal cooking pot' (148). While feminist approaches can utilise simple techniques to identify gendered roles, responsibilities and relations, true transformative change is harder to implement and evaluate due to the complexity of non-linear processes and extended time frames beyond projects (Moser 1993).

Implications for strengthening the assessment of gendered change

Insights from the analysis presented in this literature review on programme-based assessments for gendered change reveal opportunities for future studies to take a more reflexive approach, such that they can be explicitly informed by – rather than implicitly shaped by – their underlying conceptualisations. We explore three such opportunities.

Clarifying theoretical conceptualisations

Expanding the notion of reflexive practice to conceptualisations of gendered change, our review identified that the majority of studies have not overtly reflected on how theoretical foundations shape their investigations. Of particular significance is the dilution of the concept of 'empowerment' when viewed from a feminist perspective. Introduced by feminists into development practice, development practitioners such as Batliwala, Cornwall and Cleaver have all expressed concern that the concept of empowerment has been 'diffused' and 'diluted' (Batliwala 2007; Cornwall and Brock 2005). As far back as 1999, Cleaver warned that 'as "empowerment" has become a buzzword in development, an essential objective of participation, its radical, challenging and transformatory edge has been lost' (Cleaver 1999, 599). Empowerment remains the most common gender equality concept across all studies and all four conceptualisations of gendered change. The majority of empowerment definitions found within our study are more aligned with an individual and depoliticalised idea of empowerment. Several articles from the first analysis utilised empowerment only in the title or abstract as a signifier, without ever defining or clarifying what is meant by the term.

There are several dynamics that elucidate this conceptual dilution, and an exploration of these themes through structural and feminist lenses can support researchers to distil instead of dilute. First, knowledge production is inherently political and there is a tendency towards incentive structures that privilege particular theoretical approaches, which may be more easily adopted by civil society and donors (Batliwala 2007; Bedford 2009; Cornwall and Brock 2005). For example, the World Bank's use of economic forms of empowerment has continued to dominate certain circles (Bedford 2009; Prugl 2017), while individual-focussed human development measures dominate others (Hancock 2010). The influence of donor or institutional politics can lead to the inclusion or even exclusion of particular bodies of knowledge (Bedford 2009). However, Prügl (2015) argues that although some aspects are lost in this marriage of feminist thinking and sectoral knowledge, there can also be emergent conceptualisations, such as the extrapolation of empowered women as 'responsible selves' and 'internally driven' (626). Second, there has been multiplication in the breadth of disciplines now exploring these feminist themes. Each discipline comes with differing epistemological

and ontological perspectives and arenas of interests. Lastly, and perhaps most pragmatically, measuring change is inherently complex and requires some form of conceptual simplification. Each of these dynamics comes with innate risks and must be grounded in the research question driving the studies. Nonetheless, looking back to the initial intent of the GAD paradigm, stronger researcher engagement with underlying feminist concepts could temper the tendency to dilute the transformational nature of empowerment and wider gender equality agendas.

Moving to gender transformations

As the sector continues to evolve, many feminist practitioners have articulated a shift in focus from individual empowerment to structural transformations in society (Cornwall and Rivas 2015) and within the process of research itself (Mertens 2010). This shift is more closely aligned to the original framing in the Beijing Platform for Action and supported by organisations like DAWN. This transformational perspective requires an evolution of the methods, theories and themes used to measure gendered change. However, the focus of gender equality inquiries within the studies remained narrow from 2009 to 2019. For example, the strong reliance on decision-making within the surveyed studies reflects an individual empowerment perspective – placing the burden of change on women. While decision-making remains important within conceptualisations of empowerment, there is a need for further ‘sophistication’ in decision-making indicators as reflected within structural dynamics (White 2015).

Several studies leveraged transformational themes through (1) a revival of more radical concepts first connected to the gender and development sector and now situated as part of the gender transformations discourse, and (2) the emergence of newly identified domains of inquiry. Three aspects historically associated with gendered change that have been more recently overlooked could usefully be reintroduced: (1) critical consciousness, (2) collective action and (3) structural gender norms. On the first of these, Freire’s (1970) concept of conscientisation – also known as power-within or critical consciousness (Rowlands 1997) – was found in several recent studies within the sample (Kantor, Morgan, and Choudhury 2015; O’Hara and Clement 2018). Secondly, collective action or power-with engages with the connected and collaborative nature of working together for gendered change and critiques the individualistic nature of many common indicators (Gram, Morrison, and Skordis-Worrall 2018a; Kantor, Morgan, and Choudhury 2015; Rowlands 1997). Lastly, re-engaging with the social relations and structural norms of gendered change could support a more critical and systematic perspective through activities such as a historical timeline of gender trends and ‘body maps’ of gendered norms (Hillenbrand et al. 2014; Kabeer 1994). Additionally, the introduction of new dimensions of gender equality, which challenge power dynamics related to physical space (Van Houweling 2015) and subjective definitions of well-being and empowerment (Bragin et al. 2015; de Hoop et al. 2014; Price et al. 2018), offer novel conceptions that broaden typical themes.

Lastly, in academic practice researchers are becoming more attuned to the transformative potential of the process of research (Mertens 2010). Within the reviewed studies, approaches to community engagement in policy, practice and academic research were not always aligned. For example, some highly participatory programmes within wider organisational and government strategies towards girls’ empowerment were researched in a quantitative, survey-based manner. A dialogue about alignment between policy, programme and

assessment modalities based on transformative research could inspire creativity and lead to further social change through research and assessments.

Including men and boys and embracing diversity

To holistically address the underlying perceptions and power structures that shape gender equality, studies must address the experiences and perspectives of men and boys, and ideally expand to a more nuanced understanding of gender. Very few articles engaged with gender dynamics more broadly, or with men and boys more directly. The majority of studies focussed on women and girls but did not take the conceptual leap to include a discussion of strategic gender challenges and the relationships between different types of men and women (age, social-economic class, caste, race, etc.). Inclusion of men was either (1) with regards to intra-household dynamics around resources and decision-making, or (2) focussed on gender-based violence and hegemonic masculinity. Gender relations were almost exclusively focussed on intimate heterosexual partnerships and excluded any relations such as mother and son, daughter-in-law and mother-in-law, or employee–employer relationships. Similarly, the articles maintain a gender binary and do not reflect a more nuanced approach to gender relations, unlike emerging development literature (see for example Boyce et al. 2018). These trends were identified 20 years ago, in a dialogue of the missing men and myopic approach to gender in the GAD discourse (Cornwall 2000). While the focus on men was limited, boys were entirely absent from mention in the sampled articles. Considering these gaps, expanding the focus of studies to include different interpersonal relationships, men and boys, and thinking beyond a gender binary would prompt a more rounded perspective on gendered change and enable deeper engagement with the structural power dynamics that drive gender (in)equality.

Conclusion

This systematic review of academic literature explored the last decade (2009–2019) of gender equality investigations concerning development interventions, with a focus on sectoral trends and conceptual frameworks. We identified an increasing interest around the topic within the literature, a diversity of disciplinary perspectives, a balance between quantitative and qualitative approaches, a strong focus on South Asia and sub-Saharan Africa, and a narrow focus on women’s empowerment. The study also identified four theoretical conceptualisations of gendered change in this body of literature: human development, economic development, feminist development, and psychology and development.

We assert the importance of researcher familiarity with theoretical foundations and argue for conceptual integrity. We recognise the challenge of selecting domains of inquiry for a given study but suggest that stronger conceptual foundations can aid in this process. Lastly, we recommend that researchers review the types of people who are engaged within the studies, given that gender equality cannot be fully investigated through a sole focus on women. Researchers assessing gendered change have an embedded responsibility to reflect upon the implications of their conceptualisations of change. We advocate for thoughtful and reflexive studies that respond to the complexity of dynamic, subjective, intersectional, and contextual gendered change.

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Notes on contributors

Jess MacArthur is a doctoral student at the Institute for Sustainable Futures, focussed on innovating ways to measure how women are impacted by water and sanitation programming in South and Southeast Asia. She specialises in the use of design thinking to impact programme strategy and market systems. Prior to this role, she was a Director of Programs at iDE in Bangladesh where she focussed on water, sanitation and hygiene; women's empowerment; and nutrition. She trained as a chemical engineer and holds an MSc in water science, policy and development from the University of Oxford. She also has nine years of experience in WASH and education projects in South Asia, sub-Saharan Africa, Central Asia and Southeast Asia.

Naomi Carrard is Research Director at the Institute for Sustainable Futures, specialising in applied research to inform policy and practice in water, sanitation and hygiene (WASH), with a primary focus on the Asia and Pacific regions. She has qualifications in environmental law and geography, and 15 years' experience working in WASH, water resource management and development effectiveness. Since joining ISF in 2006, Naomi has led and contributed to research in areas of WASH policy and programming, gender equality, civil society's role in development, urban infrastructure and climate change adaptation. She focusses on work that integrates technical, environmental, economic and social aspects of development and resource management.

Juliet Willetts leads applied research to improve development policy and practice and to address social justice and sustainable development, including the achievement of the global Sustainable Development Goals. She is a recognised expert in the field of water and sanitation in developing country contexts, and also works on issues related to gender equality, civil society's role in development, governance and accountability, climate change, urban development, monitoring, evaluation and development effectiveness more broadly. In 2018 she was recognised as one of the Australian Financial Review's 100 Women of Influence.

Notes

1. For more complex studies, the full article was analysed to ensure clarity of coding.
2. Authors who had at least five citations were included in the network diagram. For papers with multiple authors, each author was counted fractionally. Larger nodes indicate more citations, and thicker lines indicate closer connections.

ORCID

Jess MacArthur  <http://orcid.org/0000-0002-6645-5767>

Naomi Carrard  <http://orcid.org/0000-0002-3371-9113>

Juliet Willetts  <http://orcid.org/0000-0002-3975-9642>

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3.3 Paper II – WASH and Gender: A critical review of the literature and implications for gender-transformative WASH research

Paper II has been published in the *Journal of Water, Sanitation and Hygiene for Development* and is open access online at <https://doi.org/10.2166/washdev.2020.232>. The article answers the following research question: *How has the WASH sector historically addressed gender equality as seen in published academic literature?*

It is important to note that this work distinguishes between ‘changing individual identities’ and the gender-transformative approach to development practice. The former referring to trans-gender topics and issues, and the latter related to development practices and initiatives.

Review Paper

WASH and Gender: a critical review of the literature and implications for gender-transformative WASH research

Jess MacArthur, Naomi Carrard  and Juliet Willetts


ABSTRACT

The connections between gender and water, sanitation, and hygiene (WASH) are profound, and the sector is beginning to explore the integration of gender-transformative principles into WASH programming and research. Gender-transformative approaches challenge inequalities and move beyond an instrumentalist approach to gender in development interventions. Through a critical review of academic empirical studies, this paper explores the last decade of WASH-gender literature (2008–2018). Trends were visualised using an alluvial diagram. The reviewed literature was underpinned by a diversity of disciplines, yet was dominated by women-focused, water-focused studies. Although the studies addressed many important gender considerations, few studies engaged with transformational aspects of gender equality. The majority of the studies were based in rural sub-Saharan Africa and South Asia, indicating opportunity to explore contextual dynamics in other areas of the global south. Lastly, the studies primarily focus on women of productive age; only a few studies touched on gender dynamics relevant for a diversity of women, and men and boys were mostly absent. Insights from this analysis can inform future studies at the intersection of WASH and gender. Researchers and practitioners are encouraged to include a diversity of voices, reflect on the strengths and limitations of research disciplines, and incorporate gender-transformative concepts.

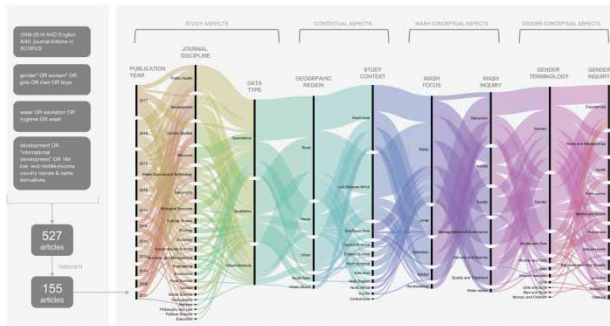
Key words | gender equality, gender-transformative, sanitation, transformative research, WASH, water

HIGHLIGHTS

- Innovative analysis methods explore the last decade of academic literature in the WASH-gender nexus ($n = 155$).
- Literature is water-focused in rural sub-Saharan Africa and South Asia.
- Men and boys feature in just 3% of studies.
- Literature is from 92 journals and 22 disciplines, highlighting the need for interconnections to avoid instrumentalism.
- Future studies can strengthen transformative research through participatory and mixed approaches.

Jess MacArthur (corresponding author)
 Naomi Carrard 
 Juliet Willetts
 Institute for Sustainable Futures, University of
 Technology Sydney,
 Building 10, 235 Jones St, Ultimo NSW 2007,
 Australia
 E-mail: jessica.macarthur@uts.edu.au

GRAPHICAL ABSTRACT



INTRODUCTION

This paper explores how empirical studies on water, sanitation, and hygiene (WASH) over the last decade have engaged with gender equality. Although many aspects of WASH have long been acknowledged to be gendered, such as water collection, cooking, cleaning, and childcare (White *et al.* 1972), the historical focus on engineered solutions in WASH has limited the sector's attention to gender (Willets *et al.* 2010). More recently, there is emerging recognition in the sector that bridging practical gender needs (e.g. access to water) with strategic gender interests (e.g. changes in power and roles) is critical to achieving transformational changes in gender equality (Carrard *et al.* 2013). We adopt a phrasing of 'gender equality' to reflect the Sustainable Development Goals (Stephens *et al.* 2018) and conceptualise equity and empowerment as pathways to equality. With growing awareness of the centrality of gender equality in WASH, it is timely for the sector to reflect on the extent and scope of empirical research. In particular, there is opportunity to explore how the sector engages with emerging concepts of gender transformation, which are characterised by themes such as power, roles, and responsibilities in the context of inclusion, accountability, and non-discrimination (Cornwall & Rivas 2015).

Improvements in WASH have important consequences for all individuals but are perhaps even more significant for women and girls (Fisher *et al.* 2017). Aspects such as well-being, status in society, health, education, and safety remain critical to WASH-gender research (Fisher 2006). Literature

speaks to four reasons for engaging with gender in WASH research and programming: the inherent challenges faced by women and girls; the integral role of women and girls in WASH; instrumental objectives; and ideological foundations. Firstly, women and girls have inherent biological challenges when it comes to water and sanitation including the physical acts of urination and defaecation, as well as complexities related to menstruation and pregnancy (Caruso *et al.* 2017; Fisher *et al.* 2017; Hennegan *et al.* 2019). Secondly, the integral social and structural responsibilities for household WASH are closely related to the traditional roles of women and girls including water collection, cooking, cleaning, and childcare (White *et al.* 1972; Fisher *et al.* 2017). Thirdly, gender-focused WASH programming can be seen as helpful for achieving programme sustainability, economic gains, improved health, and improved economic livelihoods (Fisher *et al.* 2017). In such programmes, a focus on women is seen as a means to an end. Lastly, there is a moral imperative to address gender equality in development programming as an objective in itself, which has emerged from feminist, social, and religious philosophies about the significance of gender equality (Kabeer 1994; Willets *et al.* 2010; Carrard *et al.* 2013).

Reflections of the instrumental, integral, inherent, and ideological motivations within the WASH and gender discourse reveals evolution in thinking. There is a growing appeal to move beyond *instrumental* motives, towards a practice that supports *inherent* needs, while aiming to

transform the *integral* roles of women and girls by embracing a transformative *ideological* imperative (Willets et al. 2010; Fisher et al. 2017; Sweetman & Medland 2017). Research-based on an ideological imperative is more likely to be *gender-transformative*, seeking to bridge practical gender needs – such as access to water or sanitation – with strategic gender interests – including changes in power, status, and societal structures (Moser 1989; Kabeer 1994). Leveraging examples from the agriculture and health sectors, gender-transformative thinking asserts that research and practice can and should ‘contribute to change in gender relations in wider society’ (Sweetman & Medland 2017, p. 159). Such research explores transformative *concepts* such as structures, agency and relations; values a diversity of *voices*; and utilises cross-disciplinary, participatory, and change-oriented *approaches* (Mertens 2009; Hillenbrand et al. 2015; Mullinax et al. 2018).

The International Decade for Women (1976–1985) and the International Decade for Water and Sanitation (1981–1990) overlapped from 1981 to 1985, catalysing the first WASH-gender research nexus – a body of work exploring the interconnections between WASH research and studies in gender equality. Early WASH-gender studies focused on women’s roles as users, managers, and change agents within water collection, utilisation, and management (White et al. 1972; Elmendorf & Isely 1981). Re-engaging with this historical interest and focused on gender-WASH dynamics, Fisher et al. (2017) analysed conference proceedings, observing the evolution of the WASH sector with regard to women, gender, and equity, ultimately concluding that the WASH sector has embraced women’s interests. Recently, Dery et al. (2019) also explored empowerment within WASH from global health literature, identifying five WASH-relevant elements of empowerment: participation, decision-making, information, capacity building, and leadership.

This study builds on and extends these analyses by investigating trends over the last decade of published WASH-gender empirical studies, providing an opportunity to review and reflect on the WASH-gender nexus. We present findings from a literature review utilising methods from the digital humanities, namely distant reading and visualisation techniques, to identify trends and themes in the literature. First, we describe the approach and introduce nine analysis

fields used to categorise the reviewed literature. We then present findings in a visual form with interpretive text. Finally, we identify and discuss six insights arising from the analysis that can support future research into, and implementation of, gender-transformative WASH.

METHODS

To examine trends in current gender-related empirical research in the WASH sector, this study mapped and thematically analysed WASH and gender academic articles. Literature from 2008 to 2018 was identified through the Scopus database with a focus on international development contexts (164 low- and middle-income countries), gender (gender OR women OR girls OR men OR boys), and WASH (water OR sanitation OR hygiene OR wash). The database search identified 527 unique articles, of which 155 were selected after removing irrelevant and non-empirical studies.

Drawing from the digital humanities, the study utilised distant reading analysis, a technique for aggregating and analysing a large set of texts by coding titles and abstracts to identify themes and gaps. The digital humanities leverage digital technologies and data visualisation to study literature and culture (Kirschenbaum 2010). Conventionally, distant reading analysis utilises computer processes, including text and topical analysis to help explore patterns of information that are difficult for traditional analysis (Kirschenbaum 2010). It is often used in literature and the arts to study a large corpus of literature. The approach is also useful in exploring a body of academic literature, enabling observation of trends and patterns across a broader set of texts than would be feasible with a closer-reading approach.

We coded trends and themes for nine analysis fields: year of publication; journal discipline; data type; geographic region; study context; primary focus on water, sanitation or hygiene; aspect of WASH investigated; aspect of gender investigated by the study; and terminology used to describe the individuals being considered. These terms are defined in Table 1. The full codebook can be found in the Supplementary Material.

Results from coding were visualised in an alluvial diagram to display a series of relative proportions. Trends

Table 1 | Definitions of key analysis terms

Analysis terms	Definition
Publication Year	Year in which the study was published in an academic journal.
Journal Discipline	The discipline of the journal in which the study was published as per the CiteScore 2017 academic journal metrics. If the journal crossed multiple disciplines, the most relevant discipline was selected.
Data Type	The primary type of data used in the study. For example, qualitative, quantitative, or mixed-methods.
Geographic Region	The global region in which the study is located.
Study Context	The geographic context in which the study takes place. For example, urban or rural.
WASH Focus	The primary focus of the study across water, sanitation, hygiene, and menstrual hygiene management (MHM).
WASH Inquiry	The central aspect of WASH provision or management investigated by the study, for example <i>behaviour</i> , <i>access</i> , and <i>supply</i> .
Gender Terminology	The terminology used by researchers to describe the individuals or groups being studied. For example, men or women. The category of 'gender' is applied when 'gender' is used in the abstract or title, and there is no specific discussion of a particular gender type. In this article, a heteronormative and binary framing of gender is dominant, reflecting terminology used in the 155 articles surveyed.
Gender Inquiry	How gender intersects or impacts WASH. For example, women's <i>health</i> outcomes, <i>participation</i> in committees, <i>experiences</i> of menstruation, or handwashing <i>practices</i> .

identified in the alluvial diagram were then considered with reference to wider gender and development literature, drawing from a parallel review of assessments of a gendered change in international development interventions to identify insights and implications relevant for the WASH sector.

Findings of the study should be interpreted with reference to limitations associated with the distant reading approach and the scope of literature reviewed. First, the analysis explored the English academic literature, excluding grey literature, literature in other languages, and conference proceedings. The decision to focus on the academic literature

was justified to ensure a manageable scope, enable the use of databases with known inclusion criteria, and in the knowledge that academic research plays an important role informing both research and practice. Second, reflecting dominant discourse in the existing literature, the review adopts a binary and heteronormative conception of gender, which we hope will be complemented by more inclusive analyses as the body of literature grows. Third, the distant reading technique is focused on main messages rather than details, which means nuance can be missed. Nonetheless, content highlighted in titles and abstracts reflects dominant themes and drives discourse, justifying a focus on breadth as a complement to in-depth analyses.

RESULTS

The 155 reviewed articles captured the breadth and diversity of the last decade of empirical WASH-gender research as visualised in [Figure 1](#) and described below. The relative proportions of studies within each of the nine analysis fields allow visual identification of the predominant foci of the literature. The analysis fields are grouped into four broad sets of study characteristics, as identified at the top of the figure (reading from left to right): study aspects, contextual aspects, WASH conceptual aspects, and gender conceptual aspects.

Study aspects show publication year, publication journal, and type of data. Within the sample, 72% of the studies were from the second half of the decade, indicating increasing interest in the WASH-gender nexus. Journals were aligned with 22 discrete disciplines. Public Health (15% of total), Development (14%), and Gender Studies (12%) were the most common disciplines represented, with Medicine (9%), WASH Technology (8%), and Geography (8%) also represented. The public health discipline saw a seven-fold increase in studies from 2008 to 2018. Analysis of cross-referencing between journals and authors indicated that 13% of studies had no interconnection within and across the sample. Interest in quantitative studies increased throughout the decade, matched by a decrease in qualitative and mixed-methods studies.

Contextual aspects visualise the geographic region and the type of geography with regard to population density. Studies focused on South Asia (37%) and sub-Saharan Africa (37%), with India (27% of the total sample) and

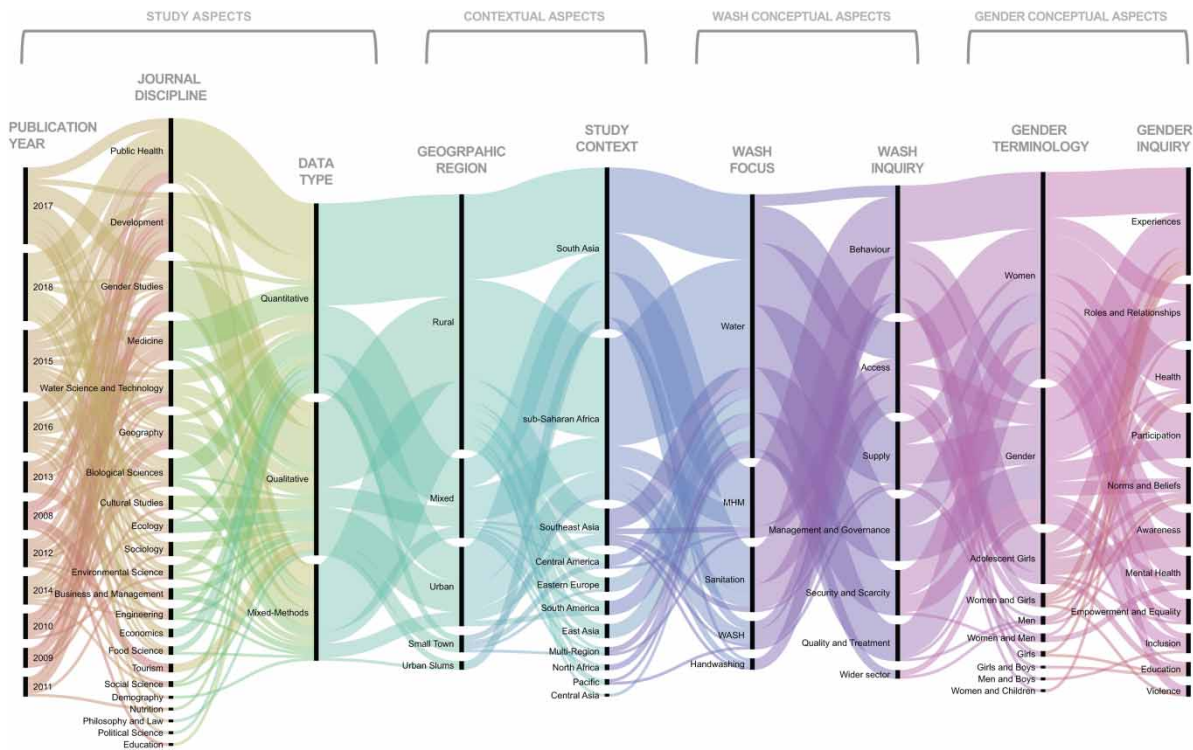


Figure 1 | Alluvial landscape map of WASH-Gender Literature (2008–2018).

Kenya (8%) remaining most common study countries. Studies focused primarily on rural contexts (58%). Mixed and urban settings each had 18% of the sample. A small number of studies were explicitly focused on small towns or urban slums and were coded separately.

WASH aspect fields categorise studies based on what type of WASH and what specific aspect of WASH programming they focused on. Within the sample, 60% focused on water, 16% on menstrual hygiene management (MHM), and 15% on sanitation. The remainder of the studies addressed handwashing (3%) or multiple aspects of WASH together (7%). Of the MHM and handwashing studies, the majority explored the behavioural practices of individuals: 84 and 100%, respectively. Within mixed WASH studies, 60% investigated access and 30% focused on behaviour. Within sanitation studies, 39% investigated access and 56% behaviour. Water-focused studies were distributed in emphasis across access (14%); management and governance (24%); quality and treatment (14%); and supply (24%).

Analysis of gender conceptual aspects found that studies primarily focused on women (47%) and gender (31%). Of

the women-focused studies, 21% explored experiences of WASH and 19% addressed personal health. Gender-focused studies explored themes of individual experiences (25%) and roles/relationships (27%). Adolescent girls (12%) were the focus of the next largest group of studies, which addressed awareness (33%) and experiences (27%). Men and boys only appeared in 5% of article titles and abstracts.

DISCUSSION: SIX INSIGHTS FOR STRENGTHENING WASH-GENDER STUDIES

Situating this analysis with reference to wider gender and development literature, including the emerging body of work on gender transformation, we present six insights and implications for strengthening the gender-transformative potential of future WASH-gender studies.

1. With increasing interest and disciplinary diversity in WASH-gender studies, researchers should actively build interconnections and seek multidisciplinary research teams to avoid siloed thinking.

Interest in the WASH-gender nexus continues to grow. Studies were published in 92 unique journals across 22 identified disciplines. Historically, the WASH literature has been located in technical fields such as engineering, which have viewed gender narrowly and instrumentally in relation to efficiency and effectiveness of WASH interventions and outcomes (Willetts *et al.* 2010). The increase in disciplinary diversity over the last decade has significant potential to enrich the sector's understanding. However, it comes with challenges of divergent syntax and conceptual simplification, a particular risk where there are low levels of interconnection between some authors and journals. For example, researchers from technical disciplines (e.g. engineering or medicine) exploring the functionality of water filters may inadvertently adopt instrumental approaches to engaging women if social science perspectives are not considered (e.g. Sheth *et al.* 2010; Freeman *et al.* 2012). This highlights the importance of multidisciplinary (Mertens 2010) or transdisciplinary (Fam *et al.* 2017) collaborations, which are common in transformative research. By prioritising collaboration, the risks of inadvertent siloed thinking can be reduced, leading to richer investigations and findings.

2. Limited use of participatory and mixed-methods reveals an opportunity to foster more transformative research approaches.

Of the selected studies, 43% used quantitative data, 35% used qualitative data, and only 21% explicitly engaged with mixed-methods. The use of qualitative and mixed-methods also declined throughout the decade, while quantitative studies increased. Furthermore, only 6% of the studies actively highlighted a participatory component. Given that any inquiry has the capacity to instigate a positive change (and the risk of catalysing negative change) in gender equality (Willetts *et al.* 2013), there is opportunity to move away from assigning research participant roles as 'research subjects', so that participants can have an active part in shaping the studies and their own futures (Mertens 2010; Mullinax *et al.* 2018). Studies that leverage both technical and social data through participatory data collection can capture valuable insights into the social relations within a technical sector. For example, the use of participatory methods to explore microbial contamination (Khatibi & Yamakanamardi 2010), system functionality (Sterling *et al.*

2014), and supply (Shonsey & Gierke 2013) shaped the research to be contextually relevant and empowering for participants. Additional examples of transformative engagement of WASH programme staff are explored in Cavill *et al.* (in press). As journals endorse and researchers expand the application of participatory and mixed-method approaches, there is an opportunity for engaging in social transformation through the process of research itself – a fundamental principle of gender-transformative research (Mertens 2009).

3. The number of studies focused on menstruation, sanitation, and hygiene have increased in recent years and lay the foundations for further investigations on intersections with gender equality.

Reviewed articles focused much more on water than sanitation and hygiene, reflecting a historical dominance of water over sanitation and hygiene more generally in the sector (Cairncross & Valdmanis 2006). Recent attention on MHM (Budhathoki *et al.* 2018; Hennegan *et al.* 2018) is a welcome trend. However, MHM-focused research was primarily from medicine and public health journals; was 72% quantitative in approach; and was almost solely focused on sub-Saharan Africa and South Asia. There is scope for growth in mixed-methods and qualitative research on MHM and for social science inquiries into how MHM links to wider aspects of gender equality. The review also found an emerging body of work focused on psychosocial stress, violence, and trauma, which offer an important lens into the psychological impacts of inadequate sanitation across life stages (e.g. Hulland *et al.* 2015; Sahoo *et al.* 2015). There is still much to be explored regarding the intersection of gender with sanitation and hygiene, including consideration of roles, practices, experiences, and social norms.

4. There is opportunity to move from 'participation' to 'power' in exploration of gender equality concepts in WASH.

Gendered concepts such as roles, relationships, participation, and experiences were commonly mentioned within the studies. However, the inclusion of such concepts was not always reflected in the way studies were framed. The lines of inquiry were typically framed in an instrumental

(17%) or neutral (59%) manner. Examples can be drawn from studies focused on water access. Neutral studies, for example, reported on who in a family collects water (e.g. [Graham *et al.* 2016](#); [Emenike *et al.* 2017](#)), without discussing implications for gender equality. Instrumental studies framed findings in terms of how they might make a supply system more efficient (e.g. [Mommen *et al.* 2017](#); [Gross *et al.* 2018](#)). These contrast with transformative studies, which explored water collection roles in the context of gendered power dynamics (e.g. [Hawkins & Seager 2010](#); [Van Houweling 2016](#)). Instrumental or neutral framings can be avoided by investigating both the connections between practical aspects of health, sustainability, and efficiency as well as strategic interests such as power, respect, confidence, and gender norms ([Moser 1989](#)).

5. A strong regional focus on sub-Saharan Africa and South Asia leaves room for future research in other less studied regions.

Geographies such as sub-Saharan Africa and South Asia are important for the WASH sector due to high rates of open defaecation, low water access, and challenging WASH-related gender norms. However, while studies often find similar strategic gender interests across geographic contexts ([Cairns *et al.* 2017](#); [Schmitt *et al.* 2017](#)), there is cultural nuance in how gender roles, dynamic and power relations function (as explored by [Carrard *et al.* \(2013\)](#) and [Leahy *et al.* \(2017\)](#)). [Sultana \(2009\)](#) reiterates this notion in her descriptions of how gender dynamics are inextricably linked to culture and space in Bangladesh, and [Winter *et al.* \(2018\)](#) argue that ‘context matters’ in their exploration of women’s sanitation use across 14 sub-Saharan countries using Demographic and Health Survey data. Studies which explore multiple geographical contexts also offer an opportunity to compare and contrast contextual factors (e.g. [Carrard *et al.* 2013](#); [Graham *et al.* 2016](#); [Cairns *et al.* 2017](#); [Schmitt *et al.* 2017](#)). Given a current lack of evidence from some regions, a broadening of geographic focus as well as cross country comparisons is much needed.

6. Current literature dominantly focuses on women of productive age, indicating a need for studies considering women’s different life stages, men and boys, and sexual and gender minorities.

Reviewed literature dominantly focused on women, which aligns with trends in wider gender research ([Cornwall 2000](#)), with particular representation of women at productive age, as young mothers. Although 30% of articles used ‘gender’ terminology, 47% of the articles focused solely on women rather than gender equality per se. Only four articles (3%) focused explicitly on the experiences of men or boys, exploring: increased workload for men after piped water installations in Kenya ([Crow *et al.* 2012](#)); the role of men and boys in menstruation programming ([Mahon *et al.* 2015](#)); and masculine identities in water management in Peru ([Rap & Oré 2017](#)). While women are integral within WASH, a narrow view of gender continues to place the burden of overcoming WASH and gender challenges on women. Studies which engage women from a life-cycle perspective (e.g. [Hulland *et al.* 2015](#); [Sahoo *et al.* 2015](#); [Baker *et al.* 2017](#)); engage men and boys (e.g. above examples and [Cavill *et al.* 2018](#)), and engage with sexual and gender minorities (e.g. [Boyce *et al.* 2018](#)) offer valuable opportunities to explore people in all their diversity. Gender-transformational research creates opportunities to engage a diversity of people across age, gender, ethnicity, and status for a more systemic approach ([Stephens *et al.* 2018](#)).

CONCLUSIONS

Drawing from the last decade of WASH-gender literature, this review critically examined sectoral trends and opportunities. Using a process of distant reading, we visualised bibliographic, contextual, and conceptual aspects to identify areas of convergence and divergence within the literature. An increasing interest in quantitative research was matched by a focus in sub-Saharan Africa and South Asia, and a focus on women. Building on these trends, we identify insights for WASH researchers seeking to embed gender-transformative approaches, concepts, and voices in their work. Transformative *approaches* often engage across disciplines and methodologies to explore and transform the lived experiences of participants through participatory or mixed-methods ([Mertens 2010](#)) [Insights 1 and 2]. Transformative studies engage with feminist *concepts* such as agency, relations, and structures that speak to power dynamics in the home, community, and broader public sphere ([Kabeer](#)

1994) [Insights 3 and 4]. Finally, gender-transformative research promotes a diversity of *voices* by recognising different groups related to age, class, gender, and economic status (Stephens et al. 2018) [Insights 5 and 6].

By exploring the last decade of WASH-gender literature, we have reflected on the growing interest in gender-transformative approaches in research, evaluation, and interventions. Although gender-transformative approaches may not be appropriate for all WASH-gender research, the Sustainable Development Goals highlight the profound interconnections between gender equality and global WASH targets. Gender-transformative WASH programming requires evidence beyond technical and health impacts – evidence that critically examines gender dynamics inherent in WASH and the contexts in which WASH services are delivered and experienced.

DATA AVAILABILITY STATEMENT

All relevant data are included in the paper or its Supplementary Information.

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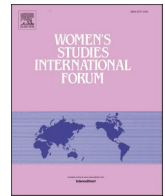
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3.4 Paper III – Gender-transformative approaches in international development: A brief history and five unifying principles

Paper III has been published as a review in *Women's Studies International Forum*. The paper traces the (re-)emergence of a gender-transformative approach to development and answers the research question: *How has the concept of gender-transformation evolved in the development sector?*

It is important to note, that while gender-transformative change is framed positively in this paper, there are many examples of adverse consequences of gender-transformative program (see for example Kabeer 2001). As such, I explore the importance of a robust 'do-more-good' in Chapter 6.5.



Review

Gender-transformative approaches in international development: A brief history and five uniting principles

Jess MacArthur^{*}, Naomi Carrard, Federico Davila, Melita Grant, Tamara Megaw, Juliet Willetts, Keren Winterford

Institute for Sustainable Futures, University of Technology Sydney, Building 10, 235 Jones St, Ultimo, NSW 2007, Australia

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ABSTRACT

The emergence of gender-transformative approaches in the international development sector has ushered in a new paradigm for gender and development, refocusing on core feminist principles. This rise has paralleled the growth of transformative research and a strengthened emphasis on social transformations in the field of international development practice. Gender-transformative approaches aim to reshape gender dynamics by redistributing resources, expectations and responsibilities between women, men, and non-binary gender identities, often focusing on norms, power, and collective action. In this paper, we trace the history of gender-transformative approaches (1990 to March 2022); explore the breadth of applications in development described in both grey and academic literature; and identify five principles to guide future gender-transformative approaches with a focus on interventions. We hope that these clarifying principles will make the rich conceptual contribution of gender-transformative thinking relevant to a broad audience of researchers and practitioners and provide a basis for further academic debate and refinement.

1. Introduction

Nearly thirty years ago, the development community came together to sign the Beijing Declaration and Platform for Action, signalling the centrality of gender equality within development work around the globe, identifying areas for change, and initiating a gender mainstreaming objective (United Nations, 1995). This new paradigm considered the power dynamics and relationships between women and men and was labelled Gender and Development (GAD) (Rathgeber, 1990). It sought to incorporate gender perspectives into all branches of development (de Waal, 2006) and introduced gender-transformative language to the sector (Moser, 2020; Subrahmanian, 2004). A gender-focus was reiterated within the Millennium Development Goals and then again as Goal 5 of the Sustainable Development Goals (SDGs) to “achieve gender equality and empower all women and girls” (UN General Assembly, 2015). Building on a recent surge in the transformational language within gender and development spaces (Moser, 2020), it is valuable to revisit the terminology. By exploring the term's definition and operationalisation, we hope to inspire a new generation of international development researchers and practitioners as countries strive to meet the SDGs.

At their core, the goals of gender equality and women's empowerment within the development sector have sought to reform discriminatory and unequal systems and structures that perpetuate inequalities (United Nations, 1995). Rees (1998) identifies three models of gender equality: 1) equality as sameness where women are able to enter male domains; 2) equality as the equal valuation of both men and women in society; and 3) equality as transformation to new standards for gender relations. Adopting this third model of gender equality, GAD programming aimed to move beyond the practical outcomes of development programs (such as water, housing, and income) and lean into more strategic outcomes (such as redefining social norms, power structures, and attitudes) (Molyneux, 1985; Moser, 1989). Within this perspective, gender-equal futures rely on a full reshaping of the fabric of society - a gender-transformation. This transformation is never fully complete and will continue to be contested and evolved into the future.

The GAD approach, however, has become largely associated with women's empowerment and has been critiqued as having lost much of its initial political and revolutionary objectives (Batliwala, 2007; Eyben, 2013; Kabeer, 2005; Rao & Kelleher, 2005). The dilution of radical empowerment goals (the rebalancing of power and privilege between women and men) into technical goals (Kabeer, 2005) placed the burden

^{*} Corresponding author.

E-mail address: jessica.macarthur@uts.edu.au (J. MacArthur).

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of change on women and their individual agency (Hillenbrand et al., 2015; Moser, 2020). While “[t]he 1995 Beijing Women's Conference developed a vision of global social transformation; the transformational promise of Beijing failed to bring about a policy shift in favour of women's empowerment” (Eyben, 2013, p. 18; as quoted in Moser, 2020). Spurred on by economic visions of progress, empowerment-focused interventions often overlooked the more difficult aspects of transformation: social norms, power relations, political engagement, and collective action (Chant & Sweetman, 2012; El-Bushra, 2000). A broader and more societal approach is therefore needed to reshape gender norms towards equality.

Within this paper, we explore the emergence of gender-transformative approaches in international development and wrestle with the concept's novelty and recent visibility. In one way, the gender-transformative discourse has emerged as a response to common critiques of “development as empowerment” and an “erosion in its translation into practice” (Moser, 2016, p. 8). However, the phrasing and language of gender-transformative approaches has much earlier roots in feminist development literature (see for example Kabeer, 1994). Batliwala (2007) argues that the ‘power’ had been taken out of empowerment and calls for “a new language in which to frame our vision and strategies for social transformation at the local, national, or global level” (2007, p.564). Feminist scholars and social justice advocates have also sought to integrate intersectionality, that is, the recognition that there are multiple intersecting and overlapping forms of social difference, tied to structures of privilege and inequality (Keddie et al., 2022, p. 2). For advocates of a gender-transformative approach, the concept has been assumed and accepted, without being specified and interrogated and requires clarity to avoid dilution. In this paper, we seek to understand the depth and breadth of interpretations of the phrase ‘gender-transformative’ within development discourse and explore if the term is truly novel or just a resurgence of an earlier discourse and proposed practice.

We define the term gender-transformative as societal transformations towards gender equalities. However, we recognise that ‘gender-transformation’ is also used by individuals who are in the process of changing their gender identities, and who may or may not identify as transgender. The term therefore can be confusing, especially in cross-cultural settings. We propose that these two uses of the gender-transformation term can co-exist, however for the purposes of this paper we focus on gender-transformation in international development and society.

In this paper, we first critically review the history and genesis of gender-transformative approaches and examine the relevant breadth of applications in development within both grey and academic literature. From this foundation, we then propose and justify five principles to guide future implementation and research. These principles are designed to support civil society organisations, researchers, and donors to operationalise gender-transformative concepts, maintaining integrity with respect to the long lineage of feminist thinking and practice.

2. Contextualising gender in wider transformations discourse

While the integration of gender-transformative discourses in development thinking and practice can be traced to the Beijing Platform for Action, the roots of social transformative discourses in broader society emerged much earlier. Appeals in the 1800s united women's groups, religious groups, and philosophers focused on social injustices, including slavery, women's rights, and class structures (Batliwala, 2007; Linnér & Wibek, 2019). This was also the era of first-wave feminism, where activists leaning on religious and socialist visions of progress began the political campaign for equality through suffrage and the repeal of unjust policies related to the gender double standard (for example Butler, 1868). This parallels the origins of the concept of social empowerment (without a focus on gender) through the Reformation, Quakerism, and the Salvation Army, alongside Marxist and Socialist reformers as discussed in Batliwala (2007) and Kabeer (1994).

In more recent scholarship, transformative research practices have emerged in the last decade as a distinct research paradigm (Mertens, 2007; Sweetman et al., 2010). Transformative research seeks to advocate for social and political change through an action agenda and is often connected with social issues such as empowerment and inequality, and frequently relies on participatory approaches (Mertens, 2007; Patterson et al., 2017). Transformative research seeks to not only build knowledge but acknowledges that research itself has the potential to transform societies - both through the process and the results of research (Mertens, 2007; Mullinax et al., 2018; Sweetman et al., 2010).

Lastly, within the realm of socio-technical-ecological sustainability, the concepts of transformations and transformative change have become central (Hölscher et al., 2018; Stirling, 2014). Here, transformative change is systemic and influences the underlying paradigms and values that impact human decisions on technologies, governance, and economic structures (Fazey et al., 2018; Page et al., 2016; Patterson et al., 2017). Such change requires a diversity of values and discourses to be part of the transformation process. It recognises the tensions of having multiple systems undergoing change which may have competing sets of outcomes.

3. Methodology

To trace the history and application of gender-transformative language, we conducted a review of academic and grey literature, as illustrated in Fig. 1 and utilized distant and close reading techniques from the digital humanities as well as collaborative sensemaking. Distant reading is an interdisciplinary approach that uses visual and digital representations to look at large bodies of work; while close reading involves more detailed explorations of texts (Burdick, 2012; Moretti, 2013). Collaborative sensemaking involves targeted discussions to build collective sense of complex themes.

We searched Scopus, Web of Science and Google Scholar using the terms “gender transformative” OR “gender transformation” from 1990 to 2019 in the English language. All searches identified responses with and without hyphens. A second search was conducted in April 2022 adding literature from January 2020 to March (first Quarter) 2022. From the 740 unique papers identified, after removing duplicates from 1090, 356 were relevant to the concepts of gender-transformation in the development context. We use the term ‘papers’ to include journal articles, studies, book chapters, theses, toolkits, books, conference proceedings, and reports.

We then iteratively conducted three types of analysis, termed here content, timeline, and emergence. The content analysis involved a distant textual analysis of the sample of 356 papers with a focus on collocated terms and key phrases in titles and abstracts using the digital humanities processes on voyant-tools.org. The timeline analysis used close reading techniques to develop a detailed thematic chronology identifying three dominant streams by exploring full papers. We then undertook an emergence analysis of key theorists and foundational literature to explore the dominant streams of gender-transformative approaches which draw from distinct bodies of work. The timeline and emergence analyses were used to distil different historical trajectories of gender-transformation concepts.

Lastly, through a process of collaborative sensemaking within an interdisciplinary research team (co-authors of this paper) and building on our literature review, we identified and refined five unifying principles for development practitioners and researchers. This process involved six hour-long participatory and interactive e-discussions in which we also explored the limitations and challenges of applying gender-transformative approaches. Such challenges include the usefulness of the phrasing, risks of reductionism, and complexity of gender-related interventions.

A limitation of the study is its focus on online English-language literature, to the exclusion of potentially relevant and insightful material from a diversity of cultures and language groups. Analysis of the

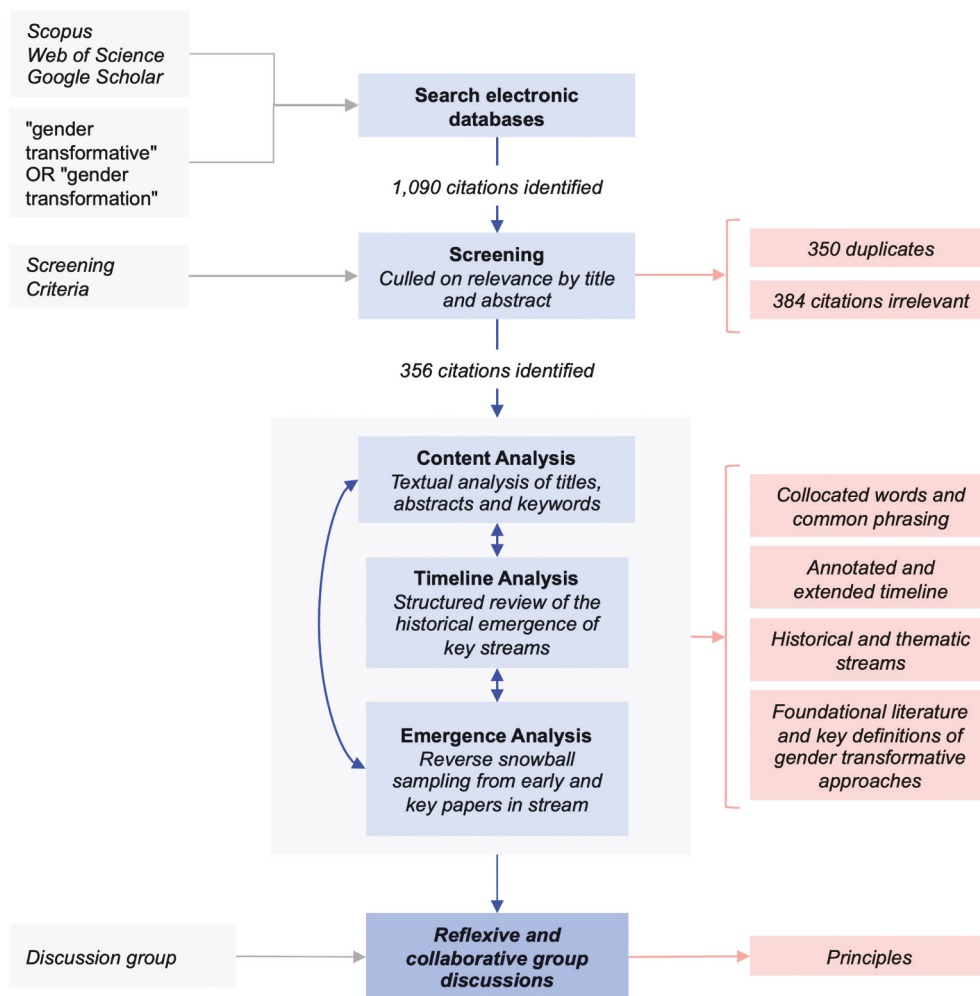


Fig. 1. Systematic review strategy and approach.

English-language literature is justified for reasons of scope and given its dominance in shaping development practice globally. Yet complementary analysis across a wider range of papers would enable both validation of findings from this study and identification of additional and contextually specific insights.

The analysis is also necessarily limited by the composition of the research team, given the importance of collaborative sensemaking in generating findings. All researchers were employed within a single applied research institute and as such shared common experiences, approaches, and values. While researchers brought different disciplinary traditions, contextual expertise, and practitioner partnerships to the analysis, findings from this study could be strengthened further by incorporating a greater diversity of perspectives. The choice to undertake analysis as an internal team process was driven by a shared interest in identifying the emergence and conceptual foundations of gender-transformation given its relevance to multiple ongoing research activities. It was also a practical decision, given the complexity of undertaking collaborative sensemaking with a team working entirely remotely across multiple time zones and during the COVID-19 pandemic.

4. Three decades of gender-transformative development literature

The literature on gender-transformative development has increased exponentially over the last three decades. From the 356 papers identified between 1990 and the first quarter of 2022, only two papers were from the 1990s, 21 from 2000 to 2009, 193 from 2010 to 2019, and 140

between 2020 and March 2022. Of these, 71 % of documents were journal articles. 16 % were reports, and 4 % were book chapters; the remainder included books, conference papers and editorials. This signals a shift in terminology and uptake of transformative concepts, especially in South Africa, where a fifth of the papers (71/356) were focused. Eighty papers did not have a specific geographic focus and explored themes of gender-transformation in development more generally.

4.1. Gender transform* - key usages of the term

We found significant diversity in the definitions and usage of the term “gender-transformations”. Moser (2017, p. 223) identified seven key uses of the word ranging from “verbs to nouns to adjectives”, however, she found that the term is focused on the “idea of change”. By exploring the frequency of terms and collocates with the abstracts and titles of 356 papers using distant reading practices,¹ we identified the key usages of the “gender transform*²” terminology over the last 30 years. The term “transform*” appeared 769 times, with “transformative” being the most common iteration of the term (473 times) and transformation* being the next most common (227 times). Additionally, we explored the top ten collocates of “gender transform*” within the abstracts and titles as can be seen in Fig. 2. We identified that the words

¹ This analysis was conducted in Voyant Tools [voyant-tools.org].

² The * symbol denotes the wide range of possible versions of the word using the truncated “transform” as a root.

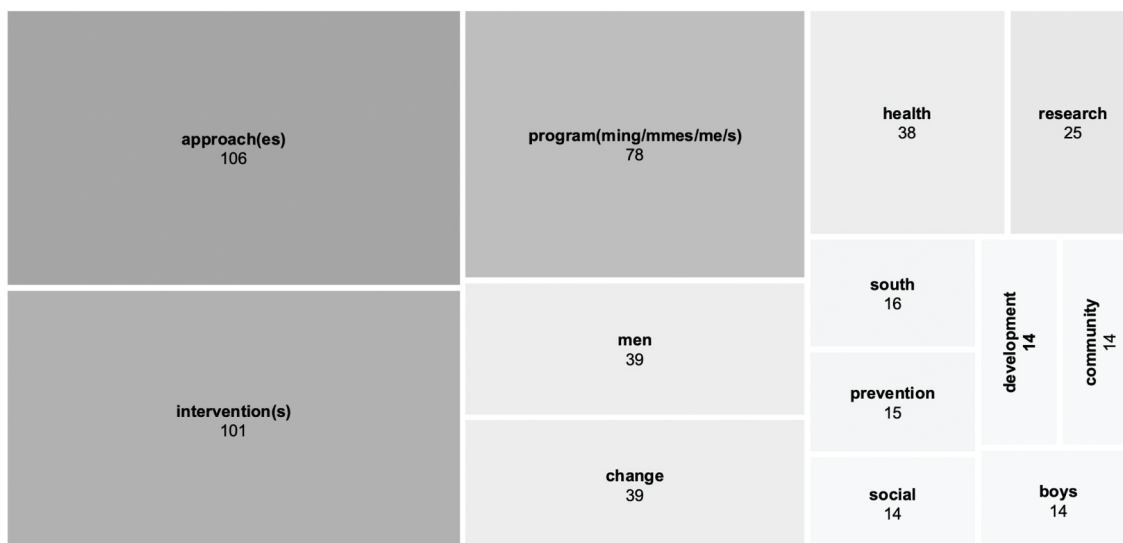


Fig. 2. Most common collocates with the term gender-transform* in the sample (n = number of expressions within the titles and abstracts of 356 papers).

“approach”, “intervention”, and “program” with all relevant iterations are the most common usages of the phrasing.

Based on this collocate analysis, and the frequency of the terms, we have chosen to use the phrasing “gender-transformative approaches” within this article as a more inclusive phrasing than intervention, policy, or program. These approaches represent the programmatic methods that are used to foster transformation. This phrasing, therefore, functions as a shorthand for wider systemic change related to gender equality within development practice. In this article, we also adopt other terms where appropriate, such as gender-transformative change when we are referring to transformations from a philosophical perspective or to identify the ultimate goal of gender-transformative approaches.

4.2. Gender-transformative research and evaluation

Although the majority of the literature described gender-transformative programming or interventions, a small sub-section of the literature described gender-transformative research (occurring four times as a collocate in abstracts and titles). Wieringa conceptualised (gender)-transformation, as a process in which “both analysis and practice are steps” (Wieringa, 1994, p. 842). Wieringa “intricately links” processes of planning, empowerment, and transformation “welded by a feminist-informed analysis” (Wieringa, 1994, p. 843). In this mindset, intervention and assessment are merged, a view shared by scholars advocating for a transformative paradigm of research and evaluation (Mertens, 2007; Murthy & Zaveri, 2016). A gender-transformative approach to research aims to increase the transformative potential of the research process (Murthy & Zaveri, 2016) moving from ‘do-no-harm’ to ‘do-more-good’ through the research methods. Focused on transformative research more broadly, Sweetman et al. (2010) clarified ten principles of transformative mixed-methods studies. The principles highlighted the difficulty in classifying research as transformative based on academic articles. Nonetheless, only four papers within our study explicitly described or adopted transformative research approaches, while a small number of papers describe their transformative research or evaluation methodologies as participatory (6), collaborative (4), action-oriented (7).

5. Emergence and breadth of gender-transformative approaches

We now present the breadth of gender-transformative approaches and the key foundational literature which introduced the phrase into the gender and development lexicon. This breadth can be categorised into

three emerging streams centred around organisational, relational, and sectoral foci, as seen in Fig. 3. While there is some overlap between the streams through shared concepts and individual practitioners, the three groups represent unique categories of gender-transformative approaches. Following Fig. 3, we present a tabular summary and visualisation of the streams of gender-transformative approaches. We then discuss the roots of gender-transformative language (before 2000) before exploring each of the three streams with relation to key literature and themes (2000–March 2022).

Table 1 outlines key definitions of gender-transformation in foundational texts and the above-mentioned three groups of literature. Additionally, the breadth of this literature and relevant topics are visualised in Fig. 4 as segments (coloured by each respective stream) representing the relative frequency of topics within the literature review (n = 356). Within Fig. 4, the size of each segment is representative of the topic's frequency within the study as the number of relevant papers. Papers were coded with a single topic for simplicity. For example, ‘agriculture’ was the main topic of 15 papers within the study and all papers focused on ‘agriculture’ were situated within the sectoral stream. Fig. 4 illustrates that the relational stream was the largest within the study and contained topics such as ‘men and masculinities’, ‘HIV’, ‘intimate partner violence’ and ‘adolescents’. The sectoral stream was dominated by topics around ‘agriculture’ and ‘food systems’, while the organisational stream included a large number of studies on ‘justice’ and ‘higher education’.

5.1. Foundations of gender-transformative approaches

Inspired by a broader surge of social transformations, feminists working in international development as planners, scholars, and implementers in the 1980s and early 1990s, began to identify gender inequalities in development theory and practice. These included scholars such as Srilatha Batliwala, Naila Kabeer, Sara Longwe, Maxine Molyneux, Caroline Moser, Jo Rowlands, Saskia Wieringa, and Kate Young. Spurred on by the writings of Boserup (1970), these feminists sought transformation of the social systems which perpetuated gender inequalities.

Notably, both Young (1993) and Kabeer (1994), utilized explicit transformational terminology in their writings (see March et al., 1999), planting the seeds for future applications of gender-transformation. Young (1993) introduced the concept of *transformatory potential* as an approach to explore how empowered women could transform ordinary practical needs to strategic outcomes; leveraging the phrasing of Moser

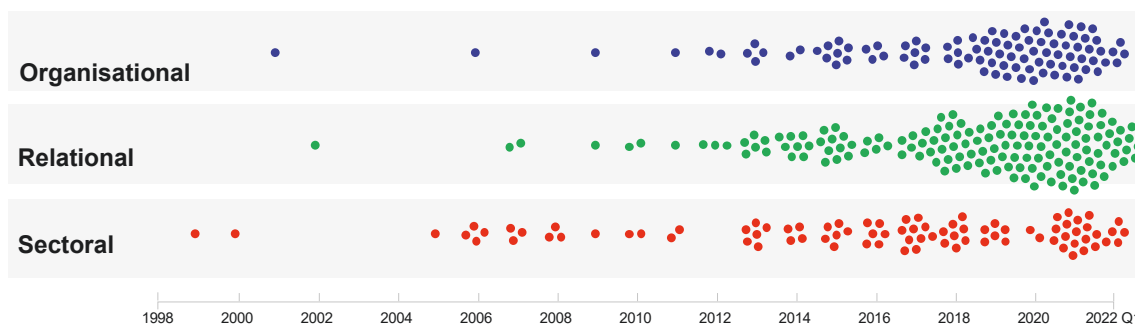


Fig. 3. Distribution of literature over time (each dot represents a paper) of the modern streams of gender-transformative development as represented in papers ($n = 356$).

(1989) and Molyneux (1985). In parallel, Kabeer (1994) designed a classification system for development interventions, to identify them as gender-blind, gender-neutral, gender-sensitive or *gender-transformative* (see Kabeer, 1994; Kabeer & Subramanian, 1996; March et al., 1999). Importantly, this classification system has been frequently adapted with many potential iterations in circulation. Some of these iterations problematically place a transformative approach below and separate from ‘approaches that empower’ (for example see Gupta et al., 2003). As such, the transformative potential of social change is diluted by placing the emphasis on women, rather than society as a whole. However, for early feminist development theorists, planners and practitioners, gender transformation was a normative concept which implied that programs could influence gender equalities and become pathways for increased human flourishing.

5.2. Stream 1: organisational gender-transformative approaches

Spurred on by the work of Molyneux (1985) reviewing the opportunities for gender-transformations in the institutional and political realms, the first stream of gender-transformative approaches emerged in organisations and governance systems. The stream followed systemic transformations through a breadth of organisations surrounding politics, markets, culture, justice, the military, local government, microfinance, and education. Much of the politically focused literature grew out of the end of apartheid in South Africa through policies “to effect structural change regarding gender equality during the process of state transformation” (McEwan, 2000, p. 1; Rai, 2000). Aligned with this, a subset of work emerged around the deep structures and hidden values of organisations which perpetuate gender inequalities (as described in Rao et al., 1999). More recently, a focus on financial inclusion has explored structural challenges in financial institutions (Vossenberget al., 2018) – a domain which is often criticised for its less-than transformational agenda (see Chant & Sweetman, 2012).

Notably, this stream of practice tended to focus on social structures and in particular gender parity, often excluding the interpersonal dynamics which also govern gender inequalities. Approaches focused on gender-transformations within institutions spoke to the systemic and structural challenges of inequality, yet had limited focus on the experiences of individuals within the systems.

5.3. Stream 2: relational gender-transformative approaches

The second stream of approaches has taken a relational focus primarily within development programming in reproductive health and gender-based violence and has embraced the necessity of working with both women and men (see Gupta, 2000; Gupta et al., 2003). Within the stream, health-related studies often focused on concepts of HIV/AIDS and reproductive health (Dworkin et al., 2015; Gupta, 2000; Gupta et al., 2003; Rottach et al., 2009). Relationship-based studies focused on masculinity and gender-based violence (Barker et al., 2007; Casey et al.,

2018; Gibbs et al., 2015) explored the “links between masculinities and men’s health-related behavior, and increasingly on engaging men and boys as a pathway to transforming masculinities” (Gibbs et al., 2015, p. 85). Intersectional approaches to working with men and boys have been influenced by developments in feminist scholarship and advocacy informing the public health, social work, and education fields (Keddie et al., 2022, p. 2). Transformative elements such as attitudes, behaviours, and power were crucial to the formative research and implementation of strategic gender-transformative interventions. Connections between the World Health Organization, International Centre for Research on Women (ICRW) and Promundo through the early 2000s continued to build expertise within gender-transformative approaches focused on HIV/AIDS, gender-based violence, and reproductive health.

Approaches focused on gender-transformations within relationships highlighted the importance of interpersonal connections within transformations at the household or relational level but were less likely to explore the systemic and structural challenges that perpetuate inequalities.

5.4. Stream 3: sectoral gender-transformative approaches

The third stream drew on the relational approaches to gender-transformation but was situated in the specific sectoral contexts of agriculture, fisheries, forestry, nutrition, and urbanisation. These approaches were more nuanced and sensitive to contextual systems such as subsistence livelihoods, market systems, and the environment than the relational and organisational streams. The studies described efforts to create change within a limited system often focusing on a specific sector by engaging with change at different levels within a given system (Cole et al., 2015; Kantor et al., 2015; Resurrección et al., 2019; Kruijssen et al., 2016). Such sectoral approaches were specifically championed by CGIAR within agriculture, nutrition, and resilience programming, adapting the approaches and thinking for unique development situations and objectives. Notably, this stream contained studies on fisheries, livestock, and forestry in the context of food security, food systems, value chains and livelihoods alongside studies on climate, disaster, and conflict. Additionally, Moser’s work has re-sought a transformative agenda in urban contexts with a specific focus on asset accumulation (Moser, 2016, 2017). For Moser, the transformation of urban environments and addressing inequality is inextricably linked to the transformation of gender structures and is found in the formulating of assets as instrumental objects to transformative concepts.

This stream of gender-transformative approaches tended to focus on women’s empowerment as the first step to transformation, often placing the burden of change solely on women, rather than viewing empowerment as an integrated individual and collective transformation.

6. Five principles of gender-transformative approaches

Drawing on this diverse genealogy of gender-transformative

Table 1
Selected definitions of gender-transformative approaches.

Stream	Year	Key definitions of gender-transformation
Foundational	1993	Transformatory potential is “to allow the interrogation of practical needs (by women themselves)” to see how they can become or transform themselves into strategic concerns. In other words, do they have the capacity or potential for questioning, undermining or transforming gender relations and the structures of subordination . (Young, 1993, pg. 156)
	1996	Programs and policies fall along a spectrum of gender-blind, gender-neutral, gender-sensitive or gender-transformative . Such transformative approaches “...can be envisaged which may target women, men or both and which recognize the existence of gender-specific needs and constraints but which additionally seek to transform the existing gender relations in a more egalitarian direction through the redistribution of resources and responsibilities .” (Kabeer & Subramanian, 1996 p. 19)
Stream 1: Organisational	1999	“[T]ransforming the unspoken, informal institutional norms that perpetuate gender inequality in organizations is key to achieving gender equitable outcomes for all.” (Rao et al., 1999)
	2000	“[The] transformation of both gender politics and the state , with particular reference to the construction of citizenship, governance and state structures .” (McEwan, 2000)
Stream 2: Relational	2003	Such approaches...“seek to transform gender roles and create more gender-equitable relationships ... [which] seek to change the underlying conditions that cause gender inequities”. Transformative approaches involve and engage men and boys, as role models and in fostering constructive roles for them (Gupta, 2000; Gupta et al., 2003; Dworkin et al., 2015). ^a
	2009	“Gender transformative approaches actively strive to examine, question, and change rigid gender norms and imbalance of power...Gender-transformative approaches encourage critical awareness among men and women of gender roles and norms ; promote the position of women; challenge the distribution of resources and allocation of duties between men and women; and/or address the power relationships between women and others in the community” (Rottach et al., 2009)
Stream 3: Sectoral	2012	[aquaculture] “A Gender Transformative Approach (GTA) goes beyond just considering the symptoms of gender inequality, and addresses the social norms, attitudes, behaviors and social systems that underlie them” (Puskur et al., 2012)
	2015	[livelihoods] “Gender-transformative approaches to development, in contrast, hold a conceptualisation of empowerment that embraces its feminist roots . Gender-transformative change and processes of empowerment are ultimately about transforming unequal power relations and the structures and norms (both visible and invisible) that uphold them” (Hillenbrand et al., 2015, p. 5)
	2019	[resilience] Gender-transformative adaptation aims to “transform the power dynamics and structures that serve to reinforce social and gendered inequalities. Specifically, it intends to change discriminatory political, social and economic practices and the patriarchal norms that obstruct positive adaptation in climate change contexts...It offers a more holistic multi-dimensional approach and moves beyond programs that fundamentally hide and ignore deep-seated power relations and structures.” (Resurrección et al., 2019)

^a Gupta's initial definition of the approach spectrum reads: do-no-harm, gender-sensitive, transformative approaches, and approaches that empower. Nonetheless Gupta is explicit that the approaches are not mutually exclusive and multi-pronged approaches are preferred (Gupta, 2000; Gupta et al., 2003). Following many authors in the health field (Barker et al., 2007) we combine

Gupta's top two rungs using the definition of ‘approaches that empower’ with a transformative title.

approaches and with an aim of addressing potential areas of oversight, we distilled a set of five principles with the intent to inform practitioners and researchers working in this field. To identify the principles, we examined the three streams of literature, explored foundational literature on gender-transformative approaches, and conducted a series of collaborative and reflexive group discussions based on our practice as researchers focused on gender equality in development. We also drew on additional literature from the social sciences and reflected on transformative language in the discourses of historical social-political transformations, transformative research epistemologies, and ecological sustainability.

This distillation of such complexity brings the risk of reductionism and over-simplification. Equally, clarifying principles can make complex concepts more accessible, particularly to practitioners, and also provide a basis for further academic debate and refinement. Fig. 5 captures the key inter-relationships between the five principles, noting that each principle influences, and is part of the others.

6.1. Principle 1. Motivated towards profound gender-transformations

The first and most foundational principle of gender-transformative approaches is to interrogate the motivation of programs. Such motivation must be towards lasting change - ideally embracing feminist ideals (Hillenbrand et al., 2015). Within the literature, gender-transformative approaches were motivated by a desire to see revolutionary changes in the “deeply ingrained nature of gender inequality” (Mullinax et al., 2018, p. 4) through both the process and the outcomes of change.

Transformative change is born from critical consciousness and a normative view of equality being beneficial to human beings (Rottach et al., 2009). Critical consciousness is an essential element in motivating such change since it affects one's ability to perceive discriminatory norms and practices in society, and the motivation to intervene in order to change these norms towards a different reality (Freire, 1970; Kabeer, 1999). Freire (1970) describes critical consciousness as a cyclical process of critical reflection and action. Illustrating this principle in the sectoral stream, Guring from Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN) affirmed that “if you want to adopt a gender-transformative approach, the first thing you need to transform is yourself” (Puskur et al., 2012, p. 7).

Feminist development scholars contend that true transformational approaches go beyond the economic or health outcomes of the welfare, anti-poverty, equity, or efficiency visions of progress (Moser, 1989). This mindset flips the traditional program theory of change upside down. In a traditional theory of change, gender equality is a tool to strengthen development outcomes. Instead, a transformative approach contends that improvements in development outcomes (which are inevitably gendered) such as sanitation, agriculture, and nutrition can be tools to reshape gender inequalities, which in turn leads to further strengthened development outcomes.

Accordingly, transformative approaches embrace the perspective that human *flourishing*, drawing from Aristotle, is the ultimate goal of development and that such flourishing demands a transformational agenda of gender equality (Kabeer, 1994; Nussbaum, 1999; Sen, 1999). Sen's approach to defining flourishing (as well-being) is in reference to people's capabilities in terms of their real opportunities to do and be what they have reason to value. Furthermore, the freedom to achieve well-being is of primary moral importance (Sen, 1999). Kabeer argued that we need “transformative forms of agency that do not simply address immediate inequalities but are used to initiate longer-term processes of change in the structures of patriarchy” (Kabeer, 2005, p. 16). This agenda can come from ideological or religious beliefs but ultimately is political and structural (Batliwala, 2007), leading to longer-term and wider social transformations.

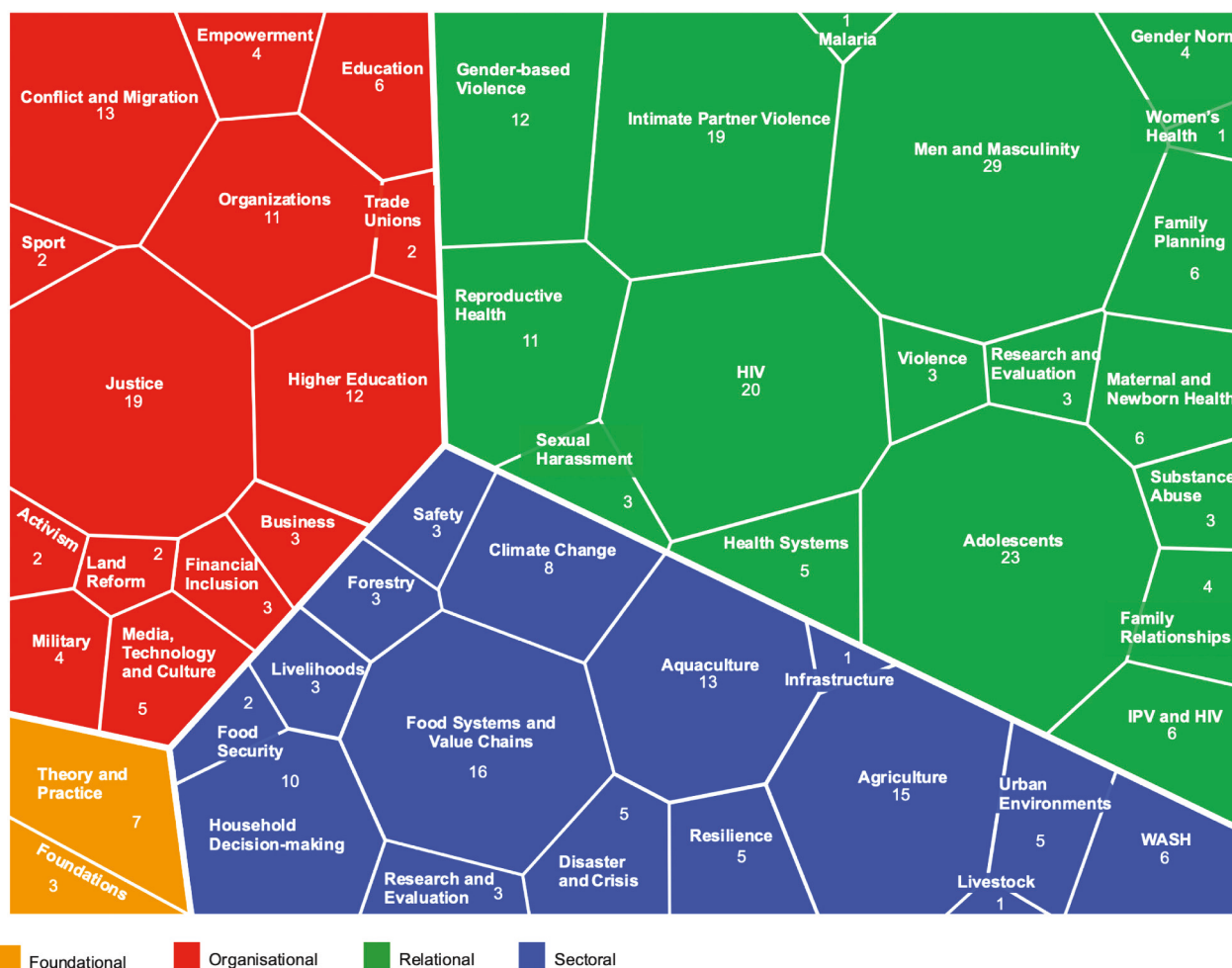


Fig. 4. Landscape map of the streams of gender-transformative literature and sub-sectors of study (n = 356 papers) Each of the four streams (foundational, organisational, relational, sectoral) is represented by a different colour and contains topics illustrated as smaller segments. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

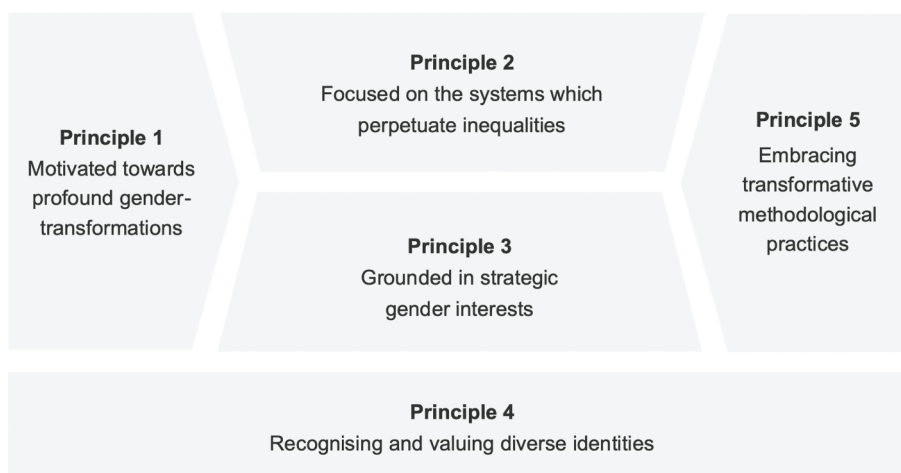


Fig. 5. Five unifying principles of gender-transformative approaches.

Applying this principle to implementation, evaluation and research requires a shared and contextualised understanding of an objective of profound gendered change for a specific program and setting; noting potential tensions with imposing a new normative viewpoint (Kabeer et al., 2011; Nazneen et al., 2014). Emergent feminist literature

understands research and evaluation as a political tool to promote social justice, empower excluded people and make visible gender and intersectional discrimination (del Moral-Espín & Espinosa Fajardo, 2021). In addition, as noted above, it requires personal and professional transformation as the first step (Nazneen & Sultan, 2014), reiterated in recent

literature on gender-transformation in the water and sanitation sector (Cavill et al., 2020). As such, practitioners need to consider the potential neocolonial implications of development work (Clisby & Enderstein, 2017; Nazneen et al., 2014). Reflections on power dynamics can also encourage contextual and localised understandings of equality (often through partnerships with local feminist organisations) while recognising the weight of diverse inequalities (Walby, 2005). Practically, teams which collaboratively conduct a gender analysis (see March et al., 1999) are given the occasion to identify opportunities, challenges, and tensions within a shared vision of human flourishing through gender-transformations.

6.2. Principle 2. Focused on the systems which perpetuate inequalities

Gender-transformative practice also requires a multi-level and systematic approach to address deeply rooted inequalities. The sector continues to learn from the challenges and shortcomings of a narrow focus on individual women's empowerment. Such individualised forms of change struggle to transform entire systems (Hillenbrand et al., 2015; Moser, 2020). Nonetheless, "...the goal of social change is not reform within the existing system, but radical transformation of the system itself. Social, political, and economic structures should be transformed in order to redistribute power and resources fairly" (Maguire, 1984, p. 21). With this in mind, it is important to remember that systems are made up of people; and change must be reflected across the system within individual people. For example, within the sectoral stream, the CGIAR team conceptualised five spheres for transformative change as the individual, families, communities, organisations, and wider enabling environment, intersecting with macro, meso, and micro level changes (Cole et al., 2015; Kantor et al., 2015).

This multi-level and sectoral thinking forms part of systemic approaches to transformations (Rao et al., 1999; Scoones et al., 2020). Broadly, a systems approach to research and advocacy looks for the interacting parts of a system, feedback processes, and the overall intention of the system's behaviour (Meadows, 2008). Analysing gender dimensions through a systems lens can help identify areas or entry points that can be leveraged to manoeuvre the system into a particular direction, with the ultimate goal of improving the overall behaviour of the system (Manlosa et al., 2019).

Practically, this principle means that the design of implementation, research or evaluation should explicitly consider the possible levels that are most relevant and take into account feedback loops and emergent properties in the system. A transformative approach would orient itself towards leverage points that challenge and change the mindset of the paradigm of a system (its goals, structure, rules, delays, and parameters), and ultimately, the transcending of existing paradigms (Meadows, 2008).

6.3. Principle 3. Grounded in strategic gender interests

In this political and structural form of transformative change, the concepts addressed in programming have strategic outcomes related to power, structures, norms, attitudes, and gender relations as seen in all three streams. These outcomes seek to meet practical development needs as pathways to address strategic gender interests (Kabeer, 1994; Molyneux, 1985; Moser, 1989). While addressing practical gender needs involves changes within the realm of existing gender norms such as water provision, health care, and employment, this approach is not transformative. Contributing to strategic gender interests involves reimagining social norms, through changing status or changing power relations, particularly between women and men, or in relation to other genders. For example, within the existing literature, interventions in health, work, agriculture, environment, and asset management bridged into strategic interests. The literature highlights that transformative approaches address the causes, and not just the consequences of existing inequalities. These causes relate to the real challenges to women's rights

that perpetuate gender discrimination and are embedded in behaviours, attitudes, and cultural norms (Sandler & Rao, 2012).

One useful gender analysis framework exploring strategic interests is CARE's domains of *agency*, *relations*, and *structures* (as used in Morgan, 2014 and Hillenbrand et al., 2015). This model closely aligns with Kabeer's (1999) conceptualisation of empowerment in which resources lead to outcomes through agency and as supported by structures. In this model, agency is related to the individual and collective knowledge and skills, attitudes, assets, services, and actions. Relations explore the dynamics of negotiation or cooperation and expectations between people in organisations, groups, the community, market, and the home with a strong focus on assets, time, and social capital (Kabeer's domain of resources). Lastly, structures refer to the formal and informal rules that govern institutional, collective, and individual practices. Such structures include social norms, status, and recognition.

Bridging the insights into practice, gender analysis (see CARE's framework or March et al., 1999) is a significant first step in understanding the relevant aspects of agency, relations, and structures. Such analysis leverages a critical consciousness that change must occur, to explore which strategic changes are possible from a development intervention.

6.4. Principle 4. Recognising and valuing diverse identities

Next, these strategic outcomes should recognise the diversity of people, including with respect to their gender identities. Kabeer (1994) explains that "while gender is never absent, it is never present in pure form. It is always interwoven with other social inequalities such as class and race and must be analysed through a holistic framework if the concrete conditions for life for different groups of women and men are to be understood" (p. 65). This is highlighted within all three streams of literature, through specific attention to age, socioeconomic status, and power relations.

Drawing from intersectionality literature, transformative changes towards gender equality intersect with a range of aspects such as nationality, race, culture, religion, marital status, age, physical ability, sexuality, class, and caste (Crenshaw, 1991; Sandler & Rao, 2012). Therefore, it is important to recognise the diversity of individuals who are impacted by gender-transformative research and interventions, and meaningfully consider how all forms of oppression compound and intersect (Poulsen, 2018; Stephens et al., 2018). However, practitioners must be careful to not focus primarily on the characteristics of people (e.g. their race, class, or gender identity), but on the understanding of structural processes (racism, classism, patriarchy and cisnormality which pervade social, political and economic systems) that create and perpetuate inequalities (Bastia, 2014; Squires, 2008; Yuval-Davis, 2006).

Additionally, development interventions and research can reinforce binary notions of gender, and in doing so, make invisible trans- and gender-nonconforming people and their different conceptions of family relationships. Notably, the 356 papers explored in this review primarily referred to equality between women and men. Another risk is oversimplifying intersectionality theory by relying on deficit models of identity, which fail to recognise how delineating difference can be a source of solidarity, empowerment, and resistance (Rosenthal 2016 in Fehrenbacher & Patel, 2020, p. 146).

Gender-transformative interventions can potentially be improved through incorporating an intersectional lens into design, research methods and sharing learning. There are varied analytical approaches, each foregrounding different aspects (McCall 2005 in Soeters et al., 2019). Examples in health research of quantitative methods are multi-level modelling and mixed methods approaches such as cultural consensus modelling and geospatial cluster analysis, which allow for rigorous investigation of variation among groups as well as complex interactions across levels of analysis (Fehrenbacher & Patel, 2020). Qualitative methods used across a diverse range of sectors include in-

depth interviews, case studies, and ethnography to explore participants' perceptions of the impact of different aspects of identity and social power in their lives. Multiple tools can be applied with a mixed methods approach to thoroughly examine an intersectional question in international development research and practice that aspires to be gender transformative.

While the integration of multiple perspectives and consideration of diverse needs may increase the costs and complexity of development approaches, these voices are critical to a holistic approach to gender-transformation in private and public spaces. This includes the integration of men as key change agents in transforming power dynamics, and, where possible and with appropriate approaches to 'do no harm', engaging with gender and sexual minorities. Research and interventions that affect children present an opportunity to include children's voices and consider specific measures to bolster change in both children's well-being and gender transformation ensuring appropriate practices are followed (del Moral-Espín & Espinosa Fajardo, 2021). Visibility and integration of diverse individuals into research and practice is a foundational requirement for gender-transformative approaches.

6.5. Principle 5. Embracing transformative methodological practices

The fifth principle is focused on the methodological approaches embedded within transformative practice as discussed previously in relation to gender transformative research. Much of the gender-transformative literature in all three streams relied on the reflexive, participatory, action-oriented, and collaborative integration of research and practice - with little distinction between the two as they became melded into one united approach. Such action-based methodological approaches are inspired by the transformative research paradigm (Creswell, 2014; Mertens, 2007).

One example of gender-transformative research is feminist participatory action research, in which transformative principles are embedded throughout the research process of planning implementation, and dissemination of results (Cornwall & Sardenberg, 2014; Kantor et al., 2015; Mullinax et al., 2018). Such research seeks to not only build knowledge but acknowledges that research has the potential to transform societies - both through the process and the results of research (Mertens, 2007; Sweetman et al., 2010). These processes have built coalitions across organisations and sectors, relying on feminist organisations for localised knowledge and conceptualisations of gender equality. An example of contemporary feminist coalitions is the South Asian Network for Gender Transformation that connects activists across regional borders in 'solidarities of epistemologies', which provide conversations of mutual learning across place-based differences (Desai, 2020).

Reflexivity is necessary to enable questioning of how particular familiar frames of reference (informed by our positionality) can determine how we see ourselves and others, and implications for knowledge creation. Such reflexivity requires an 'ethics of openness and vulnerability' that involves awareness of relationships and interdependence with others and being open to the uncertainty that questioning entails (Keddie et al., 2022).

Building on the existing gender-transformative literature, we draw in the parallel literature around decolonising approaches to development and research, given the increasing debate in this area and its relevance to gender-transformation. The international development sector was first established within a colonial context that privileged some races and sexes above others. It is a collective responsibility for those working in the sector now, especially those in positions of power and privilege, to dismantle the inequalities imposed by these racist and sexist systems (Worsham et al., 2021). Research conducted through 'imperial eyes' has worked to oppress indigenous knowledges and portray people in the Global South as 'the Other'. Decolonising development means "disrupting the deeply-rooted hierarchies, asymmetric power structures, the universalisation of Western knowledge, the privileging of whiteness, and

the taken-for-granted Othering of the majority world" (Sultana, 2019, p. 34). This requires active and reflective consideration of who owns research and knowledge, while avoiding perpetuating inequalities regarding whose ideas are represented. Decolonising knowledge involves the recognition of a plurality of values, practices, and knowledge, as well as "bringing to the centre and privileging indigenous values, attitudes and practices" (Smith, 2012, p. 41). Amplifying the knowledge of local actors from their own points of view can provide a rich and nuanced picture of the development context. Decolonisation and gender-transformation approaches both seek to address power dynamics in knowledge production and encourage a greater diversity of voices to be heard.

There are opportunities to integrate decolonising approaches alongside reflexive, participatory, change-focused, action-oriented, and collaborative practices of gender-transformative interventions. As such, this principle requires a shift in practice, bringing implementation, evaluation, and research much closer to one another, and designing initiatives that integrate them. By leveraging transformative methodological practices, the process of inquiry melds into the process of action.

7. Conclusions

In this article, we have explored the history of gender-transformative approaches; clarified the current breadth of applications through both grey and academic literature; and identified five uniting principles to support future gender-transformative research and practice. While we have confirmed that gender-transformative approaches are not novel and are based on feminist thinking and ideas established many decades ago, the practicalities of implementing such approaches continue to evolve. For instance, this paper has highlighted aspects such as decolonising research and development practice and the recognition of diversity in gender identities as continued evolutions within feminist development practice.

As shortfalls in the 'empowerment as development' models have emerged, the revived language of gender-transformation has an opportunity to critically explore broader trajectories and objectives of change within the context of international development work. Where a gender-mainstreaming approach has aimed to embed gendered thinking into development programming as a steppingstone towards improved development outcomes, a gender-transformative approach asserts that equality is both a pathway to and objective of development programming. This language seeks to reorient a new generation of researchers and practitioners to the feminist roots of gender and development. It aims not to repair the women, or change the men, but to transform the systems and structures to emancipate both men and women to create new ways of being and doing.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.wsif.2022.102635>.

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3.5 Synthesis: To what extent does existing scholarship align with a gender-transformative approach?

Synthesising insights from the three literature reviews, I conclude this chapter by examining the extent to which academic assessments and research in the international development sector – and specifically in WASH – have aligned with gender-transformative practice. I do this by reflecting on findings from Papers I and II, with reference to the five principles of gender-transformative approaches identified in Paper III. While the principles were initially designed to support gender-transformative interventions, their relevance to academic assessments (Paper I) and research (Paper II) holds – as Wieringa (1994) argues, true transformative practice requires a welding together of investigations and interventions. In Chapter 5's synthesis, I will once again draw on these principles to underpin emerging tenets of gender-transformative assessment practice. I now describe each of the principles and their relevant insights from Papers I and II and describe how these insights influenced the subsequent inquiry.

3.5.1 Principle 1: Motivated towards profound gender-transformations?

Existing gender-focused studies in international development and WASH were less motivated towards profound gender-transformations when framed solely in scientific, economic and public health conceptualisations of gender equality.¹⁸ As such, studies not influenced by feminist conceptualisations, often viewed gender equality as a stepping stone towards human flourishing rather than an outcome in and of itself, an insight identified by other feminist scholars (Nussbaum, 2000; Cornwall, 2001; Batliwala, 2007; Podems, 2010). For example, in Paper I, economic views of gender equality tended to focus instrumentally on women's decision-making leading to household financial security. For these studies, a flourishing family is economically stable an objective called 'smart economics', which has been critiqued by feminist research as potentially instrumental (Chant and Sweetman, 2012). In Paper II related to WASH, science- and health-focused studies were more likely to adopt gender-instrumental interests – exploring how women's engagement improves WASH systems (Mommen et al., 2017) or children's handwashing practices (Cavill and Huggett, 2020) – or gender-specific interests only investigating the experiences of women (Hulland et al., 2015; Sahoo et al., 2015; Baker et al., 2017; Caruso et al., 2017). For these studies, a flourishing world is characterised by equitable, efficient, and sustainable systems (Elmendorf and Isely, 1981; van Wijk-Sijbesma, 1987).

During the *review* phase, my conceptualisation of gender equality evolved shaping the subsequent phases of this doctoral inquiry. My perspective evolved, from an economic viewpoint directed towards increasing the efficiency and effectiveness of WASH systems, to

¹⁸ I do not argue that all studies must be framed solely in a feminist perspective, but rather that gender-related studies in development and WASH could benefit from transformative practices which implicitly encourage a plurality of impacts especially when incorporating gender equality aspects. In many intervention theories of change, a single impact statement is identified as the final project aim, such as improved health (Belcher and Palenberg, 2018). A plurality of project impacts would encourage mandates to include gender-transformative aims and avoid gender-instrumental tendencies.

become a more nuanced and synergistic feminist perspective. This feminist perspective is underpinned by gender and development studies and identifies gender equality itself as a key indicator of a flourishing world, rather than a stepping stone towards flourishing. Additionally, identifying the importance of motivating disciplinary worldviews, I determined to adopt a feminist perspective and explicitly both explore and foster gender-transformations within the remainder of the inquiry.

3.5.2 Principle 2: Focused on the systems which perpetuate inequalities?

Gender-focused studies in international development and WASH primarily focused on the 'symptoms' rather than the systems which perpetuate inequalities, a phrasing promoted by advocates of the gender-transformative approach (AAS, 2012; Hillenbrand et al., 2015). In both Papers I and II, the emphasis was often on individual or household level changes, without exploring how these fit into wider societal challenges.¹⁹ This approach continues to place the "burden of change" on women rather than exploring "the social norms, attitudes, behaviors, and social systems that underlie" inequalities (AAS, 2012, 3). For example, in **Paper I**, 58% of the studies focused on individual women's empowerment, many of which adopted economic or psychological framings, highlighting how empowerment has lost its initial potency (Batliwala, 2007; Cornwall and Rivas, 2015). In **Paper II**, concentrated on the WASH sector, only 4% of the studies explored outcomes within organisational structures, despite the importance of organisations and duty bearers in the provision of WASH services (Fisher et al., 2017). As such, this research suggests that the development sector continues to problematically adopt a 'Women in Development' paradigm (as described in **Chapter 1**) focusing primarily on women's experiences and perceptions (Rathgeber, 1989; Kabeer, 1994).

The gap identified in these literature reviews shaped the subsequent inquiry of this doctoral research to highlight a focus on systems. This occurred in two ways. First, I aimed to explore the experiences of individuals across multiple spheres of life – without a focus on the home or workplace. This opened the inquiry to investigate the ripple effects of gender-transformations from one sphere to another (de Vries and van den Brink, 2016). Second, I aimed to actively understand how systems (including the structures of SMSU3) shaped the experiences of the individuals which make up the systems (Kabeer, 1994). This was done through a focus on the factors which shaped experiences – including program influences and wider societal change.

3.5.3 Principle 3: Grounded in strategic gender interests?

The extent to which studies in international development and WASH explored strategic gender interests remains uncertain – what Kabeer described as the tension "between what 'is' and what 'could be' in the formulation of policies and programs" (Kabeer, 1994, 300). In **Paper I**, although themes commonly associated with strategic gender interests such as decision-making and

¹⁹ Much of this narrowing could be articulated as a necessary constraint in conducting academic research and the importance of drawing boundaries around studies. However, the overall trends from both papers and emerging literature indicate that most emphasis is placed on women's individual empowerment and access to services.

leadership were explored within the literature, instrumental framings particularly from scientific and economic disciplines dampened potential strategic value. Additionally, as illustrated in **Paper II**, 37% of WASH studies explored themes of access and supply, which Moser (1993) would describe as a practical gender need. Yet, Kabeer and other scholars such as Wieringa (1994) and Longwe (1997) argue that “women’s practical gender needs, and the ways in which they are met, thus become interrelated dimensions of strategic interests...” (Kabeer, 1994, 300). Therefore, the extent to which literature explores strategic gender interests, cannot be as simple as categorising themes or indicators, but remains a complex dialogue between assessment, intervention and research (Wieringa, 1994).

The uncertainty identified in Papers I and II, directly influenced my purposeful focus on the ‘ways in which’ the inquiry was undertaken and an exploration of the day-to-day experiences of practical and potentially strategic interests. First, the inquiry paid meaningful attention to the transformative potential of the assessments. Second, the study aimed to explore themes related to both practical and strategic gender outcomes (Carrard et al., 2013), while adopting narrative formats which have shown promise in describing the connections between practical and strategic interests. Ultimately these insights were influential in framing the inquiry’s research question as articulated in **Chapter 1** through the words ‘meaningfully explore and foster’.

3.5.4 Principle 4: Recognising and valuing diverse identities?

As evidenced in Papers I and II, the recognition and valuing of diverse identities in both academic examples of international development assessment and gender-WASH research is a significant gap. Notably in **Paper I**, nearly two-thirds (63%) of the articles focused solely on women. This trend was similarly followed in the WASH literature (**Paper II**) in which nearly half of the articles (47%) focused solely on women and many of these focused on women with young children. Very few of both reviews explored the experiences of men and boys; a common lament from development scholars (Cornwall, 2000; Bannon and Correia eds, 2006; Peretz et al., 2018) and WASH practitioners (Mahon et al., 2015; Cavill et al., 2018). Moser argues “the focus on gender rather than women makes it critical to look not only at the category ‘women’—since that is only half the story—but at women in relation to men, and the way in which relations between these categories are socially constructed” (Moser, 1993, 3). Kabeer expands this idea to include aspects of intersectionality, in that gender “...is always interwoven with other social inequalities such as class and race” (Kabeer, 1994, 65). As argued in both papers, the sector’s focus on women of reproductive age, can only provide a narrow version of ‘the story’.

As such, this inquiry purposely sought to explore a breadth of experiences from a diverse group of individuals and gave equal weight to men’s experiences of gender-transformative change. This is evidenced in several ways. First, the inquiry aimed to actively engage both women and men equally, even when this made the process more complicated (as described in **Paper IV**). Second, the micronarrative story collection adopted census sampling to ensure a more inclusive perspective than used in typical gender-related research relying on purposive sampling (as

discussed in **Paper V**). Third, while analysis was undertaken with a focus on gender differences in responses, I aimed to include aspects such as job role, age and societal status within the analysis – illuminating social differences beyond gender (as described in **Paper V** and **SM.1**). Lastly, while no one in the study actively identified as other gendered, several of the reflection interviews highlighted challenges for individuals living outside of the traditional gender norms, and care was taken to protect these individuals and their responses in the subsequent analysis. The importance of diverse identities is again explored in **Chapter 5**, with the importance of inclusivity across all assessment stages emerging as a tenet of transformative assessments.

3.5.5 Principle 5: Embracing transformative methodological practices?

Finally, studies in international development and WASH largely embraced pragmatic or postpositivist methodological practices and had limited engagement with the transformative paradigm. For example, in **Paper I**, while the studies were 40% quantitative and 40% qualitative, only 5% of the assessments adopted a transformative paradigm as evidenced through study descriptions – drawing on the definitions from Sweetman et al. (2010). Results from **Paper I** also highlighted an interesting trend in the mismatch between highly participatory programs and large-scale control trials used describe changes (e.g., Gupta et al., 2013; Hewett et al., 2017; Houweling et al., 2019), which some scholars have described as a problematic trend (Batiwala and Pittman, 2010; White, 2015; Kabeer, 2018). Within the WASH sector, as evidenced in **Paper II**, the transformative paradigm is even more nascent with only 3% of studies adopting a transformative methodological approach and seen in the small number of WASH-related studies identified in **Paper III**. The WASH sector has much to learn from the examples of agriculture and food security in adopting and accepting more transformative forms of research.

It is important to note that while it is hoped that gender-transformations lead to positive and desired outcomes for society and in particular women in girls, this may not always be the case. There are many documented examples of unintended outcomes of gender-transformative programming (see for example Kabeer, 2001). As such, actions towards gender-transformative research and practice can lead to unintended adverse outcomes (Jabeen, 2018). Therefore, a robust ‘do-no-harm’ and ideally a ‘do-more-good’ (see Chapter 6.5) is required for all research and practice exploring sensitive topics such as gender equality.

Aiming to fill this gap and clarify the value of transformative research in WASH, this inquiry actively adopted a transformative paradigm and transformative methodological practices, both within the pilot assessment and in the meta-analysis that framed the wider research question (**Chapter 1**). First, the inquiry adopted methodological practices that were participatory and aligned with transformative forms of engagement, namely photovoice and micronarratives (see **Chapter 4**). Second, the inquiry purposefully investigated the transformative potential of these approaches with a goal of strengthening future transformative practice (see **Chapter 6**). Finally, and perhaps most importantly, this doctoral research aimed to refine definitions of gender-

transformative research and evaluation approaches which exist primarily in grey literature (Khanna et al., 2016; Mullinax et al., 2018) and create a foundation for future academic scholarship (Chapter 8).

3.6 Limitations of the review phase

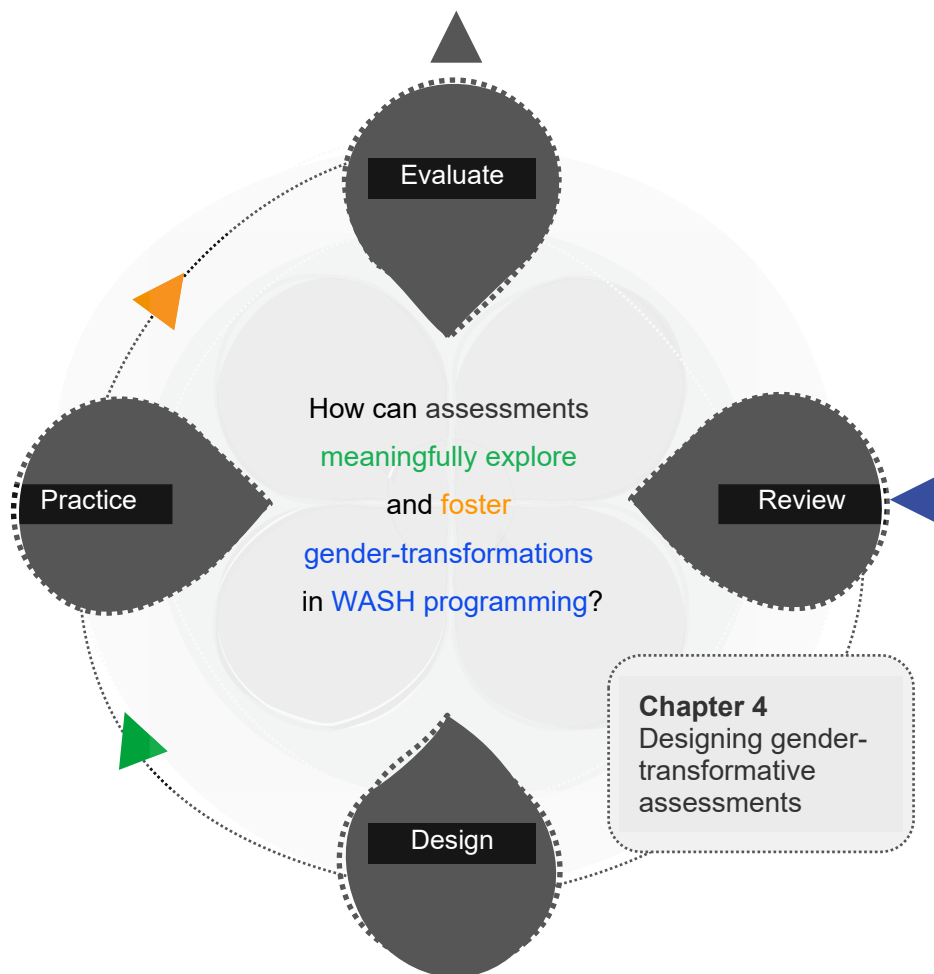
The methodology adopted within this *review* phase has several limitations. First, while much of the sector operates outside of the realm of academic literature, two of the papers focused exclusively on academic publications. Yet, as argued in Papers I and II, academic research sets the tone for wider sectoral understandings and therefore offers a valuable perspective that is still legitimate to explore. Second, a limitation of this thesis' structure required a clear line of argument, presented here as a tidy three-part chapter, each of these papers was created in parallel; leading to a set of reviews that are inherently woven together through insights, themes, and understandings. Such complexity is difficult to describe in a linear fashion. Lastly, the focus on WASH was purposefully absent from **Paper I** and **III**, in order to observe breadth of practice within the development sector. Yet this ensured that the *review* stage was sufficiently broad to understand layers of best practice in the wider development literature.

3.7 Summary

In this chapter, I have documented the findings of the *review* phase of the collaborative action research process through three interconnected literature reviews. The reviews explored the intersections between gender and development within published assessments (**Paper I**), within academic research in the WASH sector (**Paper II**), and within (re-)emerging gender-transformative approaches in published and grey literature (**Paper III**). The process revealed the conceptual and methodological complexities in applying transformative approaches in a field with significant diversity of worldviews and disciplinary tendencies. To structure this complexity, I synthesised the findings of Papers I and II, through the five principles of gender-transformative approaches identified in **Paper III**. This process yielded insights related to (1) the disciplinary tensions between feminist and common constructions of a gendered approach; (2) the focus on symptoms rather than systems of gender inequality in both WASH and development more broadly; (3) a lack of certainty on how to apply aspects of strategic gender interests to research and assessments; (4) a strong focus on the empowerment of women, without taking into consideration further diversity; and lastly (5) a tendency to adopt pragmatic or postpositivist methodological practices rather than seeking opportunities for transformative outcomes. The findings from this synthesis were then used to frame the *design* and *practice* phases of the action research cycle which will be explored in the subsequent chapters. In sum, this chapter has aimed to review the international development sector's investigations of gendered change in academic scholarship to inform the design and practice of gender-transformative assessments.

Chapter 4

Designing gender-transformative assessment approaches for the SMSU3 midline evaluation

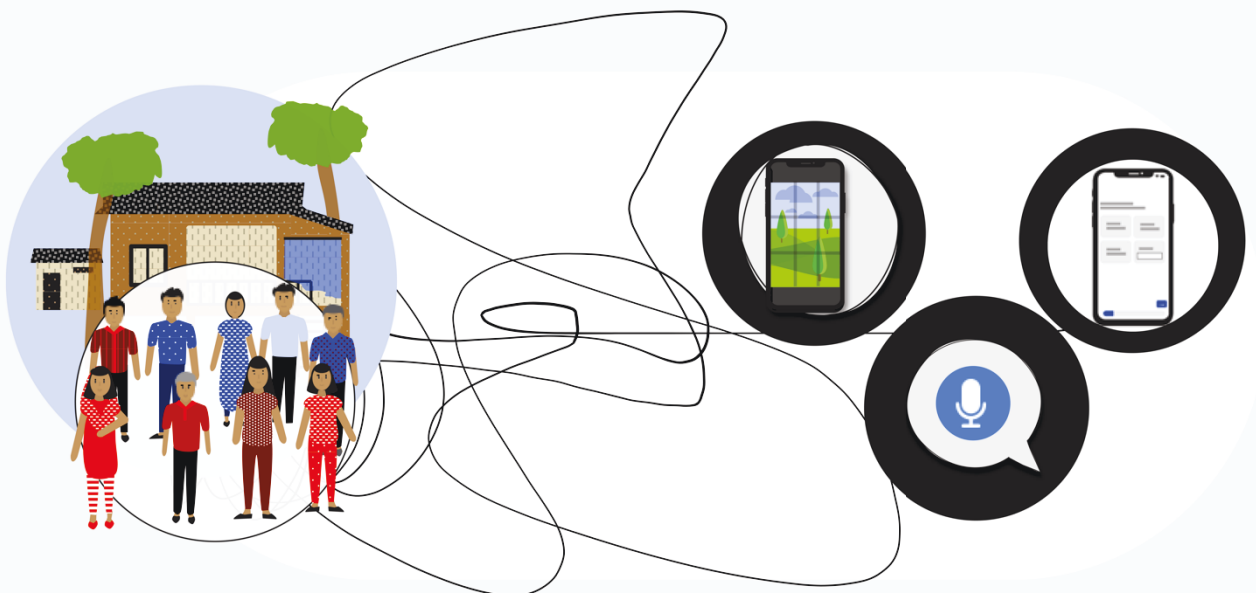


Two weeks into my inquiry's fieldwork in Cambodia, the COVID-19 pandemic was declared, and I was required to relocate and reformulate my strategy. I found myself in my parent's basement in rural Canada unsure of how I could continue with this doctorate. Yet, over the coming months and in rich collaboration with the team in Phnom Penh, we shifted the focus to the staff members of the SMSU3 program, and found new excitement in designing remote and digital techniques to facilitate the research process. A stronger and clearer focus on the transformative modality of research emerged from the messiness and uncertainty.

The collaborative opportunity to reimagine this inquiry, was completely unexpected, yet offered a valuable opportunity to lean into creativity and design solutions to unexpected challenges.

“...designing a research study is an exercise of the dramatic imagination”

(Cronbach, as cited in Patton, 2002, p. 12)



4.1 Overview

In this chapter, I discuss the inner circle of the action research cycle and introduce the two assessment practices designed to meaningfully explore gender-transformations in the WASH sector. I begin the chapter by clarifying the setting of the pilot including a description of the pilot program and the broader Cambodian context with regards to WASH, gender equality and the digital revolution. Next, I describe the process used to select assessment approaches for piloting, focusing on the value of visual storytelling. I then introduce the two assessment approaches – micronarratives and photovoice as components of the midline program evaluation. I detail how these two approaches were tailored through a variety of techniques and tools. Lastly, I connect the design and use of these approaches to the research questions which frame Chapters 5 and 6.

4.2 Pilot setting: A midline evaluation of a gender mainstreaming approach in the WASH sector

The pilot assessment was conducted as a component of a 2020 midline evaluation of iDE Cambodia's SMSU3 program. The full midline evaluation covered the entire program theory of change, while this inquiry focused on SMSU3's gender mainstreaming strategy. Gender mainstreaming in SMSU3 has sought to foster gender-transformations for staff working within the program. This strategy was determined as an essential precursor to staff having the necessary perspective and capacity to pursue gender-transformative change within the targeted communities.

Crafted in collaboration with the SMSU3 leadership team (research collaborators), the pilot assessment research question was:

How are gender-transformations occurring for staff of SMSU3?

This assessment question was purposely crafted to be open to emergent understandings and findings for the program team. In particular, the question was not prescriptive about the types of anticipated transformations, for example regarding decision-making, leadership or voice, but was open to a range of potential outcomes. The question was also designed to ensure usable insights for the team to support future programming decisions.

The pilot assessment adopted a four-stage process (*design* → *generate* → *analyse and synthesise* → *utilise*) as illustrated in **Figure 13** and detailed in **Table 5**. The lines between these phases are inherently blurry especially with regards to respondent-led interpretation, which bridges generation and analysis, and sensemaking which bridges synthesis and utilisation.

Figure 13. *The inner layer of the action research cycle representing the pilot assessment*

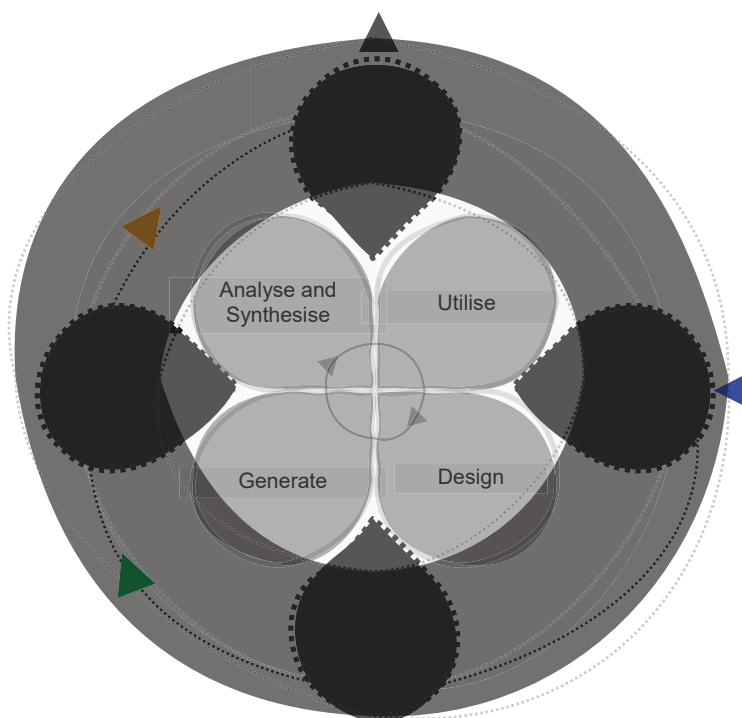


Table 5. *Description of the four phases of the pilot research*²⁰

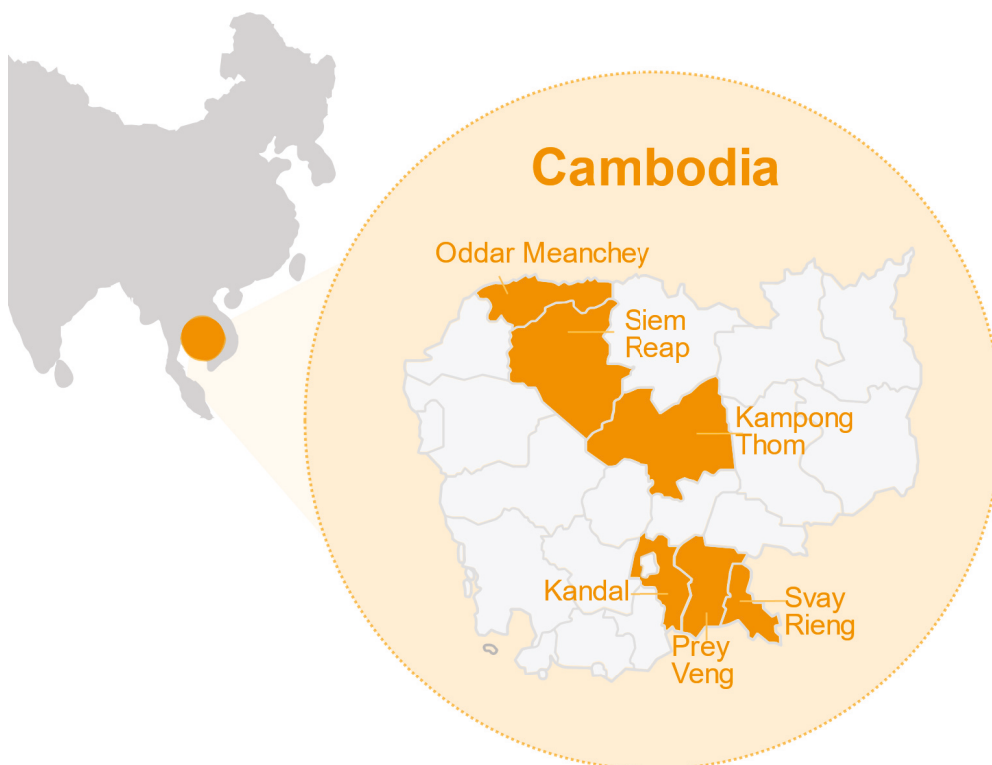
Phase	Definition
Design	Process of (1) defining the research question, (2) identifying the requirements and constraints of the assessment; and (3) creating and testing the approaches.
Generate	Process of generating data as part of the research in dialogue between research participants and facilitators. In keeping with a constructivist and transformative modality, data is generated and not collected or found. This includes the process of respondent-led interpretation.
Analyse and synthesise	Process of analysing data through sorting, classifying, and creating sense from the analysed insights. Analysis and synthesis also relied on respondent-led interpretation (which will be explored in Section 5.4).
Utilise	Process of translating insights into action, inspired by Patton's (1996) utilisation-focused evaluation approach. This was conducted through a series of workshops (emerging insights, sensemaking, and reflection) with the research collaborators and research participants. The phase overlapped with the process of evaluation conducted at the meta-level of the inquiry (see Table 2).

²⁰ Process adapted from McNiff (2017) and Patton (1996).

4.3 Pilot program: Sanitation Marketing Scale-Up Program 3 (SMSU3) in Cambodia

The Sanitation Marketing Scale-Up Program 3 (SMSU3), a water and sanitation intervention implemented by iDE Cambodia, contains multiple funding streams including the Australian Government's Water for Women Fund. The program is one of 15 programs in Asia and the Pacific focused on supporting improved health, equality and wellbeing through socially inclusive and sustainable WASH projects. The program operates in six rural provinces (as illustrated in **Figure 14**) supporting the promotion and sale of latrines, water filters, faecal sludge management and handwashing systems through private enterprises. Within the selected six provinces, only 64% of households have access to improved sanitation services and the intervention seeks to improve household practices through the introduction of quality technologies. My engagement with SMSU3 focused on the promotion and sale of latrines. Improvements in sanitation in turn support stronger handwashing, faecal sludge management and water quality.

Figure 14. Map of the six Cambodian provinces of the SMSU3 project



As seen in **Figure 15**, iDE field office staff directly engage with sales agents (SAs) and latrine business owners who support rural households to purchase latrines. Within the iDE Cambodia program, sales agents are considered staff members and receive a commission wage from latrine sales. Therefore, staff members included leadership team members (n=12), field staff (n=90) and sales agents (n=95). The program has also been supported by several staff based in Denver, Colorado who participated in the research as collaborators (n=3). These individuals

were iDE's global strategic advisors on gender and evaluation. For clarity, I use the terms collaborators and participants to refer separately to the individuals who engaged in the collaborative research process (outer layer) and individuals who responded to the assessments respectively (inner layer). In the case of photovoice, some collaborators were also participants.

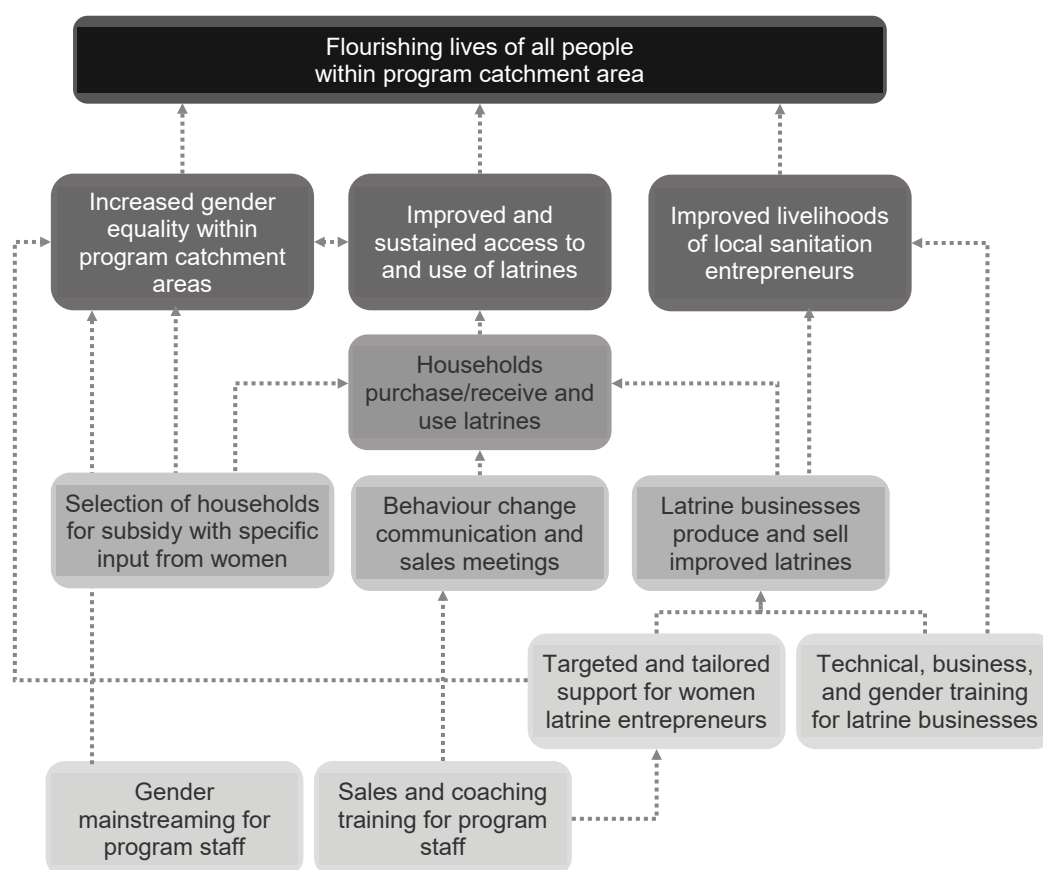
Figure 15. A simplified schematic of SMSU3 project staff and stakeholders



4.3.1 Gender mainstreaming in SMSU3

In addition to WASH-related outcomes, SMSU3 has sought to strengthen gender equality in the program catchment areas and in particular for SMSU3 staff members. As seen in **Figure 16**, gender mainstreaming for program staff (program leadership, field staff and sales agents) was a core component of the project implementation. The mainstreaming included a gender-point person in each province, addressing the gender balance of the team through targeted hiring practices, and an annual gender training for all staff. The mainstreaming addressed historically gender-insensitive approaches to the selection of households for subsidy, behaviour change communication materials and wife–husband partnerships within latrine businesses.

Figure 16. SMSU3’s gender mainstreaming theory of change



The gender mainstreaming approach is well established in wider gender and development practice (Moser, 1993; Plantenga, 2004) and has been recently gaining traction in the WASH sector. For example, in a recent publication, Cavill et al. (2020) highlighted that “gender transformation is required at all levels in the WASH sector: individual, programme, organization, donor, government, and partner level” (p.221).

4.4 Pilot context: Gender equality, WASH, and mobile technology in Cambodia

So far in this chapter, I have described the pilot setting as a midline evaluation and introduced the pilot program – SMSU3. I now describe the broader context of gender equality, WASH and mobile technology in Cambodia.

4.4.1 Gender equality context in Cambodia

The Kingdom of Cambodia is in the Indochina peninsula in Southeast Asia and bordered by Vietnam, Laos, and Thailand. From 1867, Cambodia sustained over 100 years of French colonial influence after gaining protection from France due to the threat of invasion from Thailand. Cambodia remained a protectorate of France from 1867 to 1953, when it gained independence and became a constitutional monarchy (Chandler and Steinberg, 1987).

Today, the population of Cambodia is over 16.7 million (2020 estimate) of which 75% is rural, due to a strong reliance on agriculture (DHS, 2020). Over 48% of Cambodians are employed in the agricultural sector and nearly 20% are employed in industries such as tourism and garment manufacturing (ILO, 2019) – the latter of which is highly focused on women’s employment. Cambodia’s state religion, Theravada Buddhism, is practised by 97% of Cambodians and is foundational to the gender norms and attitudes within the country. For example, the importance of semi-religious gender codes. Similarly, 96% of Cambodians are ethnically Khmer²¹, while matrilineal ethnic groups such as the Cham make up a small minority (Kingdom of Cambodia, 2020).

Since independence, the country has seen significant turmoil through proximity to the Vietnam War (1969–1973), genocide by the Khmer Rouge (1975–1979), and the Cambodian–Vietnamese War (1979–1991). Influenced by Maoist China, the Communist Party of Kampuchea – popularly known as the Khmer Rouge – forced urban populations to rural areas in order to reinstate an agrarian economy (Kiernan, 2008). The regime ultimately killed over two million people (25% of the population) in four years, and all religious and Western influences were forbidden (Ebihara and Ledgerwood, 2002; Ledgerwood, 2012).

After the fall of the communist regime, Cambodia took active steps to protect the rights of women and align with globally recognised mandates of gender equality. Ratified in 1993, the Cambodian Constitution protects the equal rights of women and men. Additionally, the country adopted the Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) in 1992 and the Beijing Platform for Action in 1995 (Kingdom of Cambodia, 2003).

However, the gendered impacts of the Khmer Rouge period were and are significant. Notably, more women survived the genocide than men (Ebihara & Ledgerwood 2002) and in the post

²¹ As identified by the predominant mother tongue of respondents in the 2019 national census.

regime years, men between 15 and 50 were almost entirely absent from rural communities. Still today, 27% of homes are female headed (DHS, 2014). The turmoil also left behind other gender-related challenges in the country, and much of the published academic literature focusing on gender and Cambodia has been centred on challenges such as prostitution, trafficking, high levels of violence against women, and HIV/AIDS (see for example: Anderson & Grace, 2018; Aveling, 2012; Brickell, 2008, 2011a; Kent, 2011; Yaşar, 2010). Additionally, the genocide led to a shortage of male labour and women were required to take on more traditionally male roles (Ebihara & Ledgerwood, 2002).

Despite strong economic participation of women in Cambodia, political representation remains low. In particular, only 9.4% of ministers and 20% of the lower house representatives are women (OECD, 2019). While this has improved since independence, the numbers are significantly below regional norms. This seeming tension challenges Western ideals of power as economic or political, which may not be appropriate in the contexts of Cambodia and Southeast Asia (Jacobsen, 2008). For example, Jacobsen (2008) argues that “although Cambodian women have been represented at different times as ‘powerless’ in Western analyses, they have continued to exercise authority outside those areas of concern to Western constructs of power” (p.6). She argues that a better word for ‘power’ in the Cambodian context is that of ‘substantial influence’ or ‘*khsae*’. Such forms of power were common amongst women in the preclassical periods of Cambodian history (Jacobsen, 2008).

Nonetheless, for women, this form of *khsae* power is juxtaposed against the pervasive traditional Cambodian moral codes. While the origins of the *chbab srey* (moral code focused on women) and *chbab pro* (focused on men) are debated, scholars agree that they represent “sentiments encapsulated in the Brahmanical inscriptions of the preclassical and classical periods...embody[ing] the ideal society as perceived by a particular author” (Jacobsen, 2008, 120). One notable theory is that they were written by Ang Duong in the 19th century to disparage his own niece who he saw as usurping his claim to the Cambodian throne. Regardless of their history, the *chbab srey* and *chbab pro* detail ‘proper’ moral behaviour, roles, and responsibilities for both women and men and were only removed from curriculum in Cambodian schools in 2007 (United Nations Cambodia, 2022). For example, the *chbab srey* prescribes “a subordinate, shy, and subservient role for women, and a strong decision-making role for men. Women are told to remain silent and never challenge their husbands...which reinforces the high tolerance for violence against women” (Hillenbrand et al., 2014, 359). The influence of these social codes remains significant in forming the mindsets of many Cambodians with regards to gender; perhaps in a similar way to which Aristotelian social codes still dictate traditional gendered behaviours in Western countries (Pierce et al., 2004).

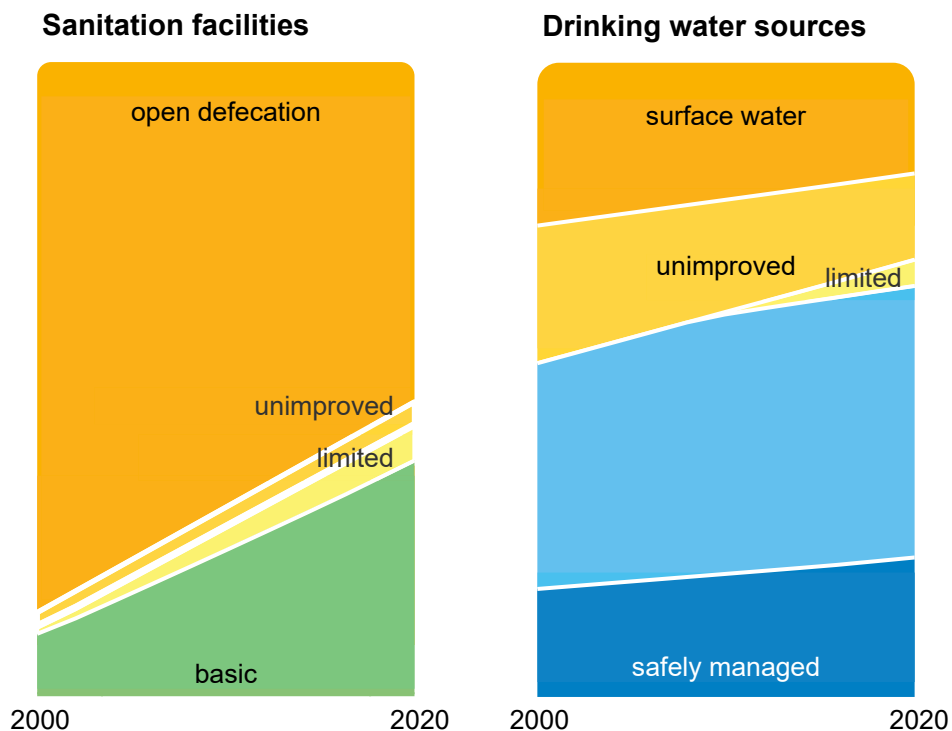
Despite these strong social codes, Cambodian perspectives of gender are rapidly changing, primarily due to its young population (Aveling, 2012). Policies of women’s rights, reproductive health and education have laid the foundation for much of this rapid change (United Nations

Cambodia, 2022). Tensions between pre-revolutionary cultural norms and emerging transformations remain rife and are particularly strong between generations and between urban and rural spaces (Brickell, 2011b, 2011a). Our pilot assessment was directly situated within these generational and geographic domains of tension, which influenced the experiences of SMSU3 staff.

4.4.2 WASH context in Cambodia

Over the last 20 years, improvements in WASH access in Cambodia have been dramatic as visualised in **Figure 17**. Rural areas have gone from zero basic sanitation access to 61% since 2000, and surface water use has dropped from 25% to 8% in the same time frame (JMP, 2021a). These gains have been more significant in Cambodia than in other countries within Southeast Asia. Cambodia is only second to Nepal in the list of countries with the greatest progress on increasing basic sanitation (2015–2020) and had the largest decrease globally in open defecation in the same time frame (JMP, 2021b). Such rapid improvements carry significant social and gender consequences associated with a reframing of daily life, roles, and responsibilities to align with new sanitation practices. These improvements have not just been experienced by the rural poor, but have also been experienced by the majority of society including the urban working class (JMP, 2021a) and includes many of the research participants.

Figure 17. Improvements in sanitation and drinking water in Cambodia 2000–2020²²



²² Adapted from JMP (2021a, 2021b)

4.4.3 Digital context of Cambodia

Radical changes in equality and WASH within the Cambodian context over the last 20 years are matched with a significant technical revolution through the digitisation of Cambodia. Cambodia has some of the highest mobile phone access and 3G coverage rates in the world with 30% more phone subscriptions than people (ITU, 2019). Where basic block phones dominate much of Southeast Asia, in 2018 48% of mobile phones in Cambodia were smartphones (AfterAccess, 2019). Cambodians often use their phones for eGaming, social media and image editing (ADA, 2020). However, it should be noted that smartphone access is often gendered globally (Rowntree and Shanahan, 2020) and reflecting this, Cambodian women are 20% less likely than men to own a mobile phone (AfterAccess, 2019). Despite this gap, all of the staff in the SMSU3 program had access to personal or program smartphones, regardless of gender. However, access should not assume digital literacy and comfort (further discussed in **Report VII**). The rapid digitisation of Cambodia offers a valuable context to explore opportunities for digital forms of data generation and synthesis as detailed in the two selected approaches.

4.5 Selecting approaches to pilot: Narrowing in on visual storytelling

My methodological inquiry focused on innovative and creative qualitative approaches, as determined in the inquiry's funding description, and by a personal interest in arts-based evaluation. The mandate to adopt innovative approaches was formulated in the funding application before I was personally involved in the process. Wiles and colleagues (2011) identify six different types of innovative qualitative methods: creative, narrative, mixed, online, digital and group-based. Building on this definition of innovative qualitative approaches and my own experiences with visual communication styles, I focused on creative forms of qualitative research. Kara (2015) identified four ways in which research can be creative: (1) arts-based practices, (2) use of technology, (3) application of mixed methods, and (4) transformative research frameworks. She specifically describes the value of participatory, feminist, and decolonising frameworks as an important form of creative research practice. My work comprised all four of these aspects yet was situated within the creative modality of visual storytelling.

To ensure a manageable scope for this inquiry and in collaboration with SMSU3 leadership, I selected two approaches with gender-transformative potential to pilot in the midline evaluation. Both approaches adopted visual storytelling practices. The process of selecting began from a wide search of potential approaches which was narrowed down based on requirements of the assessment and contextual factors.

- The selection process began in November 2019 with the development of a longlist of potential approaches and techniques identified during the *review* stage of the action research process.²³ The longlist comprised 14 evaluation and 20 research approaches used in qualitative inquiries with a focus on gender. Additionally, 70 techniques for data generation and 16 for utilisation were identified.
- This longlist was then narrowed in March 2020 to respond to the programmatic and COVID-19 contexts, driven by four main factors. First, I sought approaches relevant to investigate and pursue gender-transformative change through a feminist lens. Second, I focused on creative approaches as articulated in this inquiry's grant. Third, because of COVID-19 restrictions in movement, I required approaches relevant to explore change for program staff of SMSU3. Lastly, also because of the pandemic, I focused on approaches which could be conducted remotely.
- The narrowing identified a suite of visual storytelling approaches. These included examples of participatory photography projects (Maclean and Woodward, 2013; Cornwall and Sardenberg, 2014; Bisung and Elliott, 2019), storytelling (Colton et al., 2006; CPA, 2007; Ali, 2014a, 2014b), most significant change (Tibbitts, 2016; Dinh et al., 2019) and micronarratives (Bakhache et al., 2017; Bartels et al., 2019). These visual storytelling examples resonated in the sense that that both explored and fostered transformative change, but also were compatible with a feminist epistemology.
- The final selection of micronarratives and photovoice, was made in June 2020 during discussions with the SMSU3 leadership team. These two approaches were then collaboratively refined to meet the needs of the SMSU3 midline evaluation and new techniques were designed to supplement and support the approaches (e.g., VOICE coding and personas).

4.6 The transformative value of visual storytelling

Visual storytelling draws on the well-established multi-modal practices of visual ethnography, image elicitation, narrative inquiry, and visual narrative inquiry emerging from a range of disciplinary fields including education, the cognitive sciences and knowledge management. In this section I briefly introduce the concepts of retrospective assessment modalities and visual storytelling and outline four reasons why visual storytelling is a relevant approach to explore and foster gender-transformative change.

The practice of storytelling encourages one to look back on their lives, in alignment with the retrospective modality of assessment from **Figure 3** in **Chapter 1**. Retrospective forms of assessment have been highlighted as a potentially more effective way of exploring changes for

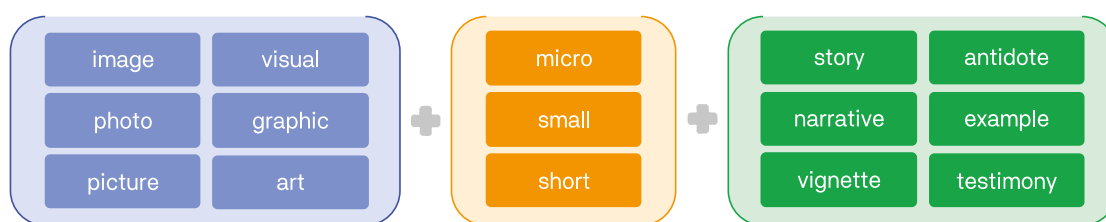
²³ The development of a longlist is a Design Thinking technique that allows a designer to identify and codify existing solutions. The idea is to create a longlist of possible options before narrowing to a more traditional 'short list'.

participants than typical pretest–posttest modalities in social research (Pratt et al., 2000; Lam and Bengo, 2003; Little et al., 2020). For example, frames of reference and understandings change over time leading to potential ‘response shift’ (Little et al., 2020). Therefore, emerging best practice recommends the use of a ‘post + perceived change’ modality in describing personal change. Such an approach is retrospective and asks participants to describe their current status (post) and then to estimate the amount and direction of change (perceived change) (Lam and Bengo, 2003). For example, an assessment might investigate what someone is currently experiencing and then how that has changed since the beginning of an intervention.

The qualitative multi-modal assessment practice of visual storytelling uses found or produced images to enhance the process of story generation.²⁴ The two piloted visual storytelling practices both involved the composition of a short narrative strengthened by accompanying visuals.²⁵ In this way, images are not “visual redundancies” to text, but instead are a significant component of the communication (Harper, 1989). Short stories feature: agents which experience events caused by tensions (Herman, 2009; Fuchs et al., 2021) and therefore can be used to describe either personal or observed experiences resulting from a program intervention.

As depicted in **Figure 18**, this type of approach is not typically described in literature and therefore I have crafted the phrase ‘visual storytelling’ to describe the practice. Alternative names could have been ‘visual short stories’ or ‘visual micronarratives’. The term ‘storytelling’ has been selected to highlight the process of creation and not just the outcomes (Snowden, 1999), and the word ‘visual’ to emphasise the breadth of photography and illustrations that have been used in inquiry. I have left out the diminutive qualifier to distinguish the practice from other social media-based forms of ‘tiny’ narrative (Dayter, 2015).

Figure 18. A visual storytelling formula



²⁴ Found images refer to images which are not produced as part of the inquiry, but rather come from previous engagements (Harper, 2002). These can be found by the participants or supplied by the researcher.

²⁵ A short narrative is also referred to as a ‘tiny story’ (Dayter, 2015) or ‘micro-narrative’ (Venditti et al., 2017) or a ‘micronarrative’ (Snowden, 2011).

4.6.1 Visual storytelling in the age of social media

In the age of social media, much communication is being formed in character-limited modalities supplemented with images and tags (Snowden, 2011; Venditti et al., 2017). Social media use in Cambodia is widespread and 74% of Cambodians are active social media users, up from 27% in 2016 (Statistica, 2022). This includes extensive use of social media platforms such as Facebook, Instagram and Twitter, as well as messaging applications such as Facebook Messenger, Telegram and Line (Willemysn and Dara, 2017; Starkey, 2021). Social media's character-limited format aligns with day-to-day storytelling practice in which "naturally occurring stories come in fragmented anecdotal form" (Snowden, 2011). Distinct from other forms of communication, social media promotes the use of "self-signifying" (Snowden, 2011) or the process of coding, tagging, or categorising one's own narrative to align with existing categories or to form new categories.²⁶ Visual storytelling practice aims to emulate this micro-form of tagged communication which has come to dominate current digital discourse.

4.6.2 Visual storytelling as cross-cultural practice

Across cultures, the art of storytelling is a celebrated and respected craft, and the act of describing one's own experience as story is daily occurrence. Snowden argues that stories "convey complex meanings across culture and language barriers, in a way that linguistic statements cannot" (Snowden, 1999, 30). Similarly, visuals can support communication of meaning across cultures and modalities (Dancygier et al., 2016; Fukada, 2016). Both visual and storytelling techniques have also been described as potentially decolonising formats which embrace other ways of knowing (Archibald, 2014; Archibald et al., 2019; Whitlow et al., 2019; Thambinathan and Kinsella, 2021). Bridging personal storytelling with forms of visual communication, visual storytelling creates opportunities to share complex narratives of change across cultural boundaries.

4.6.3 Visual storytelling as embodied practice

The processes of creating visual stories fosters reflections on the embodiment of one's own experiences. Visual elicitation requires participants to engage different aspects of their person (physical, emotional, and relational), then used in responding to interview questions (often mental) (Kara, 2015; Mannay, 2016). Lisa Given describes this process in her description of visual narrative inquiry as "an undivided continuous interaction between humans and their environments that includes thoughts, feelings, doings, and perceiving" (2012, 939). Such an approach resonates with a holistic understanding of the person with regards to body, mind, emotions, context, and relationships – as articulated in theories of embodiment (Merleau-Ponty, 1962). Embodied practice also allows for participants to reflect on their own lives, and therefore offers opportunity for personal transformation (Given, 2012). As a more embodied form of

²⁶ The value of self-signification for meaningful descriptions of gender-transformative change is explored further in **Section 5.4.2.**

inquiry than traditional qualitative research, visual storytelling creates opportunities for participants to reflect on their own lived experiences and potentially identify areas for change.²⁷

4.6.4 Visual storytelling for untangling complexity

Lastly, visual storytelling has been described as a useful tool in mapping the potentialities of complex adaptive systems. Referring to the value of micronarratives, Snowden argues that “complex systems with human motivations and attitudes...are best revealed through an understanding of the day-to-day micronarratives of existence” (Snowden, 2011, p. 226). Similar arguments have been made regarding the value of visuals to describe and document complexity (Boehnert et al., 2018). Research blending visual and narrative techniques to create sense of complex systems is nascent but holds promise in communicating complexity and highlighting opportunities to foster change in collaborative processes (see Cortes Arevalo et al. 2020 regarding an example in river management). Gender equality remains a ‘wicked problem’ embedded in a ‘wicked system’ to use the terminology of Andersson et al. (2014) or a complex adaptive system (Snowden, 2011). Such social systems are constantly co-evolving and modified by interactions of agents and structures (Snowden, 2011; Andersson et al., 2014). Describing complexity within a system is perhaps best completed through a set of stories read together. Where one story represents a single experience, many stories when analysed and explored together paint a broader perspective of the system (Snowden, 2011). For those seeking to understand complex systems such as societal gender dynamics, visual storytelling is a useful tool for assessment.

Here I have articulated the usefulness of visual storytelling for this action research: the value in untangling complexity, engaging with embodied experiences, supporting cross-cultural communications, and leveraging modern forms of communication. The significance of storytelling as an active practice matched with the usefulness of images to elicit richer responses created an environment to not only collect narratives, but also foster change in the process. In the next section, I will detail the two selected approaches: micronarratives and photovoice.

²⁷ The value of embodiment for meaningful engagement with gender-transformative change is further discussed in the synthesis section of **Chapter 5**.

4.7 Micronarratives

Micronarratives are short stories which describe the experiences or observations of participants and are often used to explore complex programs (Bartels et al., 2019; van der Merwe et al., 2019).²⁸ My use of micronarratives leveraged provided cartoon images to help elicit short stories describing experiences of gender-transformative change. Micronarratives are distinct to other narrative based approaches, as they investigate experiences as a set and often leverage larger samples sizes. Micronarratives were selected as a component of the evaluation in consultation with program leadership who expressed a desire to hear from and synthesise a wide range of experiences from field-based staff considering the restrictions of interactions with beneficiaries during COVID-19. The importance of gender dynamics for field implementation teams has been highlighted in several recent publications in the WASH field (Cavill et al., 2020; Anderson et al., 2021).

Two approaches are commonly used in the development of short stories or micronarratives for assessment purposes, and I was inspired by both in the design of the micronarrative approach for SMSU3. First, the software Sensemaker® is one tool that is commonly used in the collection and analysis of micronarratives (van der Merwe et al., 2019). Sensemaker® prioritises large sample sizes and respondent-led interpretation and features automatic analysis. However, its use has been critiqued as being overly complex and difficult to use, especially with marginalised communities (Bartels et al., 2018, 2019). Second, Most Significant Change (MSC) is a common approach to short-narrative collection (Davies and Dart, 2005), often using interviews alongside curation and analysis of the stories with program leadership. The approach directs respondents to share stories of personal significance through a prompt designed around the phrase 'most significant change'. The approach has been critiqued as resource intensive and the story curation process as narrow and potentially disconnected from participants (Willets and Crawford, 2007).

To address challenges common with other short-narrative approaches, during the *design* phase of the inner cycle the collaborative team designed a visual micronarrative generation tool modelled after the MSC and Sensemaker® narrative collection processes. Notably, we adopted the subjective 'most significant' prompt framing from MSC which allowed the process to explore insights that were important to participants. This framing assumes that all respondents are going through some form of gender-transformative change based on their involvement with a gender-focused program and within a shifting cultural environment related to gender in Cambodia.²⁹ This framing also assumes that responses about the most significant gender-

²⁸ In **Paper V**, this approach is described as the hyphenated 'micro-narratives'. In **Paper VI** this is described as the hyphenated 'micro-stories'. I clarified my syntax through the drafting of this thesis.

²⁹ Notably, during the first several rounds of analysing the micronarratives, I aimed to categorise descriptions of change as transformative or not based on the insights from **Paper III**. However, it quickly became clear that such analysis was not only nearly impossible, but also futile. This difficult aligns with the critiques from Kabeer (1994) and Wieringa (1994) in untangling practical and strategic gender interests. Reengaging with Paulo Freire's (2000) understanding of social

related changes are a genuine reflection of their experiences. From Sensemaker®, we adopted the short story format, large sample modality and processes of self-signification. Adaptations were made to best meet the needs of the assessment, the research question, and the context. The micronarrative approach included three rounds of rapid piloting with the collaboration team to test the technical, conceptual, and practical aspects of the approach (see Step 1 in the subsequent narrative). The nine different batches of the micronarrative generation are summarised in **Table 6**.

The breadth of techniques used within the micronarrative generation, analysis/synthesis, and utilisation are summarised in **Table 7**. In the generation phase techniques included group administration, a digital survey, an optional audio survey, card sorting, image elicitation and VOICE coding. These techniques allowed simultaneous self-administered participation from staff using a smartphone survey application with voice and text input options. The visual card sorting aspects provided an interactive entry point for participants to engage with the complex topic of gender-transformations. Three interconnected techniques were used in the synthesis phase: thematic analysis, structural topic modelling, and the development of personas. Two hybrid sensemaking workshops were also conducted, one in combination with the photovoice sensemaking and a separate workshop for the collaboration team in preparation for the midline evaluation reporting.

Blending micronarrative generation with image elicitation, an audio survey and persona analysis allowed the team to collect and analyse a significant volume of qualitative data from a wider group of SMSU3 field staff and sales agents (n=176) in a short period of time. Analysis was then conducted on the breadth of narratives rather than selection of a single narrative. The approach aimed to elicit retrospective stories of personal and meaningful change that were related to the program interventions.

change, I reconceptualised that all the changes were in fact transformative and aimed to understand the extent of their transformation (observers, reflectors, and actors) as described in the personas report (**SM.1**) and **Paper V**.

Table 6. Summary of micronarrative batches as rapid pilot and pilot

Batch	Rapid Pilot			Pilot					
	1	2	3	1	2	3	4	5	6
Province	Phnom Penh (head office)	Kandal	Prey Veng	Kandal	Svay Rieng	Prey Veng	Oddar Meanchey	Siem Reap	Kampong Thom
Date	7/5/2020	8/27/2020	9/10/2020	10/12/2020	10/13/2020	10/14/2020	10/20/2020	10/21/2020	10/22/2020
Participants	6	12	10	15	16	33	10	40	41
Men	4	6	4	11	6	18	5	22	21
Women	2	6	6	4	10	15	5	18	20
Prompt type ³⁰	Themes (20)	Themes (22)	Themes (22)	Positive/Negative	Spheres	Verbs	Positive/Negative	Themes (14)	Verbs
Number of stories	2	2	1	2	1	1	2	1	1

Table 7. Techniques embedded into micronarrative approach

Phase	Technique	Description	Justification	Tools
Generation	Group administered	Group administered surveys allow for parallel data generation by multiple individuals at a single time, with the support of a researcher.	Administering the process in small groups reduced costs and ensured that responses could be collected by many participants simultaneously. The technique also allowed participants to have access to the internet at the office to complete the survey.	<ul style="list-style-type: none"> • Skype • PowerPoint • Projector and Computer

³⁰ A detailed description of the prompt types is included in **Paper IV (Chapter 4.2)**.

Phase	Technique	Description	Justification	Tools
Generation	Audio survey	Audio surveys allow participants to submit responses through an audio file similar to the use of short-form audio messaging common in Cambodia as described by the program leadership team. Audio surveys allows users to submit short audio clips rather than type responses. They are primarily used in self-administered internet-based surveys and replace open-response questions.	Audio surveys were selected as they have been shown to increase the length and quality of responses in other contexts (Thissen et al., 2008; Luff and Sturgis, 2015) and were suggested in the collaborative discussions with the SMSU3 program leadership. Phonic was selected due to its easy integration with Qualtrics. Visual Report VII investigates the effectiveness and inclusivity of audio surveys.	<ul style="list-style-type: none"> • Phonic • Qualtrics • Smartphone with internet access
	Digital survey	Digital surveys are an online technique of collecting or generating data. They can use both closed and open answer responses.	Digital surveys were selected due to the ability to generate data with a wide number of participants, in a short amount of time and to ensure group administration. Qualtrics was selected due its security protocols (UTS approved) and ability to include digital card sorts. The digital submission form is found in SM.3 .	<ul style="list-style-type: none"> • Qualtrics • Smartphone with internet access
	Digital card sorting and image elicitation	A common technique in participatory rural appraisal, card sorting allows participants to engage with a range of potential aspects and sort them into piles (Guijt and Gaventa, 1998). Image elicitation is the process of using images to support deeper engagement with complex topics (Harper, 2002). Participants selected a single card from a set (between 4 and 14). Cards included images and a short phrase in Khmer.	Cartoon images on digital cards were used as visual entry points for participants to select a topic to discuss related to gender equality. Offering choice of entry points allowed participants to determine the direction of discussions. I chose to draw the images rather than engaging a Cambodian artist as the images were revised a total of five times throughout the testing of the tools.	<ul style="list-style-type: none"> • Qualtrics with JavaScript and HTML coding • Cartoon graphics

Phase	Technique	Description	Justification	Tools
Generation	VOICE coding	<p>VOICE coding is an interpretation technique designed within this doctoral action research process. It includes a series of questions to support the self-significant of photo-stories.</p> <p>VOICE coding follows five questions related to the value, outcomes, importance, contribution factors and expectations (MacArthur & Megaw, 2022).</p>	<p>VOICE coding was designed to fill a gap in understanding the context and significance of qualitative descriptions of change. It was embedded into the digital submission survey.</p> <p>VOICE coding is summarised in Box 1.</p>	<ul style="list-style-type: none"> • Smartphone with internet access
Analysis and synthesis	Thematic analysis	<p>One of the most common approaches to textual analysis, thematic analysis systematically identifies themes from a textual dataset (Guest and Mclellan, 2003; Guest et al., 2012).</p>	<p>Thematic analysis was selected to best understand the different types of changes described by the SMSU3 field team. A particular type of thematic coding focusing on verbs (Saldaña, 2012) within the short narratives, was selected to streamline the process for the large number of responses.</p> <p>Further details in Paper V.</p>	<ul style="list-style-type: none"> • Computer • Airtable • Excel
	Structural topic modelling	<p>Structural topic modelling algorithms are an emerging technique to the analysis of large amounts of qualitative data and function similar to cluster analysis, but utilise text rather than numbers (Hornik and Grün, 2011; Roberts et al., 2019).</p>	<p>Structural topic modelling was selected as an alternative analysis technique to triangulate the results from the thematic analysis.</p> <p>Further details in Paper V.</p>	<ul style="list-style-type: none"> • Computer • R Studio
Synthesis and utilisation	Personas	<p>The novel (to qualitative assessment practices) persona technique to analysis creates a set of representative characters that correspond to the types of individuals within a dataset (Nielsen, 2019; Salminen et al., 2021).</p>	<p>Personas were selected as they can summarise a breadth of responses and ensure anonymity within an internal assessment.</p> <p>Further details in Paper V.</p>	<ul style="list-style-type: none"> • Computer • PowerPoint

Phase	Technique	Description	Justification	Tools
Synthesis and utilisation	Hybrid workshops	Hybrid workshops allow participants to join both in-person and online modalities simultaneously. They use interactive techniques such as digital sticky-notes and brainstorming to support engagement.	Two hybrid workshops were used with the micronarrative data. The first emerging insights presented emerging data to the collaboration team in preparation for the midline reporting, the second sensemaking workshop also included sensemaking from the photovoice responses.	<ul style="list-style-type: none"> • Zoom • Google Slides • Computers • PDF Viewer • Printed persona set

Figure 19. Design and implementation of the micronarrative approach within SMSU3

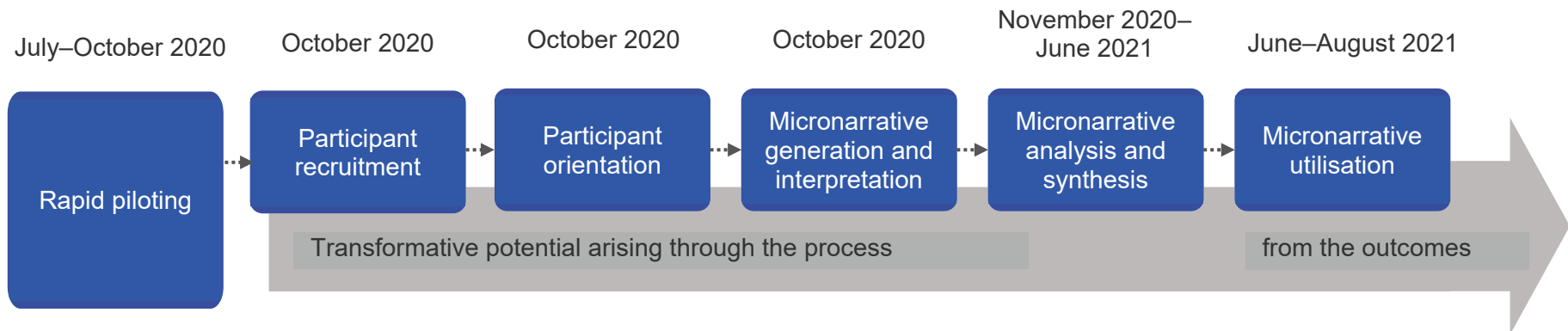


Figure 19 (illustrated on the previous page) summarises the steps for the micronarrative approach. The steps broadly follow the process of design, generation, analysis/synthesis and utilisation as outlined in the inner cycle of the collaborative action research process. In the subsequent narrative, I briefly describe each of the steps.

- **Step 1. Rapid piloting.** To facilitate a collaborative design process in the development of the micronarrative approach, three rounds of rapid piloting were conducted between June and October 2020 with a total of 28 participants. Of the rapid pilot responses, 22 were from field staff of SMSU3 and therefore responses were included in the synthesis process. The remainder included collaborators from iDE and personal colleagues. The first round of rapid piloting (n=10) included a digital Q-sorting process (Mckeown and Thomas, 2017), where participants sorted cards into a pyramid shape indicating the level of significant change. A Q-sort methodology was tested as it offers a structured and statistical approach to clustering perspectives (Watts and Stenner, 2014). Additionally in the first round of piloting, I had adapted focus-group based activities (drawing from Murthy, 2015) into digital activities to elicit richer descriptions of the changes. However, both the Q-sort and digital activities were deemed too complex and time consuming to use in the full pilot. Therefore, for all future batches, the digital activities were removed, and participants were asked to select one or two digital cards, rather than using a Q-sort. This selection process still allowed participants to direct the focus of the response but remained simpler.
- **Step 2. Participant recruitment.** The recruitment of participants was conducted in collaboration with SMSU3 leadership and two hired research assistants. The SMSU3 evaluation manager created a rota (n=163³¹) through each of the six program provinces (Kandal, Prey Veng, Svay Rieng, Oddar Meanchey, Siem Reap, and Kampong Thom) including sales agents and field staff. Participants were then invited to attend a 3-hour session in their provincial office. Participation was optional and participants were informed that their lack of participation would in no way impact their role within iDE. Participants were also able to stop their participation at any time without giving reason. It should be noted that power dynamics both 1) between myself and team and 2) between participating members, were at play in the process. I included self-reflection questions in the survey template to ask participants about potential distress and feelings of discomfort. Additionally, the facilitation was not done with iDE staff members, but with external research assistants with no connections to the organisation.

³¹ This rota did not include the 22 participants from the rapid pilot. A total of 185 participants from the six field offices were invited to participate in the rapid pilot and full pilot.

- **Step 3. Participant orientation.** At the allocated time and location, participants were invited into a workshop room for a hybrid orientation presentation (photographs included in **Figure 20**). Due to COVID-19 travel restrictions, I facilitated the orientation online through Skype from abroad. Skype was selected as it was more easily accessed in rural areas than Zoom. The presentation (illustrated examples in **Figure 21**) included a welcome by the research team and a brief introduction to the research, distress protocols and technical support.

Figure 20. Orientation with micronarrative participants³²

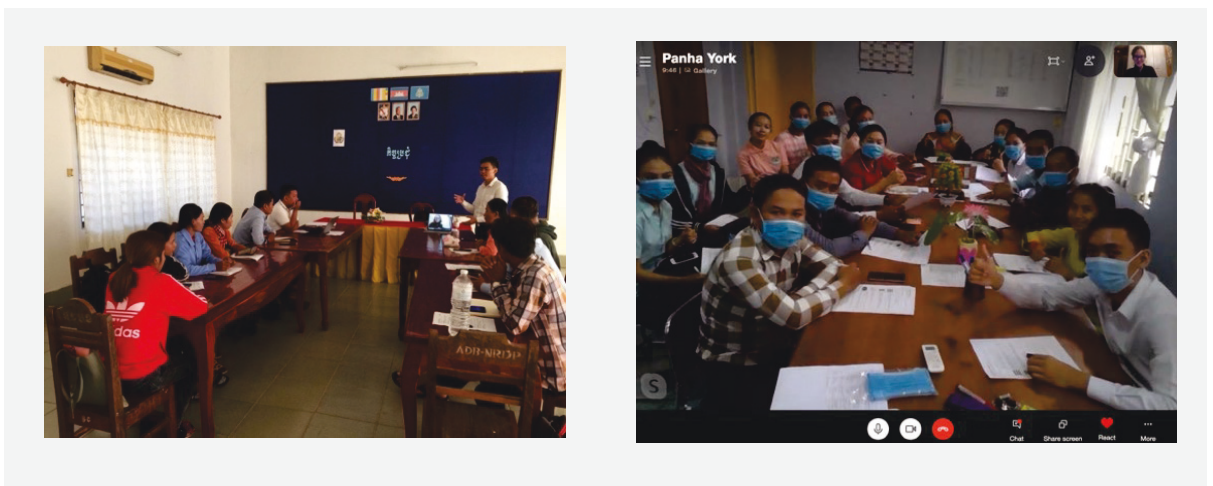


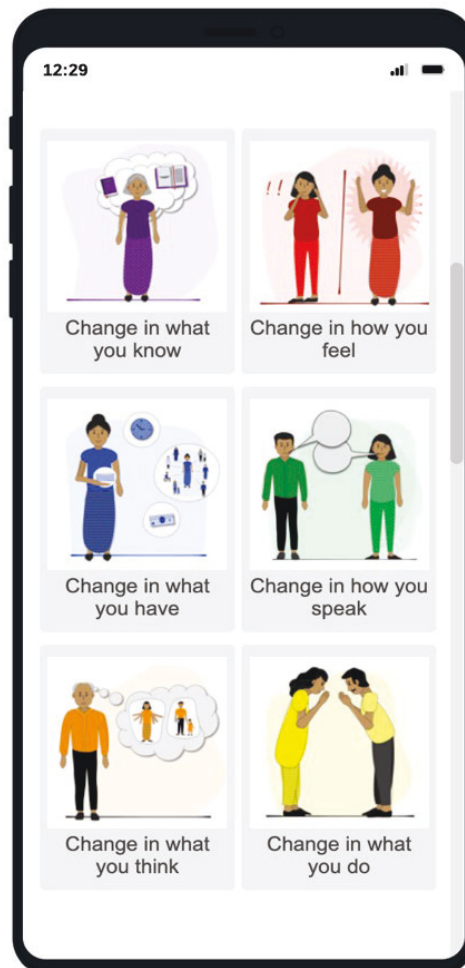
Figure 21. Examples of the Khmer orientation presentation



³² Images: Jess MacArthur and Panha York. Verbal consent was obtained from all participants prior to the photographing.

- Step 4. Support micronarrative generation and interpretation.** Participants were then invited to use their personal or work smartphones to complete the online audio survey. The survey included questions related to demographics and critical consciousness.³³ It also divided the narrative sharing into smaller questions based on feedback from the rapid piloting. Two research assistants were on-site to support participants with any technical challenges. Additionally, participants were encouraged to find private space for audio recording if desired. Each day (total of 6 days in 14 groups) received a slightly different version of the survey using feedback from reflection interviews (one to three per day). At a meta-level the survey aimed to identify the best way to ask participants about complex personal change (see **Paper IV**). Reflection interviews were also conducted with Skype with 16 staff members with live translation by a research assistant.

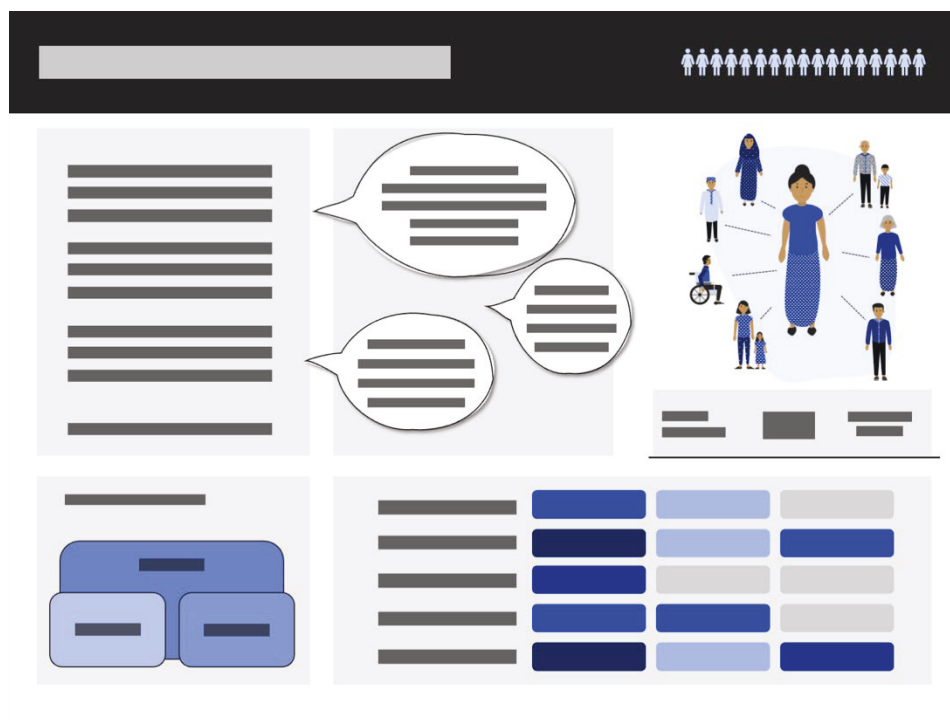
Figure 22. Screenshot example from the verb-based micronarrative generation



³³ The critical consciousness scale from the WASH-GEM was used (Carrard et al., 2022).

- Step 5. Micronarrative analysis and synthesis.** Once all the narratives were generated, the team conducted several rounds of collaborative thematic analysis (Guest et al., 2012; Saldaña, 2012) over the course of nine months. A codebook was used to identify the different thematic modes of change represented in the sample. Focus was given to finding thematic analysis tools and techniques that could be easily adopted and employed by practitioners in the future. In the final iteration of analysis, change narratives were clustered based on the verbs (action words) that were used in the stories. From these verbs, personas were developed that represented the different types of staff changes. These different clusters of change were developed into 14 personas of change. The personas were triangulated using structural topic modelling algorithms and summarised in a visual report (**SM.1**). At a meta-level, the inquiry adapted a design thinking persona approach to be useful for qualitative narrative analysis (see **Paper V**).

Figure 23. Visual layout of the personas from the SMSU3 program



- Step 6. Micronarrative utilisation.** The micronarrative personas were used both in the midline evaluation reporting as well as in a sensemaking workshop. First, an online emerging insights workshop was conducted in November 2020, which summarised the high-level findings and introduced several of the emergent themes in a presentation. Second, once the visual persona report was complete (**SM.1**), the personas were communicated in a hybrid sensemaking workshop (28 June 2021) which also explored the results of the photovoice approach. The sensemaking workshop generated a series of actionable recommendations to strengthen future gender mainstreaming activities.

4.8 Photovoice

Photovoice is an interactive photography approach, in which participants create and interpret photos related to a prompt (Wang and Burris, 1997; Wang, 1999). The activity produces photo-stories which include both an image and text-based interpretation. The images are used to elicit rich reflections on the experiences or observations of photographers. I further discuss the theoretical foundations and history of photovoice in **Paper VIII**.

Photovoice was selected as a component of the midline evaluation in consultation with program leadership who expressed a desire to strengthen the capacity of staff members in smartphone photography skills and create visual tools to report experiences of change. Rooted in feminist theory, as explained in **Paper VIII**, photovoice also resonated with the focus of the evaluation – the effectiveness of gender mainstreaming interventions within the SMSU3 program.

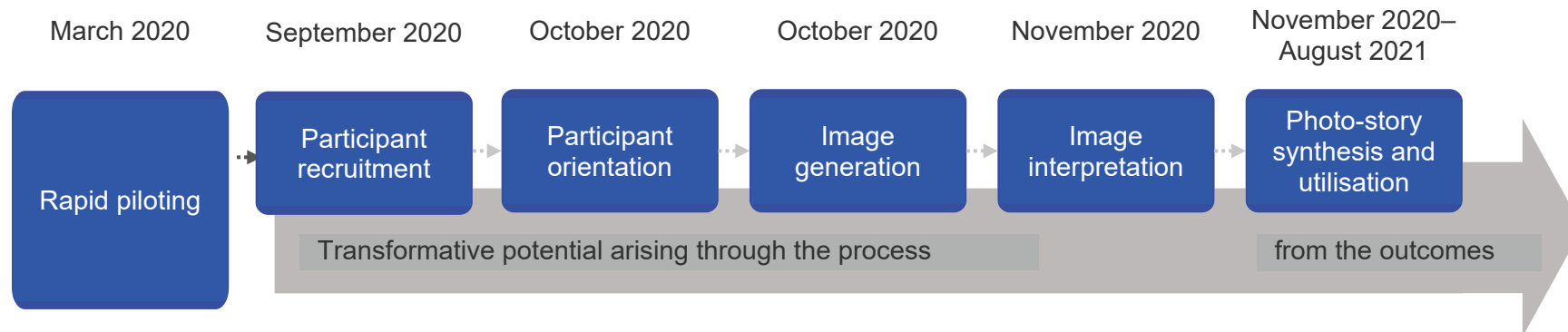
Within the *design* phase of the pilot, photovoice was tailored to best meet the needs of the assessment, the research question, and the context. As such, a breadth of techniques used within our photo-story generation, analysis/synthesis, and utilisation phases are summarised in **Table 8**. For photo-story generation, the approach engaged participatory photography, a digital survey and VOICE coding. Synthesis was completed through photo-story curation, and for utilisation a photo-book and hybrid workshop were used. The photovoice activity was modified as the research coincided with the COVID-19 pandemic, reducing opportunities for face-to-face interactions. Hence, participants interpreted their own photographs through the submission of an online form, instead of conducting this interpretation collaboratively in a workshop setting as per the pre-COVID plan.

Table 8. Techniques embedded into photovoice approach

Phase	Technique	Description	Justification	Tools
Generation	Smartphone participatory photography	Participatory photography is an assessment technique in which participants create photos related to an assessment prompt (Wang, 1999; Wang & Burris, 1997). This contrasts with the use of found or provided images in other forms of image elicitation (Harper, 2002). Further described in Paper VIII .	Participatory photography was selected to meet an expressed desire from the SMSU3 program management team to strengthen the photography skills of the team, while conducting an assessment. Smartphone use is widespread in urban Cambodian environments, and therefore personal smartphones were used for photographing.	<ul style="list-style-type: none"> • Personal smartphones with photography capability
	Digital survey	See Table 7 .	Digital surveys were selected for photo-story submission due to the COVID-19 restrictions and to balance the time requirements for staff. The digital submission form is found in SM.4 .	<ul style="list-style-type: none"> • Workplace computers • Qualtrics
	VOICE coding	See Table 7 .	See Table 7 .	<ul style="list-style-type: none"> • Workplace computers • Qualtrics
Analysis and synthesis	Curation	Bridging arts-based practices into the qualitative research space, the synthesis technique of curation refers to the use of context, content, and form (Pink, 2014) to structure a collection of art – in this case photo-stories.	Curation was selected over other forms of more intensive image analysis (e.g. Capous-Desyllas & Bromfield, 2018) to amplify the voices of the photovoice participants over the researchers.	<ul style="list-style-type: none"> • Airtable • Excel • PowerPoint • Computer
Synthesis and utilisation	Photo-book	A photo-book is a visual communication tool displaying the curated set of photo-stories in a particular order and structure. Printed photo-books have been used in other photovoice activities (see Paper VIII – Figure 7).	A digital photo-book (SM.2) was selected to both ensure that program collaborators could engage with the content, but also adapt the content for future use. A digital version was selected to support online collaboration and communication. Printed versions were also used in the sensemaking workshop.	<ul style="list-style-type: none"> • PowerPoint • Computer

Phase	Technique	Description	Justification	Tools
Utilisation	Hybrid workshop	See Table 7 .	A hybrid workshop was selected to adapt to the COVID-19 remote working requirements and to ensure that participants could engage collaboratively to create sense and recommendations from the photo-book.	<ul style="list-style-type: none"> • Zoom • Google Slides • Computers • PDF Viewer • Printed photo-books

Figure 24. Design and implementation of the photovoice approach within SMSU3



Adapting and simplifying the steps described in the foundational literature on photovoice (Wang and Burris, 1997), six steps (illustrated in **Figure 24** on the previous page) were used to frame the photovoice implementation. In the subsequent narrative, I briefly describe each of the six steps.

- **Step 1. Rapid piloting.** Between 13 and 15 March 2020³⁴, I conducted a co-design workshop in Phnom Penh with 15 members of the SMSU3 leadership team (these would become the research collaborators). As part of this workshop (13 March 2020), I trialled a rapid gender-focused photovoice activity around the prompt: “create images related to the gender dynamics of SMSU3”. Few of the shared images had a clear gender focus, highlighting the importance of directly asking participants about the relationship with the image and gender in the interpretation phase. The prompt was also described as confusing, and one participant reflected “I wasn’t sure what to take a photo of.” While rapid, this piloting was influential in the design of prompts for image creation and interpretation for the full-scale pilot remotely conducted later in the year with some of the same individuals.
- **Step 2. Participant recruitment.** Photovoice participants were recruited through an email (1 September 2020) sent by SMSU3’s training manager (Samrach Koh) to the SMSU3 program leadership team and additional staff of iDE Cambodia based in the Phnom Penh office. The invitation email contained details of the photovoice activity and a participant information sheet. The first 20 respondents to register were accepted. As the training was conducted in English, participants were required to have basic English language capacity and access to a smartphone with photography capabilities. We originally capped the training at 15 participants, but we added five more spots due to high interest in participation. Participants included 14 men and six women, broadly representing the gender balance of staff within the office and came from a range of organisational roles.
- **Step 3. Participant orientation.** The 3-hour orientation workshop (5 October 2020) had four objectives: (1) present the concept of photovoice as a monitoring and evaluation approach, (2) build capacity and confidence of participants in photography skills, (3) encourage ethical photography, (4) clarify the photo submission and selection process, and (5) introduce prompts through an activity to collect gender equality-related photographs. The workshop included a series of short presentations (as illustrated in **Figure 25**) and opportunities to try new techniques. The workshop was conducted as a hybrid workshop (as illustrated in **Figure 26**): participants joined in-person in the iDE Cambodia office in Phnom Penh and due to COVID-19 travel restrictions, I facilitated the workshop online through Zoom from abroad.

³⁴ This was conducted in person in Phnom Penh, just prior to the first global COVID-19 lockdown.

Figure 25. Examples of the slideshow presentation used for participant orientation

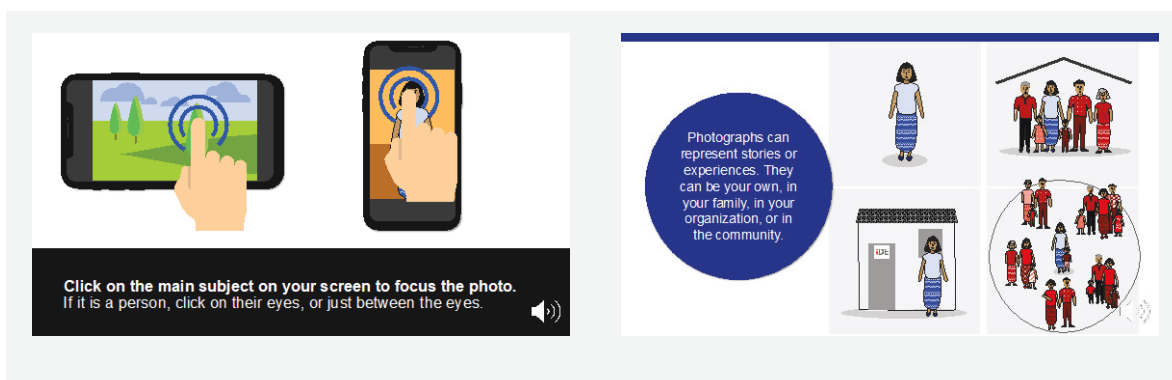


Figure 26. Selected images of the photovoice orientation workshop³⁵



The photovoice prompt was: “This program has made an impact on people’s lives; for you, your colleagues, your community and people in the communities you work in. Different people will experience the program differently; this is especially true for how women and men will experience the program. Please take photos that represent these differences. This can include the different ways that men and women interact, or differences related to WASH.”

A shorter prompt was summarised in a single sentence “how are different types of people differently experiencing SMSU3”. Both prompts were used by the team, one as a ‘short-hand’ version and one as a longer more detailed example. This allowed the team to remember the prompt more easily, but also have access to the fuller description.

- **Step 4. Support image generation.** Participants were supported over the next three weeks to create images as they went about their daily work tasks, using their smartphone cameras. Samrach Koh supported participants by answering any technical and strategic questions. Verbal

³⁵ Images: Samrach Koh. Verbal consent was obtained from all participants prior to the photographing

informed consent was collected from all individuals depicted within photographs and the study also aimed to collect written consent wherever possible.

- **Step 5. Support image interpretation.** After three weeks, participants were sent a link through email (20 October 2020) to an online submission template in Qualtrics. The template, illustrated in **Figure 27**, included socio-demographic information about the participants and space to submit up to three images. The digital image submission form (**SM.4**) included socio-demographic questions about the photographer, ethical considerations, five open ended questions/statements, and six closed questions following the VOICE framework (**Box 1**). A total of 32 images were submitted through the online format.

Figure 27. Illustrative photo submission template

UTS Institute for Sustainable Futures

Please give your photograph a title. Type in the box below.

What is this photograph representing? Type your caption in the the box below.
What happened? Where? When? Who was involved? How did it end?

Why did you choose to share this particular photo? Type in the box below.

- **Step 6. Photo-story synthesis and utilisation.** Once photo-stories had been submitted (finished on 11 November 2020), images were first screened for their inclusion of a response to the final submission question (“why do you think this photo is important to gender equality?”). I conducted curation of the images related to the captions and titles of the remaining 25 images identifying themes, contexts, and activities. I then compiled photos into thematic collages and created a photo-story booklet (**SM.2**) for internal circulation with the team. Finally, the photo-book was explored by program leadership team and available photographers (n=14) who participated in a hybrid sensemaking workshop (28 June 2021). The workshop combined sensemaking for both the photovoice and micronarrative approaches and generated a series of actionable recommendations to strengthen future gender mainstreaming activities.

in eliciting sufficiently detailed micronarratives and the inclusivity of the use of audio within surveys. I chose to adopt a visual format to share these findings, to encourage a higher level of engagement from collaborators, as the findings have resonance with wider discussions of women's participation.

4.9.5 Paper VIII – How can we strengthen the transformative potential of participatory photography?

Lastly, personal reflection on the actual transformative potential of the photovoice activity, led to the development of **Paper VIII**, which explored opportunities to strengthen transformative potential across all stages of a photovoice activity. This reflection led to reengagement with photovoice and photo-elicitation literature from the WASH sector and a critical analysis on the transformative potential of the SMSU3 pilot as well as other examples from WASH. Ultimately, this sub-inquiry solidified the importance of the research process in fostering transformative change – a key contribution of this thesis.

Box 1. A brief introduction to VOICE coding

Utilised in both the micronarrative and photovoice approaches, during this phase of the research process, I designed a simple framework articulating five aspects of focus for describing context and significance. I draw on other scholarship in the field of evaluation, most notably, Davies and Dart's (2005) MSC approach, Jabeen's (2018) framework of unintended outcomes. and Waffi's (2017) creative participatory self-evaluation methodology. This framework was then used as a technique to support participants to describe the significance and context of their responses.

Here I introduce the five different aspects of the VOICE framework – noting that the first letter of each aspects spells the word 'VOICE'.

Aspect	Definition
Value	The direction of change and overall meaning of the change (Jabeen, 2018). Change is not always positive, and this aspect explores the trajectory of the change on a spectrum of positive to negative. This highlights the importance of identifying both beneficial and adverse unintended outcomes.
Occurrences	The salience, frequency or 'signal strength' of a particular type of change within reported data, what Jabeen (2018) refers to as the 'distribution of effects'. Change is not homogenous, and this aspect aims to understand the frequency of changes amongst a particular group or population.
Importance	The significance or weight of a change, both from the viewpoint of participants and program implementors, adopting wording from Davies and Dart (2005) and Waffi (2017). Changes which evaluators find significant may not be for respondents, and vice versa. This dimension helps to clarify the importance of a change within a context.
Contributions	The connections between the change and the specific program under review (Waffi, 2017). Transformative change is influenced by social programming, but it is always situated within a wider current of societal change.
Expectations 1	The extent to which an outcome is foreseen or surprising, what Jabeen (2018) refers to as 'knowability'. Unforeseen outcomes, and in particular those with negative consequences, remain critical for evaluators.
Expectations 2	A prediction of the lasting impact of the change, what Jabeen (2018) refers to as 'temporality'. Ideally, positive change does not fade away after a program ends. This aspect helps to explore the future expectations of the change.

The framework was piloted in and adapted to other ISF programming with colleague Tamara Megaw. This collaborative experience is summarised in a joint blogpost included in supplementary materials (SM.5; MacArthur & Megaw, 2022).

4.9 Emergent questions and connections to the subsequent research phases

In the last sections, I have detailed the process of designing, testing and implementing two selected assessment approaches within the collaborative action research. This design process led to several emergent questions related to data generation, synthesis and utilisation and informed the direction of the subsequent Chapters 5 and 6. Ultimately, the design process led to the development of a series of research questions addressed in outputs IV–VIII.³⁶ These questions were first introduced in **Table 2 (Chapter 1)** and in the following narrative I describe how the design process led to their development.

4.9.1 Paper IV – Which prompts best support participants in generating meaningful micronarratives about personal gendered change?

Rapid piloting of micronarrative generation revealed a significant challenge in directing participants to describe their own personal experiences of gendered change. For example, in the rapid pilot, the theme of ‘respect’ led to interesting, yet non-gender-related descriptions of changing respect for elders and leaders. As such, the importance of prompts emerged as an area for design and richer inquiry. In **Paper IV**, I investigate a variety of different prompts to direct participants to describe experiences of gendered change.

4.9.2 Paper V and Box 1 – How can we best support the analysis and utilisation of micronarratives amplifying the voices of participants?

The desire to amplify the voices of participants in the micronarrative analysis and utilisation process, led to the splitting of ‘analysis’ into processes of interpretation and synthesis alongside the development of two innovative techniques. First, to support interpretation, I designed a self-signification technique aligned with the acronym VOICE³⁷ (as described on the previous page in **Box 1**) to allow participants to clarify aspects of story context and meaning. I reengage with the value of self-signification in the synthesis of **Chapter 5 (Section 5.4)**. Second, to support synthesis and utilisation, I adapted a technique from design practice – personas, detailed within **Paper V**. The persona technique sought to overcome a number of challenges with the synthesis and utilisation processes. For example: (1) a concern of being able to identify individuals within the dataset because of close relationships within the SMSU3 team, (2) a challenge of consolidating and sharing over 200 micronarratives, and (3) a desire to clarify the breadth of described change within SMSU3. Both the VOICE coding and the use of personas aimed to strengthen the voices of participants, whilst protecting their anonymity and privacy by allowing for further interpretation and by valuing each individual response within the synthesis process.³⁸

³⁶ Many other questions arose from the design process, yet for clarity I choose five to explore in more detail within outputs IV–VIII.

³⁷ VOICE coding was used with both the photovoice and micronarrative approaches.

³⁸ In traditional forms of thematic analysis, weaker themes are often not included in a final set of thematic insights (Guest et al., 2012).

4.9.3 Paper VI – What are a set of principles to guide qualitative assessment? How did our use of micronarratives perform against these principles?

For practitioners supporting the inquiry, the collaborative design process highlighted a broad lack of confidence in and familiarity with qualitative methods. This insight aligns with other researchers who have identified a capacity gap and hesitancy in international development related to qualitative approaches (Mack et al., 2005; Jones et al., 2009; Guest et al., 2013). To strengthen capacity and confidence for the collaborators, I led a process of identifying a simple set of principles for practitioners to guide the design and implementation of future qualitative assessments, described in **Paper VI**. These principles were then applied to our use of micronarratives to identify areas for future improvement as seen in the final table of **Paper VI**.

4.9.4 Report VII – How effective and inclusive was our use of audio surveys?

The fourth question arose from personal reflection on the effectiveness and inclusivity of the audio survey technique included within the micronarratives. I identified the importance of this topic during the synthesis of the reflection interviews (n=16), which established gendered differences into perceptions of the audio recording process. To answer this question, visual **Report VII** utilised a mixed-methods analysis to investigate the effectiveness of audio surveys in eliciting sufficiently detailed micronarratives and the inclusivity of the use of audio within surveys. I chose to adopt a visual format to share these findings, to encourage a higher level of engagement from collaborators, as the findings have resonance with wider discussions of women's participation.

4.9.5 Paper VIII – How can we strengthen the transformative potential of participatory photography?

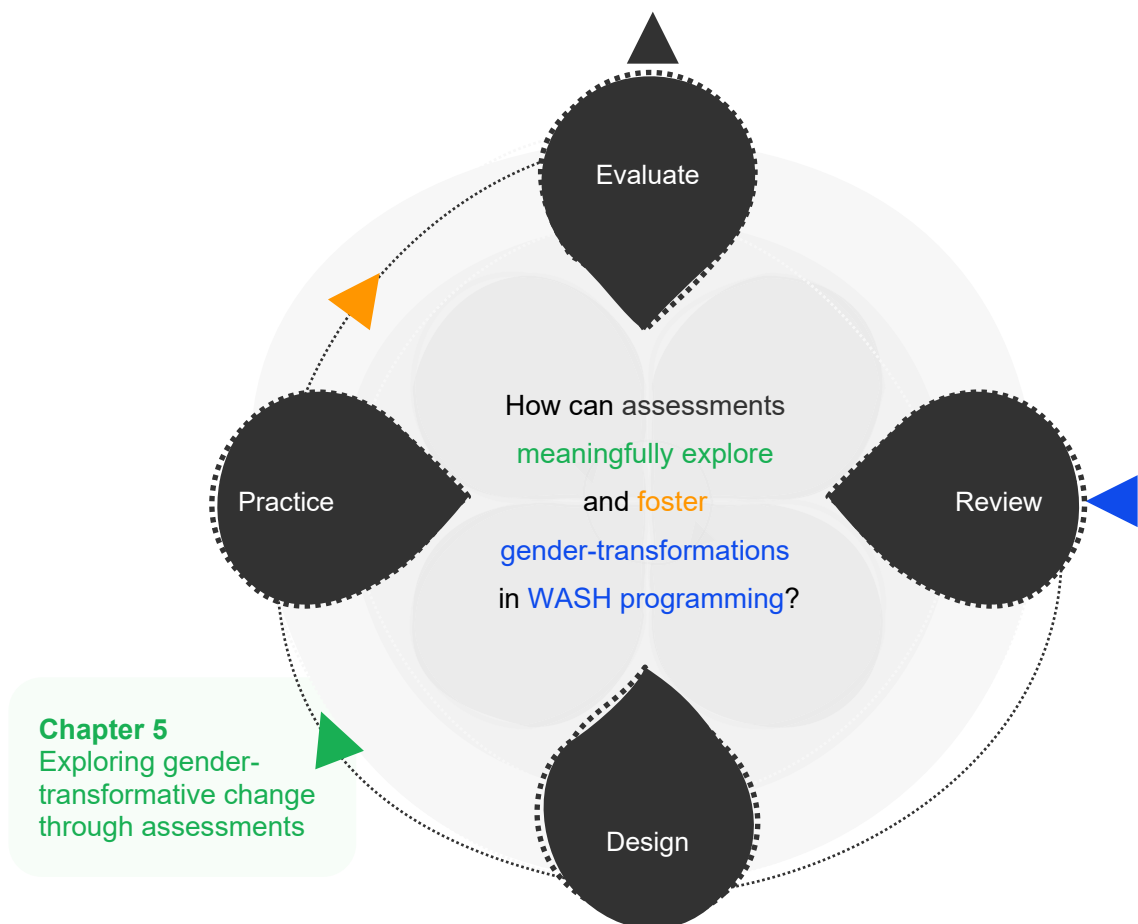
Lastly, personal reflection on the actual transformative potential of the photovoice activity, led to the development of **Paper VIII**, which explored opportunities to strengthen transformative potential across all stages of a photovoice activity. This reflection led to reengagement with photovoice and photo-elicitation literature from the WASH sector and a critical analysis on the transformative potential of the SMSU3 pilot as well as other examples from WASH. Ultimately, this sub-inquiry solidified the importance of the research process in fostering transformative change – a key contribution of this thesis.

4.10 Summary

In this chapter, I have detailed the pilot assessments within the SMSU3 program, clarifying the pilot setting and context along with the selection of two visual storytelling approaches: micronarratives and photovoice. The Cambodian context with regards to WASH, gender equality and the digital revolution created a distinct opportunity to pilot novel qualitative approaches relying on digital systems. Originally the inquiry aimed to identify 'which methods' could best foster transformative potential, however the collaborative action research process transformed my thinking from 'which methods' to 'how can methods'. I suggest that visual storytelling is one such modality which can both explore and foster transformative change within gender-focused programming. Lastly, in this chapter I have linked the process of tailoring and implementing these visual storytelling approaches to the five subsequent outputs that make up Chapters 5 and 6.

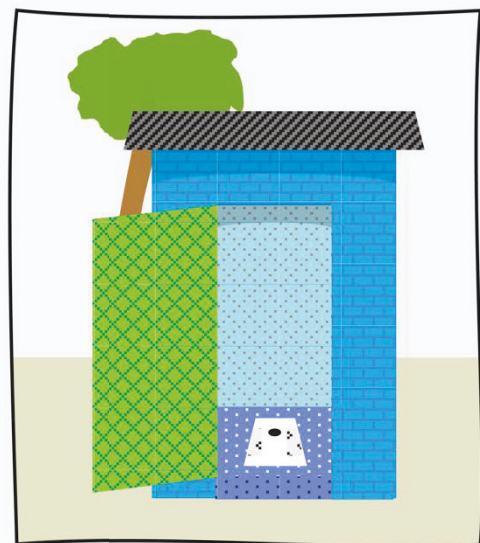
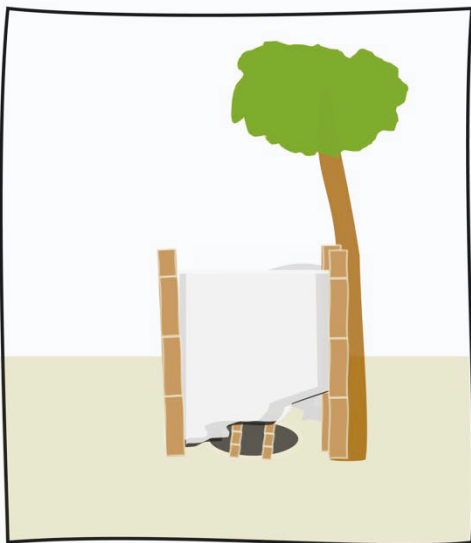
Chapter 5

Exploring gender-transformative change through assessments



Several years ago, while on a field visit in Barisal – a southern area of Bangladesh – I was inspecting a brand-new latrine installed in the front courtyard of a rural home. Stepping back, I noticed that the women and children were not as excited to show me the latrine, as I was used to in other homes. Quietly, I spoke to the mother and asked her how she was liking the new latrine. It became clear that she was not in fact using this new toilet and she led me behind the home to an open pit that she was using with her children. In this area of Bangladesh, women are shy to be seen using the latrine, and in some cases practices of purdah limit women's mobility outside of the front of the home.

A few months later, colleagues and I were assessing sanitation access in northern Ghana. In the region, women were often the primary income earners, and the program was working with women decision-makers to promote improved latrines. My colleague relayed to me stories from several interviews where grandmothers held the keys to the new latrines on their person and would not allow anyone else from the home to use the latrines. They justified the decision saying that it ensured that the latrines stayed clean and a safe environment for themselves.



The contrast between the women's experiences in these Bangladesh and Ghana contexts is stark. Yet what emerged is the importance of assessment tools to investigate a range of embodied experiences.

5.1 Overview

Within this chapter, I bridge the *design* and *practice* phases of the action research cycle and consider the extent to which assessments can meaningfully explore gender-transformations in WASH programs as highlighted in the research question this chapter addresses:

How can assessments be designed to meaningfully explore gender-transformative change?

This chapter answers the research question by examining both data elicitation (**Paper IV**) and a novel approach to data analysis and synthesis that promoted utilisation (**Paper V**).

In **Paper IV** published in *Evaluation*, I investigated four different types of prompts to elicit stories of gender-transformative change within qualitative assessments. As a micronarrative approach does not provide opportunity for follow-up questions and discussion, the design of prompts is critical to ensuring meaningful responses.

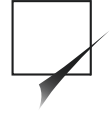
Paper V, under review with *Evaluation and Program Planning*, investigated the use of personas – a technique from design thinking – to analyse, synthesise and utilise descriptions of gendered change. In the paper, I detail the use of machine learning and thematic analysis to cluster respondents into persona groups.

Reflection on these papers together led to identification of two key design considerations in the meaningful exploration of gender-transformative change: (a) the importance of embodiment as a lens through which to see gender-transformative change, and (b) of respondent-led interpretation to support meaningful responses. The chapter concludes with a brief reflection on the limitations in bridging the *design* and *practice* phases of the collaborative action research cycle.

5.2 Paper IV – Eliciting stories of gender-transformative change: Investigating the effectiveness of question prompt formulations in qualitative gender assessments

Paper IV has been published as a research article in *Evaluation* and is available online at <https://doi.org/10.1177/13563890221105537>. The article answers the following research question: *How can participants be asked about meaningful gendered change in assessments?*

In this paper, I use the term ‘micronarrative collection’ to refer to the generation of short stories using the micronarrative process. My adoption of and preference for the term ‘generation’ emerged through my personal sensemaking in writing this thesis, completed at a later time than the development of the manuscript.



Article

Eliciting stories of gender-transformative change: Investigating the effectiveness of question prompt formulations in qualitative gender assessments

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Jess MacArthur 

University of Technology Sydney, Australia

Naomi Carrard 

University of Technology Sydney, Australia

Toeur Veasna

iDE Cambodia, Cambodia

Tyler Kozole

iDE Cambodia, Cambodia

Juliet Willetts 

University of Technology Sydney, Australia

Abstract

Evaluations of gender equality initiatives in development programmes traditionally assess cognitive dimensions such as knowledge, attitudes, and awareness; and often rely solely on women's perspectives. Leveraging story-based evaluation methods, this article explores the assessment of complex gender-transformations and focuses on effective question prompts to elicit significant and meaningful narratives of change from both women and men. In collaboration with a development programme in Cambodia, a staff assessment process led to a set of criteria

Corresponding author:

Jess MacArthur, Institute for Sustainable Futures, University of Technology Sydney, Building 10, 235 Jones Street, Ultimo, NSW 2007, Australia.

Email: jessica.macarthur@uts.edu.au

for considering the quality of respondent stories and testing the efficacy of four different question prompts ($n = 176$): verb-, value-, sphere-, and theme-based. Highlighting aspects of embodiment, the study suggests that verb-based prompts were the most effective at eliciting stories that reflect diverse experiences of both women and men in processes of gender-transformation. Findings from our analysis can support evaluators in balancing simplicity and specificity of questions in assessing the unique experiences of individuals undergoing complex change.

Keywords

gender equality, gender-transformation, micronarratives, question prompts, self-administered

Introduction

Over the last decade, efforts to promote gender equality have become increasingly nuanced, focusing on changes within households, workplaces, and the public sphere (Cornwall and Rivas, 2015). Within this context, programmes in the international development sector aim to address structural gender inequalities and empower women alongside and within development interventions (Cornwall and Rivas, 2015; Rao and Kelleher, 2005). This trend is mirrored in the private and public sectors spurred on by campaigns for gender parity, equal pay, and ending gender-based violence (World Economic Forum, 2019). Such an approach is called ‘*gender-transformative*’, aiming to transform traditional structures, beliefs, and practices of masculinity and femininity while fostering an entirely new perspective of gender equality (Cornwall and Rivas, 2015).

For programme evaluators investigating gender-transformative change, a core concern is identifying and describing the lived experiences of individuals and how these experiences relate to programmes. Often this process begins with an exploration of gender dynamics for staff within development programmes. However, the process of monitoring and evaluating gender outcomes is complex. There are several reasons for this. First, gendered outcomes associated with interventions can relate to changes in gender equality at individual, relational, or structural levels (Carrard et al., 2013; Rowlands, 1995). In addition, outcomes often intersect with other compounding factors such as gender identity, race, age, and status (Collins, 2015). Common outcomes include aspects such as participation, voice, decision-making, leadership, social norms, and gender roles. Gender equality also must be contextually interpreted (Mohanty, 1984), and it remains challenging to formulate standardised questions that would apply to a range of contexts.

To simplify the evaluation process, many studies speak only to women participants, speak to female and male participants about women’s experiences, or focus on pre-selected outcomes that are easily described and understood (MacArthur et al., 2021). However, in a topic as structural, personal, and nuanced as gender equality, these simplifications have been observed to lead to a fragmented understanding of the embodied experiences of changing gender dynamics (Cornwall and Rivas, 2015).

One approach that addresses these challenges is story-based evaluations, where participants craft their own narratives of change which are shared with programme evaluators. This can include longer narrative-based approaches such as oral histories and narrative inquiry, or the use of micronarratives, which capture short descriptions of change (Bamberg, 2006). However, existing modes of story-based gender equality studies remain resource-intensive,

and data quality is inconsistent even with face-to-face facilitation (Bakhache et al., 2017; Bartels et al., 2019; Willetts et al., 2013).

As the primary change agents within development interventions, staff members are often the starting place for gender-transformative interventions through gender training (Moser, 2005). This training is particularly important in highly technical sectors, such as sanitation, as many staff are men and come from male-dominated trades such as engineering (Cavill et al., 2020).

The research presented in this article explores key methodological considerations in designing and using prompts to elicit stories focused on gender dynamics. Prompt design is a critical factor in ensuring that participants can understand and respond to the line of questioning and that responses reflect the realms of interest to the assessor or researcher (Smyth, 2016; Yin, 2015). This challenge was particularly pertinent at the time of conducting this research, given limited face-to-face interactions during the COVID-19 pandemic, which has led many evaluators to adopt asynchronous forms of assessment, including self-administered questionnaires.

The article begins with an introduction to the concepts of gender-transformations and embodiment, as critical considerations within studies of personal transformations. Then the paper summarises components of the collaborative action research which underpinned this study – a case study conducted in partnership with a civil society organisation in Cambodia. Each of the four identified question prompts are introduced, followed by a framework to judge the performance of the prompts. Next, the article presents and reflects on the strengths, limitations, and applicability of the four different prompt designs to elicit stories of gender equality. Finally, the paper discusses conceptual and methodological considerations for future studies on gender-transformative changes in the international development sector and beyond.

Gender equality as transformation and embodiment

Exploring methodological issues in eliciting stories of gendered change requires us first to define ‘*gender equality*’. The global goals of gender equality and women’s empowerment as articulated in the Beijing Platform for Action (United Nations, 1995) and subsequent Millennium and Sustainable Development Goals (UN General Assembly, 2015) provide a vision of a world in which communities are more equal for individuals of different genders. In these goals, gender equality is an outcome of equity and empowerment towards a transformation of society with ‘*equal rights, responsibilities and opportunities of women and men and girls and boys*’ (UN Women, 2001:1).

Acting on these global mandates, interventions which seek to overcome gender inequalities adopt, often implicitly, one of three equality strategies (Rees, 1998). These strategies shape not only programmatic activities, but also the approaches adopted to monitor and evaluate change. One strategy highlights *sameness*, in which equality is achieved by women entering traditionally male-dominated domains. This conception of gender equality is often assessed through changes in gender parity. A second strategy identifies equality as *difference*, where women and men are equally valued and celebrated for their differences. This is often explored through changes in the roles that women and men play in society, as well as changes in the valuing of non-traditional roles. The third strategy identifies equality as *transformation*, in which programmes aim to transform the structures and norms which govern traditional gender dynamics (Rees, 1998). This third, more radical modality is often articulated as a gender-transformative approach (Cornwall and Rivas, 2015; Kabeer, 1994), and new strategies are required to better engage its complexity and nuance.

One lens that has relevance for describing and articulating the contextual nuances of gender-transformative change is that of embodiment. Theories of embodiment claim the importance of a holistic understanding of the person with regard to body, mind, emotions, context, and relationships (Merleau-Ponty, 1962). These aspects resonate strongly with discussions of the ‘*gendered self*’, in which physical differences form the foundation for structural gender inequalities (Mason, 2018). Much of the extensive literature on gender equality focuses on aspects of cognitive agency such as decision-making, knowledge, control, and autonomy (Ibrahim and Alkire, 2007; Kabeer, 1999; MacArthur et al., 2021). These are all critical aspects but often do not capture embodied experiences – the ways in which ‘*bodies reproduce and sometimes challenge gendered power dynamics*’ (Mason, 2018: 95).

This paper proposes that by prompting respondents to describe their own embodied experiences, evaluators can begin to untangle the complexity of the cognitive, physical, emotional, contextual, and relational aspects of gender-transformation. The ability of prompts to leverage embodied experience emerged as an iterative finding from this study. As such, the article introduces ideas of embodiment here to support linear engagement with the article’s analysis, noting that embodiment is most relevant to the final tested prompt (verb-based). Findings with reference to embodiment theory are discussed at the end of the paper.

Research approach

This evaluation research explored both conceptual and methodological challenges of gender equality evaluations by focusing on four unique prompts to investigate gender-transformations for staff on an international development programme. The research team selected self-administered micronarrative story collection through text and audio submissions to explore the efficacy of a range of prompts. In contrast to traditional forms of narrative inquiry, which rely on semi-structured interviews (Adler et al., 2017), micronarratives were deemed an ideal method for prompt exploration as there is no opportunity to probe deeper or further explore responses with participants (Bartels et al., 2019; Van der Merwe et al., 2019). The primary research was conducted during the COVID-19 pandemic (July–October 2020), thus reinforcing the value of self-administered approaches.

The research was conducted in collaboration with iDE Cambodia – an international civil society organisation with long-term presence in Cambodia. The study was embedded within the SMSU3 programme, operating in six rural provinces and supporting the promotion and sale of latrines through private enterprises. The programme has adopted a gender mainstreaming approach under the Water for Women Fund, and therefore our study focused on gendered changes for staff members. The lead author facilitated the research process remotely with two research assistants and coordination support from SMSU3 leadership in Cambodia. All field-based staff of the SMSU3 programme were invited to participate in the study, and several opted out of participating. This led to a total of 204 stories from 176 participants. All participants of the study had at least secondary education and medium to high literacy levels. This is unique to the documented experiences of gender equality studies using micronarratives among individuals with low literacy levels (Bartels et al., 2019).

The study was approved by the University of Technology Sydney’s Human Research Ethics Committee (UTS HREC ETH19-4343) prior to the start of the research. The ethical approval included all components of the study. As gender topics can be sensitive and domestic violence is prevalent in Cambodia,¹ the research team prepared a distress protocol and made connections

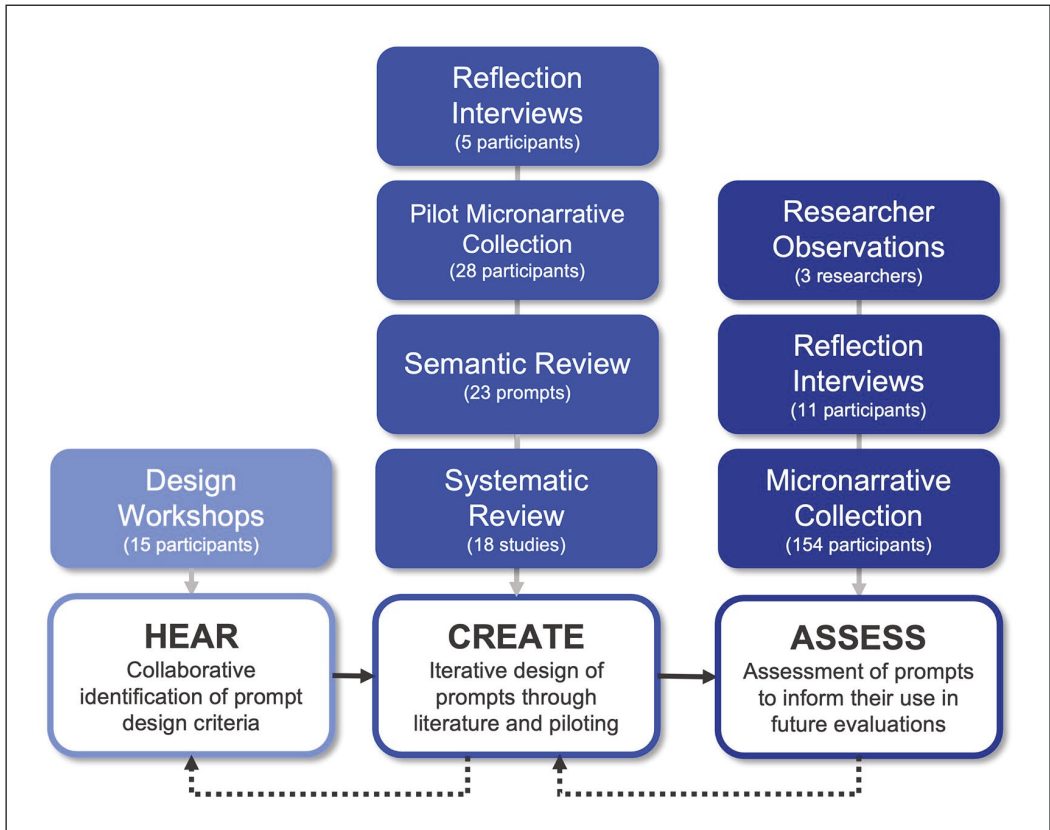


Figure 1. Study process and data sources which informed each stage.

with relevant feminist organisations for support. All participants were given the opportunity to opt-out of the research and were advised that they were not required to participate, nor would non-participation reflect poorly on them or their work. Participants were informed that the purpose of their contribution was not only to understand their own experiences of the programme, but also to help other researchers better ask questions about gendered experiences.

Design thinking-inspired process of data collection

The data collection process consisted of a series of collaborative workshops, reviews, narrative collection, interviews, and observations, as summarised in Figure 1 and Table 1. The process was inspired by the three common phases in design thinking (IDEO, 2015): ‘hear’, ‘create’, and ‘deliver’ and adapted to our use case. This model is a simplified conception of the actual process, which was inherently iterative and complex.

Prompt analysis and assessment

The assessment explored the efficacy of each prompt against the set of criteria identified during the HEAR phase. These criteria will be further explored in a later section of the

Table 1. Hear, Create, Assess: Detailed description of the components of the collaborative evaluation process (March–October 2020, SMSU3 Cambodia).

Component		Process
HEAR	Design workshops	Two in-person workshops (March 2020) considered the cross-cultural challenges in prompt design and tensions between prompt simplicity and specificity. The workshops ultimately helped identify a first round of design criteria which were refined through the CREATE phase.
CREATE	Systematic review	A systematic literature review of qualitative examples of intervention-based gender equality assessments. The review identified 18 relevant studies from 1,088 potential studies. Studies identified from Web of Science and Scopus in English-language from January 2000 to–September 2020. Each article was studied to understand the methods, question phrasing, frequency, and participant types.
	Semantic review	A detailed syntax review of narrative and retrospective approaches to evaluation, focusing on 23 prompts from published Sensemaker (Van der Merwe et al., 2019) and Most Significant Change (Davies and Dart, 2005) techniques.
	Rapid pilot	Three rounds of rapid piloting (n = 28, July–September 2020) to troubleshoot smartphone data collection, visuals, audio options, and question response space (one long answer box, many short answers boxes, and a blend).
	Reflection interviews	Semi-structured interviews with five rapid pilot participants (September 2020) to refine and simplify the prompt designs. Interviews were live translated from Khmer to English, recorded and transcribed.
ASSESS	Micronarrative collection	Short story collection from field-based staff members of the project (n = 154, October 2020). The micronarrative collection was conducted in small batches (10-15 individuals per batch) in Khmer on smartphones already owned by the staff members. Participants submitted their stories either typing or speaking using an online survey platform in Qualtrics with Phonic (audio recording application) and were encouraged to find private spaces to share their audio recordings. The survey included multiple-choice, free response, and audio recording questions.
	Reflection interviews	Semi-structured interviews with a further 11 respondents to reflect on the prompts and the micronarrative collection process (October 2020).
	Researcher observations	Observations through daily notes and recorded debrief conversations from the lead researcher and two research assistants (July–October 2020).

paper. To assess the prompts through their elicited narratives, micronarrative survey responses were compiled in *Airtable*, along with researcher observations and reflections of the survey facilitation. This process enabled each prompt to be reviewed individually and compared against each of the four criteria. Analysis was conducted initially by the lead author and then discussed by the research team to ensure coherence and evidence-based insights.

Table 2. Design Criteria: Four dimensions of good narratives identified through the evaluation process, March 2020, SMSU3 Cambodia.

Dimension	Definition	Assessment details
Focused: Appropriately focused	In our case, stories were related to gender equality.	Alignment with gender-related concepts and dynamics.
Personal: First-person description of a personal change	Stories depicted real life occurrences and were related to the respondent's own personal experiences. This dimension aimed to improve story trustworthiness.	First-person description of a personal change. This contrasts with observed changes about another person.
Programmatic: Linked to programme influences	In our case, stories were related to the recent gender-mainstreaming interventions for staff. In contrast to stories reflecting more general societal changes related to gender equality.	Inclusion of a description of a project related intervention, such as a training or job role.
Coherent: Sufficiently coherent and detailed	Stories contained sufficient detail and clarity to describe the change. This was not a judgement of the significance of the narrative.	Presence of the five main aspects of storytelling: who, what, where, when, and why. These aim to identify the context, mechanisms, and outcomes of change.

Limitations

This study should be interpreted within its contextual and pragmatic limitations. First, the unique context in Cambodia brings specific gender and social norms. For example, although women often participate in the workforce, there are strong gender codes which govern gender dynamics (Brickell, 2011; Ledgerwood, 1990). The programme was also focused on improving sanitation, which historically is also a male-dominated subsector of development programming (Willets et al., 2010). Second, it should be noted that by directly asking about change, the study pre-supposed that some change had occurred for the staff members. Future iterations of a narrative survey could include skip logic for participants reporting that they have experienced no change. Finally, the study's iterative co-design process and pragmatic objectives led to the unequal sampling of each of the four prompt designs. The evaluation prioritised quality stories through a commitment to working in collaboration and creating useful results for the case study programme. Therefore, the sphere-based prompt was not repeated. Future studies could use a more even sampling distribution to explore if the patterns identified in this study remain salient.

Design criteria: Dimensions of 'good' narratives

In alignment with design-thinking processes, the research began by formulating a set of dimensions which operated both as (1) guidelines to support the design of prompts and (2) as assessment criteria through which to evaluate the efficacy of prompts in eliciting stories of change. The process can be described as an *'after-action-review'* in which an intervention is reviewed and refined against its initial objectives. The four criteria, described in Table 2, were primarily derived from two design workshops, which began this research, with inputs and refinements throughout the design and testing processes. Within the workshops, the criteria emerged from the evaluative objective of the narrative collection: to gather quality and personal stories which described significant changes related to gender equality and associated

with the gender mainstreaming intervention. The criteria will be further elaborated within the assessment section of this paper.

Prompt design: Four testable prompts

Drawing on the systematic review, semantic review, rapid pilot, and pilot reflection interviews, the paper now introduces each of the four prompts and the design features that emerged from our reviews. For clarity, this section includes some methodological aspects to best represent the design process. The literature review identified a variety of terms used to direct participants towards discussing differences in personal experiences: changes, effects, impacts, outcomes, experiences, learnings, improvements, and testimonials. The study selected '*changes*' as the simplest and most commonly used word within the literature based on learnings from the rapid pilot. This aligns with the Most Significant Change (MSC) approach (Davies and Dart, 2005).

The semantic review explored the phrasing used to draw out responses in both MSC (Davies and Dart, 2005) and Sensemaker (Van der Merwe et al., 2019) story elicitation; two common narrative approaches in evaluation. Phrases such as '*share an example*', '*talk about your experience*', '*describe what happened*', '*talk about an experience that illustrates*', '*tell a story*', and '*provide a story*' were common in the 23 prompts reviewed. However, the rapid pilot interviews suggested that the words '*story*' and '*example*', were potentially confusing, with both connoting fictional events within the Cambodian context. Therefore, the study selected wording related to personal experience and '*what happened*' in collaboration with Khmer-speaking colleagues.

Building on these insights from the reviews and piloting, the study also investigated best practices related to retrospective self-reporting of changes (Lam and Bengo, 2003). This literature suggests that breaking the questions into four parts can increase the accuracy and reliability of stories: (1) what changed? (2) what were things like before? (3) what are things like now? and (4) why did this happen? This format allows participants to reflect on their own pre-and post-status and then clarify the direction, extent, and mechanisms of change.

Finally, after the rapid pilot, the study adapted the phrasing of the prompts to clarify the context of change as situated in personal experiences of gender equality. Initially, the rapid pilot led to stories that (1) described the current challenges rather than changes, (2) identified changes unrelated to gender equality, and (3) explored changes that were not deemed significant to the respondents. To mitigate these issues, the final assessed prompts included a brief definition of gender equality² and the phrase '*the most significant change for you personally, related to gender equality*' to guide participants to discuss their own significant experiences of change about gender equality. This wording is strongly aligned with the Most Significant Change approach (Davies and Dart, 2005).

To provide further context and clarity to each story and strengthen interpretation in alignment with the intent of the storytellers, the evaluation team also designed a series of short-answer and multiple-choice follow up questions. These aimed to confirm the meaning and significance of the story and elucidate details such as the types of people involved and how the story made one feel. These questions were included after the stories sharing section of the micronarrative survey in a similar manner to Sensemaker studies (Van der Merwe et al., 2019).

Each of the four prompts is summarised in Table 3 and briefly described below.

Table 3. Summary of the four selected prompts with regards to objectives, participants, visuals, and prompt wording. Micronarrative collection October 2020, SMSU3 Cambodia.

Name	Value-based	Sphere-based	Theme-based	Verb-based
Objective	Elicit stories of both positive and negative changes.	Elicit stories of change which occur in different locations.	Elicit stories associated with a set of pre-selected outcomes with specific relevance for gender equality.	Elicit stories related to the personal experiences of change.
Participants	n = 25 people, 39 stories	n = 16, 15 stories	n = 25 people, 39 stories	n = 74 people, 71 stories
Visual	<i>emoicons</i>	<i>cards</i>	<i>cards</i>	<i>cards</i>
Pre-prompt	Both this study and SMSU3 are focused on gender equality-how experiences and interactions are becoming more equal between women and men.	Thinking about your involvement in the SMSU3 programme, where have you seen the most significant change related to gender equality?	Thinking about your involvement in the SMSU3 programme, pick one of these cards which represents the most significant change for you personally, related to gender equality.	Thinking about your involvement in the SMSU3 programme, pick one of these cards which represents the most significant change for you personally, related to gender equality.
Prompt	What were things like before? What are things like now? What specifically changed? Why did this change happen? Has anything gotten worse or changed negatively for you personally, related to gender equality? If so, what happened? What were things like before? What are things like now? What specifically changed? Why did this change happen?	Within yourself Within your family/home Within your work Within the community What specifically changed? What were things like before? What are things like now? Why did this change happen?	Changes in self-awareness of gender inequalities Changes in attitudes towards women leaders Changes in workloads between men and women Changes in decision making between women and men Changes in the level of conflict between men and women Changes in communication between men and women Changes in what is considered normal for men and women Changes in respect for and trust in women Changes in participation of women Changes in confidence for women Changes in freedom of movement for women Changes in personal safety for women Changes in skills and knowledge for women Other (Please describe) What specifically changed? What were things like before? What are things like now? Why did this change happen?	Change in what you know Change in what you have Change in how you think Change in how you feel Change in how you speak Change in what you do What specifically changed? What were things like before? What are things like now? Why did this change happen?

Value-based prompt – Positive and negative stories of change

In the first prompt design, the evaluation directly solicited both positive and negative stories of change related to the programme. This objective was identified during the design workshops with a specific focus on unintended programmatic outcomes. Uncovering unintended outcomes has important implications for do-no-harm policies, which are core to gender equality programmes. The word ‘value’ adopts Jabeen’s (2018) phrasing, which identified three value-types of unintended programme outcomes: positive, neutral, and negative.

This approach was the third most common modality identified in the literature review (for example: Altenbuchner et al., 2017; Larson et al., 2018) and specifically aimed to identify potentially problematic unintended outcomes (Jabeen, 2018). Identifying and understanding negative effects is important for programme managers of gender equality programming, where unintended impacts can lead to domestic violence or backlash (Kabeer, 2001). The Most Significant Change literature recommends including specific negative change questions to ensure that unintended outcomes are identified as ‘90 to 95 percent of significant change stories tend to be about positive change’ (Davies and Dart, 2005: 19).

For this prompt, participants were first asked about a positive change and then were given the option to share a negative story of change. Emoticons were used alongside the words positive and negative to reinforce intent.

Sphere-based prompt – Stories about changes in different spheres of life

In the second prompt design, the study sought narratives related to the locations in which change can occur to understand the extent to which change has impacted other aspects of life outside of the workplace. This effect has been articulated as capability expansion (Keleher, 2014; Sen, 1989) or ‘the spillover effect’ with transformations spilling over from one sphere of life to another (Kabeer, 2005). While this approach was not found in the literature review, it has been used by scholars and theorists in articulating the zones in which change can occur (Carrard et al., 2013; Rowlands, 1997).

For this prompt option, participants were shown a set of four digital location cards highlighting changes inside themselves, in the home, in the workplace and in the community. The cards included both Khmer text and a cartoon graphic. Participants were requested to select one card representing the sphere in which they had seen the most significant changes related to gender equality and associated with the programme.

Theme-based prompts – Stories responding to pre-selected themes

In the third prompt design, the team pre-selected themes to guide participants towards specific and known changes. The themes were selected based on commonly associated changes for staff of sanitation programmes (Carrard et al., 2013) and in collaboration with programme leadership. Identifying themes appropriate for both women and men was a particularly challenging aspect of this prompt.

Based on our systematic review, this prompt design is the most used of the four within the literature (see for example: Leahy et al., 2017; Price et al., 2018; Waffi, 2017; Willan et al., 2020). However, in these examples, researchers often pre-selected two or three themes to study rather than allowing participants to select which themes to discuss.

For this prompt, participants were requested to spend time reviewing a set of 13 digital cards, which included both Khmer text and cartoon graphics. Participants were then asked to select one card to discuss through their micronarrative.

Verb-based prompts – Using active words to elicit stories in different domains

Aiming to elicit further stories of personal change and leveraging concepts of embodiment, the fourth prompt asked participants to reflect on a set of six verb-based changes. After the rapid pilot, it became clear that a prompt that simplified language that was accessible for both women and men, could be an interesting and valuable counterpoint to the thematic approach. Drawing on the foundation of embodiment literature, the study identified six verbs to reflect different embodied states relevant to gendered experiences.

These verbs aligned with conceptual domains common in gender equality work. The identification of verbs arose from the development of a conceptual framework used in the quantitative analysis of gendered change for WASH programmes – the WASH-GEM (Carrard et al., 2022). The WASH-GEM includes five domains which were clarified through verbs for programme teams: resources (have and know), agency and structures (do and speak), critical consciousness (think), and wellbeing (feel). The verbs do not capture the full breadth of concepts from the WASH-GEM domains but offer a simple approach to engage with a set of conceptually complex dimensions.

For this prompt, participants were asked to select one card from a set of six digital verb-based change cards. Each card included Khmer text and a cartoon graphic.

Prompt assessment against the design criteria

Building on the four criteria identified to represent ‘good’ stories (Table 2), this paper now turns to evaluate how the prompts performed. For clarity, this section includes brief descriptions of the methodological analysis processes used to assess these aspects.

Focused: Narratives related to gender equality

The first assessment criterion highlights the necessity that narratives actually describe changes in gender equality in alignment with the evaluation questions and purpose. During the rapid piloting, the question prompts did not directly include the phrase ‘gender equality’, to avoid prescriptive or normative conceptualisations and instead relied on gender-related themes, such as respect and confidence. However, this led to confusion, for example responses about respecting authority and elders. Therefore, the tested prompts all included brief descriptions of gender equality (pre-prompt) to ensure that collected narratives were focused on the central premise of the evaluation. Once steps were taken to include a brief description of gender equality within the prompts, all prompts successfully collected gender-equality-focused narratives.

Although gender equality remains a highly contextualised concept, our analysis suggests that research participants had similar conceptual models of equality to one another and overall saw changes towards equality as positive. However, this could be because the majority of the collected stories were positive, despite specifically seeking negative stories. The evaluation team surmised that the relatively similar mental models of gender equality within our sample

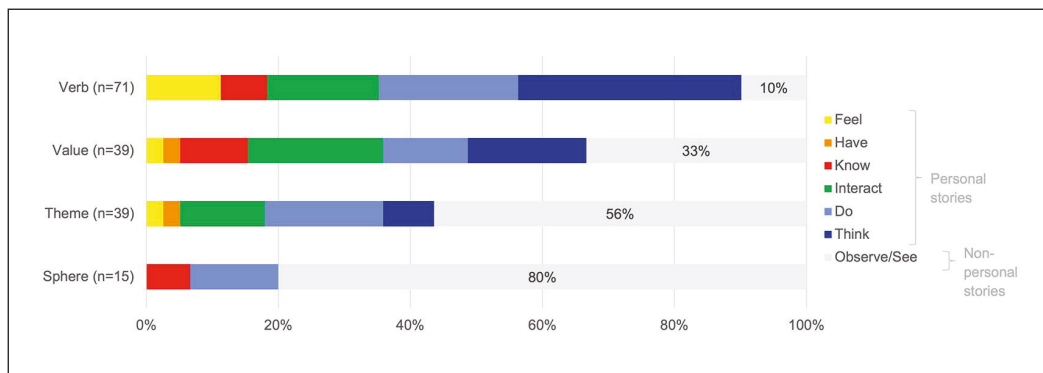


Figure 2. Personal nature of reported changes, by prompt October 2020, SMSU3 Cambodia. Researcher coded. n = 164 (excludes 5 blank narratives).

Box 1. Example of personal and non-personal stories.

Example of a non-personal story “When there wasn’t gender [equality] in the workplace, most of the employees were men, and the leader was a man. There weren’t any women who worked as a leader. After the training and the promotion of gender [equality], there are some changes. So, there are more women in the workplace and some leaders are women. These changes are due to the understanding of the equality of gender. It means that women and men have the same knowledge and leadership.” *Sphere-based prompt, Card: change at work*

Example of a personal story “Previously, I thought that women could not be leaders. Now I understand that women can do the same as men. Because I attended the training, I understood that women and men have equal rights” *Verb-based prompt, Card: change in what you think.*

were directly related to the programme’s impact. All staff members had participated in the same gender mainstreaming training, which discussed concepts of gender equality in detail and shared a particular normative view of gender equality.

Personal: Narratives of experienced change

The extent to which narratives were connected to personal experiences rather than perceived or observed experiences (non-personal) is illustrated in Figure 2. The evaluation aimed to collect first-person stories to improve trustworthiness and validity in the stories. The proximity of the storyteller to the story was identified by coding the verbs within each narrative. Where applicable, this was informed by each respondent’s answers to multiple-choice questions about who was involved in the story. Verbs of observation are illustrated in light grey, while verbs of personal experience are in darker colours. Examples of personal and non-personal stories are included in Box 1.

The verb-based approach performed the best in capturing personal stories of change (90%), while the sphere-based performed the worst (only 20% of the stories were personal). In addition, as illustrated in Figure 2, the types of stories elicited were explored based on the main verb used within the story. In alignment with its main design objective, the verb-based prompt was most effective at eliciting a breadth of experiential stories.

Box 2. Example of programme related and non-programme-related stories.

No connection to the programme “Previously, it was thought that only men could study higher. Nowadays, there is a change, daughters can study like sons. It is due to current promotions.” *Verb-based prompt, Card: change in what you think*

Strong connection to programme “In my family, all the decisions are not only for me, but my wife can also decide. . . . Previously, all decisions were on me alone. Now all the important decisions in the family must be discussed and agreed smoothly. [This happened] because I participated in training on the gender of men and women.” *Theme-based prompt, Card: change in workloads between women and men*

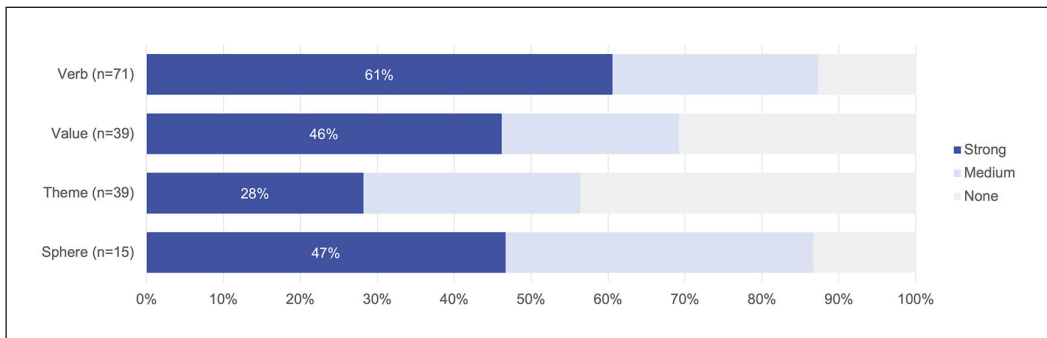


Figure 3. Programmatic contribution to change, by prompt October 2020, SMSU3 Cambodia. Researcher coded. n = 164 (excludes 5 blank narratives).

Programmatic: Narratives associated with programme interventions

The next criterion explored the strength of the connection of the narrative to the gender mainstreaming intervention. The evaluation aimed to elicit narratives of change which were influenced by the intervention. The researcher coded the extent to which the programme was perceived to influence change, focusing on the sub-question ‘*why did this change happen?*’, which was included in all four prompt designs. If a respondent described both general societal changes and programme activities, this was coded as a medium connection. Examples of programmatic and non-programmatic stories are included in Box 2.

As shown in Figure 3, the verb-based prompt was the most successful in collecting programmatic stories, while the theme-based prompt was the least successful. The sphere-based prompts were as effective as the verb-based prompts in eliciting stories somewhat or strongly connected to the programme.

Coherent: Narratives that include enough detail to analyse

The last area of assessment reviewed each story’s coherence. As with any evaluation, the quality of the data elicited from respondents is directly connected with the ability of an evaluator to conduct an assessment. Story coherence was coded based on the presence of five aspects commonly associated with narrative storytelling: who, what, where, when, and why. The presence of an aspect is illustrated with a zero-to-five-star coding process, with one star awarded for each described aspect. Examples of stories with one, three, and five stars are included in

Box 3. Examples of three levels of story coherence.

1*_–“There is a change from the work we have done” *Value-based prompt, Negative Iteration*

3***–“After learning about gender equality, I became more aware of gender equality and participated in exchanging ideas and knowledge with each other, regardless of race or gender.” *Verb-based prompt, Card: change in what you think*

5***** – “My family initially did not want me to work in a community that required travelling long distances because they thought that long-distance travel was unsafe for women and that working in remote areas could have both physical and emotional impacts. He [my father] strictly forbids long-distance travel, which can be detrimental to health, especially community theft and contempt. Now my family has changed a lot because I explained to them the value of women, that women have the right to travel long distances without risk and that my organisation thinks about respecting women’s safety. The social reality and behaviour of people is changing the mindset of my elders.” *Theme-based prompt, Card: changes in freedom of movement for women,*

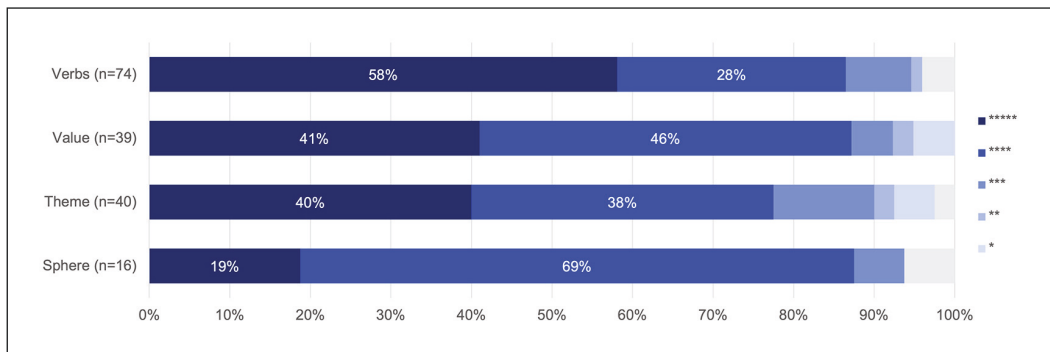


Figure 4. Average story quality, by prompt type, October 2020, SMSU3 Cambodia. Researcher coded. n = 169 (includes 5 blank narratives in grey).

Box 3. These scores are often, but not always, related to the length of the story; stories were an average of 142 words long (after transcription and translation into English).

As illustrated in Figure 4, the verb-based prompt also performed the best at collecting stories that incorporate all five aspects. However, when comparing four- and five-star stories, all but the theme-based prompt performed similarly.

Reflections on the efficacy of each prompt

The study will now reflect on the efficacy of each prompt, synthesising the results and reflections regarding each prompt’s particular objective.

Value-based prompt

Although the value-based prompt successfully elicited personal stories, it did not effectively elicit negative stories of change – which was its primary objective. Most respondents did not share a negative story and instead used the opportunity to share a second positive story or

reiterate their first story. Value was also explored for all four prompts in the survey section just after the story-sharing by asking participants to respond to two multiple-choice questions.^{3,4} Ninety-seven percent (155/169) of total responses elicited feelings of ‘happy’ and ‘very happy’, with only one response eliciting ‘unhappy’ and one ‘sad’. Drawing on the researcher’s coding of the value of the stories, the theme-based prompt was the most effective at exploring negative changes.

Although the value-based prompt and the whole study were unsuccessful at eliciting unintended outcomes, the results highlight the difficulty in eliciting negative stories, a problem recognised in our semantic review (Davies and Dart, 2005). However, this finding contrasts with other studies from our literature review, which did not have the same challenges in soliciting negative stories of change. These studies used prompts such as ‘*tell me about the negative effects of organic farming on women*’ (Altenbuchner et al., 2017) or asking about personal wellbeing in post-conflict situations and following up with ‘*how does this story make you feel?*’ (Roupetz et al., 2020). As these example prompts were very similar to our prompt designs and the inclusion of a bespoke prompt to collect negative impacts, these results suggest that the context may have hindered sharing of negative impacts. The studies that more effectively elicited negative stories took place in India (Altenbuchner et al., 2017), Pakistan (Asghar et al., 2018), and with Syrian refugees in Lebanon (Roupetz et al., 2020).

Upon further reflection, the team has explored if Cambodia’s ‘*honour and shame*’ culture precludes the sharing of negative stories. In such a culture, individuals are not prone to share negative reflections without significant probing and rapport-building (Ledgerwood, 1990). This is even more pronounced in internal evaluations, where respondents, even anonymously, are less open to sharing challenges. Nonetheless, a lack of negative stories does not imply that negative experiences are not occurring.

Sphere-based prompt

In a similar manner to the counter-intuitive result of the value-based prompts, sphere-based prompts were less effective at eliciting a diversity of story locations. In addition, the inclusion of the ‘*self*’ as a sphere of change was perhaps misunderstood as it did not elicit the stories around cognitive or personal changes as intended within the survey. Each prompt also included a multiple-choice question to understand the location of change further: ‘*who else was involved in this change?*’, which included location-specific wording around work, community, and family. Uniquely, the other three prompts were more effective at identifying changes that have spread to the home and the community, yet *all* the sphere-based responses focused on work-related change.

As the sphere-based prompt was not as successful at exploring the expansion of change into other realms as the other prompts, our results suggest that using physical locations as prompts may lead participants to reflect on the activities they observe within locations and not on their own experiences in the physical space. Nonetheless, much has been written about the value of exploring gendered space and the gender divisions of spheres (Rosaldo et al., 1974). The cultural, social, and ultimately structural significance of gendered space reinforces the importance of investigating change across multiple arenas – either directly as a prompt or through follow-up questions.

Theme-based prompt

While the responses to the theme-based prompts were less personal, they provided value in expanding and enriching the programme's understanding of foreseen (intended and unintended) outcomes. The theme-based prompts led respondents to focus more on changes they saw in colleagues and family members rather than on their own experiences of change. The evaluation team believe this is because the visuals generated unique connections with participants' day to day observations of change. This prompt also included the largest cluster of negative stories. The research team coded themes to the other three prompt responses to further understand the breadth of changes that all four prompts elicited. However, this analysis process was complex, with themes overlapping and intersecting in almost all stories of change. The analysis led to the development of personas to represent the types of changes rather than traditional thematic analysis.

This study revealed the tension between breadth and depth within thematic investigations. Examples in the literature relied on a smaller set (between one and five) of pre-selected themes within the context of in-depth interviews or focus group discussions and were based on programmatic theories of change. It was also difficult to ensure the same themes for women and men, as wording became complicated. The theme-based prompt was also unable to capture nuances such as '*changes in confidence to speak with women*' in contrast to the card which read '*changes in confidence for women*'. However, the theme-based prompt was effective at eliciting stories, which were simpler to cluster and analyse, in contrast to conducting thematic analysis with the other three prompts. The use of micro-narratives allowed for a wider number of participants and the inclusion of a larger number of themes, but this may not always be practical.

Verb-based prompt

The responses to the verb-based prompt reflected a wide range of personal changes across all spheres and types of change, highlighting the effectiveness of verbs in soliciting diverse narratives as well as embodied change. A low number of respondents (38%) believed that others were also experiencing their change (the lowest of all four prompts), which suggests that this prompt was able to capture a much more diverse and nuanced breadth of responses. The verb-based prompt was also the most successful in capturing changes within the home. This prompt was, however, less effective at identifying unintended outcomes, indicating an opportunity for future research. Comparisons of the verb-based prompt's objective to collect a range of personal experiences were conducted by coding the verbs that occurred within each story. As illustrated previously in Figure 2, the verb-based prompt was the most effective, despite being unable to elicit a story about a change in what '*you have*'.

The simplicity yet specificity of this verb-based prompt led to a breadth of responses. However, such diversity required more time and resources for data analysis, as noted above. Little has been written about the value of verb-based prompts, outside best practice recommendations for qualitative interviews in keeping prompts short, concise, and free from academic jargon. For example, Patton (2002) describes a prompt design approach which reviews the experiences, opinions, feelings, knowledge, and sensations of participants in the past, present, or projected into the future (Patton, 2002: 351–2). Our case study suggests that verb-based prompts are effective because they are easily accessible to participants and reduce the number of possible response iterations.

Reflections on embodiment and future research

Embodiment as a lens to interpret gender-transformations

The article now considers the usefulness of embodiment as a lens through which to explore gender-transformations. Our interest in embodiment arose from reflections on why the verb-based prompts performed significantly better than the other three tested prompts. Not only did it collect results that more closely aligned with the prompt intent and evaluation purpose, but the verb-based prompts were most effective in eliciting personal, programmatic, and coherent stories of change. The analysis identified two reasons why embodiment is a useful lens for qualitative assessments of gender-transformations: first, that embodiment is not just women-focused, and second, that it was the easiest prompt for participants to understand and respond to.

The evaluation of gender-transformations requires a tool to elicit stories which capture each individual's engagement with change. Embodiment centres on change within the gendered person, recognising that not only women, but also men, experience change in a transforming environment (Mason, 2018). This highlights the ability and responsibility of each individual to become actors of change through processes of critical consciousness (Freire, 1970); broadening the narrative of women's empowerment which dominates thinking in the gender equality sector (Cornwall and Rivas, 2015). For all prompts, except for the verb-based example, participants were more likely to discuss the actions and behaviours of others (often women), rather than their own experiences.

The evaluation of gender-transformations requires a tool to simply direct participants to engage with a breadth of possible outcomes. Embodiment, and in particular our usage of embodiment as action verbs, simplifies a range of experiences into a set of six easily recognisable activities. These actions align with the physical, cognitive, emotional, and relational components of embodiment theory (Merleau-Ponty, 1962); while also aligning with aspects of gender equality including resources, agency, structures, and wellbeing. Yet this approach circumvents the academic language, which is inappropriate in many research environments. The sphere- and value-based prompts did not elicit a breadth of outcomes, and the theme-based prompt required more time for respondents to digest the content and select a card, with implications for respondent fatigue and need for additional time and resources.

Implications for evaluators

Evaluators exploring themes of gender-transformation and in particular, changes for both women and men are faced with the challenge of asking good questions. Our study has proposed that 'good' questions guide respondents to discuss both foreseen and unforeseen outcomes and are not prescriptive. Our study suggests that evaluators would benefit from using verb-based question prompts to elicit rich and personal stories of change from programme staff. This approach may also be valuable for other complex topics such as resilience to climate change and market systems change. In addition, the study has highlighted the usefulness of visual cues through cards and emoticons guiding respondents to discuss the topic of their choice and open more opportunities to identify unintended outcomes.

The extent to which participants discussed gender-transformations might have been influenced by the shared definitions of gender equality between participants because of

gender training. For evaluations exploring gender-related change in programmes where this has not occurred, further prompt testing and co-design would be required to ensure that the prompts do not inadvertently normalise equality and limit the evaluation insights.

Directions for future scholarship

Few studies have explored how prompts and question formulations impact qualitative studies, and further research could explore the salience of our findings in other contexts. For example, future studies could explore the use of verb-based prompts with beneficiaries and through wider geographic diversity. Studies could also leverage other methods such as interviews or focus groups, which could include cognitive testing of the prompts. Studies could also expand on ways to use verb-based prompts to elicit stories related to unintended and potentially negative outcomes. In addition, studies could ask about changes in each sphere instead of asking participants to select a sphere where the most change had occurred. Finally, prompts that focus on learnings or differences for different types of people, which were identified in our literature review (Asghar et al., 2018; Dutt and Grabe, 2019) but not included in our study, could offer a wider breadth of possible prompt designs for gender practitioners focused on researching and evaluating gendered change.

Conclusions

As many evaluation practices move online to self-administered and remote modalities, reliable and straightforward methods for qualitatively exploring complex changes are becoming even more important. Yet studies into the semantic design of question prompts for evaluations are nascent. This paper has described a systematic and collaborative study concerning the design and assessment of four unique question prompts used in evaluating complex gender-transformations for staff of a development programme in Cambodia.

Through an assessment of verb-, value-, sphere-, and theme-based prompt designs (n = 176), our study showed that the verb-based prompt was the most effective at eliciting personal, coherent, programmatic, and focused stories of gender-related change. Our analysis suggested that the verb-based prompt was the most successful because it leveraged concepts of embodiment in which all participants (both women and men) were able to respond directly from their own perspectives about their own experiences. This is unique, especially in gender equality assessments, which often focus on women rather than the gendered experiences of all individuals. Evaluators seeking to explore gender-transformative outcomes are encouraged to adopt verb-based embodied question phrasing to elicit responses.

As gender-related studies aim to move from a sole focus on women to a broader understanding of gender dynamics, this research has proposed modes relevant to both women and men. Findings from this analysis can inform not only gender-focused evaluations, but also studies of other complex processes of change in aspects such as systems strengthening and resilience building.

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ORCID iDs

Jess MacArthur  <https://orcid.org/0000-0002-6645-5767>

Naomi Carrard  <https://orcid.org/0000-0002-3371-9113>

Juliet Willetts  <https://orcid.org/0000-0002-3975-9642>

Notes

1. A total of 18.2% of women have experienced physical or sexual violence committed by husband/partner (National Institute of Statistics [Cambodia], 2014).
2. 'Both this study and SMSU3 are focused on gender equality-how experiences and interactions are becoming more equal between women and men'
3. Question 1: **Pick and share an emoji that describes how you feel about this change.** Select one (1) or add your own option (*very happy, happy, unsure, sad, unhappy, mad, other*). Emoticons (emojis) were identified during our design workshops as a useful tool due to the ubiquitous nature of visual cues within social media in Southeast Asia.
4. Question 2: **What is the outcome of this change?** Click one (1) option (*positive, neutral, negative*)

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Jess MacArthur's research explores the social dynamics of water and sanitation programming in South and Southeast Asia and focuses on gender research practices in the development sector.

Naomi Carrard is a Research Director at the Institute for Sustainable Futures. Her applied research focuses on water, sanitation and hygiene (WASH) across the Asia-Pacific region.

Toeur Veasna is a Monitoring and Evaluation Manager at iDE Cambodia. He leads the monitoring and evaluation team focused on improving WASH systems and gender equality in Cambodia.

Tyler Kozole is the WASH Programme Manager at iDE Cambodia. He leads iDE Cambodia's WASH and climate change programming and research initiatives, focusing on reaching households in climate-vulnerable areas.

Juliet Willetts leads applied research to improve development policy and practice and to address social justice and sustainable development, including achievement of the global Sustainable Development Goals (SDGs).

5.3 Paper V – Using personas for program evaluation and planning: Insights from a gender-focused evaluation in Cambodia

Paper V has been submitted as a research article to *Evaluation and Program Planning*. The article answers the following research question: *How can descriptions of gendered change be effectively analysed, synthesised and utilised?*

In this paper, I use the term ‘persona approach’ to refer to the persona technique used to analyse, synthesise and utilise complex forms of data. I also use the word ‘analysis’ throughout the paper to represent both processes of analysis and synthesis. My adoption of the terms ‘synthesis’ and ‘technique’ came through my personal sensemaking in writing this thesis, completed at a later time than the development of the manuscript for **Paper V**.

Using personas for program evaluation and planning: Insights from a gender-focused evaluation in Cambodia

Authors: Jess MacArthur, Vandy Moug, Naomi Carrard, Juliet Willetts

Keywords: personas, program evaluation, micro-narratives, mixed-methods analysis, storytelling, natural language processing

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Abstract: In this article, we argue for the utility of personas to address common challenges associated with the analysis of complex qualitative data sets in evaluations and to support actionable evaluation insights. Personas, also known as archetypes or profiles, are fictional composite characters that represent subgroups within a broader population of individuals.

To explore the efficacy of personas in program evaluations, we use the case of an internal midline evaluation of a gender mainstreaming activity of sanitation intervention in rural Cambodia. Fourteen personas were identified based on 200 micro-narratives of change. We adopted a collaborative, mixed-methods analysis approach starting with qualitative thematic process coding and validated through quantitative natural language processing. Visual representations of the personas were reviewed during a sensemaking workshop to maximize program leadership's engagement with the results. This engagement led to a set of actionable recommendations for the next phase of gender mainstreaming.

Our case highlights the value of personas for 1) providing a feasible means to analyze complex textual datasets, 2) producing engaging content that promotes evaluative program reflections, and 3) creating profiles for designing future activities. We reflect on opportunities for other programs to use personas in their evaluations.

Introduction

Within the field of program evaluation, qualitative evaluations remain critical for measuring intervention outcomes associated with social change processes, such as gender equality and social inclusion (Bamberger and Podems, 2002). However, the challenges of conducting robust analysis and applying findings to improve interventions are well documented (Patton, 2015; White, 2015). Data is often left unused or unreported due to staff capacity, poor data management, opaque analysis methods, and low confidence in generating insights (Guest et al., 2017; White, 2015). Within this context, there is both an opportunity and a need to explore analysis approaches which 1) provide a feasible means to analyze qualitative data sets and 2) encourage uptake of qualitative evaluation findings.

Drawing from the applied disciplines of engineering and business, we consider how techniques from design thinking can inform and strengthen evaluation. While more commonly used in marketing and product design, design principles can emerge from rapid ethnographic research, prototyping, and templated conversation starters to support user-centered solutions – whether in products, services, or advertising (Rowe, 1987). Design principles are also used to understand how objects can be better crafted to avoid gender bias in a world predominantly designed for the ‘average male’ (Criado-Perez, 2019). Recently, practitioners in international development have been considering how design principles can be applied to program and intervention planning (Lambe et al., 2020). Contributing to this body of work, we investigate how the use of personas – a profiling technique from design thinking– can be used to support the analysis and uptake of findings from qualitative evaluations.

In this paper, we first examine how personas have been used in different disciplines, explore the breadth of methods used to design personas, and consider opportunities for the use of personas within evaluation practice. We then describe our approach to developing personas in the context of a midline evaluation of a gender mainstreaming intervention in Cambodia. Lastly, we discuss the differences between conventional personas and personas developed for evaluation and explore the implications of using mixed-methods for persona design.

Background

We begin by defining the purpose and use of personas within a range of research fields, including engineering, design, business, and public health. This description is followed by a summary of persona design techniques using manual (primarily qualitative) and algorithmic (primarily quantitative) approaches.

We identify these types of personas as ‘conventional’ in that they follow the standard conventions within these disciplines. We contrast the ‘conventional’ use of personas with the ‘evaluative’ personas

Paper V (submitted for publication to *Evaluation and Program Planning*)

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introduced in this paper. ‘Evaluative’ personas are used to assess changes within a program and create a set of targeted recommendations for future implementation.

What is a persona?

Personas are best understood as representative yet fictional composite characters used in processes of design or classification. They are found in a variety of disciplinary backgrounds and are also known as archetypes or profiles. The development and use of personas varies between fields of study, but all forms rely on empirical evidence to create characters that represent diverse groups of people.

“Personas are not real people, but they are based on the behaviors and motivations of real people we have observed and represent them throughout the design process. They are composite archetypes based on behavioral data gathered from the many actual users encountered in ethnographic interviews.” (Cooper et al., 2007: 75–76)

Personas are helpful in designing new solutions, communicating with stakeholders, building consensus, measuring solution effectiveness, and supporting scale-up efforts (Cooper et al., 2007). Often, research and design teams use personas to create tailored solutions that cater to specific types of individuals with unique needs rather than to create a comprehensive solution that aims to cater to most people (Cooper et al., 2007). This person-centered approach aims to create solutions that better fit a diverse population, helping to ensure that a broader group of people can benefit from the design (Criado-Perez, 2019).

Within design and engineering, personas are often presented as a single-page summary (Cooper et al., 2007; Nielsen, 2019). This summary includes demographics, personality traits, interests, daily life information, a picture, quotes, basic statistics of product engagement, and a brief history of this character’s engagement with a product (Nielsen, 2019). Personas are most often presented in a set of characters, each representing a market segment for a particular product or service (Nielsen, 2019). Personas are often used as ‘generative models’, or profiles for which to design new products and services.

Within the fields of business, management, and public health, the concept of ‘persona’ is more typically expressed as a profile or cluster (see for example, Ford and Greer, 2006; Howard and Hoffman, 2018). Such profiles seek to classify and order unique sets of individuals by developing profiles such as the “single working mother”. These profiles are not typically given a fictional name or presented on a single page but rather are embedded into a report through text and descriptive statistics to show that a sample includes subgroups characterized by unique parameters (Spurk et al.,

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2020). This approach is sometimes described as person-centered in contrast to variable-centered or person-specific¹ (Howard and Hoffman, 2018).

The use of personas within international development is nascent, with only a few example applications for the classification of pastoral experiences (Cabrero et al., 2017), women's sanitation practices (Winter et al., 2019), cookstoves and mango production (Lambe et al., 2020), and handwashing practices (Lanfer et al., 2021). These examples give credence to the approach alongside a surge in applications of design thinking to structure more meaningful and effective development interventions (Brown, 2019). Personas have also been used to strengthen scenario planning (Vallet et al., 2020), to identify causes of attrition in online health support networks (Huh et al., 2016), and to design targeted health behavioral messaging (Vosbergen et al., 2015). Additionally, there has been recent discussion of the value of personas within contexts of cross-cultural design and with regards to intersectionality (Cabrero et al., 2017; Jensen et al., 2017). Within evaluations, the concept of 'personas' is very uncommon; however, profiling does feature within health and education evaluations (Buly and Valencia, 2002).

How are personas created?

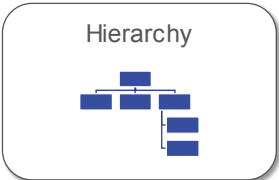
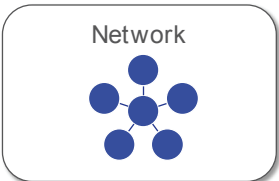
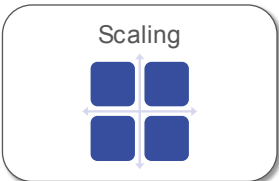

Academic discussions about persona design focus on the analysis processes used to group or categorize individuals (see Chapman and Milham, 2006; Jansen et al., 2021; Salminen et al., 2019, 2021). These analytical approaches fall on a spectrum from manual to algorithmic modalities. Manual approaches primarily rely on qualitative thematic or framework analysis. They are often characterized by small data sets and are criticized within the literature for being narrow, being susceptible to bias, and requiring significant resources (Jansen et al., 2021). Algorithmic approaches rely on computer software tools and are often used with large data sets. Such methods can be overly complex, may be unable to capture interesting outliers, and may not reflect the objectives of the intervention (Jansen et al., 2021). Algorithmic methods are commonly referred to as 'data-driven' (Salminen et al., 2021); however, this falsely implies that manual approaches do not rely on data. Therefore, we adopt the term 'algorithmic'. The emerging literature on persona design highlights the importance of relying on more than one method, including both manual and algorithmic approaches to triangulate results (Jansen et al., 2021; Salminen et al., 2021).

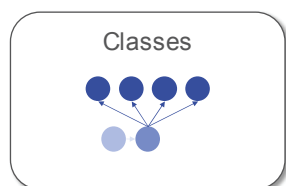
Nonetheless, the analytical approaches commonly used to design personas can adopt manual or algorithmic tools, as summarized in Table 1. The list draws from a recent literature review by Salminen et al. (2021) and recommended analysis approaches from Guest and MacQueen (2008). The analytical methods are: 1) **hierarchy** – in which data is both grouped and then ordered; 2)

¹ Variable-centered approaches "assume that all individuals from a sample are drawn from a single population for which a single set of 'averaged' parameters can be estimated", while person-centered approaches "consider the possibility that the sample might include multiple subpopulations characterized by different sets of parameters." (Morin et al., 2018: 804)

network – in which data is clustered into groups and the relationships between groups is explored; 3) **scaling** – in which two categories of data are plotted on a spectrum or grid format through which to identify cases that have strong proximity to one another; 4) **topics** – in which textual data is arranged in a matrix with cases as rows and topics or words as columns; and 5) **classes** – in which data is grouped through mapping similar concepts or themes. Algorithmic versions of this last method aim to find latent or hidden variables which lead to the grouping of data based on covariates. We demonstrate how each persona design method has both manual and algorithmic variations (i.e., the method can be completed with post-it notes and a whiteboard, specialized computer software, or a variety of options in-between). The table also highlights the relevant data types used within each method and therefore the main criteria for selecting a method. Data can be categorical (such as gender, role, location, or education level), numeric (such as age, score from a scale or index or time), or textual (such as stories or long-answer responses).

Table 1. Summary of analytical approaches for persona development. (Adapted from Guest and MacQueen, 2008; Salminen et al., 2021)

Analytical methods	Manual methods	Algorithmic methods	Data types
 <p>Hierarchy</p>	Flowchart	<ul style="list-style-type: none"> Hierarchical Clustering Analysis (HC) 	<ul style="list-style-type: none"> Categorical Numeric
 <p>Network</p>	Network Map	<ul style="list-style-type: none"> Network Cluster Analysis 	<ul style="list-style-type: none"> Categorical
 <p>Scaling</p>	Spectrum or Grid	<ul style="list-style-type: none"> K-Means Clustering 	<ul style="list-style-type: none"> Numeric
 <p>Topics</p>	Co-occurrence Matrix	<ul style="list-style-type: none"> Latent Dirichlet Allocation (LDA) Structural Topic Models (STM) Latent Semantic Analysis (LSA) Non-Negative Matrix Factorization (NMF) 	<ul style="list-style-type: none"> Textual Categorical



Mind Map

- Latent Class Analysis (LCA)
- Latent Profile Analysis (LPA)

- Categorical
- Numeric

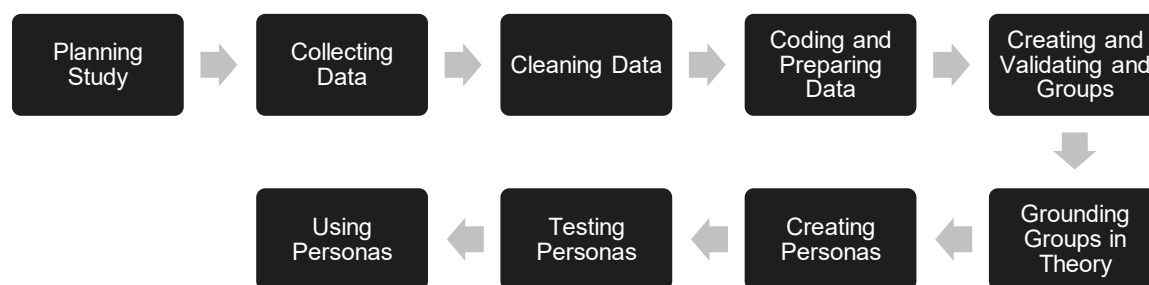
Approach

We now turn to our case study approach illustrating the use of personas in the evaluation of a gender mainstreaming intervention in Cambodia. This case has demonstrated the use of both manual and algorithmic methods to create and validate persona groups.

Process for persona development and use

Drawing from the conventional persona design and application process (Cooper et al., 2007; Nielsen, 2019; Pruitt and Adlin, 2006), we followed an adapted stepwise approach (Figure 1). The process was creative yet systematic, and the produced personas were both generative – providing opportunities to refine or design interventions, and evaluative – reflecting on the strengths and limitations of existing interventions.

Figure 1. *Persona development and use process (Adapted to an evaluation context from Cooper et al., 2007; Nielsen, 2019; Pruitt and Adlin, 2006)*



Program and study context

This study took place with the context of a sanitation marketing project funded by Australian Aid through the Water for Women program and in collaboration with iDE, an international civil society organization with a long-term presence in Cambodia. The study was designed to investigate the impacts of a gender mainstreaming strategy for staff members through storytelling using innovative qualitative methods. As the responses were in the form of textual stories, we adopted a topic-based analytical model (see Table 1). All 185 program staff members were invited to participate and were

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asked to opt-in to participating. The research team included one external researcher (lead author), one program-based researcher (second author), two advisors (further authors), and two research assistants.

Ethical clearance for the study was obtained from the University of Technology Sydney's Human Research Ethics Committee (UTS HREC ETH19-4343). Ethical considerations included distress protocols related to the sensitivity of gender-focused research and in sharing possible negative reflections of their experiences with the evaluation team.

Data Collection and Analysis

Digital stories (199) were collected from 176 staff members who participated in 14 small groups within each of the six field office locations between September and October 2020. The stories were collected as micro-narratives in which individuals were asked to share short gender-focused stories about their experiences in the program and the impacts on their lives. Micro-narratives have been used to examine gender-related themes in other contexts and utilize short narratives (100-1000 words) to describe personal experiences (Bartels et al., 2019; van der Merwe et al., 2019). For our evaluation, individuals were invited to share their stories as audio recordings or text responses using. A parallel study explored the prompts used to focus responses on changes in gender equality (MacArthur et al., 2022). The micro-narrative survey was conducted on the staff member's smartphones through the online *Qualtrics* survey platform, and the story sharing was broken into smaller questions (for example: what were things like before? what are things like now?) The micro-narratives were submitted during a facilitated session led by trained research assistants. The survey also included socio-demographic information as well as additional self-coding of stories with a set of predetermined aspects.

The de-identified micro-narratives were transcribed and translated as required from Khmer into English for analysis. For textual stories, translation was conducted using auto-translation software within *Qualtrics* and then checked by native Khmer speakers for accuracy and updated as required. Audio recordings were transcribed by native Khmer speakers and then translated into English. Data was compiled in *Airtable*, a secure online database software, and included the stories, socio-demographic information, and participant self-coding of their stories.

Within *Airtable*, we then conducted an iterative approach to prepare data for analysis by compiling the stories and coding each story by place, domain, type of change, change agent, change beneficiary, and activities. Eighteen stories were removed as they had insufficient substantial content on which to conduct analysis (n=17) or described broad changes in the field implementation locations and not changes for staff (n=1). To prepare the stories for qualitative analysis, we coded the stories by action words — an analysis technique called 'process coding' (Saldaña, 2012), which allowed for the main

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actions of the story to be easily classified. The lead researcher conducted two rounds of thematic process coding, and then the codebook was reviewed by the entire research team. Rounds three and four were conducted collaboratively between the two primary researchers to explore inter-coder agreement (Guest and MacQueen, 2008). This coding process produced a collection of action codes involving a verb (e.g., see, say, do) and a phrase (e.g., other leaders, kinder words, more at home). Lastly, descriptive statistics were developed from the self-coding of stories by participants.

Creating and Validating Groups

To identify and verify the persona groups, we utilized and compared three analytical approaches. Firstly, we adopted a qualitative clustering process using co-occurrence matrices (Guest and MacQueen, 2008). Developed within *Airtable*, these matrices explored each theme (columns) against each participant (rows) by gender, role, and age to cluster similar groups of cases. This process was done iteratively and collaboratively within the research team, ultimately identifying 14 groups. To validate these groups algorithmically, we then conducted both Latent Dirichlet Allocation (LDA) and Structural Topic Modelling (STM) within *RStudio* using the set of compiled stories as document data.

The two natural language processing algorithms were selected as they both utilize a ‘topic discovery’ process in which models produce a list of all the words within a text. Words are stemmed (shortened) and stopwords removed (e.g., ‘and’, ‘or’, ‘the’). Words are then grouped into topics, which were used to crosscheck the qualitative analysis. LDA is an unsupervised machine learning model within the *topicmodel* package in R, which identifies the hidden topics within a corpus. It treats each document as a mixture of topics and the words within a document as belonging to a mixture of topics (Hornik and Grün, 2011). Therefore, LDA can also be used for longer documents in which multiple topics can be found in a single document². STM is an adaptation of LDA, which allows for covariates or metadata in the model, using the *smt* package in R (Roberts et al., 2019). This allowed us to use the aspects of gender, age, region, role, and gender awareness score within the model.

To run these algorithmic analyses, we set the threshold at a minimum of seven stories for each cluster, resulting in a recommended ten clusters from our qualitative analysis³. Both STM and LDA analyses produced lists of topic words for each of the ten clusters, which were then compared to the co-occurrence matrix results. The results from STM and LDA were closely aligned to one another, with only marginal differences. Each list of topic words from STM and LDA was then compared against and matched to the qualitatively identified groups. Most of the groups were easily matched, as illustrated in Table 2 in the results section. The comparison of the three methods enabled the team to see the results in new ways, taking a step back from the details.

² Each document (story) was treated as having a single topic.

³ This process is often cited as one of the most difficult decision points in topic modelling (Salminen et al., 2019, 2021). Our qualitative analysis streamlined this decision.

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Grounding and Refining Personas

After the initial groups had been formed, the team collaboratively created a set of unique personas to represent the different groups, with specific reference to and engagement with social change theories. This was done by drawing on the use of the words 'see', 'think', and 'do' in the process coding to cluster the personas into three broader categories. These three clusters were strongly aligned with and framed by Paulo Freire's perspective on social transformations through critical consciousness (Freire, 2000). Grounding the personas in academic literature on social change (Freire, 2000; Rao et al., 2015) helped to both identify potential gaps in the persona set and to reflect on how the personas reveal a more comprehensive picture of organizational change.

Once the personas were situated within the broader academic literature on social change, the team developed a visual personas report in *PowerPoint* (MacArthur & Mounq 2021). This process was a blend of graphic design and data visualization (Nielsen, 2019). Each persona included a cartoon image, name, persona title, quotes, basic statistics, gender awareness score, and a brief fictional story about the individual. Distinct colors were used to reference different aspects of the theoretical framing. Gender-relevant names were selected by drawing from common Khmer names with reference to the meaning of the names. The fictional cartoons, names, ages, and roles of the personas were designed and selected by the lead researcher who was not familiar with the individual members of the program team to avoid any bias or reference to actual program staff. This was to ensure that any significant resemblance with staff members was coincidental and to avoid potential embarrassment or distress. The personas were reviewed by the research team and program management team to check against any significant resemblance with actual staff members and to reflect on the accuracy of the personas drawing from latent knowledge.

Using Personas

Lastly, the personas were used in a 2.5-hour sensemaking workshop with the program leadership team (7 members) to reflect on how future gender mainstreaming interventions could be adapted to better support types of people identified in the personas. Scenarios were run for each persona to identify specific recommendations to strengthen the gender mainstreaming approach. A brief (*Qualtrics*) survey at the end of the workshop captured reflections on the process.

Limitations

Several limitations in the data collection and analysis process require mention. In retrospective micronarrative story collection, researchers cannot interrogate the validity of the stories. Therefore, the stories had to be taken at face value and may include some embellishment. However, this remains a challenge in almost all data collection, and the ability to examine the frequency of similar stories helped create a holistic picture of the program impacts. Additionally, the analysis was done

with some distance (both physical and temporal) to the program. This may have further reduced engagement with the results than if the program team was more actively involved in the analysis.

Personas of Change: Evaluative personas

The case study evaluation produced 14 unique personas which highlight distinctive changes which staff members had experienced within the program and related to gender equality.: 1) critical observation – where an individual observes others changing; 2) critical self-reflection – where an individual personally reflects on their own experiences; and 3) critical action – where an individual’s personal reflection leads to some form of action. Further reflections on the specific findings regarding this process of change are beyond the scope of this methodological paper.

A summary of the personas is presented in Table 2, which includes the theoretical cluster of each persona; the fictional name and persona title; the salience of the persona within the entire sample of stories (n=199); selected fictional characteristic of the persona including gender, age, and program role; illustrative quotes from the stories; the process code that led to the persona design; and the topic modelling results used to triangulate the persona groups. Additionally, two illustrations demonstrate the visual representation of personas (Figure 2) and include a short story about the fictional character, a comparative score of their gender awareness and descriptive statistics about the location, perceived value, prevalence, importance, contributing factors and expectations of the reported change (MacArthur & Mounq, 2021).

Critical Observer Personas

Four personas were identified as critical observers highlighting the large number of program staff who reported an observed change (63 stories within the sample, 34%). This does not necessarily mean that these individuals have not themselves experienced a change related to gender equality, but that the story they choose to report is one of observation of others. These include observing a changing society, in which staff see change happening around them; observing successful women, where staff are observing women leaders in both society and within the organization; observing the participation of women, in that staff see women working and engaging more in meetings and in programs; and lastly still more to be done, as staff see the short fallings of gender transformation within the organization. From a Freirean perspective, such observers have not yet moved to become creators of change but are on the journey towards becoming change actors.

Critical Self-Reflector Personas

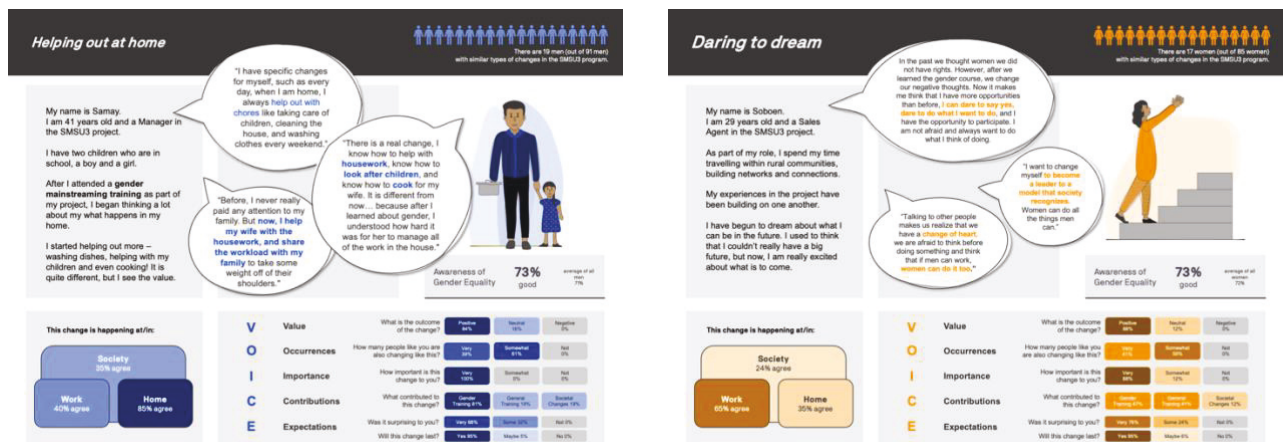
Two personas were identified as critical self-reflectors representing 34 stories (18%). These included ‘daring to dream’ and ‘changing my thoughts’. Both of these personas represent the internal aspects of observing change and being shaped by those observations. The 17 women who dared to dream

reported that they have observed other women in leadership positions and now have positive role models. For those who reported changing their thoughts, there has been a significant change in how they think about gender, rights, and equality more broadly. While these two cognitive types of change do not yet lead to action, they represent an important step in the process towards active change.

Critical Actor Personas

Lastly, eight personas were identified as critical actors, representing 48% of the stories shared (88 stories). These reports of active change ranged from changes in speech patterns (daring to speak out, adapting communication, and becoming more polite), to creating a more equal environment (helping out at home, sharing back learnings with family, advocating for women at work, and involving women in decision making) and experiencing a more equal environment (freedom to travel and move). The diversity within these stories represents the multitude of embodied ways through which a person can become an actor of change and the myriad connections between subject, object, location, and contributing factors.

Figure 2. Two selected personas from the study, highlighting the visual elements and presentation.



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Table 2. Fourteen identified personas including frequency within the sample, fictional characteristics, quotations and topic modelling.

Name (Translated Name) and Persona Title		Frequency in Sample	Fictional Characteristics	Illustrative Quote(s)	Process Code	Topic Modelling Words
Observation	Sotear (compassion) Observing a changing society	22 people (12 women, 10 men)	Woman 26 years old Sales Agent	“Changes in society have happened because the perspective of the Cambodian family changed. ” “ Now women can do the same work as men , can find outside work to support the family, while men can help with household chores in their spare time or time off from work like women.	see (“shifting society”)	LDA: famili, want, children, right, give, educ, wife, think, understand, need STM: famili, children, give, want, right, educ, wife, need, think, support
	Chanlina (moonlight) Observing successful women	19 women	Woman, 27 years old Village Mobilizer	“Before, there were not many women leaders, but now there are many women leaders in the SMSU3 program. ” “But now it is observed that women can be highly educated and can stand as leaders , can stand as politicians, can earn money without relying on men.”	see (women in leadership)	LDA: right, particip, work, societi, leader, equal, train, educ, thought, awar STM: work, equal, right, understand, due, leader, learn, societi, employe, educ
	Sokhem (hope) Observing the participation of women	16 people (7 women and 11 men)	Man 29 years old Manager	“In the past, women could not work like men due to a lot of discrimination. But now I see that women can work like men without any discrimination. ” “Women didn’t usually participate in expressing their opinions. But now, because women participate more, they express their opinions just as much as men, so they can help to contribute to improving the society as well as their family.”	see (participation of women)	LDA: see, opportun, use, communiti, earn, money, toilet, famili, safeti, organ STM: particip, see, famili, use, communiti, get, earn, money, toilet, woman

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Name (Translated Name) and Persona Title		Frequency in Sample	Fictional Characteristics	Illustrative Quote(s)	Process Code	Topic Modelling Words
	Ary (knowledge) Still more to be done	3 people (2 women and 1 man)	Woman 22 years old Manager	“Occasionally there is still gender inequality. There are definitely some shortcomings. ” “Men still do not know about women’s rights. It seems that they still do not value, do not trust women. I feel like they think that women do nothing. ”	see (more to be done)	n/a (less than seven cases)
Self-reflection	Soboen (dream) Daring to dream	17 women	Woman 29 years old Sales Agent	“I want to change myself to become a leader to a model that society recognizes. Women can do all the things men can.” “Talking to other people makes us realize that we have a change of heart , we are afraid to think before doing something and think that if men can work, women can do it too. ”	think (“I can do it too”)	LDA: think, thought, always, inaud, train, get, posit, knowledg, negat, speak STM: think, thought, work, inaud, always, abl, never, success, posit, someth
	Thom (oldest one) Changing my thoughts	16 people (4 women and 12 men)	Man 26 years old Manager	“After studying this training course, I have a better idea, realizing that women have the same rights as men, what men can do, women can do. ” “ Now, I understand that women are an important driver for our families as well as in our society as a whole.”	think (differently about women)	LDA: learn, think, understand, know, work, job, famili, past, just, use STM: work, staff, communiti, equiti, valu, project, particip, see, relat, always
Action	Samay (modern) Helping out at home	19 men	Man 41 years old Manager	“Before, I never really paid any attention to my family. But now, I help my wife with the housework, and share the workload with my family to take some weight off of their shoulders.” “There is a real change, I know how to help with housework , know how to look after children , and know how to cook for my wife. It is different from now”	do (help at home)	LDA: help, work, famili, housework, chore, cook, hous, wife, household, care SMT: help, famili, work, housework, job, cook, hous, wife, chore, care

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Name (Translated Name) and Persona Title	Frequency in Sample	Fictional Characteristics	Illustrative Quote(s)	Process Code	Topic Modelling Words
Veata (clever) Daring to speak out	16 women	Woman 22 years old Sales Agent	“The real change is I am more courageous and articulate.” “In the past, I did not know how to speak. I was shy and afraid to speak . Now I can talk a lot and have fun communicating.”	feel (<i>brave</i>) → speak (<i>“express self”</i>)	LDA: express, particip, work, opinion, understand, better, well, less, team, provid SMT: express, particip, opinion, train, idea, good, discuss, women, team, equal
Mony (precious stone) Sharing back with my family	11 women	Woman 26 years old Village Mobilizer	“I once saw my brother insulting his wife, saying, “ trying to be a businessman, but failing to keep the house’ Now, I am mature and knowledgeable enough to explain to my brother that insults, and disrespect don’t make a happy home.” “After I learned about gender at iDE... I have shared what I have learned on decision-making with my father . I told him to consider the other members’ opinions and respect them when making any decisions in the family.”	speak (<i>to family about gender equality</i>)	LDA: decis, make, famili, decid, right, decision-mak, train, past, respons, equal STM: decis, make, famili, decid, past, husband, right, think, task, father
Nimith (transformation) Advocating for women at work	11 men	Man 37 years old Manager	“Now that I have learned a lot, I have started giving women a chance to express their thought and ideas. “It’s changed my mind about recruiting . In the past, I used to think that I did not want to recruit women to work in the community, but now I have recruited 50% women and I see that the work is effective.”	do (<i>advocate for women in the office</i>)	LDA: work, staff, project, communiti, equiti, level, villag, smsu3, encourag, think STM: level, smsu3, train, project, part, right, take, manag, district, encourag
Visna (destiny) Adapting communication and collaboration	7 people (2 women and 5 men)	Man 33 years old Manager	“For me, before, all my words and expressions were never thought to affect women , and before I spoke, I did not think much about them. After attending the training, I became more cautious in my words.”	speak (<i>more carefully</i>) + do (<i>collaborate</i>)	LDA: work, equal, valu, respect, right, workplac, good,

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Name (Translated Name) and Persona Title	Frequency in Sample	Fictional Characteristics	Illustrative Quote(s)	Process Code	Topic Modelling Words
			“Before the SMSU3 Project, I felt that we did not pay attention to our working group. We were working as competitors in order to just beat one another. But...I can see that our teamwork is going smoothly. There is a change.”		understand, knowledg, due STM: work, staff, communiti, equiti, valu, project, particip, see, relat, alway
Vithu (intelligent, scholarly) Involving women in decisions	6 men	Man 27 years old Sales Agent	“Before, I didn’t prioritize women’ ideas on the team when I made decisions. Now, I am actively trying to bring more women into program decisions , prioritizing whole team participation.” “Previously, all decisions were on me alone. Now all the important decisions in the family have to be discussed and agreed smoothly. “	do (<i>involve women in decision making</i>)	n/a (less than seven cases)
Leap (success) Becoming more polite	5 women	Woman 35 years old Administrative Assistant	“In the past, I was an arrogant person who liked to find out about friends who were not very friendly. Now I am a polite person, friendly even. ” “I have changed. I used to see other people in a negative light but now I am more positive. ”	speak (<i>more politely</i>)	n/a (less than seven cases)
Pheakdey (to have faith) Freed to roam and work	4 women	Woman 20 years old Sales Agent	“In the past, my mother always forbade me to go far away . Now I have the right and freedom on my own without asking her and no more pressure on me. It is because she has a great understanding of gender” “Before, I thought I could not work far away or ride a motorbike for fear of getting hurt because I was a woman and suffered a lot. Now I think women can work as far away as men.”	think (<i>differently about mobility</i>) → do (<i>travel</i>)	n/a (less than seven cases)

Use of the personas for evaluative sensemaking

Upon completion of the persona design and visual report drafting, the personas were presented, discussed, and used in a sensemaking workshop. Captured in a post-workshop reflection, one participant shared, *“[a] deep dive of the data allowed the opportunity to not be overwhelmed with too much data and resulted in a more effective and productive discussion.”*

Firstly, taking a summative evaluation perspective, the workshop looked back and evaluated the extent to which the gender mainstreaming aspects of the program had been effective in creating meaningful and lasting transformative change for staff members. The personas helped to articulate the different ways in which change was experienced and included anticipated, unanticipated, positive, and negative changes (Jabeen, 2018), while capturing a breath of experiences through census sampling. The personas were discussed with reference to the goals and objectives of the program to evaluate the success of the mainstreaming intervention, and in particular, gender awareness training that had been provided to all staff. Aspects such as privacy and anonymity were mentioned several times in the post-workshop reflections, with leaders feeling more comfortable interacting with personas than with de-identified responses. This was especially pertinent as the workshop participants were program leaders and managers of the storytellers. While traditionally, qualitative data is de-identified, the nature of a census sampling approach creates issues around anonymity, the personas created a further layer of distance between the workshop participants and the storyteller respondents. It helps *“provide an anonymous way to present data and not put someone on the spot”* one leader reflected. Another commented that the persona approach *“is great to keep privacy”*. These reflections were with specific reference to the difficulty of evaluating change in close colleagues within a mainstreaming intervention.

Secondly, from a formative evaluation perspective, the workshop used the personas as ‘generative models’ or lenses through which to examine the future mainstreaming strategy. Small groups selected personas and discussed how best to tailor the mainstreaming interventions to support and encourage individuals represented by the persona. One workshop participant reflected that *“[p]ersonas help us to connect empathically with the humans behind the stories.”* Another commented that *“I got a deeper perspective on gender in the Khmer context... [personas] helped to remind me to check assumptions and ‘inherited knowledge’”*. Recommendations that came out of the workshop included strategies to further support women in leadership such as building networks across teams, as well as creating a more conducive environment in trainings *“for women and less outspoken staff to engage and ask questions.”* These recommendations were then incorporated into the next strategy iteration for the gender mainstreaming invention.

Discussion and Lessons Learned

We now reflect on the value of personas for evaluations in the international development sector with specific reference to the use of data in the form of stories and the feasibility of using both manual and algorithmic methods.

Personas for program evaluation

While there are many similarities between 'conventional' and 'evaluative' personas, there are several differences which reflect the unique applications of evaluation and program planning. Conventional personas are primarily forward-looking and are used to design a particular product or service (Cooper et al., 2007). Evaluative personas, as described in this article, can be used by internal or external evaluators both to understand better and characterize program outcomes and to design interventions.

As a retrospective evaluation approach, personas enable evaluators to document the extent of program progress to date. When used with a storytelling approach and census sampling, they are particularly beneficial in revealing unintended outcomes, an important imperative in evaluation practice (Jabeen 2018) which may be overlooked in other analysis and synthesis approaches used with stories (such as case studies). Lastly during the grounding phase, evaluators can relate personas to theories of change or logical frameworks within programs to identify the extent to which anticipated changes are occurring.

As a generative or formative evaluation approach, personas create a set of profiles for the group of interest (for example: staff, beneficiaries, change agent) through which to streamline and refine a program going forward. They can also be used to plan entirely new programming in a formative evaluation modality (see Lambe et al., 2020). Personas are particularly useful in identifying the types of individuals who may champion or hinder change and highlight those who may be left behind by interventions, products, or services (Criado-Perez, 2019).

By systematically summarizing, categorizing, and visualizing complex qualitative data, evaluators are more easily able to use and share insights. This blend of visual, textual, and numeric data helps to engage program leaders in new ways, which is especially important in cross-cultural settings, where textual information is not as easily understood due to language barriers and visual information can have alternative meanings (Davis and Hunt, 2017). These simple adaptations from manual analysis and report-driven dissemination, can be used to strengthen the design and use of evaluations further.

Value of story-based data

Our experiences and learnings have been shaped by our use of story-based data through micro-narratives and a census sampling approach as the data source to formulate personas. Alternative forms of data (such as focus groups, survey responses, or interviews) and sampling procedures (such as positive deviance or snowball sampling) would yield different experiences in designing personas. Future studies could explore evaluation persona design with alternative sampling and data collection modalities.

Our results suggest that when drawing on story-based data, personas can address common concerns with case stories⁴: generalizability, validity, and opportunities for learning (*Evaluation*, 2012). First, personas are developed using a structured approach to data analysis in which the stories are presented as a set, instead of a single case. Hence personas can portray the stories of a broader range of individuals, which addresses concerns about case study selection. When applicable, census or representative sampling can also support frequency analysis to understand a story's salience within a population. Additionally, the use of personas as a set of single page summaries can encourage uptake of evaluation results and can be embedded into intervention design strategies, by 'putting faces to the data'. Nonetheless, story-based personas are only as strong as the quality of stories collected, the breadth of the sample, the quality of analysis, and the support from program managers.

Mixed-method approaches to textual data analysis

The use of natural language processing alongside traditional thematic analysis expands opportunities for evaluators to adopt new data sources and increases confidence in analysis insights. Textual data is primarily analyzed using qualitative approaches, often on the basis of themes, however our evaluation case blended manual analysis and topic models for persona group clustering and validation. This validation increased our team's confidence in the results, which is often a hesitation in qualitative research (Guest et al., 2017; Saldaña, 2012). Additionally, combining techniques provided a validity check and transparency for the created personas.

This mixed-methods approach was feasible due several unique circumstances related to the sampling, quality of the data, and previous experiences of the research team. Firstly, the sample size and length of narrative data were suitable for both manual and algorithmic approaches. Smaller samples would be best served with manual analysis and larger with algorithmic - often based on

⁴ We adopt the terminology case story to refer to the use of narratives about the impact of the program on beneficiaries, commonly used in the international development sector and usefully referred to as case studies. This language helps to distinguish the use of narratives in program evaluation from the common qualitative analysis approach entitled case study.

resource constraints.⁵ The data quality was high (only 9.5% of the stories were unusable), responses concise and datasets included socio-demographic information. This reduced the complexity of extracting, stemming, and preparing data for algorithmic analysis.⁶ Both primary researchers had qualitative and human-centred design research experience, which may not be accessible for all evaluation teams. However, tools such as design thinking templates, process coding (Saldaña, 2012) and a systematic approach to data collection and analysis (Guest and MacQueen, 2008) can reduce these skill barriers.

Nonetheless, evaluative personas could be developed from both qualitative or quantitative datasets and could rely on different forms of data. While not in the evaluation field, other similar studies have used social media feeds (Salminen et al., 2018), survey responses (Winter et al., 2019), focus groups, and interviews (Huh et al., 2016; Vosbergen et al., 2015) to group individuals into clusters. They also have employed hierarchical clustering, k-means clustering, and latent class analysis based on the unique forms of numeric and categorical data. While clustering is only one aspect of persona design, it can be a valuable step in clarifying complex data sets. The breadth of use cases opens opportunities for personas as both an analysis and a dissemination tool for program teams and evaluators in new ways not yet explored in this article.

We began this article with an assertion that qualitative data analysis can be complicated and that evaluation teams often lack confidence in the insights derived from qualitative data sets. The structured, mixed-methods approach to evaluative persona design presented in this paper, have aimed to identify one tool to support program teams in the analysis of stories. The results show that qualitative analysis can be transparent and validated by quantitative tools.

Conclusions

This study demonstrated the concept of personas to the wider evaluation and program planning audience and demonstrated that they can be an effective way to conduct both summative and formative appraisal. Through our case study we explored the use of personas to share insights of a gender mainstreaming program in rural Cambodia, with staff of a sanitation marketing project. Drawing from 200 micro-narrative stories, we identified 14 unique personas through a theory-based, mixed-methods approach to persona design. The personas were used to strengthen the gender mainstreaming approach in the project through a persona-scenario brainstorming session leading to actionable recommendations. The international development sector's continued reliance on stories

⁵ A helpful tool to support teams in identifying if manual or algorithmic approaches are suitable for different applications can be found in Jansen et al. (2021).

⁶ By incorporating a blend of clustering approaches in the evaluation design, evaluators could reduce this complexing through the format of data collection tools

Paper V (submitted for publication to *Evaluation and Program Planning*)

MacArthur, J., Mounq V., Carrard, N., & Willetts, J. (2021). Using personas for program evaluation and planning: Insights from a gender-focused evaluation in Cambodia. [Manuscript submitted for publication]

show their importance in communicating the lived experiences of individual staff and beneficiaries of programs. Personas offer opportunities to strengthen the validity, generalizability and synthesis of case studies and offer engaging documentation for program teams which can lead to further uptake of evaluation findings.

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5.4 Synthesis: Two design considerations for the meaningful exploration of change

In this synthesis, I revisit the research question that this chapter addresses (*how can assessments be designed to meaningfully explore gender-transformative change?*) by introducing two design considerations. These considerations draw from the chapter's two studies related to micronarratives and also lessons learned from the photovoice pilot. The two considerations include: (1) the usefulness of embodiment as a lens to explore gender-transformative change, and (2) opportunities to include participants in interpreting their own responses.

5.4.1 Engaging with gender-transformative change through embodied experiences

As gender-transformative change is inherently shaped by gender dynamics, my inquiry explicitly focused on the experiences of both women and men.³⁹ However, for both micronarratives and photovoice, the desire to hear from a breadth of respondents, and the need to use remote techniques, created challenges in designing clear prompts to guide participants to share the desired type of experiences, and synthesising these responses for uptake and use.

Aiming to address these challenges, embodiment emerged as a useful lens to both strengthen the meaning of responses, and to explore diverse experiences. Proponents of embodiment argue that body and intellect are unified to express intentionality and meaning (Moya, 2014) and that a holistic understanding of experience must explore body, mind, emotions, context, and relationships (Merleau-Ponty, 1962). Additionally, embodied experiences are inevitably gendered, given all experiences are shaped by gendered expectations of masculinity and femininity (Mason, 2018). Embodiment has increasingly been used in research on the individual experiences with diverse groups (Brown et al., 2011). The lens of embodiment was useful across the approaches and stages of assessment as described below.

Both micronarratives and photovoice revealed that prompts were the most effective when they focused on the embodied experiences of individuals. With photovoice, the final prompt focused on the embodied differences in experiences of the SMSU3 program. With micronarrative the most successful prompt utilised embodied verbs (think, do, have, feel, know, and speak) to guide descriptions of personal experience (as highlighted in **Paper IV**). Such simple and cross-cultural language is applicable to both women and men and can aid in the meaningful exploration of a breadth of potential gender-transformative changes.

In the analysis and synthesis of responses for both approaches, embodiment was also an important consideration in categorisation and curation. In the micronarrative approach, after a trial of several different thematic analysis modalities, I also adopted the use of verbs which

³⁹ The use of the binary 'women and men' here is not to ignore responses across the gender spectrum, but is justified as all participants and collaborators self-identified within this binary. Future research should explore opportunities to be more explicit about diverse identities.

simplified and streamlined the process of analysing stories. With photovoice, the curation of photo-stories was simplified by identifying the different physical locations of the embodied change. The lens of embodiment therefore became a simplified conceptual model through which to structure and share responses.

5.4.2 Respondent-led interpretation to strengthen meaning

The second design consideration relates to the ways in which descriptions of complex change are analysed and interpreted. Analysis of stories must consider opportunities to amplify the meaning intended by participants, as has been highlighted by scholars aiming to decolonise qualitative research practice (Thambinathan and Kinsella, 2021). Snowden argues that “because stories carry with them ambiguity, their meaning can be interpreted in different ways in different contexts. So while few would disagree that narrative creates meaning, the question arises as to how it should be interpreted.” (Snowden, 2011, 221). In response to this challenge, Snowden recommends the practice of ‘self-signification’ or the opportunity to tag one’s own story with meaning (Snowden, 2011) an increasingly common practice in social media (see **Section 4.6.1**).

Building on the value of respondent-led interpretation, this inquiry leveraged three opportunities to support this relatively undocumented technique within qualitative research. Firstly, I designed a self-signification technique used in both the micronarrative and photovoice approaches and summarised in the acronym ‘VOICE’ (**Box 1**). VOICE helped to situate responses in their context and was refined throughout the process. Second, as described in more detail in **Paper VIII**, the photovoice application highlighted the value of participants interpreting their own images through captions and titles. Lastly, a sensemaking workshop related to both micronarratives and photovoice findings was held with the research collaborators to refine and ground insights and support utilisation of the assessment results. These aspects of respondent-led interpretation aimed to strengthen the voice of participants in creating meaning around their own responses.

The value of respondent-led interpretation emerged within the inquiry as an opportunity to decolonise the research process. This aimed to redress the extractive nature of traditional qualitative research practices and to encourage ‘other(ed)’ ways of knowing. My role, therefore shifted from collector and analyser to facilitator and curator.

5.5 Limitations

The methodology adopted within the *design* and *practice* phases has three limitations. First, the papers that comprise this chapter focus solely on micronarratives (excluding photovoice). This decision was influenced by a need to craft manuscripts with sufficient depth and clear focus which would not have been possible if the papers included two different approaches. To address this, I integrated the learnings from photovoice into the synthesis section, yet future studies could explore prompt design and analysis techniques for photovoice. Second, the

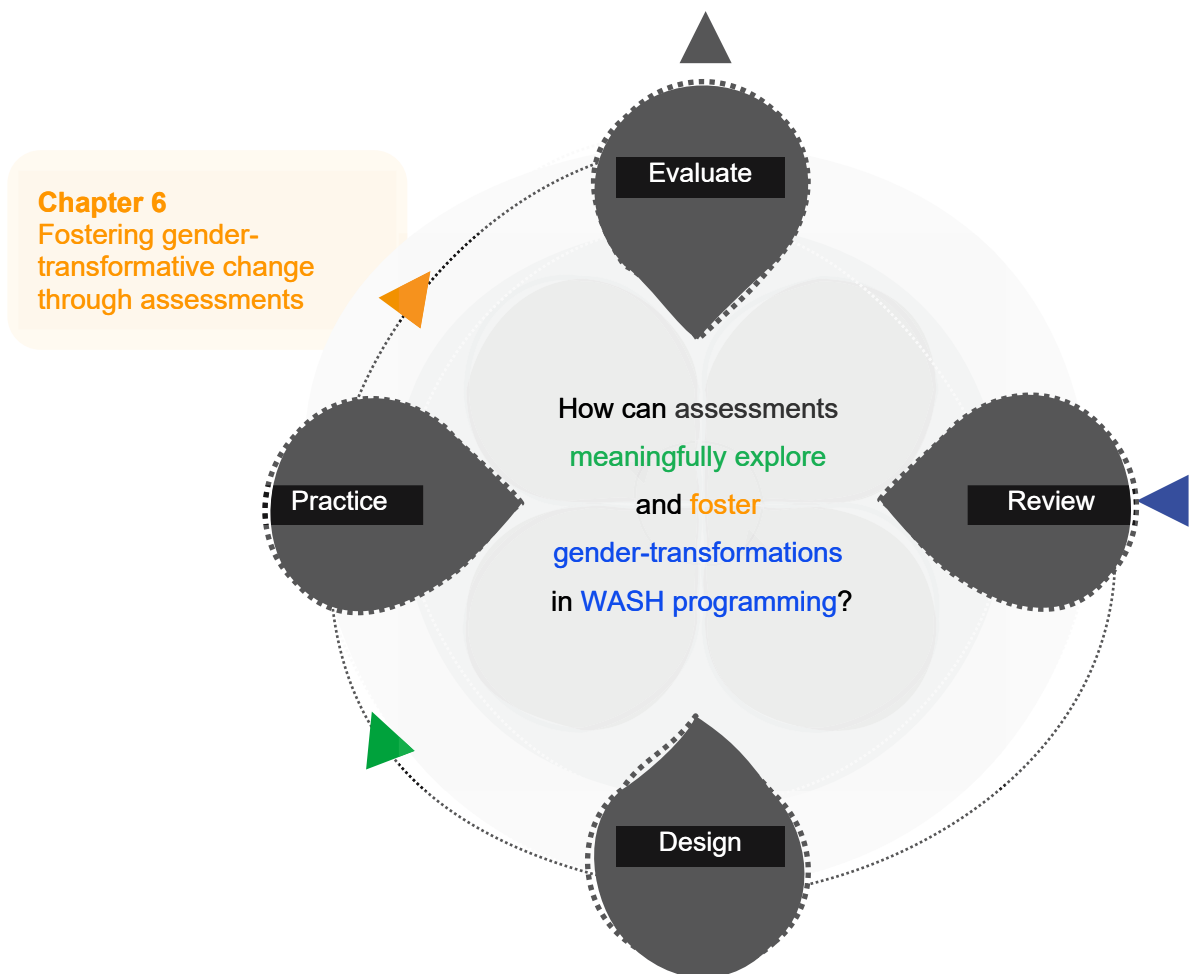
linearity of the thesis format means that the collaborative action research phases of *review* and 'evaluate' were not covered in this chapter. However, both papers included aspects from all four research phases important in the design of both the prompts and personas. Lastly, the full collaborative process was not described in detail, to maintain a focus on the methodological contributions to gender-transformative assessments.

5.6 Summary

In this chapter, I have documented a number of practical ways to design assessments for the meaningful exploration of gender-transformative change. In the two included articles, I have described opportunities to strengthen meaning in exploration in the generation (**Paper IV**) and in analysis (**Paper V**) of micronarratives. In **Paper IV**, I explored four different prompt approaches to elicit meaningful descriptions of gender-related change, appropriate for both women and men. In **Paper V**, I detailed how the design thinking analysis approach of personas, can be applied to qualitative investigations and is valuable in synthesising a large number of textual responses. In the synthesis I have highlighted two design considerations that can support the meaningful exploration of transformative change: embodiment and respondent-led interpretation. These considerations emphasise opportunities to decolonise qualitative research and to bridge research between cultures.

Chapter 6

Fostering gender-transformative change through assessments





Several years ago, on a monitoring visit to the Khulna coastal region of southern Bangladesh, I came across a tragic example of unmet gender-transformative potential concerning sanitation. Sabiha (name changed) was hesitant to show us her toilet. She granted me permission to create and use her image, but the genuine sadness is clear in her eyes. If you look over her shoulder – you can see why. Two weeks before our arrival, her latrine slab (the space where you would place your feet to use the toilet) cracked in half. Sabiha sent her teenage daughter to live with her brother to have safe access to a toilet, yet Sabiha and her husband continued to use the broken latrine. Sabiha described to me a desire to find a job to help support the funds required to fix the latrine, but that her husband would not allow her to work outside the home. Sabiha shared that she will wait on her husband, when money is available during the harvest season, to replace the latrine. Sabiha's lack of agency has continued to haunt me. It has caused me to reflect on the missed opportunity to address inequalities in my own monitoring visit. And it has forced me to consider to what extent assessments can (and should) themselves be transformative.

6.1 Overview

Bridging the *practice* and *evaluate* phases of the action research cycle, this chapter considers the extent to which assessments can foster gender-transformations in WASH programs. The chapter addresses the following question:

How can assessments be implemented to foster gender-transformative change?

The chapter identifies tenets of gender-transformative assessments by critically incorporating: (1) a set of six principles designed to guide qualitative assessments (**Paper VI**); (2) the use of audio surveys to generate micronarratives (**Report VII**); and (3) the use of photovoice as a transformative approach (**Paper VIII**).

Paper VI, published in *Development in Practice*, introduces a set of practitioner-focused principles to strengthen qualitative assessments, identified and refined through a collaborative process. The principles are then applied to my use of micronarratives, to evaluate the process relying on participant reflection interviews and surveys as well as collaborator reflections.

The visual report, **Report VII**, describes a mixed-methods evaluation process on the inclusivity and effectiveness of audio surveys. By focusing on the audio survey technique, I highlight how attention to the application of each tool and technique within an assessment is important for fostering transformative potential.

Paper VIII, published in *PLOS Water*, details a multi-component evaluation of the transformative potential of participatory photography activities. The paper reviews participatory photography examples from within the WASH sector and this inquiry's photovoice pilot with the SMSU3 program.

In the chapter synthesis, I identify four emerging tenets of gender-transformative assessment practice arising from the findings of this chapter's three outputs and shaped by the overall inquiry.

The chapter ends with a brief reflection on the limitations in bridging the *practice* and *evaluate* phases of the collaborative action research cycle.




6.2 Paper VI – Six principles to strengthen qualitative assessments in development interventions

Paper VI has been published as practice note in *Development in Practice* and is available online at <https://doi.org/10.1080/09614524.2022.2065245>. The article answers the following two research questions: *What are a set of principles to guide qualitative assessment?* and *How did the use of micronarratives align with these principles?*

PRACTICE NOTE



Six principles to strengthen qualitative assessments in development interventions

Jess MacArthur , Rana Abdel Sattar, Naomi Carrard , Tyler Kozole, Chris Nicoletti, Lauren Riley, Jennifer Roglà, Veasna Toeur, and Juliet Willetts 

ABSTRACT

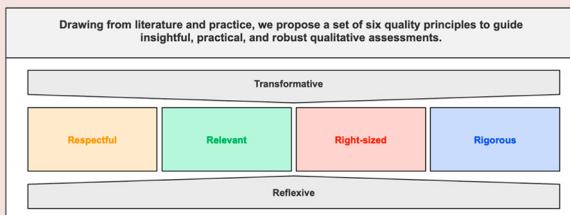
Qualitative research and evaluation is often described as an art rather than a science. This intangible nature has left many programme teams feeling uncertain about how to justify and use qualitative forms of assessment in their monitoring, evaluation, and learning practice. Existing guidance is theoretically based and often focused on applications in the Global North. Building on an expressed need for guidance from a community of practice in Asia and the Pacific, this collaborative action research process aimed to create practical and tested guidance for programme teams. The analysis was conducted as part of a Cambodia-based sanitation programme assessment. Drawing from literature and the collaborative process, we propose a set of six principles to guide insightful, practical, and robust qualitative assessments. We provide examples regarding how the principles can be used to plan, conduct, and review qualitative assessments with a goal to strengthen the future use of qualitative tools in programming.

ARTICLE HISTORY

Received 22 March 2022
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Keywords

Monitoring and evaluation;
capacity development;
partnership; qualitative



Introduction

Within monitoring, evaluation, and learning (MEL), practitioners are often faced with difficulties in designing and implementing insightful, practical, and robust assessments, especially within the context of qualitative inquiries (Lincoln and Guba 1985; Patton 2002). Additionally, what counts as “rigorous” is often difficult to contextualise in practice (Mayoux and Chambers 2005). We use the word “assessment” to reflect the breadth of research and analysis practices that review or evaluate programme opportunities and outcomes.

Qualitative assessments are often criticised as not robust, and programme teams report low confidence in collecting and analysing qualitative data (Patton 2002). This insight comes not only from literature but also from the practice of the authors of this article. In many cases, evaluation teams adopt approaches that they are already familiar with instead of exploring new options and selecting the approach most appropriate for the research question. This can limit opportunities to hear from new voices, triangulate results, and gain a depth of insight. In other cases, teams face challenges in

CONTACT Jess MacArthur  jessica.macarthur@uts.edu.au

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effectively adapting approaches to unique contexts and restrictions. These adaptations often feature trade-offs of rigour versus time, breadth versus depth, and utility versus independence. Lastly, few teams take time to conduct post-evaluation reviews of their selected approaches' efficacy and learn from their experiences (Mark 2008).

There is a wide range of practical guidance available for evaluators broadly and in particular on qualitative methods. However, this advice is (1) primarily focused on northern applications, (2) often focused on evaluator competency, (3) designed for a particular type of evaluation, and (4) tailored for use in a specific sector such as education. This guidance is often theory-driven rather than grounded in empirical practice-based evidence. Little has been written about qualitative evaluation practice or the international development sector, where evaluations are often embedded into programme implementation and conducted under resourcing constraints (staffing, time, and budgets) and differing conceptualisations of rigour (Bamberger 2000). Building on these gaps and in response to an expressed need from a southern-focused community of practice on qualitative approaches to MEL, this collaborative action research has aimed to create a set of tested and practical principles to support qualitative assessment practice in Asia and the Pacific.

Led by this expressed need for practical and tested guidance, researchers in iDE Cambodia's SMSU3 programme and the University of Technology Sydney's Institute for Sustainable Futures (UTS-ISF) conducted a Collaborative Action Research (CAR) study. The pilot assessment explored the impacts of a gender mainstreaming intervention for SMSU3 staff members, and a set of principles was formulated through a series of collaborative workshops.

In this short practice note, we explore existing guidance tools, introduce the six principles developed through the CAR process, and provide examples of how the principles can be used in practice.

Existing guidance for qualitative evaluators

The evaluation sector has a strong foundation of principles, standards, norms, and dimensions to guide evaluations. These guidance tools have been compiled by donors, associations or in connection with a particular methodological approach. In contrast to practice-driven approaches, these tools were derived from normative values as theory-driven approaches. Six of the most relevant guidance tools, five of which are from grey literature, are summarised in Table 1 in their most recent iterations. Two of the guidance documents are specifically focused on qualitative evaluations, while the other four are more broadly focused on assessments with applications to qualitative practice. Additionally, three of the tools are focused on evaluation in international contexts.

These guidance tools contain between four and ten principles, which we have mapped onto the Lean Research Framework (Hoffecker, Leith, and Wilson 2015). This framework held the most resonance with our CAR findings despite being the only reviewed guidance not explicitly focused on evaluation but research more broadly. As shown in Figure 1, *Rigorous* was the most identified principle within the six reviewed guidance tools, with "*credibility*" used in three of the six frameworks, followed by the principle of *Respectful*, which promotes a do-no-harm approach to assessments.

These existing tools offer a strong foundation of recommended practices in the evaluation sector. Nevertheless, there is an opportunity to balance theory and practice in the international development context and strengthen principles for practitioners conducting qualitative assessments. We determined that aspects of transformation and reflexivity were missing in all six frameworks, which aim to redress issues of power, tokenistic participation, and extraction inherent within many research designs.

Collaborative action approach

The expressed need for this research arose during a series of webinars within a community of MEL practitioners based in Asia and the Pacific. During these webinars, community members shared their lack of confidence in conducting qualitative forms of assessment and their uncertainty about how to defend or justify the use of more creative forms of research and evaluation in their work, and ensure

Table 1. Existing guidance on qualitative evaluation.

Title of guidance	Source	Audience	Purpose	Parameters and principles	Unique attributes
Program Evaluation Standards	The Joint Committee on Standards for Educational Evaluation (Yarbrough et al. 2011)	Evaluators and evaluation users	To “guide evaluators and evaluation users in the pursuit of evaluation quality”	<ol style="list-style-type: none"> 1. Utility 2. Feasibility 3. Propriety 4. Accuracy 5. Accountability 	Focused on evaluation outcomes, primarily in the North American context
Evaluators’ Ethical Guiding Principles	American Evaluation Association (AEA 2018)	Evaluators	To “guide to the professional ethical conduct of evaluators”	<ol style="list-style-type: none"> 1. Systematic Inquiry 2. Competence 3. Integrity 4. Respect for People 5. Common Good and Equity 	Focused on evaluator conduct, primarily in the North American context
Quality in Qualitative Evaluation: Guiding Principles	UK Government Chief Social Researcher’s Office (Spencer et al. 2003)	Government appraisers of evaluations	To “critically assess” the quality of qualitative evaluations	<ol style="list-style-type: none"> 1. Contributory 2. Defensible 3. Rigorous 4. Credible 	Focused on qualitative evaluations, primarily in the United Kingdom
Criteria of Trustworthy Naturalistic Evaluations	Framework for rigorous practice (Phillips and de Wet 2017; Lincoln and Guba 1985)	Naturalistic (qualitative) evaluators	A “framework for assessing the rigour of naturalistic evaluations in the development sector”	<ol style="list-style-type: none"> 1. Credibility 2. Transferability 3. Dependability/ Auditability 4. Confirmability 	Focused on qualitative evaluations in the South Africa context applied as a meta-assessment framework
Norms of Evaluation	United Nations Evaluation Group (2016)	UN Institutions	To “ensure that United Nations evaluation functions provide credible and useful evidence to inform and strengthen the work of the United Nations system in pursuit of its goals”	<ol style="list-style-type: none"> 1. Internationally agreed principles, goals and targets 2. Utility 3. Credibility 4. Independence 5. Impartiality 6. Ethics 7. Transparency 8. Human rights and gender equality 9. National evaluation capacities 10. Professionalism 	Focused on evaluations within the international development sector
Principles of Research	Lean Research Framework (Hoffecker, Leith, and Wilson 2015)	Researchers and designers in international development contexts	“... to guide and improve the practice of field research with people and communities in the contexts of international development and humanitarian work ... [often where] the impact of research activity on the lives of research subjects, communities, and local partners is often ignored”	<ol style="list-style-type: none"> 1. Rigorous 2. Respectful 3. Relevant 4. Right-sized 	Focused on the international development context and on the impact of research on participants

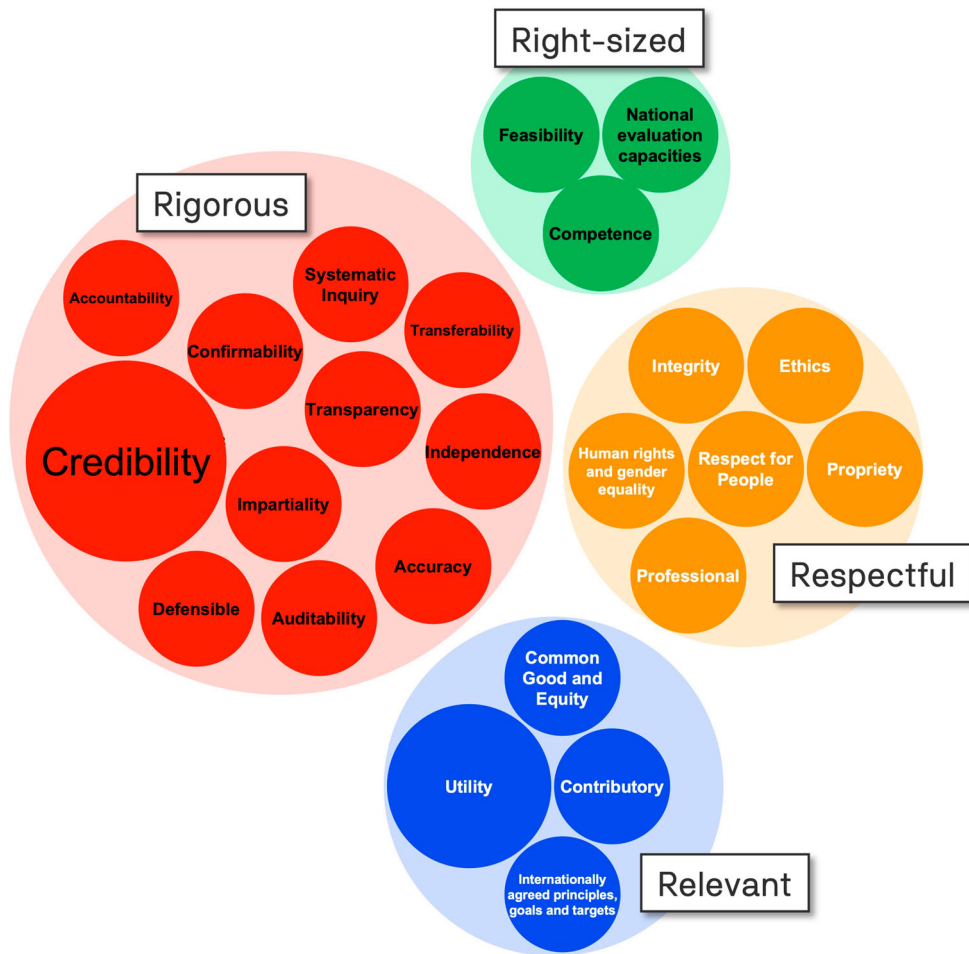


Figure 1. Circle packing diagram chart of the named principles in the six selected evaluation quality frameworks articulated through the Lean Research Framework (Hoffecker et al. 2017).

such work had rigour and quality. Such an expressed need is in the words of Paulo Freire a “*generative theme*” (Freire 2000).

Building on the six frameworks identified during our literature review, a collaborative team based in four countries conducted an interactive process to pilot and design a set of principles for use in qualitative assessments in the context of international development. While the research was facilitated by researchers in the north, the aim was to create practical tools with and for researchers in the south. The study was framed as Collaborative Action Research (CAR), an action-based approach that supports people with different “*responsibilities and roles to work together to achieve a shared common purpose*” (Coghlan and Brydon-Miller 2014, 116). Integrating theory and action within a CAR model creates a unique opportunity to blend academic rigour and evaluation practice in supporting civil society organisations to expand notions of “*acceptable*” qualitative assessment techniques.

The study collected data at two levels: the meta-level and the evaluation-level, as visualised in Figure 2 The evaluation-level component based in Cambodia included reflection questions embedded into a qualitative assessment ($n = 176$) and 16 reflection interviews with SMSU3 respondents. The meta-level included data from the research team through four workshop discussions and informal conversations between the lead researcher and research team members. The first workshop was conducted in Cambodia (March 2020) with a group of 15 Cambodian practitioners and the later

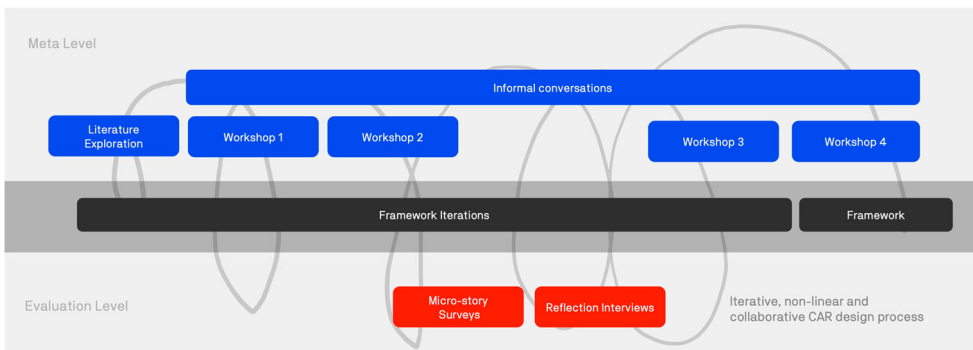


Figure 2. Collaborative action research process.

workshops were conducted online with the diverse group of co-authors spread across four countries. Data from both levels was synthesised collaboratively to produce iterative versions of the framework while engaging with evaluation and design thinking best practices.

The core research team (named authors in this work) consisted of a diverse group of development researchers and practitioners all with significant experience in the development sector and deep connections to practice across the Global South. While the work was facilitated by a northern institute, the value of diverse voices was critical to the process. Reflection on the spectrum of participation in development activities (Cornwall 2003; White 1996), describes this research as a blend of transformative and self-mobilizing. In this framing, the diverse participants in the collaborative action approach have been owners and agents in the process which was facilitated by researchers based in a northern research institute.

Introducing the principles

The final six principles are designed to support practitioners undertaking qualitative assessments in the international development sector. The collaborative and field-tested process allowed for an iterative approach to designing the framework. Several notable iterations included aligning the principles with the Lean Research Framework and adding aspects of transformative and reflexive research to encourage a do-more-good approach through process and outcomes of assessment. A do-more-good approach aims to reframe research and evaluation ethics from focusing on harm, towards fostering approaches that can promote positive outcomes and processes of assessment.

The evolution of the principles was brought about through challenges in their application, for example, the difficulty of simplifying a breadth of guidance and different aspects of data collection, analysis, and utilisation into a concise framework that includes two framing principles (top and bottom) and four core principles. The core principles focus on more functional aspects, whereas the framing principles focus on researcher mindset. The final six principles are summarised in Table 2.

This model includes considerations for transformative and reflexive research practices, both of which are missing from existing frameworks. Transformative research and evaluation approaches are becoming increasingly important in research that aims to foster social change both through the process and from the outcomes of assessments (Freire 2000; Mertens 2009). Additionally, reflexive assessment has emerged from action research practices which encourage self-reflection and critique to improve future practice (Fetterman 2017; Freire 2000). Both are underpinned by the foundational work of Paulo Freire whose participatory and reflexive approaches to social transformations highlight the value of personal reflection leading to action (Freire 2000)

These two principles aim to redress critical challenges inherent in research processes. For example, transformative research aims to address the extractive nature of much research by focusing on creating benefits for the participants within the research process and outcomes – an approach

Table 2. Framework: Six principles of quality assessments and their definitions.

Principle	Definition
Transformative	Inspires positive change for participants and researchers through the process of the research Inspires positive change for programmes and organisations from the outcomes of the research
Respectful	Protects human and legal rights and maintains the dignity of participants and stakeholders Proactively involves a diversity of participants and prioritises their satisfaction with the research process
Relevant	Generates and disseminates rich and useable insights Suitable for the cultural, geographic, and situational context
Right-sized	Adopts relevant, simple, and convenient tools and techniques Effectively and efficiently leverages time, money, and skillsets
Rigorous	Employs a systematic approach to sampling, collection, analysis, and interpretation Ensures well-founded, plausible, and justified insights, supported, and refined by existing evidence
Reflexive	Engages openly about assumptions and other complementary and conflicting perspectives Remains aware and honest about dynamics of power between the participants, researchers, and the broader stakeholders

championed by Robert Chambers in participatory rural appraisal (Chambers 1994). The transformative principle can begin conversations on decolonising measurement efforts but is not fully designed to address them. Similarly, reflexive research fosters reflection on the power dynamics inherent in research and the tendencies of research activities in development interventions to become tokenistic about participation (White 1996). By depicting these two principles as frames (top and bottom of the framework), we suggest that these more radical principles should underpin and be reflected in the other four principles. Qualitative assessments in the international development sector can only be strengthened by this type of purposeful focus and reflection.

Using the principles

The principles have been designed to be used by evaluation teams before, during, and after assessments. The principles were built on the premise that tools, methods, and approaches can all be tailored to be good quality throughout data collection, analysis, and utilisation. The principles encourage teams to place less emphasis on “what to do”, and rather focus more on “how to do”.

Before: planning assessments

As a planning tool, the framework can be used as a conversation starter for teams in the planning process. Teams can use each of the 12 items as “how might we” discussion questions to select and tailor appropriate tools, methods, and approaches as they plan assessments.

During: conducting assessments

The framework can be used as debrief topics for research teams during an assessment. Daily debriefs are an important part of evaluation processes and ensure that expectations are being met. In this sense, debriefs should not just be undertaken during data collection but also during data analysis.

After: evaluating assessments

The framework can be used to evaluate the efficacy of an assessment. One approach is to use the framework as a series of discussion questions to frame a reflection workshop. Similarly, additional questions can be embedded within the assessment to track how participants feel about the tools, methods, and content – both as observations from the research team and reflections directly from participants. For example, in our evaluation which used micro-stories, we included reflection questions for participants focused on the four central principles in the framework. Regarding the *Respectful* principle, we asked if the participants felt safe and comfortable during the audio

Table 3. Example assessment of SMSU3 midterm evaluation process. Drawing from an online reflection workshop [October 2021], quotations are directly from the workshop or from reflection interviews with participants, percentages drawn from feedback from participants ($n = 176$).

Approach	Significant Change micro-stories	Elicitation of micro-stories through cartoon visual on personal smartphones for 176 programme staff of SMSU3
Approach Methods	Data Collection: Audio survey (audio or text responses) [October 2020]	Analysis: Personas developed using both manual and computer-driven techniques [November–February 2021]
Tools	Data Collection: Qualtrics, Phonic	Analysis: Airtable, Excel, R Studio, PowerPoint
Principles Transformative	Definition (approach ...) Inspires positive change for participants and researchers through the process of the research	Score 3
	Inspires positive change for programmes and organisations from the outcomes of the research	4
Respectful	Protects human and legal rights and maintains the dignity of participants and stakeholders	4
	Proactively involves a diversity of participants and prioritises their satisfaction with the research process	4
		Utilisation: Online sensemaking workshop with key programme staff and leadership [August 2021]
		Utilisation: Surprises, Questions & Recommendations Canvas, Zoom, Google Slides, Personas (presentation and printed set)
		Comments and Justification - “Besides learning a new technology, the team members have a chance to recall the gender knowledge when answering the questions” - “Stories can show evidence of change which reflected by each participant” - “What I like about the survey is that maybe the questions can empower women staff members” - “Now that we’ve done it this first time, it will be easier for next time” - 78% strongly agree – this survey helped me think more deeply about gender equality - Able cluster stories and create profiles/personas. Personas used in the planning of future gender mainstreaming strategies in a workshop - “MHM and other insights to be incorporated into Gender Mainstreaming training” - “Helped validate importance and impact of Gender Mainstreaming. Easier to use these insights to encourage other iDE programmes to adopt this training” - 79% strongly agree - my answers can make SMSU3 better for staff; 73% strongly agree - my answers can make SMSU3 better for clients - “Some participants were uncomfortable sharing over audio”, giving options for both audio and text mitigates these challenges - 82% of men and 76% of women felt fully comfortable - Participants determine the type of micro-story they wish to share based on the card they select - Card sorting and audio recording allows for more engagement, but no purposeful interactive aspects between participants - “Lots of feedback that the survey was fun to do” 65% strongly agreed the survey was enjoyable, 71% strongly agreed it was interesting - “Census sampling, so almost everyone participated”



Relevant	Generates and disseminates rich and useable insights	4	<ul style="list-style-type: none"> - Rich data and new insights because of the breadth - However not able to go deep in the surveys and to probe for more. - “The personas analysis approach presents the data in a more digestible way” - “Provided key insights on how effective our gender transformative approach”
	Suitable for the cultural, geographic, and situational context	4	<ul style="list-style-type: none"> - 79% participants agreed that the survey was extremely or very effective - “Detailed, participatory workshops ensured that the images, content, questions, and process all fit well within our context. Several iterations led to a solid final product”
Right-sized	Adopts relevant, simple, and convenient tools and techniques	4	<ul style="list-style-type: none"> - Able to leverage staff access to mobile phones. - “Adding the audio recording option took some time to get right, but it worked well”
	Effectively and efficiently leverages time, money, and skillsets	3	<ul style="list-style-type: none"> - Analysis does take time, but it is faster than traditional interviewing. Able to collect 176 responses in 2 weeks - Requires software licenses - “Effective at getting all field staff to participate, but did take some time from everyone”
Rigorous	Employs a systematic approach to sampling, collection, analysis, and interpretation	4	<ul style="list-style-type: none"> - Very systematic methods for analysis and semi-quantitative analysis - “The approach provides clear qualitative and quantitative evidence” - Selected analysis tools to track data analysis process transparently and safely
	Ensures well-founded, plausible, and justified insights, supported, and refined by existing evidence	4	<ul style="list-style-type: none"> - Not ethical to share the stories back to participants, but can share composite stories - No way to check the bias of respondents. “Difficult to check if the stories are accurate/honest” - 69% strongly believed that others answered truthfully - Personas were designed using both manual and computer-driven approaches
Reflexive	Engages openly about assumptions and other complementary and conflicting perspectives	4	<ul style="list-style-type: none"> - “Interactive workshops and sessions helped ensure that assumptions were being checked” - “Trialling tool a few times before deployment was key”
	Remains aware and honest about dynamics of power between the participants, researchers, and the broader stakeholders	3	<ul style="list-style-type: none"> - Debriefs with research assistants helped to explore these dynamics - “Feedback that respondents were concerned about “getting the right” answers”

survey. We also conducted quick reflection interviews with 16 participants who completed the audio surveys and inquired on perceptions of safety. An example of a rubric-style review of our micro-story collection is depicted in [Table 3](#). This review was conducted in an online workshop format a year after the study was conducted. This ensured time to consider the impacts of the study findings on programme implementation.

Limitations of the principles

While these principles have been developed in a practice-based dialogue between a multi-national collective of researchers and practitioners, they have only been tested in one context. Further research is required to explore their applicability in other geographies and with other forms of qualitative evaluation. As the principles were formed through the CAR process, further research may also evaluate their applicability for the entire design, implementation, and reflection process of an evaluation.

Conclusions

Building on established guidance for evaluators and drawing on a collaborative research process, the six field-tested principles introduced in this practice note have been designed to support practitioners in conducting quality assessments in the field of international development. They aim to reinvigorate a conversation in the sector on the opportunities to foster more robust assessments and to encourage teams to stretch beyond the familiar ground of focus groups and interviews while maintaining rigour. The addition of principles related to transformative and reflexive approaches also seek to support evaluators in “doing-more-good” within the assessment process and to take advantage of the potential of an evaluative process to also be one that initiates beneficial change. Lastly, while the principles have been designed with qualitative assessments in mind, the process revealed that the principles can also be useful within the context of quantitative or mixed methods assessments.

Acknowledgements

Thanks to the participants of this micro-story evaluation and the programme leaders SMSU3 for providing space to explore complex changes through innovative methods. We acknowledge the CSO partners within the Water for Women fund from ten countries who expressed a need for this research as part of a wider project on increasing confidence in qualitative forms of monitoring and evaluation. Additional thanks to the Water for Women Programme through the Australian Government’s Department of Foreign Affairs and Trade for providing the funding for this research project.

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Notes on contributors

Ms Jess MacArthur’s research explores the social dynamics of water and sanitation programming in South and South-east Asia and focuses on gender research practices in the development sector.

Ms Rana Abdel Sattar supports strategic decision-making for programme operations, oversees the development of new WASH products and services in iDE Cambodia's Sanitation Marketing Scal-up (SMSU3) Program.

Ms Naomi Carrard is a Research Director at the Institute for Sustainable Futures. Her applied research focuses on water, sanitation, and hygiene (WASH) across the Asia-Pacific region.

Mr Tyler Kozole is the WASH Programme Manager at iDE Cambodia. He leads iDE Cambodia's WASH and climate change programming and research initiatives, focusing on reaching households in climate-vulnerable areas.

Mr Chris Nicoletti leads iDE's global measurement efforts, including rigorous impact evaluations, designing and implementing efficient management information systems, and effectively communicating data and results.

Dr Lauren Riley is the gender equality and social inclusion manager at iDE focusing on market-based approaches to inclusion and equality challenges using both qualitative and quantitative methods.

Dr Jennifer Roglà is iDE's Director of Research & Evidence focused on identifying questions the organisation is in a unique place to answer, garnering the resources and partners to answer them, and leading the charge in influencing the sector with the lessons that we are learning.

Mr Veasna Toeur is a Monitoring and Evaluation Manager at iDE Cambodia. He leads the monitoring and evaluation team focused on improving WASH systems and gender equality in Cambodia.

Professor Juliet Willetts leads applied research to improve development policy and practice and to address social justice and sustainable development, including achievement of the global Sustainable Development Goals (SDGs).

ORCID

Jess MacArthur  <http://orcid.org/0000-0002-6645-5767>

Naomi Carrard  <http://orcid.org/0000-0002-3371-9113>

Juliet Willetts  <http://orcid.org/0000-0002-3975-9642>

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6.3 Report VII – Effectiveness and inclusivity of audio data collection: Insights from a Cambodia-based assessment

In this visual report, I have assessed the effectiveness and inclusivity of the nascent practice of using audio surveys. I have selected the format of a visual report as a counterpoint to the more academic manuscripts which have made up the majority of the thesis, and to demonstrate opportunities to report mixed-methods studies in more accessible formats for program teams. The article responds to the following research question: *How effective and inclusive was the use of audio surveys?* The study highlights that ensuring strong engagement and meaningful responses is critical to both exploring and fostering transformative change. While this study did not explicitly judge the effectiveness of audio surveys in fostering transformative change, the broader explorations of the efficacy of audio surveys influenced the development of the four tenets of gender-transformative assessments and reinforced the importance of quality for assessments of gender-transformative change.



1

This study and visual report has been completed as a part of Jess MacArthur’s doctoral research on gender transformations in the WASH sector (UTS HREC REF NO. ETH19-4343), funded by the Australian Government’s Water for Women Fund and undertaken in collaboration with iDE Cambodia’s SMSU3 program.

Visuals, graphics and cartoons by Jess MacArthur.
No portion of this report may be reproduced without permission.

Citation

MacArthur J, Carrard N, Willetts J. (2021). Effectiveness and inclusivity of audio data collection: Insights from a Cambodia-based assessment. Visual Report. Institute for Sustainable Futures, University of Technology Sydney.

2

Summary

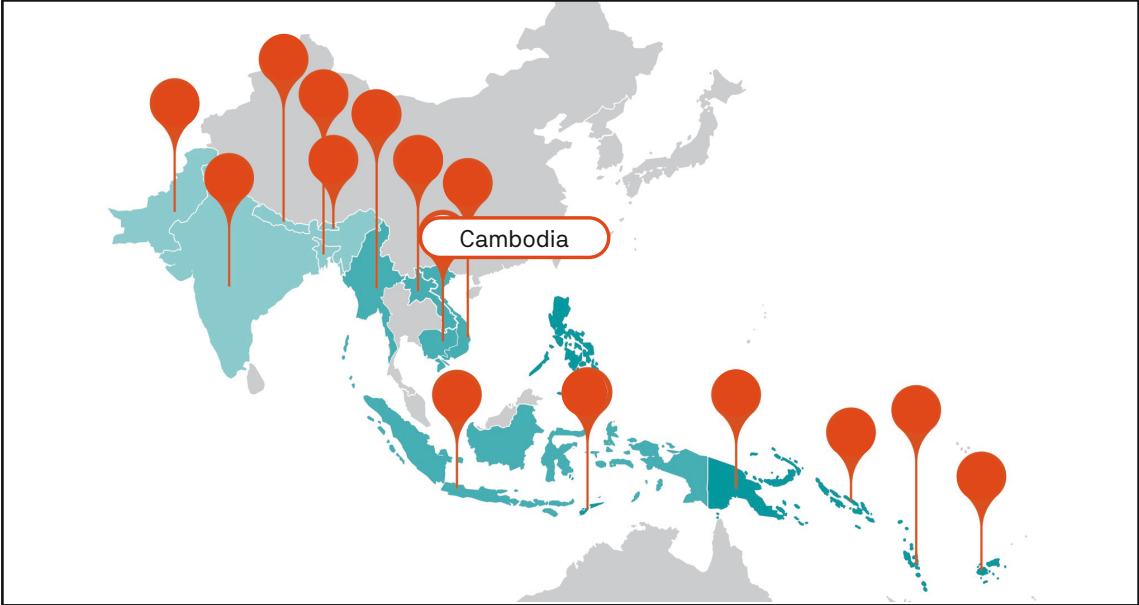
Where did the study take place?	Six provinces in rural Cambodia: Svay Rieng, Siem Reap, Prey Veng, Oddar Meanchey, Kandal and Kampong Thom
When did the study take place?	October 2020
Whose experiences did the study explore?	Field staff members (n=176) of an international civil society organisation
What method was being examined?	Self-administered audio recording using smartphones
Why was this method being examined?	To understand how women and men experienced the process of participating in the study differently and to make it more inclusive for the future
What data collection approaches were used?	Mixed methods, quantitative meta-data results from the responses (n=176) and qualitative interviews (n=19) with a subset of respondents about their participation
What data analysis approaches were used?	Quantitative: descriptive statistics, statistical analysis and logical modelling Qualitative: thematic analysis, sentiment analysis
What were the key findings?	There were no significant gender differences in the quality, length of response or time taken to complete the survey. However, men were more likely than women to audio record and reported more positive experiences with the process of participation. Additionally 5% of both women and men (equally) experience some discomfort from the process, but the reasons were different by gender.
What are the key recommendations to create a more inclusive process?	<ol style="list-style-type: none">1. Introduce audio surveys to respondent groups before conducting the study with a non-sensitive topic to build familiarity with the technique before engaging with sensitive issues2. Give individuals the choice to audio record or type responses.3. Provide support mechanisms and training on the audio recording process.

3

Introduction


Transformative research within the SMSU3 project and the Water for Women Fund.

4



Cambodia

Water for Women is Australia's flagship water, sanitation and hygiene (WASH) program supporting improved health, equality and wellbeing in Asian and Pacific communities through socially inclusive and sustainable WASH projects. Water for Women is delivering 18 WASH projects in 15 countries together with 11 research projects (2018-2022).




waterforwomen.uts.edu.au

5



Sanitation Marketing Scale-Up Program 3 (SMSU3), a water and sanitation intervention implemented by iDE Cambodia contains multiple funding streams including DFAT's Water for Women fund. The program operates in six rural provinces supporting the promotion and sale of latrines, water filters, faecal sludge management and handwashing systems through private enterprises.

iDE

6

Background

Trends in Cambodia smartphone use
and audio recording surveys

7

Research foundations

This study was situated in two different research approaches: transformative research and methodological research.

transformative research¹

- A transformative approach to research suggests that research can never be neutral.
- Any discussion of complex issues, such as gender equality, will raise awareness of the issue and therefore research can (and should) be used to transform the status quo.
- Transformative research often engages more interactive techniques and is purposeful about its goal of social change.

methodological research²

- Methodological research is research on the process of research.
- It seeks to understand how to make research better
- This might look at improving transparency or rigor.
- In our case we wanted to explore the **effectiveness, inclusivity and potential harm** of the research process.

1. Mertens, D. (2009). Transformative Research and Evaluation. Gilford.

2. Mbuagbaw, L., Lawson, D. O., Puljak, L., Allison, D. B., & Thabane, L. (2020). A tutorial on methodological studies: The what, when, how and why. BMC Medical Research Methodology, 20(1), 1–12. <https://doi.org/10.1186/s12874-020-01107-7>

8

Smartphone use in Cambodia

Prevalence and inclusivity



- Cambodia has some of the highest mobile phone access and 3G coverage rates in the world with more phone subscriptions than people (130%; 2019) ¹
- Photo and video editing is reported as only behind eGaming and Social Media as the top uses of mobile phones in the country²
- 48% (2018) of mobile phones in Cambodia are smartphones ³
- However, there are significant social gender dynamics that govern women's access and use of mobile phones globally and in Cambodia ⁴
- Cambodian women are 20% less likely than men to own a mobile phone and 62% of women own mobile phone (2018) ³

1. International Telecommunication Union (ITU) World Telecommunication/ICT Indicators Database (2019)
2. ADA (2020) Mobile device insights report: South and Southeast Asia.
3. LIRNEasia. (2018) [AfterAccess: ICT access and use in Asia and the Global South \(Version 2.0\)](#), Colombo: LIRNEasia
4. Rowntree O and Shanahan M (2020) [Connected Women: The Mobile Gender Gap Report 2020](#).

9

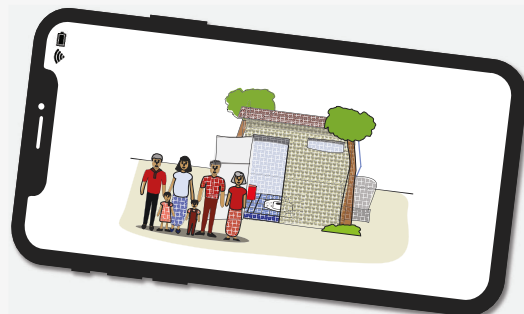
Smartphone use in SMSU3

Prevalence and inclusivity

During initial planning workshops, one program leader of SMSU3 in Cambodia noted that *"smartphone use amongst our team is ubiquitous"*.

He stated that staff's involvement with an international civil society organisation often indicated a socio demographic with higher phone access and usage for both women and men than the average population.

Additionally, most job tasks in SMSU3 such as sales monitoring require the use of smartphone or tablets, indicating higher digital literacy than the average population.



10

Audio recording in research

Gains in popularity and use

Over the last several years, and spurred on by the pandemic, audio recording has become more popular in self-administered¹ surveys as an alternative to face-to-face research.

Audio recording is already common in qualitative face-to-face interviews, as well as through computer audio-recorded interviewing (CARI), unobtrusive digital recording for quality control.²

Popular self-administered audio survey³ tools include, but are not limited to:

- Phonic
- Snap Surveys
- Question Pro
- Go Survey
- Qwary (video)
- Mote Chrome Extension (Google Forms)

1. Self-administered surveys are completely conducted by the end respondent without an interviewer present. They are self-directed.
2. Thissen, M R, Sattaluri S, McFarlane E, Biemer PP (2008) The Evolution of Audio Recording in Field Surveys. Survey Practice 1 (5). <https://doi.org/10.29115/SP-2008-0018>.
3. Audio surveys allows users to submit short audio clips rather than type responses. They are primarily used in self-administered internet-based surveys and replace open-response questions. Audio surveys may be all or partially audio response driven.

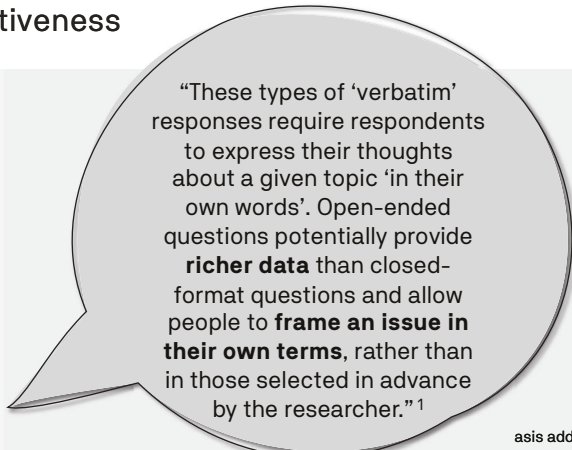
11

Audio recording in research

Existing explorations on effectiveness

Previous scholarship has identified three reasons why audio surveys are potentially valuable.^{1,2}

1. Provide participants with opportunity to express their thoughts
2. Foster richer data
3. Empower participants to frame the issue in their own words



“These types of ‘verbatim’ responses require respondents to express their thoughts about a given topic ‘in their own words’. Open-ended questions potentially provide **richer data** than closed-format questions and allow people to **frame an issue in their own terms**, rather than in those selected in advance by the researcher.”¹

asis added.

1. Luff R, Sturgis P (2015) Does Audio-recording Open-ended Survey Questions Improve Data Quality? National Centre for Research Methods. University of Southampton NCRM News. <https://www.ncrm.ac.uk/news/show.php?article=5449>
2. It should be noted that this is the only such discussion of the use of audio recording for ‘open response questions’ that the author could find.

12

Do-no-harm

in transformative research

- A transformative approach to research suggests that research can never be neutral but should be conducted in a manner that does not bring any harm to participants, and ideally has positive impacts on the lives of participants¹.
- Harm is not just physical, but can also be emotional or mental. Participants may face harm related to the content, context and modality of the study.

Forms of harm

The **content** of the study...

- reminds people of something
- raises up feelings of incompetence or inadequacy
- raises up feelings of grief, anger or consciousness of ongoing hardships

The **context** of the study...

- is not private enough and someone overhears sensitive content
- is at a inconvenient time of day and the participant has other pressing concerns

The **modality** of the study...

- is confusing and causes a participant to stop or leave
- is not culturally appropriate or sensitive to the context

1. Water for Women Fund, SNV and DFAT, 'Do No Harm' for inclusive WASH: working towards a shared understanding', Learning brief – Systems Strengthening / Leave No One Behind, 2020, Melbourne, Water for Women Fund.

13

Methodology

A mixed methods approach to exploring effectiveness, inclusivity, and potential harm.

14

Research justification and questions

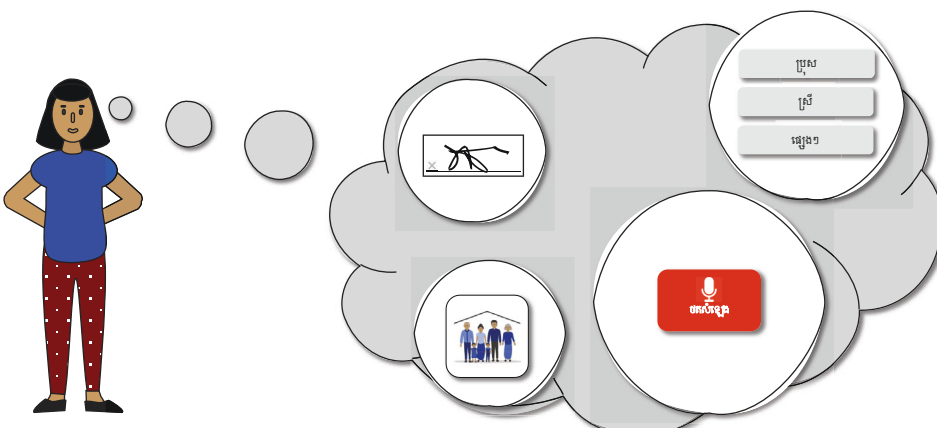
The challenges in mobility caused by COVID-19, have led to a surge in the use of remote and self-administered techniques for data collection including audio surveys.

Cambodia offers a unique case to explore experiences due to the high prevalence of mobile phone usage and broad inclusivity of audio survey techniques.

However, research into the effectiveness and inclusivity of audio surveys is nascent.

- How effective was the use of audio recording for self-administered surveys? (outcomes-focused)
- How 'inclusive' was the use of audio recording for self-administered surveys? (process-focused)
- How did audio recorded responses align with a do-no-harm approach to research?
- How can researchers support the positive uptake of audio surveys in the future?

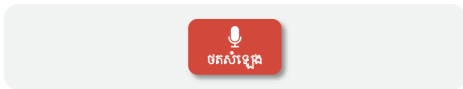
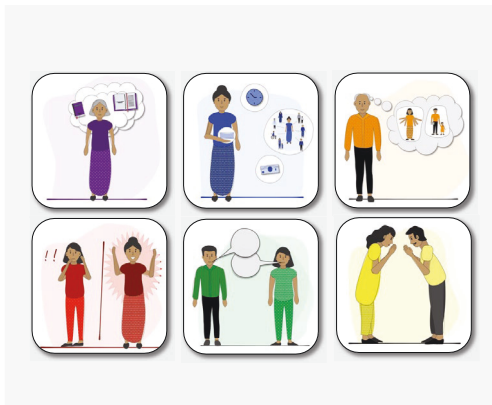
15



The illustration shows a woman on the left with her hands on her hips, looking thoughtful. To her right is a large thought bubble containing several icons: a crossed-out scissor icon, a family icon, a microphone icon with the Khmer text 'សំឡេង' (Voice), and a list of Khmer words: 'ប្រុស' (Man), 'ស្រី' (Woman), and 'គ្រួសារ' (Family).

These insights draw on an audio-based storytelling study around gender transformative change for 176 program staff. The study aimed to evaluate the impact of a gender mainstreaming intervention for field staff of a sanitation marketing program in rural Cambodia. The program is part of the Water for Women fund – Australia's flagship WASH program supporting gender equality and social inclusion.

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To collect stories of change, we designed a series of cartoon graphics to elicit stories around a variety of gender-related themes. The study utilised an internet browser form designed for smartphone data collection in Qualtrics and using a Phonic plug in for audio recording. The form included demographic aspects, a critical consciousness scale, story collection, reflection question on the story-sharing process. Census sampling was used for all staff of the program in the field and respondents came from a range of roles-- from community mobilizers (sales agents) to program managers.

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Data Collection:

- Respective (backwards looking) stories of change were collected using micro-narratives.
- Micro-narratives are short audio or text stories which describe changes that the participants report on.
- Stories were to be true, personal and related to the program.
- Staff used their own phones to share their stories using an online survey format in Qualtrics and Phonic.
- The prompts solicited personal changes related to SMSU3 for all field staff members during October 2020.
- 176 staff participated as several opted out of the study.
- Post-survey reflection interviews were conducted with a subset of respondents (n=19)

Data Analysis:

- Inclusivity of the audio recording process was analysed through reflection responses and meta data from the micronarratives
- Descriptive statistics and statistical analyses were conducted on the decision to type or record, the audio recording quality, length and total survey time
- Thematic and sentiment analysis was conducted on the reflection interviews

176 SMSU3 staff participated in the micro-narrative collection.
 200 stories of change shared. 19 stories were unusable.
 20 SMSU3 staff participated in post-survey interviews.

18

Quantitative Results

Using demographic and meta-data from the responses, how effective and inclusive were the audio surveys?

Descriptive and statistical analysis on participant-focused and story-focused outcomes.

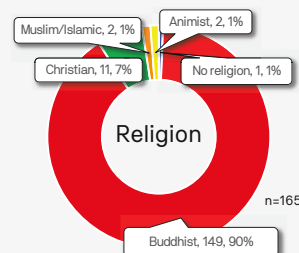
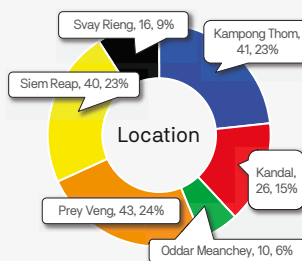
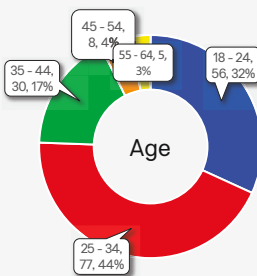
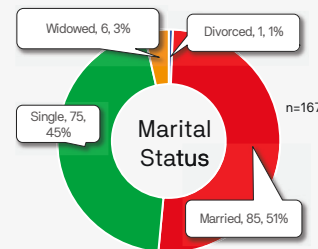
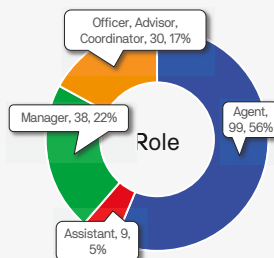
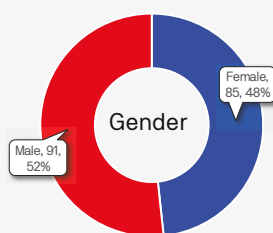
19

Respondent Demographics

n=176 staff members

Unless otherwise stated

Respondents were **almost an equal number of women and men** spread across each of the six project locations. 56% of the respondents were sales agents and most were under 34 years old. Most respondents were Buddhist (90%) and the sample was split between married (51%) and single (45%).



20

Critical Consciousness Gender Awareness Score

Poor <65%	Average 66-71%	Good 72-78%	Very Good >79%
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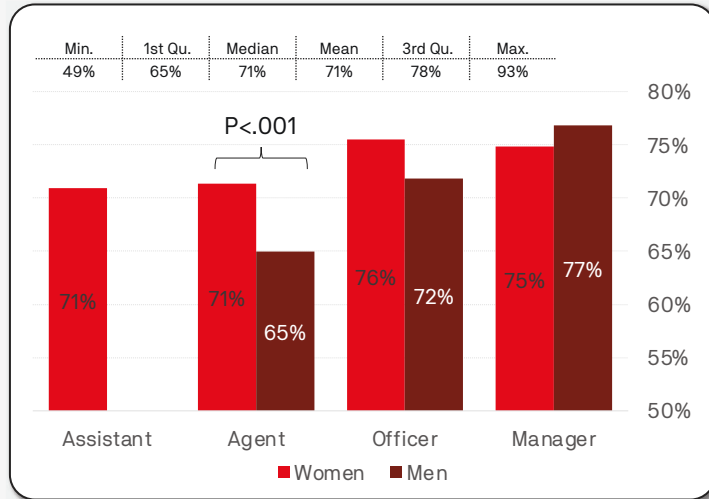
Drawing on a quintile analysis of the CC scores.

Critical consciousness (CC) varied across non-management staff within SMSU3. We calculate it on a CC scale of 0-100%. Higher scores relate to higher CC.

This chart suggests that women had a higher CC score than men. CC was also more stable across job roles for women as compared with men.

We observed that male CC increased with job level. The lowest CC was with male agents and the highest with male managers (P<.001).

Average CC scores by gender and role
SMSU field staff (n=176)



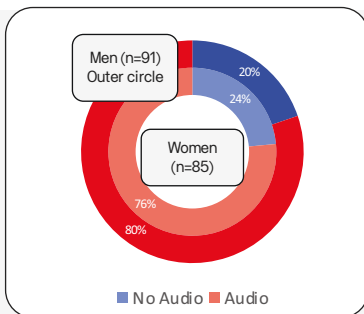
Section of y-axis show to more clearly explore the differences between women and men.

21

Story Responses

n=182 stories

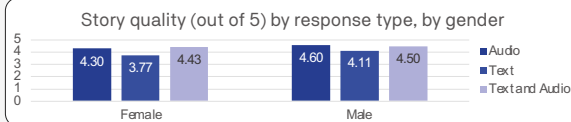
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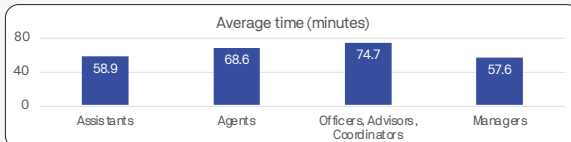
Men were more likely than women to audio record. Small effect size; V=0.176, p-value = 0.0259

However this was also related to job location and staffing dynamics within the program. **Location was significant in the decision to audio record.** Small effect size; V=0.372, p-value = 0.000127

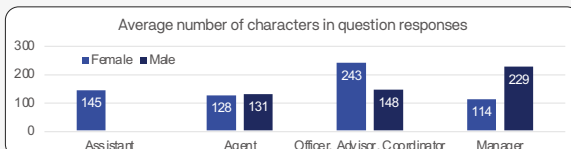
Our observational data suggested that these locational differences were due to the social and gender dynamics within each office.



Men tended to share higher quality stories¹ than women. p-value = 0.00775; Effect Size d=0.404. Role also had an impact on story quality p-value = 0.00716; Effect Size f=0.247.



Role had the largest impact on how long someone took to complete the survey. p-value = 0.0356; Effect Size d=0.226
Gender had no statistical connection with the time required.



Overall men were more likely to provide longer responses. p-value = 0.0227; Effect Size d=0.343

1. As assessed by the inclusion of who, what, where, when and why within the stories – each aspect receiving a point out of five

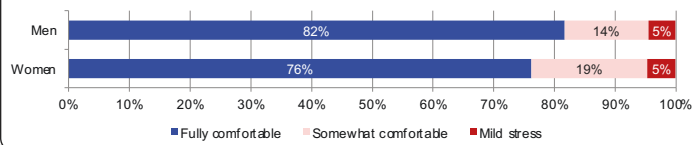
22

Quantitative Survey Reflections

Distress and comfort

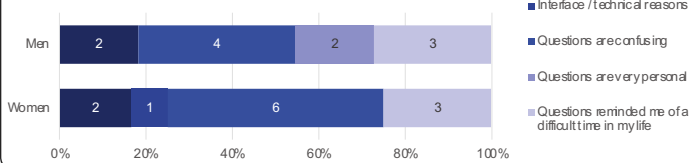
Women and men experienced similar levels of mild stress when conducting the survey, with men more fully comfortable than women.

How did you feel when doing the survey? (n=171)



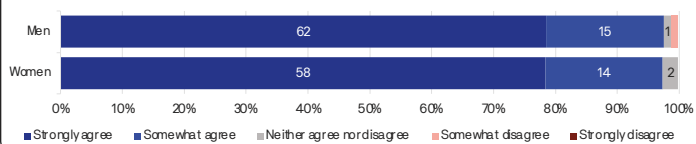
Discomfort was primarily because the questions seemed confusing. Men also described feeling like the questions were very personal and one woman described the technical challenges.

If not fully comfortable, why was the survey not comfortable for you? (n=23)



Women and men overall both agreed that they felt safe while doing the survey. However one man did report feeling unsafe.

I felt safe while doing the survey (n=177)



23

Quantitative Survey Reflections

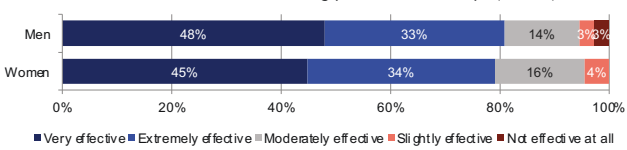
Audio recording and survey effectiveness (n=176 people)

Overall, women and men both agreed that the audio recording aspect of the survey was effective, however men were more likely to report that it was not effective at all.

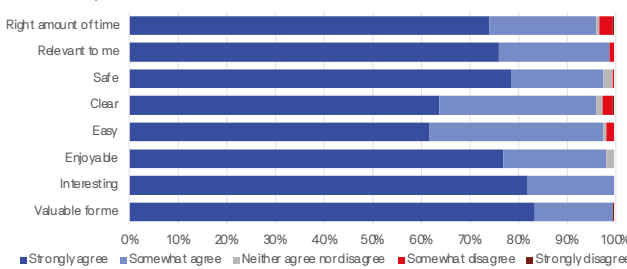
The majority of participants agreed the survey satisfied a range of positive criteria.

However, clarity, ease and time were the most commonly cited negative aspects of the survey. Qualitative reflections highlighted that this was because most staff were not familiar with long-answer format surveys and were more accustomed to multiple choice surveys. Future iterations could avoid using the word 'survey' to create a new classification and distinguish the approach.

How effective was the audio recording part of the survey? (n=140)



The survey was...



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Inclusivity (gender differences)

Statistical Summary

Outcomes		p-value	Effect Size	Notes
Participant-focused outcomes	Audio used	0.718 ns	0.0347 (Cramér's V)	There was no statistically significant relationship between Gender and Audio
	Survey time	0.367 ns	0.136 (Cohen's d)	There was no statistically significant relationship between Gender and Total Time
Story-focused outcomes	Audio quality	0.405 ns	0.145 (Cohen's d)	There was no statistically significant relationship between Gender and Audio Quality Score
	Number of re-records	0.0116 **	0.384 (Cohen's d)	Men tended to have higher values for Attempted Audio Recordings than Women
	Story quality	0.00775 ***	0.404 (Cohen's d)	Men tended to have higher values for Story Quality than Women
	Story length	0.0396 **	0.282 (Cohen's d)	Men tended to have higher values for Average Characters than Women

Analysis was split between participant-focused ↑ and story-focused ↓ outcomes

To explore the gender-inclusivity of audio surveys, we then conducted statistical tests to identify the connections between gender and survey outcomes.

Gender was significant for the number of re-records, story quality and story length; men had higher values in all three of these outcomes (indicated in blue).

Men were 1.62 times as likely to record than women when regressed with role, province and age. In other terms men were 62% more likely to audio record than women. However, the decision to audio record was in fact more connected to role and location than gender.

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Effectiveness

Statistical Summary

Group 1	Group 2	Test	P-value	Effect Size (Cohen's f)
Story Medium (text audio, both)	Story Length	ANOVA	< 0.00001 ***	0.875 Large effect
Story Medium (text audio, both)	Story Quality	ANOVA	0.000234 ***	0.325 Medium effect

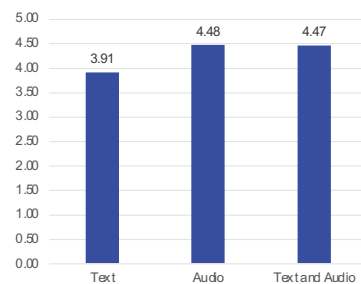
To explore the effectiveness of audio surveys, we ran statistical analyses on the story-based outcomes: length and quality.

Story quality was graded on scale of 0-5 indicating the number of aspects required for a complete story (who, what, where, when, how).

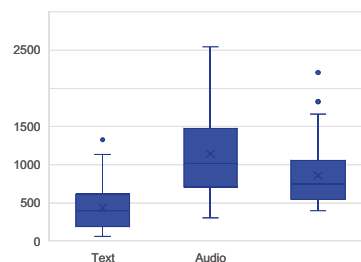
Both story length and story quality were higher in the audio recording options then for text and both had high significance. Story length also had a large effect size.

This shows that audio was very effective at eliciting longer and better quality responses from participants.

Average story quality (out of 5)



Story length (number of characters in translated story)



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Statistical Models

Participant focused outcomes

To understand just how important gender was in relation to the other demographic aspects, we create four statistical models exploring **gender, role, province and age** on the participant-focused outcomes.

All logistic regression models had only moderate or poor fit indicating that gender, role, province and age were not controlling factors in the outcomes. However, province was the most influential factor.

This implies that while gender was important as determined in the qualitative side of the research, there are other intersectional factors which influence outcomes. In particular this results suggest that **office dynamics** are critical in supporting staff to feel comfortable in the process.

Audio used	Survey time	Audio quality	Number of rerecords
<ul style="list-style-type: none"> Logistic regression how gender, age, role, and province impacted one's decision to use text or audio Cumulatively, the drivers in this model explain a low proportion of Audio <p>n = 155 (Pilot 4) Adjusted R² = .13</p> <ul style="list-style-type: none"> Province accounted for 79%, age 13%, role 6%, and gender 3% of the model. 	<ul style="list-style-type: none"> OLS logistic regression how gender, age, role, and province impacted the time one took to complete the survey Cumulatively, the drivers in this model explain a moderate proportion of Total Time <p>n = 155 (Pilot 4) Adjusted R² = .22 P < 0.00001 ***</p> <ul style="list-style-type: none"> Province accounted for 72%, age 17%, role 10%, and gender 0% of the model. 	<ul style="list-style-type: none"> OLS logistic regression how gender, age, role, and province impacted the quality of the audio recordings as identified by the transcription team Cumulatively, the drivers in this model explain a low proportion of Audio - Audio Score <p>n = 155 (Pilot 4) Adjusted R² = -.0006 P = 0.520</p> <ul style="list-style-type: none"> Province accounted for 63%, role 28%, age 7% and gender 2% of the model. 	<ul style="list-style-type: none"> OLS logistic regression how gender, age, role, and province impacted the number of attempted audio recordings Cumulatively, the drivers in this model explain a moderate proportion of Audio - Attempted Audio Recordings <p>n = 155 (Pilot 4) Adjusted R² = 0.19 P = 0.0000292 ***</p> <ul style="list-style-type: none"> Province accounted for 52%, role 36%, gender 9% and age 3% of the model.

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Statistical Models

Story focused outcomes

Additionally, to understand just how important gender was in relation to the other demographic aspects, we created two statistical models exploring **gender, role, province, age and critical consciousness** on the story-focused outcomes.

These logistic models also had poor or moderate fit as well. Story quality was influenced by a variety of all five aspects. Story length was mostly influenced by province and story medium (text, audio or both).

Similar to the participant-focused outcomes, stories were also less connected to gender than anticipated. Uniquely **age had strong impact on story outcomes** with older participants having longer and stronger stories.

Story quality	Story length
<ul style="list-style-type: none"> OLS logistic regression how gender, age, role, critical consciousness and province impacted the quality of the story Cumulatively, the drivers in this model explain a low proportion of Story Quality <p>n = 178 Adjusted R² = .184 p = .315</p> <ul style="list-style-type: none"> Role accounted for 33%, age 21%, gender 20%, province 19%, and CC 6% of the model. 	<ul style="list-style-type: none"> OLS logistic regression how gender, age, role, critical consciousness and province impacted the quality of the story Cumulatively, the drivers in this model explain a moderate proportion of Average Characters for Question <p>n = 178 Adjusted R² = .32 p < 0.00001 ***</p> <ul style="list-style-type: none"> Province accounted for 53%, role for 32%, age 7%, gender 6% and CC 1% of the model

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Qualitative Results


Using responses reflection interviews and team observations, how effective and inclusive were the audio surveys?


Thematic analysis and sentiment analysis of responses exploring the modality, content and context of the audio survey processes.


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Thematic analysis of reflections on the audio recording process


Modality –Technology

“It’s a lot faster than typing” (man) 



“It’s [audio recording] a lot more convenient and the answer is a lot more detailed” (woman) 



“In rural areas in Cambodia, typing is not so common, it’s also tricky to type in Khmer...[therefore recording was a good option] (man) 

“My phone showed an error. So, I decided to type my answers in” (man) 

“I didn’t know if the response actually sent. So, I just typed instead” (woman) 

Observation notes: We had several examples of women who used transcription applications (spoken Khmer to written Khmer) and then copied their typed answers into the survey. When asked, the women shared that they were nervous about ‘getting it wrong’ in the audio recording and not being able to re-record their responses, so they would prefer to type. However, they didn’t really know how to type, so it was easier to audio record and then copy their answers.

 Women  Men

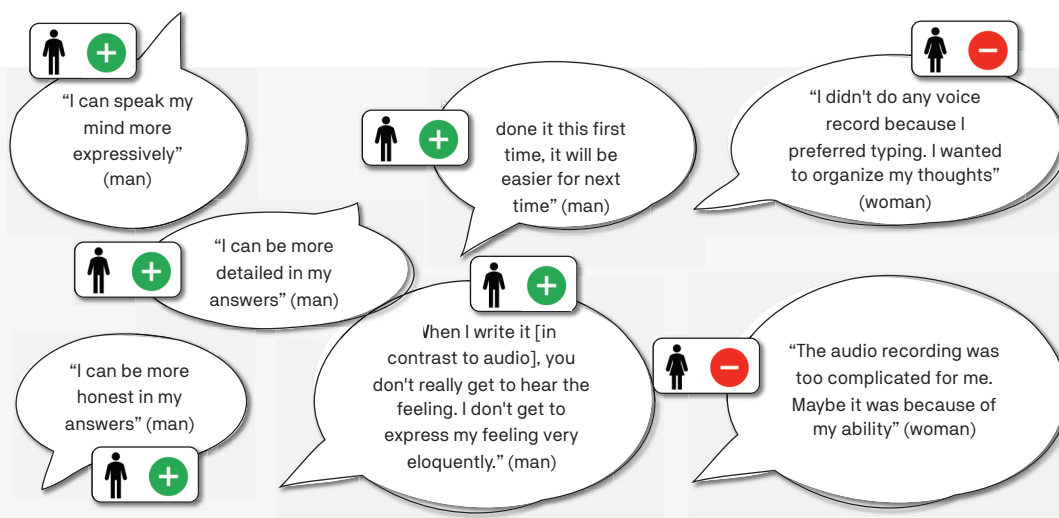
 Positive Sentiment  Negative Sentiment

In general, men were more positive about the technological aspects of audio recording than women. Observational data showed that women were nervous about the process and men were more confident.

30

Thematic analysis of reflections on the audio recording process

Modality – Personal expression

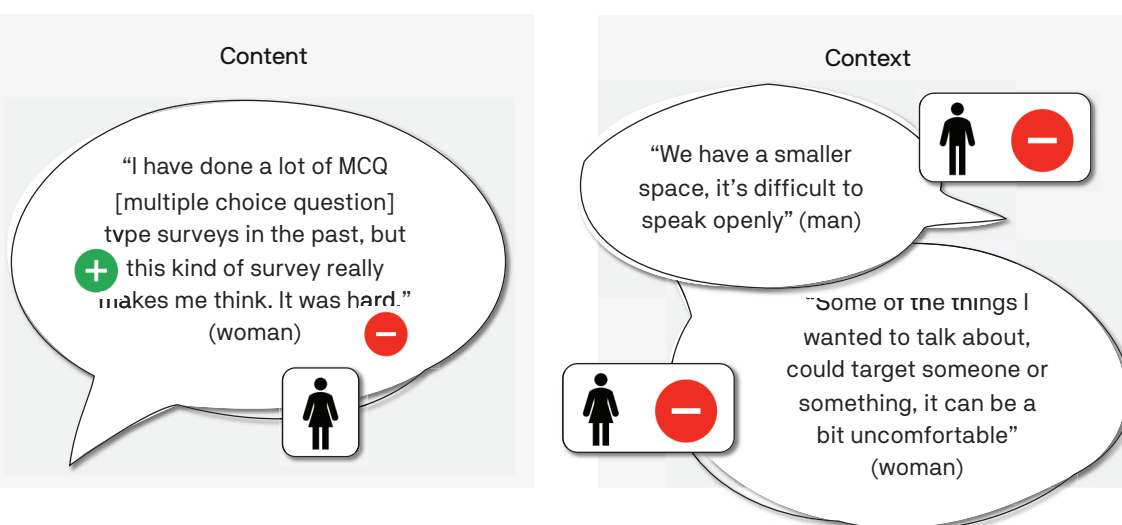


In general, men also spoke about freedom to express themselves, while women were much more hesitant and wanted to organise their thought rather than freely speak.

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Thematic analysis of reflections on the audio recording process

Content and Context

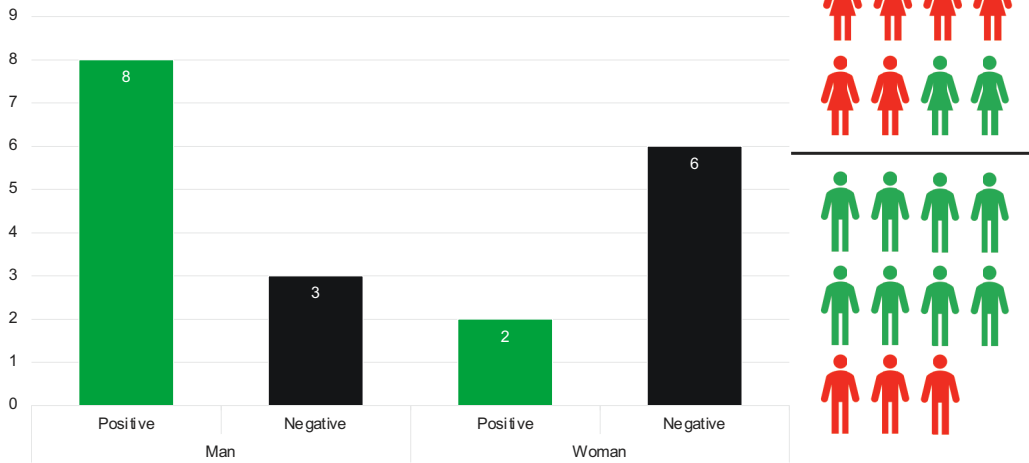


While we did not specifically ask, freely shared reflections around the content and context were all negative comments around how different the survey was to complete and some felt uncomfortable. Our quantitative data suggest that these findings are not ubiquitous, but did represent an important minority.

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Sentiment analysis of reflections on the audio recording process

Of the 19 specific reflections on the recording process (11 from men, 8 from women), 10 were positive and 11 were negative. However, there were significant gender distinctions in these reflections, with men being much more positive about the process than women.



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Insights

Bringing together the qualitative and quantitative results, how effective and inclusive were the audio surveys?

34

Effectiveness of Audio Recording

Richer data outcomes?

Literature suggests that audio recording has the potential to produce higher quality data.

We explored this through two different variables – story quality and story length.¹

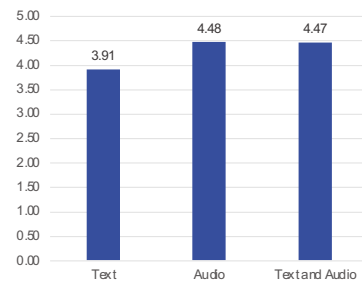
32% of the respondents used audio, 49% text and 19% both audio and text for their stories.

Audio performed the best for both story quality ($p < 0.00001$, large effect size) and story length ($p = 0.00234$, medium effect).

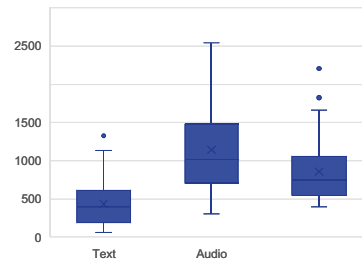
Our study aligns with previous scholarship² on the effectiveness for increasing story length and quality through audio recording.

1. In this study we did not look at the number of themes identified in the responses, as another aspect of the study was to explore how different prompts performed and therefore the results are not comparable.
2. Luff R, Sturgis P (2015) Does Audio-recording Open-ended Survey Questions Improve Data Quality? National Centre for Research Methods, University of Southampton NCRM News. <https://www.ncrm.ac.uk/news/show.php?article=5449>

Average story quality (out of 5)



Story length (number of characters in translated story)



35

Inclusivity of Audio Recording

Gender dynamics in audio recording outcomes

We saw statistically significant gendered differences in the number of re-records, the story quality and story length. Men held higher numbers on all three of these outcomes.

The re-records imply that within our sample women are re-recording less frequently. Most likely because they ended up typing.

Story quality and length show that within our sample **men record better quality stories and longer stories.**

In addition when controlling for role, age and province, province was the most important factor. This suggests that gender was less important than province, role and age in the decision to record, story length and story quality. **This highlights the gender differences in staffing of SMSU3 across regions by age and role.**

Statistical significance audio outcomes by gender

Audio used	ns
Survey time	ns
Audio quality	ns
Number of re-records	**
Story quality	***
Story length	**

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Inclusivity of Audio Recording

Gender dynamics in the audio recording process

We also saw gender differences in the perception of the audio recording process, as identified through the qualitative interviews with 19 participants after the audio survey.

Overall, women had more negative perceptions of the audio recording process. Women noted aspects of the content, context and modality of audio recording. Most of their reflections were challenges. Men primarily noted benefits of the audio recording modality.

However, this was deeply connected to the locations, ages and roles that have gender dynamics in the program.

While men highlighted the opportunity to express themselves through the audio recording process, women described wanting to type because they could 'organise [their] thoughts' and 'get it right'.

A more cautious approach to sharing information for women compared to men has also been identified in other research by ISF around women's leadership.¹

"I didn't do any voice record because I preferred typing. I wanted to organize my thoughts"
(woman)

"I can speak my mind more expressively"
(man)

1. ISF-UTS and SNV, Gender transformative leadership in WASH during the COVID-19 pandemic, Research Report, The Hague, SNV, 2021.

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Do-no-harm in audio surveys

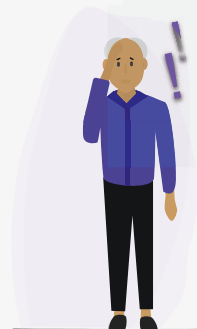
There is scope for further research into types of harm

Of the 171 participants who responded to questions about any stress during the survey, 5% of women and 5% of men reported mild stress. The most common reason (10/23) was that the 'questions are confusing'. However two men also mentioned that the 'questions are very personal'. One man also reported not feeling safe during the audio survey. No women reported not feeling safe.

If we are trying to seek transformative change in gender relations, this is another example of considering the experiences of men as well as women.

The do-no-harm literature¹ primarily focuses on ensuring that no harm comes to those who are potentially disadvantaged or vulnerable.² Our data does not speak to the reasons behind discomfort and therefore, there is need for further research on do-no-harm strategies in the context of personal transformations which require critical consciousness often expressed as discomfort with current beliefs.

This finding aligns with other gender equality scholarship³ conducted by ISF in Cambodia and Nepal, which highlighted that men were equally likely to experience distress in gender-equality related interviews.



1. Garred M, Booth C, and Barnard-Webster K. "Do No Harm & Gender." Guidance Note. Cambridge, MA: CDA Collaborative Learning Projects, 2018.
2. Liamputtong, P. (2007). *Researching the Vulnerable*. <https://doi.org/10.4135/9781849209861>
3. ISF-UTS (2021). WASH-GEM Validation Study Findings Report.

38

Recommendations and Conclusions

How can programs support better audio surveys in the future?

39

Recommendations

Practical ways to support audio surveys in mixed gender groups

Content

A. Introduce audio surveys with a neutral or non-sensitive topic

Context

A. Introduce audio surveys in a group learning session

B. Provide hands on 'tech support' for respondents

Modality

A. Provide both text and audio response options

B. Provide clarity on your response length expectations.

C. Test visuals and platforms for participant understanding

D. Allow participants to re-record and playback if possible.

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Conclusions

Practical ways to support audio surveys in mixed gender groups

In this study we have explored the effectiveness and inclusivity of audio surveys for collecting rich qualitative data asynchronously.

The methodological case study explored experiences of staff members (n=176) of the SMSU3 project through micronarratives (201 stories) that were shared through audio, text or a combination.

Effectiveness and inclusivity of audio surveys was explored through mixed methods and included meta-data from the audio surveys, observations and post-survey reflection interviews.



Effectiveness

Audio responses elicited longer and higher quality story responses than text.



Inclusivity

Men shared longer and higher quality stories and women reported more negative perceptions of the audio recording process.



Do-no-harm

Men were just as likely as women to experience stress and feel unsafe through the audio survey process.

6.4 Paper VIII – Fostering the transformative potential of participatory photography: Insights and opportunities from water and sanitation assessments

Paper VIII has been published as a research article with *PLOS Water* and is available open access online at <https://doi.org/10.1371/journal.pwat.0000036>. The article responds to the research question: *How can the transformative potential of participatory photography be strengthened?* In the article, I draw from both literature and practice to investigate how transformative change can arise both through the process and in the outcomes of qualitative assessments.

RESEARCH ARTICLE

Fostering the transformative potential of participatory photography: Insights from water and sanitation assessments

Jess MacArthur^{1*}, Naomi Carrard¹, Samrach Koh², Juliet Willetts¹

1 Institute for Sustainable Futures, University of Technology Sydney, Ultimo, NSW, Australia, **2** iDE Cambodia, Phnom Penh, Cambodia

* jessica.macarthur@uts.edu.au



Abstract

Transformative research and evaluation both aim to foster social change as part of the inquiry process, often leveraging participatory and tactile methods with an advocacy objective. One such approach is participatory photography which engages marginalized individuals in image creation and includes activities such as photovoice and photo-elicitation. This article considers opportunities to strengthen the transformative potential of participatory photography activities within the water, sanitation, and hygiene (WASH) sector. The research comprised two components: 1) a systematic literature review of participatory photography activities in the WASH sector (n = 32) and 2) an empirical case of a photovoice evaluation of a staff-focused gender mainstreaming intervention in Cambodia (n = 20), including a structured survey, structured observations of the evaluation process, and three participatory reflection workshops with program leadership. Drawing on the two components, we reflect on the extent to which photography-based approaches in the WASH-sector have been transformative. Our findings indicate that transformative potential can arise from participatory photography's process and outcomes. The research identified opportunities for the WASH-sector to strengthen participatory photography by 1) purposefully recruiting participants, 2) creating engaging orientation opportunities, 3) supporting participants in ethical image creation, 4) facilitating image interpretation, and 5) progressing photo-stories into advocacy. The study also considers how participatory photography can address gender inequalities inherent in photography, hence seeking gender-transformation. While these insights were derived for participatory photography activities in the WASH sector, the findings and implications have relevance in other sectors that seek to investigate complex change and foster transformations.

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Introduction

Participatory approaches to visual storytelling, and in particular those using photography, emerged in the late 1950s within interpretative anthropology [1]. Through the digitization of photography these approaches have become more accessible for researchers and participants

alike [2]. Participatory photography engages marginalized groups to document the needs of communities and leverage images as powerful tools for change [3]. This use of photography incorporates aspects of participatory action research and collaborative interpretation in alignment with feminist and social justice values [3]. Engagement of marginalized voices in participatory processes can also lead to what is known as transformative polyvocality—“*the power of many voices to shift and sustain narrative*” [4]. With participatory photography, images become not only the means by which to identify inequalities but also the means through which to address them.

The emancipatory ideals found within participatory photography overlap and align with transformative research and evaluation [5, 6]. Transformative approaches aim to foster change both ‘*through*’ and ‘*from*’ assessments. Transformation which arises ‘*through*’ implies the ways in which research and evaluation processes can foster empowerment and agency for participants. Transformation which arises ‘*from*’ identifies the ways in which results of research and evaluation activities can lead to advocacy reducing inequalities.

Transformative change outcomes also align with the objectives of the international development community, inspired by the Sustainable Development Goals (SDGs). In particular, SDGs 5 and 10 –gender equality and reduced inequalities, require non-traditional approaches to investigate, describe and transform exclusionary practices [7]. This is also true in the water, sanitation, and hygiene (WASH) sector spurred on by SDG 6 –clean water and sanitation. The WASH sector’s historical reliance on technical solutions has only intensified the social dynamics which perpetuate inequalities [8]. Women, girls, and other vulnerable groups are often disproportionately burdened by ineffective WASH systems [8]. By adopting the WASH-sector as a research setting, we aim to investigate the extent to which photography-based methods can support social change.

This research builds and expands on empirical evaluations within the health sector conducted in high-income countries on the potential of participatory photography, and in particular photovoice, towards empowerment and social justice [9–13]. However, our research is situated in the realm of WASH and draws from a Cambodian empirical case, exploring the transformative potential of participatory photography as a research and evaluation method in international development.

In this article, we focus on the WASH-sector’s use of photography-based research and evaluation methods to foster photography’s transformative potential. We begin by synthesizing key concepts in photography-based approaches and their alignment with transformative research and evaluation. We then introduce the approach taken in the research, comprising a systematic literature review and an evaluation from Cambodia. Drawing on the literature survey and empirical case, we reflect on the extent to which photography-based approaches in the WASH-sector have been transformative. We present findings from the research with reference to the five stages of participatory photography, with implications relevant for the international development and social change movements more broadly. Lastly, the research considers the extent to which participatory photography activities have gender-transformative potential.

Photography in research and evaluation

Approaches to photographic storytelling within research include varying degrees of three aspects: *documentation*, *elicitation*, and *participation*. Documentary approaches primarily illustrate ethnographic findings and appear alongside narrative insights. For example, photographs have been used in WASH to illustrate gendered differences in access to water [14, 15]. Harper comments that such images “*do not really develop the analytic insights of the authors; rather they appear as visual redundancies to the written text.*” [1 p37]. Elicitation approaches,

also known as responsive photography, have been used in surveys and interviews to as ‘ice-breakers’ to foster an environment for conversation and to spark reflections [1, 16]. These photographs are often created by an unnamed third party. In the WASH-sector, photo-elicitation has been used in through interviews on critical influences on sanitation development [17] and pictorial surveys to explore perceptions on water quality or supply [18, 19]. Lastly, participatory approaches involve the active engagement of respondents in the generation of images [2]. Examples include sociological studies exploring needs and barriers [20], as well as participatory monitoring schemes often focused on water quality [21].

Participatory photography approaches

Participatory photography activities in which the participants are the photographers vary in aspects of image *creation*, *interpretation*, and *utilization*. Adapting Lapenta, we identify three approaches to engaging with participants in the production of images: documentary, reflexive, and collective (photovoice) forms of participatory photography [2]. Where participatory documentation focuses its engagement of participants on image creation, reflexive photography focuses on interpretation, and photovoice on image utilization [2].

First, participatory documentation, often described as community-based monitoring, is the process in which respondents collect and share images with researchers to evaluate change in tangible phenomena easily identified in photographs. Participants are not involved in the analysis or interpretation of images. Examples in the WASH sector include water quality assessed through color [21] or changes in water supply infrastructure [22].

Second, concentrating on less tangible phenomena, such as social dynamics, reflexive photography, also known as ‘autodriven photo elicitation’ [2], engages participants to interpret their own created photographs, often within one-on-one interviews [22]. The approach is reflexive in that the participant generates meaning from the process of creating an image and discussing the produced image [2].

Third, as the most collaborative and collective approach, photovoice—initially entitled ‘photo novella’ [3]—is situated within participatory action research and is explicit about the use of images for advocacy [3, 23]. Participants create images individually and then collaboratively interpret them, leading to an advocacy strategy [3].

It is important to note that these three approaches are not distinct, and many studies engage a blend to fulfill relevant objectives and manage research constraints. This blending has led to a wide range of applications labeled photovoice, even though many are less concerned about image utilization for advocacy [20, 24]. For this reason, we use the language ‘participatory photography activity’ throughout this article to reflect the breadth of ways in which participatory photography can be used in monitoring, assessment, research, and evaluation.

Stages of a participatory photography activity

Despite their differences, participatory photography activities can be simplified into an iterative five-stage process alongside transformative potential (Fig 1). This framing draws on Wang’s initial nine aspects [23], which we clustered into five stages for simplicity and to reflect the breadth of participatory approaches beyond photovoice. Firstly, participants are recruited and oriented on the use of a camera and the photography prompt. Next, participants create photographs over a few hours, several weeks, or in multiple stages. Photographs are then interpreted often through titles and captions—the generation of photo-stories. Interpretation can be conducted through a survey, one-on-one interview, or collaborative group process. Often sessions transcripts are used as additional qualitative data. Lastly, photo-stories are used in advocacy and sensemaking.

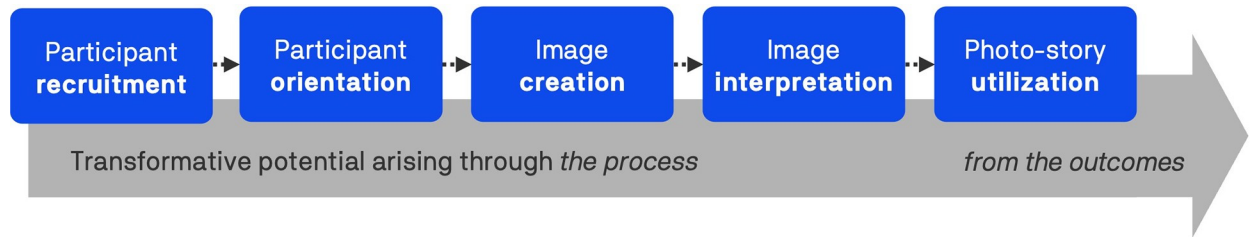


Fig 1. Five states of a participatory photography activity and related transformative potential (adapted from [23]).

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The transformative potential of research and evaluation

Emerging parallel to participatory photography approaches, the transformative paradigm emphasizes advocacy, participation, and social justice [5]. The transformative approach contends that “research and evaluation can and should play an explicit role in identifying and alleviating discrimination and marginalization” [25]. International development has long contended with increasing meaningful participant engagement of within research and evaluation. Accordingly, [Table 1](#) describes a spectrum of participation from functional to self-mobilizing. Self-mobilizing participation is the ultimate objective; however, the transformative approach is often more feasible for activities embedded within programs. Transformative research approaches aim to rebalance the power dynamics inherent in the research process—placing more power in the hands of participants. “It is about radically rethinking who initiates and undertakes the process, and who learns or benefits from the findings” [26].

For activities adopting a transformative view of participation, positive social change is fostered both ‘through’ and ‘from’ the process of inquiry. Studies are framed by their transformative potential. The word ‘potential’ indicates that research cannot fully understand individual or systemic transformation within but must rely on indicators of change. Such indicators measure the bridge between practical and strategic aims. This bridge is described as transformative potential in the language of pioneering feminist development scholars [29–31].

Methods

Ethics statement

Ethical clearance for the research was obtained through the University of Technology Sydney’s Human Research Ethics Committee (UTS HREC ETH19-4343). Cambodian ethical approval was not required. Written clearance was obtained from the Country Director of iDE Cambodia. Photovoice participants provided written consent twice: first to participate in the process and again when sharing their photo-stories. Verbal informed consent was collected from all individuals depicted in photographs and written consent was collected when possible. Consent for depicted individuals focused on the use of images for the midline evaluation and not academic publication. As such the images included in this paper do not depict individuals.

Table 1. A spectrum of engagement in participatory research and evaluation approaches (adapted from [27, 28]).

Functional	Instrumental	Consultative	Transformative	Self-Mobilizing
Participants are objects	Participants are instruments	Participants are actors	Participants are agents	Participants are owners
Include participants to secure compliance, lend legitimacy, and extract information	Leverage participants to increase the efficiency of the evaluation	Engage participants as representatives and increase the sustainability and accuracy of findings	Engage participants with the goal of empowerment and change	Support participants in their leadership and direction of the evaluation

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Dual component approach

The research presented in this article considers two investigations of participatory photography activities in the WASH sector (Fig 2). The two components were conducted separately but analyzed together to interrogate opportunities for furthering the transformative potential of participatory photography.

The analysis was inspired by the lead author’s reflections on the empirical case study in Cambodia leading to a series of collaborator discussions and re-engagement with the breadth of published literature from the WASH sector. Validity was achieved by adhering to a triad of techniques within the transformative paradigm: researcher reflexivity, collaboration, and peer-debriefing [32].

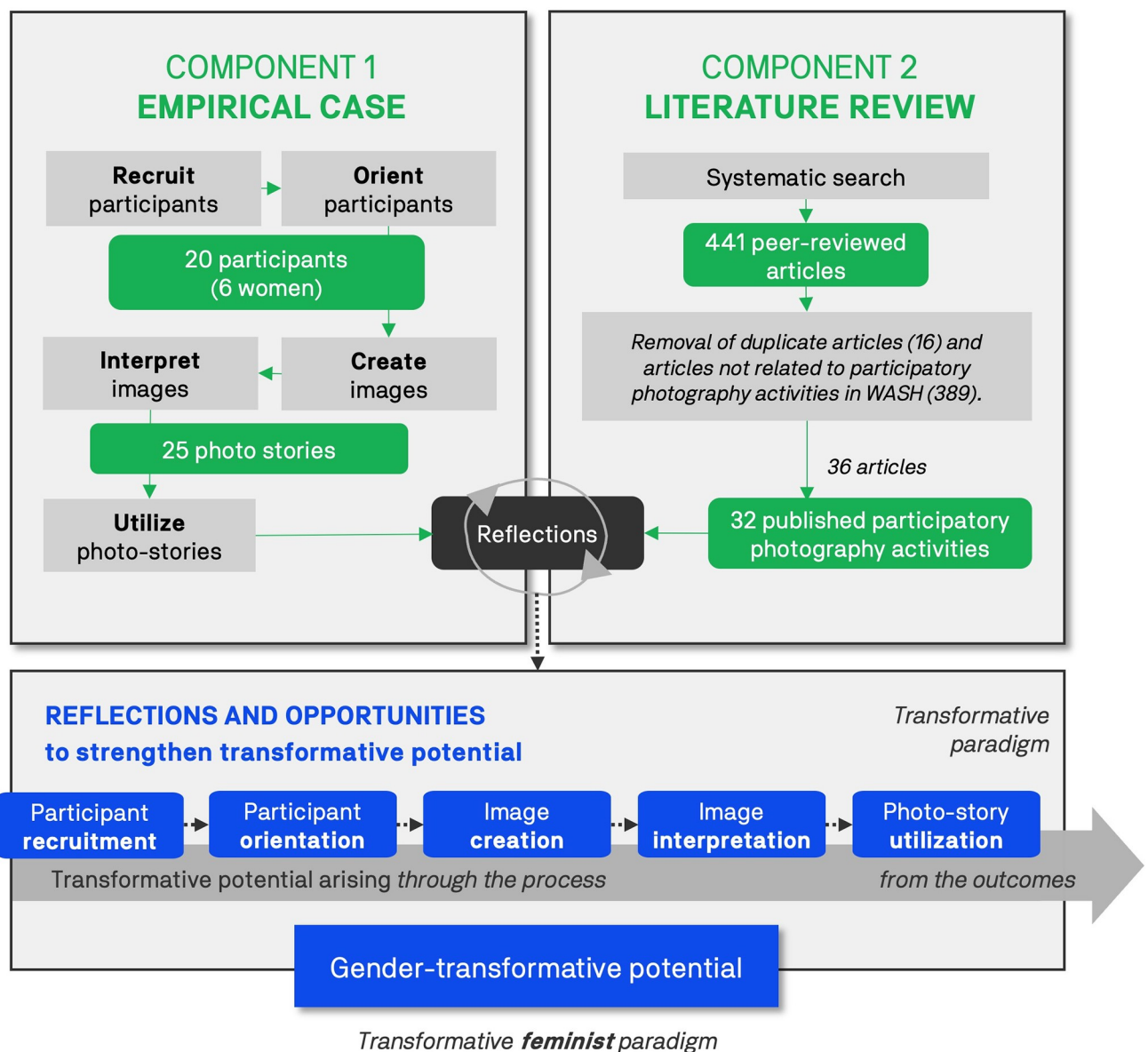


Fig 2. Dual-components of this research: A systematic literature review and an empirical photovoice activity in Cambodia.

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Component 1: A photovoice activity with staff members of a market-based sanitation program in Cambodia

The empirical case was conducted as part of a midline evaluation of gender mainstreaming within a market-based sanitation program (SMSU3). The collaborative action research was conducted with researchers from Institute for Sustainable Futures at the University of Technology Sydney and iDE Cambodia and funded by the Australian Government's Water for Women Fund.

Photovoice [23] was selected in consultation with program leaders who expressed a desire to strengthen staff capacity in smartphone photography. The photovoice activity was conducted during the COVID-19 pandemic, reducing opportunities for face-to-face research. Hence, participants interpreted their own photographs through the submission of an online form.

The photovoice activity was conducted in October 2020. An invitation including overview of the research and ethical procedures, was sent out to all Phnom Penh based WASH staff on a first response basis. Twenty staff with basic English and access to a smartphone were recruited. Cambodia has some of the highest mobile phone access and 3G coverage rates in the world, with more phone subscriptions than people [33]. Additionally, 48% of mobile phones in Cambodia are smartphones [30], highlighting the ubiquitous nature of mobile phone use in Cambodia. A three-hour online orientation included an introduction to photovoice, ethical considerations (including obtaining informed consent from photograph subjects), and smartphone photography skills. The prompt focused on evaluating the gender-mainstreaming component of the program for staff, change agents, and beneficiaries "how have women and men experienced SMSU3 [the name of the program] differently?". Staff participants, then created photographs as they went about their daily work over a period of three weeks. Photographs could focus on personal experiences or observed experiences of beneficiaries. Next, participants were invited to submit up to three photo-stories. The *Qualtrics*-based submission form included sociodemographic questions about the photographer, ethical considerations, five open-ended questions, six closed questions following the VOICE framework [34], and reflections on the photographer's experience of the photovoice activity.

Drawing on captions, titles, and responses to the multiple-choice questions, the lead researcher then coded and clustered images in *Airtable*. Content analysis was completed in three rounds: 1) content—what the image is portraying (themes and activities); 2) context—where the image is situated; and 3) form—visual techniques including color and layout [35, 36]. The code book was discussed and refined in weekly conversations with the authors during the analysis process. Photo-stories were then curated into an electronic booklet with three context-specific chapters.

Three workshops were then conducted to support the research: one sensemaking and two reflection workshops. Details are included in [S1 Data](#). The sensemaking workshop (n = 15) included available photographers and the iDE staff leading the SMSU3 project. The workshop interpreted the photo-stories generating recommendations to strengthen future gender mainstreaming. After one year two online reflection workshops were conducted with the SMSU3 leadership team (n = 5) and the lead author. These workshops interrogated the transformative potential of photovoice as a methodology through reflection, collaboration, and debriefing [32]. Workshop participants were invited to compile insights about the content, context, and modality of the photovoice activity in Cambodia. The lead author then classified insights with relevance to each of the five stages of a participatory photography activity ([Fig 1](#)). This process led to the emergence of a sixth theme that considered gendered insights from the research, which is situated in a feminist lens of the transformative paradigm.

Component 2: A systematic literature review of participatory photography in the WASH-sector

To investigate the WASH-sector's use of participatory photography activities, a 'systematic search and review' was conducted of peer-reviewed studies [37]. This type of review includes a systematic literature search but does not include a process of quality appraisal [37]. Potential studies in English were identified in October 2021 through the *Scopus* database. *Scopus* was selected due to its connection to less traditional forms of scientific research. Two searches were conducted to ensure a wide breadth of potential articles. One focused more on visual storytelling, the other on photo-elicitation. Search terms included words related to participatory photography, visual storytelling, and the WASH sector. Details on the search strategy and the final selected articles are included in [S2 Data](#). A combined total of 441 potential studies were inspected for duplicates (16) and then screened for relevance to identify 36 relevant articles describing 32 participatory photography activities. As the search found a limited number of studies, quality criteria were not used to exclude any of the literature. The final 36 studies were coded and annotated within *Airtable* with regards to the activity's objective, context, methodological approaches, the five stages of a participatory photography activity ([Fig 1](#)), and any reported reflections on the activity. This coding and annotation process led to a set of insights which were then mapped against the five-stage of a participatory photography activity ([Fig 1](#): recruitment, orientation, photographing, interpreting, and advocacy).

Synthesizing components: Meta reflections of the transformative potential of participatory photography activities in WASH

After the completion of the photovoice activity in Cambodia and the systematic literature review, insights were drawn out focusing on the extent to which the activities exhibited transformative potential. This analysis was conducted through researcher reflexivity and peer-debriefing with reference to the five stages of a participatory photography activity and potential gender-transformative considerations (bottom section of [Fig 2](#)).

Results and discussion

We now present and discuss the findings of both components of this research in three parts. First, we present an overview of the results of each component. Next, we discuss the transformative potential of participatory photography in the WASH sector with reference to each of the five stages of a participatory photography activity. Lastly, we consider opportunities for participatory photography activities to foster gender-transformations.

Overview of findings from the two components

Component 1: A photovoice activity with staff members of a market-based sanitation program in Cambodia. The photovoice activity generated a curated set of 25 gender-related photo-stories, which overall highlighted the positive interactions amongst and between staff, local business owners, and beneficiaries. Participants included six women and 14 men, broadly representing the gender balance of staff within the office. A total of 32 images were submitted and of these 25 included a response to the question "*why do you think this photo is important to gender equality?*" Sample photo-stories (edited lightly for clarity) are included in [Figs 3 and 4](#). Permission was obtained to include these photo-stories; however author names are withheld for privacy.

Drawing on these 25 photo-stories, content analysis identified a range of gendered aspects, contexts, and activities ([Fig 5](#)). Aspects of participation, decision-making, and changing

A toilet under the rain

Last October I travelled to Oddar Meanchey Province with the project administration manager for the quality control of Easy Latrine for business owners there. I was really surprised to see a toilet with multi-colored zinc walls that had just been built. I interviewed the owner of the toilet and they replied that they used the materials they already had, such as plywood left over from the house construction and old zinc for the building of the toilet.

They like the toilet very much, especially when it is raining, because they do not have to walk through the rain to the bush behind their house as usual anymore, and they no longer worry about their daughters and young kids. Now they feel warm and safe every time.

I shared this photo because I want to show that toilets are important for men and women and children. We do not need to build expensive toilets, we can use the materials that we already have to build the toilet shelter, so it reduces the costs. Toilets help keep families healthy, hygienic, and safe. They ensure privacy and promote gender equality.



Fig 3. Photo-story submission: A toilet under the rain.

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gender roles were common themes within the photo-stories. The context of the photo-stories was balanced between the workplace, the community, and local businesses. The project interventions represented within the photo-stories were wide-ranging, but almost all highlighted the interactions of people with different roles and responsibilities.

This analysis was only possible when exploring the full photo-story and not just the image or associated narrative. When explored together, the titles, captions, and images helped to create a fuller picture of the depicted experiences. For example, an image of a latrine in the rain (Fig 3) was elaborated in the first-person narrative caption to explore elements of safety for women and girls in using and accessing latrines, expanding the team's conceptualization of safety beyond violence and animals. The image illustrated the story within the rural, wet environment and provided a visual context through which to understand the significance of the change. Overall, participant's reflections highlighted the value of interacting with people in different environments to stimulate new insights.

Component 2: WASH-related literature review findings on participatory photography activities. The systematic search and review identified 32 participatory photography activities, of which 26 self-described as photovoice. The remaining six were described as modified

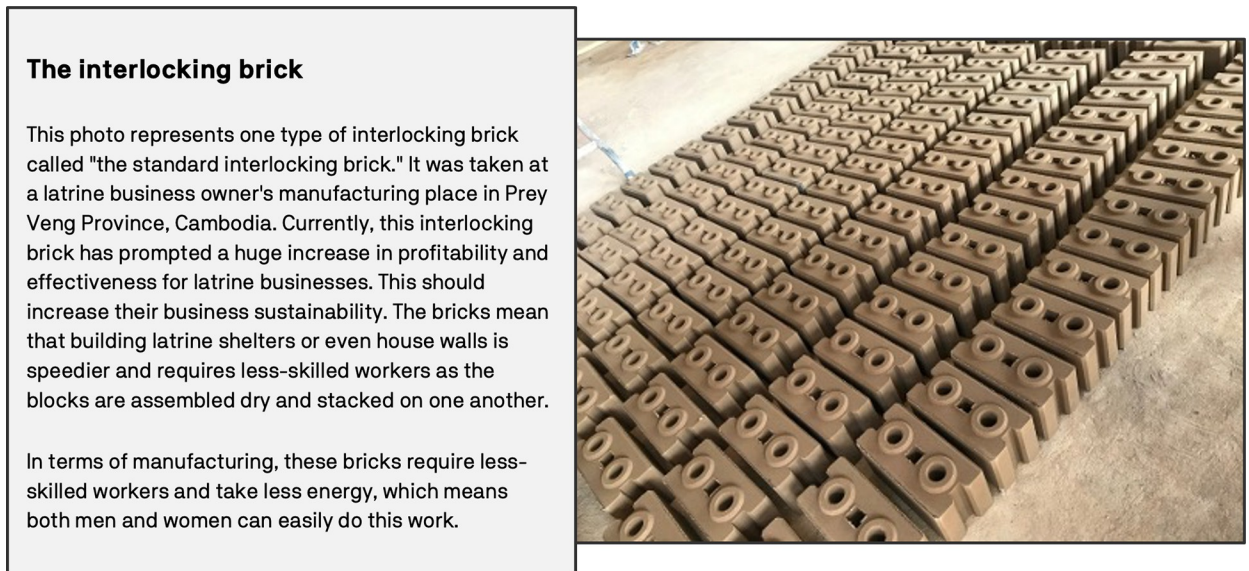


Fig 4. Photo-story submission: The interlocking brick.

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photovoice, participatory photography, and photo-elicitation. A visualization of the sectoral focus, country focus, and photographers from these 32 activities is included in Fig 6.

Out of the 32 activities, 13 recruited participants in higher-income countries such as Australia, the United States, and Canada, with fewer barriers to camera access and use. As visualized in Fig 6, the activities spanned 17 countries, with large clusters in Australia, the United States, and Kenya. One activity took place in both Côte d'Ivoire and Mauritania; the others were single-country activities. Within Canada, Australia, and the United States, activities were often based in First Nation or Indigenous communities. Regarding sectoral focus, one third were focused on sanitation. Notably, studies within lower- and middle-income countries were

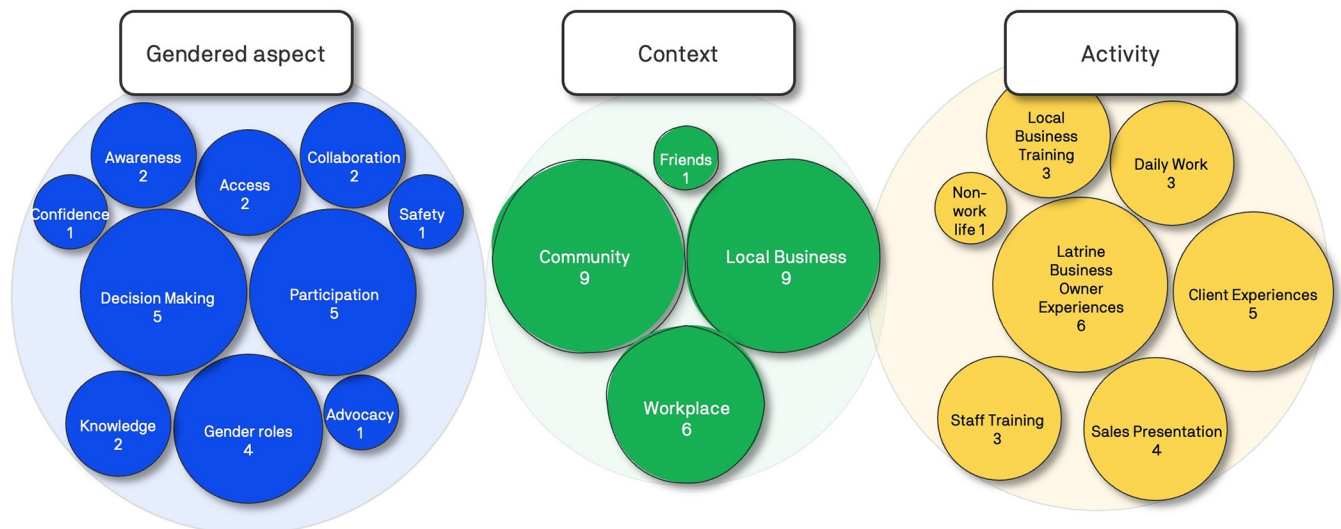


Fig 5. Gender aspects, contexts, and activities from the photovoice activity (25 submitted photo-stories relevant to gender equality). The size of each circle represents the frequency of the theme within the sample. Each column represents a different layer of analysis and includes all 25 photographs.

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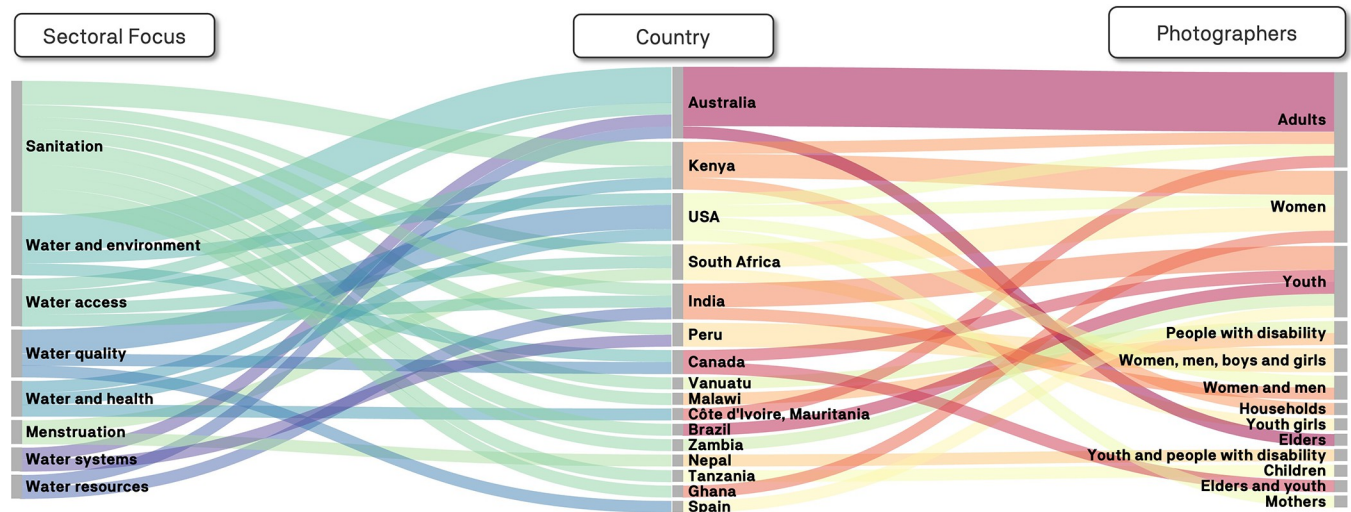


Fig 6. An alluvial diagram of the sectoral focus, locations, and photographers in the 32 identified participatory photography activities from published literature focused on WASH.

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more focused on sanitation, while studies in higher-income countries were more focused on water. Eleven activities explicitly engaged women (one with mothers), and 14 engaged youth and children. One Canada-based activity partnered elders with youth for collaborative image production [38].

Overall, the activities lacked detail on orientation processes, and the majority did not actively seek to orient photographers. Eleven of the activities did not include a description of the orientation training provided to participants. The 21 described orientations included topics such as ethics (in 10 activities), basic instructions on the use of the camera (in 10 activities), basic photography skills (in seven activities), and securing permission from human subjects (in five activities). Two examples, one from the United States and one from Australia, included more advanced photography training.

The 32 activities primarily relied on the use of digital and disposable cameras for image creation, and the activities were often conducted in parallel with further assessment methods such as interviews, workshops, and other participatory activities. The photographing period described in the activities ranged from two hours to six months. Eleven of the activities utilized participatory photography activities alongside other methods including: a quantitative survey (4 activities), focus group discussions (4 activities), interviews (4), questionnaires (3), observation (3), transect walks (2), and participatory mapping (2). The process of participatory photography was described in less detail in the instances where photography was one of a collection of methods. As seen in Fig 7, six activities used a mixture of both provided and personal cameras beyond the more common digital and disposable cameras. Only four activities leveraged smartphones within the contexts of Kenya, Canada, and the United States (as indicated in both the mixture and smartphone categories). Disposable cameras were used as late as 2020, despite identified challenges in the development of photography film [39].

Within the 32 activities, interpretation of the photographs was primarily conducted in a participatory manner using interviews and workshop discussions, as depicted in Fig 7. Three of the activities did not engage participants in the interpretation of the photographs, and two multi-method activities did not describe analysis procedures. Seven of the activities reported using the SHOWed technique to support photograph interpretation [23]. Fifteen of the

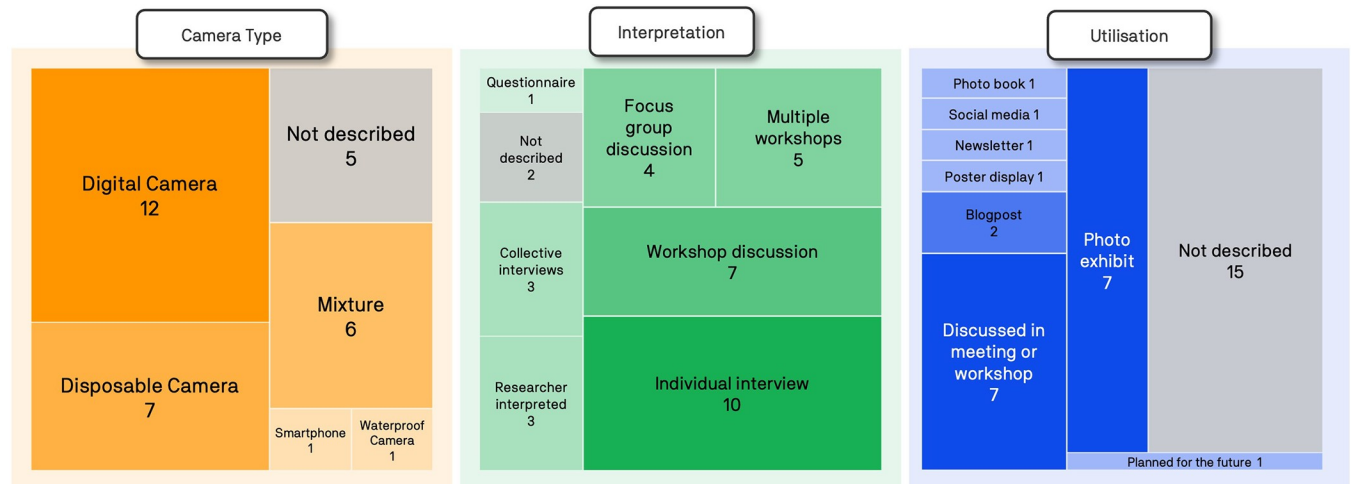


Fig 7. Landscape maps of the camera type, photograph interpretation process, and utilization technique in the 32 WASH examples of participatory photography activities from published literature.

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activities described additional analysis undertaken by the researchers. Several of the activities identified challenges in ensuring that photographs aligned with the topic of the research [40, 41].

Approaches to photo-story utilization for advocacy were often unreported and primarily appeared in applications where photovoice was the sole method. As seen in Fig 7, 15 activities did not report any form of advocacy or utilization of results. Common approaches to advocacy included photo exhibits and collaborative workshops with relevant stakeholders. However, several recent activities described using blogs and social media to influence future policy and program design. None of the activities discussed advocacy outcomes.

In both higher and lower-income contexts, the WASH-sector has adopted the use of participatory photography activities in a breadth of creative ways, often focused on identifying challenges and bringing under-represented voices to the table. Nonetheless, as will be discussed in the following section in conjunction with our empirical component, there is an opportunity to strengthen transformative potential across all stages of implementation.

Strengthening the transformative potential of participatory photography

We now interrogate the extent to which WASH-related examples and our empirical case reflected transformative potential across the five stages of a participatory photography activity. Implications for researchers seeking to strengthen the transformative potential of future activities are also introduced with each stage. As articulated by theorists in feminist development, we specifically use the phrase ‘*transformative potential*’ to highlight that transformation cannot be guaranteed but that steps can be taken to foster transformations [30].

Stage 1: Fostering agency through purposeful recruitment. Participatory photography activities hold opportunities to reverse the power dynamics inherent in research. However, our analysis suggests that the camera can be either a barrier or enabler of transformation and that thoughtful recruitment can reduce potential participant distress. Foundational literature on photovoice describes the value of “*entrust[ing] cameras to the hands of people to enable them to act as recorders, and potential catalysts for change*” [3 p369]. In other terms, the process can create space for participants to “*take control*” [10] of the research process reversing power dynamics.

Within our empirical case, insights from the reflection workshop indicated that the photo-voice activity provided an opportunity to strengthen the agency of participants to “*facilitate*” the direction of the activity: “*they [respondents] had the liberty and agency to be decision makers and choose their story and what they really wanted to highlight,*” that participants “*expressed their opinions without bias or outside input impacting the responses,*” and that participants were “*more engaged through [the] activities.*” Additionally, the reflection process from our empirical case noted that a new group of participants were engaged in the evaluation process and broadened the types of outcomes that were identified.

Within the broader literature on participatory photography in the WASH-sector, researchers within indigenous communities describe the value of the approach as a “*means for participants to direct the research process*” [42]. However, WASH-literature activities that recruited women from marginalized communities identified a range of challenges and potential distress related to women’s historically limited agency. For example, some marginalized women outsourced the activity to male relatives. Another study described the complications of training women to use the camera [40]. Others described women staying together during the photography activities where men wandered about individually [43]. However, in other circumstances, and in particular with men and children, the approaches were noted to be fun and enjoyable [41, 42, 44]. Others identified the sense of pride and satisfaction exhibited by participants [45]. These differences can be traced back to the gender digital divide [46] and further solidify the gender and social dynamics of personal agency attached to photography and documenting one’s personal experiences.

Several examples emerged from the literature to counter these challenges. One activity recruited marginalized women who already had program-based experience with smartphones for the identification of water security risks [47]. Similarly, in our empirical case, participants already used smartphones in their day-to-day lives. Another activity engaged children in creating photographs and then involved their mothers in interpretation [41]. Familiarity with the camera (smartphone) technology led to more positive outcomes and mitigated potential distress or harm.

Ultimately within short-term photography activities—given that fostering agency is a long-term process—recruiting participants already familiar with smartphones can reduce potential harm and leverage the camera as an enabler of change. For example, activities may choose to work with program staff rather than marginalized community members without camera experience. Staff-led photography activities can still focus on beneficiary experiences in the prompt, as in our empirical case. Longer-term photography activities create space to better support marginalized community members and are best embedded as an intervention activity. In cases where long-term direct engagement is not feasible with marginalized participants, other methods such as oral histories and transect walks may offer opportunities for polyvocality without causing potential distress or harm.

Stage 2: Strengthening photography skills through meaningful orientations. Our empirical example identified the benefits of strengthening photography skills within the orientation sessions. Within foundational literature on participatory photography, Wang’s guidance identified that “*facilitators may wish to minimize technical advice during the initial workshop to avoid inhibiting people’s creativity*” [3].

For our activity in Cambodia, including skill-building within the orientation session was in response to a request from the program leadership team and aimed to redress the extractive nature of many data collection processes. Our participant reflections included learnings around the use of cameras, writing captions, photography ethics, lighting, and creating a safer photography environment. One respondent noted a reframing of the notion that only an expensive camera could create good photographs. “*[I learned that]. . . my smartphone is capable*

of taking nice photos". Another participant noted that the photovoice process provided an "opportunity for learning new skills" and that it was a "wake up call to take photos like I never did before." Program leaders noted that completion certificates were proudly displayed in office cubicles and that learning of this new skill was described as "a fun exercise that got a lot of engagement from the team" and an opportunity to "build confidence." The photography skill building was conducted to encourage quality photographs as shared photo-stories, but also to build in a valuable skill for participants to take into their everyday lives.

The finding that skill-building was beneficial contrasts with the reviewed WASH-literature, which explicitly described not building in technical skill aspects to the orientation. Of the 32 activities identified in the WASH literature, only two discussed any form of photography skill development. Three reasons are articulated for this in the literature: 1) to avoid influencing the types of photographs that were created [41]; 2) because the process is time-consuming [48]; and 3) to avoid potential negative power dynamics related to researcher as 'teacher' [49, 50].

Acknowledging the validity of these concerns and weighing them against the potential benefits of incorporating training, we believe that the opportunity to support participants and to build into their lives a skill that extends beyond the potentially extractive bounds of the evaluation outweighs the concerns. Additionally, we did not identify any evidence of stifling creativity but saw increased creativity in photography angles and patterns—a topic covered in the training. Within our empirical case, creativity led to more interesting photo-stories and facilitated more complex and detailed gender reflections on the images. For example, how brick mold technology can remove gendered barriers to latrine manufacturing for women entrepreneurs by reducing the amount of heavy lifting required in the production process (Fig 4). Our training aimed to create an empowering space for participants, and no negative reflections were shared by participants around power dynamics. The orientation process could be further strengthened by engaging a local photographer for the skill training, hence reducing potential power dynamics associated with external 'expert' training [49]. In sum, where appropriate, embedding capacity strengthening activities into orientations can redress the extractive nature of research and create an opportunity for building valuable and often gendered skills.

Stage 3: Promoting ethical photography. The promotion of ethical image creation remains a fundamental consideration of the use of photovoice, and as many WASH-related topics are potentially sensitive, the importance of ethics is heightened. Wang and Redwood-Jones, describe the ethical considerations along each key stage in a photovoice activity considering privacy law [51]. They provide a set of eight minimum best practices which include multiple layers of informed consent (participants, images, and depicted individuals), ethical training, giving images back to communities, and supporting facilitators to foster ethical environments [51]. These practices have resonance with the WASH-sector and offer not only an opportunity to conduct meaningful assessment but to transform power dynamics of research and image production that can perpetuate existing power asymmetries.

Following a different ethical process situated in reflection, collaboration, and peer-debriefing, our empirical case aligned with many of the principles highlighted by Wang and Redwood-Jones. Our case employed three layers of consent: first to participate, then to share images, and informed consent from individuals depicted in images. Initial ethical training covered how to foster respectful images, and facilitators were coached through the process of promoting ethics. In reflection on Wang and Redwood-Jones' principles, two areas have emerged that could be improved. Firstly, while the images were created with the participant's own smartphones, they were not shared back with the depicted individuals. Secondly, while informed verbal consent was collected from all depicted individuals, a significant number (63%) of photographs were not shared with signed consent forms from depicted people, despite orientation training on ethical procedures and follow-up. We believe the challenges in

promoting written consent were exacerbated by the context of remote facilitation and the lack of cultural familiarity with such consent; however, a form of informal communication, such as a social media group could foster a culture which prioritizes ethics.

Within the 32 published photovoice activities from WASH-related literature, seven specifically referred to Wang and Redwood Jones' ethical best practices; yet across the activities more broadly, the description of ethical procedures was varied and often weak. Six activities did not have a description or discussion of any ethical procedures. Twenty activities described participating in an ethical board review and 13 included ethics aspects in the training procedures. Just over half of the activities described a process of initial informed consent and six described a process of obtaining separate consent to use images. Four activities provided images back to communities and three activities discussed the process with community leaders prior to starting the activities. Lastly, four activities on sensitive topics described the use of safeguarding protocols or special considerations for complex contexts.

Despite this prevalence of ethical consideration in the WASH-related literature, many of the activities focused on sensitive topics, including defecation practices, incontinence, sexual coercion, drought, water insecurity, and water conflict. Additionally, many of these activities engaged potentially vulnerable groups such as marginalized women, individuals with a disability, youth, and children. The value of engaging with marginalized individuals to create images on complex and often sensitive topics is one of the strategic benefits of participatory photography. Nevertheless, while the published documentation only provides a glimpse into the full extent of each participatory photography activity, there remains a significant opportunity to strengthen ethical considerations, especially when applying the approach in complex and sensitive contexts.

Within a framework of decolonization, one further ethical consideration could be added to existing best practices: addressing the problematic language of photography. The English language phrasing around photography is inherently problematic, with verbs such as *capture*, *take*, and *shoot* commonly associated with the action of photographing [52]. Adapting wording requires a reflexive approach to ensure that photography is not extractive or dehumanizing, and this reframing has been a valuable process even in the drafting of this manuscript.

Ultimately, the principles outlined by Wang and Redwood-Jones provide a robust framework for studies seeking to strengthen ethical considerations. These considerations are at their most critical during the image creation stage yet remain important throughout the entire participatory activity. Careful facilitation requires adjustments in language and diligent follow-up to avoid a superficial approach to ethics.

Stage 4: Reframing researcher roles. Reflection on the examples of participatory photography activities from WASH-related literature and our empirical case highlighted the value of ensuring that photographer perspectives take precedence in image interpretation. In this sense, photographs are "*used as mechanisms to encourage deeper reflection on lived experience and, in doing so, facilitate richer personal narratives*" [41 p7]. This restructuring of the research process involves adapting the role of the researcher(s) from manager to facilitator and from interpreter to curator. A researcher as facilitator and curator helps to support participants in the process of identifying themes and bridge insights into utilization [53]. We rely on the taxonomy introduced in this article's background section to distinguish between documentary, reflexive, and collective forms of participatory photography and use these categories to describe our empirical case and the WASH-literature below.

Upon further reflection, our process was more aligned with reflexive photography in the image interpretation phase. There was missed opportunity for transformation by involving the participants in the initial identification of themes prior to the sensemaking workshop through

a community-driven data-coding process [54]. This would not only have increased the participants' connection with the results, but also could have strengthened agency.

Within the WASH-related research, aspects of interpretation, while well described, varied considerably and, in a third of cases, were misaligned with the interpretation philosophy of the named approach. Keeping with the cooperative spirit of photovoice, 19 of the activities described some form of collaborative interpretation through group interviews, workshops, or focus group discussions. Seven activities conducted interpretation in individual interviews, an approach more aligned with reflexive photography. In three activities, the researcher was primarily responsible for image interpretation, a process more closely aligned with participatory documentation.

Reframing the role of a researcher from interpreter to curator is a valuable process to ensure that images are represented and interpreted fairly and accurately. There may be cases where an additional layer of researcher interpretation is required. However, there is a rich opportunity for images to elicit further discussion and to identify further barriers and needs. Such respectful interpretation is a dialogue between researcher and participant. Therefore, researchers become curators: sorting and organizing photo-stories rather than interpreters. In summary, our analysis suggests that photography activities have more transformative potential when the researcher considers opportunities to strengthen participation by moving from instrumental to transformative engagements (see [Table 1](#)). This was exemplified in the literature by allowing participants to interpret their own images and reframing the researcher's role as facilitator and curator.

Stage 5: Utilizing photo-stories for advocacy. Participatory photography activities also have potential to cultivate change through the power of photo-stories, as identified in general photovoice literature, WASH-related literature, and our case example from Cambodia. Photovoice began as a feminist participatory needs assessment tool with the goal of both identifying and addressing challenges. Wang describes photographs as an “*exceptionally powerful means*” and photovoice as “*a tool for action. . .to meaningful social change*” [55 p190]. This concept aligns with the transformative research tenet of utilizing results for social change. However, photovoice meta-studies from other sectors have identified that advocacy is often undocumented in published photovoice assessments [56].

In the reflection workshops from our empirical case in Cambodia, program leaders highlighted the value of the images in shaping their own thinking and identifying tangible recommendations for future activities. One leader noted that “*details of changes. . .captured in pictures, makes people see things and impact clearer*”. Another commented that “*people could easily understand the story through photos, not just talking without any visuals*” and that “*as an outside observant it was very interesting to hear directly the stories from the point of view of the participants.*” More specifically, in the photo-story depicted in [Fig 3](#), the photographer described the challenges during storms of accessing latrines that are placed far from the main home. During the sensemaking workshop with the photovoice participants, safety aspects relating to weather were clarified as something to consider in the next iteration of the latrine design.

Within the examined literature, the power of images for change was strongly commended, yet little was documented about the use of photo-stories for advocacy and the uptake of results by policymakers. Notably, Bisung and colleagues identified that the photographs prompted community members to think critically about specific behaviors and practices: “*though such practices existed for long, some participants were not aware of them*” [37 p4]. Other studies described the ways in which participants were “*enthusiastic about the power of photographs to document subject matter*” and that “*community residents were automatically attracted to the photographs, animated discussions followed*” [32 p100]. Nonetheless, the movement from

images to action was missing in 10 of the 26 activities which self-identified as photovoice in the WASH literature, a trend identified in other literature studies on participatory photography [20, 24]. In seventeen examples, the use of photo exhibits, online campaigns, and workshops were documented, but the outcomes of these advocacy tools were not described. A similar finding has been documented in other writing on the politics and pedagogy of exhibiting participatory visual works [56, 57].

In summary, the weakness of many participatory photography activities in WASH has been the lack of translation of photo-stories into action in alignment with the objectives of participatory action research. This is often more difficult in circumstances where researchers, rather than community members, initiate the research. As such, the missing advocacy discussion in publications could be connected to pressure to publish results quickly or not having funding to reflect on the impact of the advocacy stage of the research. Nonetheless, there are opportunities such as gallery walls displaying printed photographs with captions, social media campaigns, websites, or in our case, a sensemaking workshop with research participants and program leadership. This also honors the efforts of participants by ensuring that their voices are heard by those who make decisions on their behalf. The emergence of innovative and digital approaches can support this process of advocacy through blogs and online forums. All advocacy approaches require considered participation to ensure true polyvocality.

Focusing on gender: Reflections on the gender-transformative potential of participatory photography

In addition to exploring the *general* transformative potential of participatory photography in, the reflection process illuminated its *gender*-transformative potential. Photovoice emerged from a feminist research paradigm, and its transformative potential remains inherently gendered [3, 23]. Gender-transformative potential is the ability to bridge practical gender needs into strategic gender interests [29, 58]. In other terms, “*meeting daily practical needs in ways that transform the conditions in which women make choices*” [58], which involves broader structural changes to gender dynamics. Kabeer argues that the gender-transformative potential of a particular intervention is connected to the rebalancing of power [58]. We now describe two facets of the gender-transformative potential of participatory photography drawn from this research and across all five stages: opportunities to address photography’s patriarchal characteristics through purposeful inclusion and opportunities to foster empowerment.

Addressing photography’s patriarchal characteristics through the purposeful engagement of women and other marginalized individuals. Participatory photography activities hold an opportunity to address the patriarchal and colonial characteristics of photography and smartphone use [52, 59]. This represents a missed opportunity within our empirical case, where gender parity was not achieved with our recruitment strategy. In the literature, the active engagement of women (and other marginalized individuals) created a more successful platform for gender parity. Notably, in journalistic and commercial photography, most photographers are male, and photographs taken by men are more likely to be published [59]. Additionally, colonial hunting-focused language around photography is rooted in patriarchy [52]. Previous research has identified that women and men depict different things in photographs emphasizing the importance of a diverse participant group [60]. Additionally, smartphone access is often gendered globally [61] and Cambodian women are 20% less likely (16 percentage points) than men to own a mobile phone [48]. The ability to redress the patriarchal characteristics seen in photography and smartphone use, alongside opportunities to encourage diverse viewpoints, is an opportunity for gender transformation in participatory photography activities.

Fostering empowerment for women and other marginalized individuals. Participatory photography activities also have the potential to address the three dimensions of women's empowerment as identified by Kabeer [31]: resources, agency, and achievements. This insight has been highlighted in our study and described by other studies in the public health field [9–11, 62]. Such empowerment can be fostered in situations with unequal power dynamics—such as gender inequalities [31]. Hence, empowerment can be pursued through participatory photography both for women and individuals with lower levels of historical power. Related to resources, participatory photography has addressed i) the access to and use of technology [61]; ii) social capital in the process of image creation; and iii) knowledge and skills related to assessments and photography [3]. Regarding agency, participatory photography has: i) raised critical consciousness of surrounding inequalities [62, 63]; ii) supported autonomy to direct the course of the assessment [3]; and iii) increased self-confidence [42]. Strengthened agency can occur for both individuals and groups through the research process. Finally, achievements, also known as outcomes, can be seen in participatory photography through i) the generation of insights and themes from historically underrepresented viewpoints [42, 63]; and ii) the opportunity for participants to discuss and plan future interventions and advocacy [3, 23, 63]. Empowerment is not a guarantee—as highlighted by the distress experienced by some marginalized women in short-term photovoice activities; however, participatory photography can raise the gender-transformative potential of photography-based research.

Conclusions

This article has critically explored the transformative potential and gender-transformative potential of participatory photography activities within the WASH-sector through two research components: an examination of 32 published participatory photography activities and an empirical case from Cambodia. The research analyzed the extent to which participatory photography activities have fostered transformations both 'through' and 'from' the process of assessment. The analysis suggested that across the five stages of participatory photography activities within the WASH-sector, transformative outcomes were often unrealized, and ethical considerations were overlooked. Nevertheless, participatory photography activities have the potential to address the goals of gender equality and social inclusion within many WASH interventions and to redress the challenges of extractive research practices. Participatory photography activities have the potential to shift the focus in ethical research from do-no-harm to doing-more-good. Researchers and evaluators within the WASH-sector and international development more broadly can foster transformative research processes and outcomes through purposeful participant recruitment, considered orientation, and meaningful advocacy strategies that leverage the potential of photo-stories for identifying and addressing inequalities.

Supporting information

S1 Data. Qualitative reflection dataset. Photovoice Reflections from Component 1: Gender-focused evaluation of a sanitation program in Cambodia. This pdf document contains qualitative data in three parts: 1) raw responses from photo-voice submission survey; 2) photovoice sensemaking workshop reflections; and 3) photovoice leadership reflection workshop. (PDF)

S2 Data. Literature database. Search strategy and included studies from Component 2. This spreadsheet includes the search strategy as an adapted PRISMA flow chart and details on 36

studies included within the systematic literature review.
(XLSX)

S1 Text. Inclusivity in global research.
(DOCX)

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Author Contributions

Conceptualization: Jess MacArthur, Naomi Carrard, Juliet Willetts.

Data curation: Jess MacArthur.

Formal analysis: Jess MacArthur.

Investigation: Samrach Koh.

Methodology: Samrach Koh.

Project administration: Samrach Koh.

Supervision: Naomi Carrard, Juliet Willetts.

Visualization: Jess MacArthur.

Writing – original draft: Jess MacArthur.

Writing – review & editing: Naomi Carrard, Juliet Willetts.

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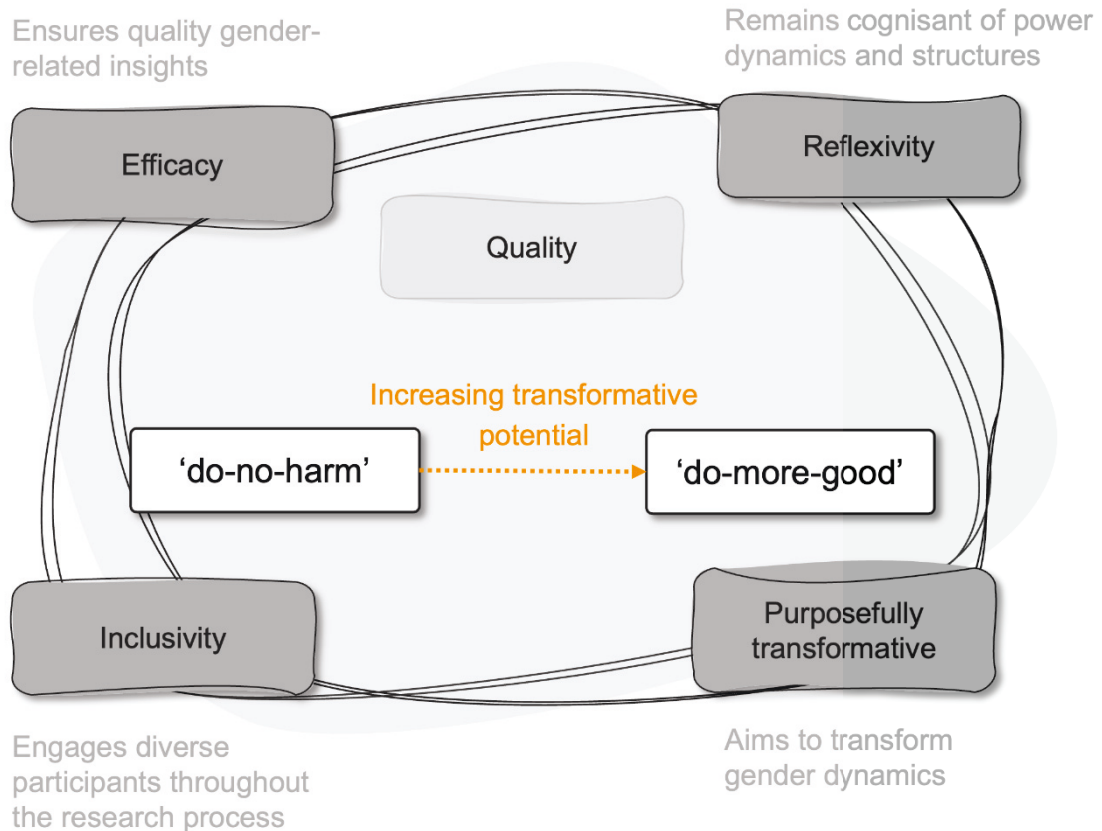
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6.5 Synthesis: Four emerging tenets of (gender)-transformative assessment practice

I conclude this chapter by exploring the extent to which my use of the selected visual storytelling approaches was able to foster gender-transformative change. The synthesis draws on outputs VI, VII and VIII, and also insights from the full inquiry. My process of synthesis involved individual brainstorming techniques from design thinking (Kolko, 2010) and mind-mapping to identify tenets important in fostering gender-transformative change in assessments. These tenets were then refined through collaborative discussions with my supervision team.

Illustrated in **Figure 28**, the four tenets are situated against a backdrop of *quality* research practices. The tenets assert that assessments should encourage *efficacy* (ensuring quality gender-related insights), *inclusivity* (engaging diverse participants throughout the research process), *reflexivity* (cognisant of power dynamics and structures) and lastly, be *purposefully transformative* (aiming to transform gender dynamics). The four tenets broadly align with the principles of gender-transformative interventions in **Paper III**; however reflect the methodological focus on gender-transformative assessments.

Figure 28. Four emerging tenets of gender-transformative assessments



In the following discussion, I first explore the centre of the figure, before introducing each of the tenets.

Forming the background of **Figure 28**, I draw on the six collaboratively identified principles of quality qualitative assessments (**Paper VI**): rigorous, right-sized, respectful and relevant, alongside being reflexive and transformative. These latter two principles, illustrated within **Paper VI** (graphical abstract) as framing the other four principles, align with two tenets identified in the synthesis (reflexivity and purposefully transformative). While quality is not required to pursue transformative outcomes, I argue that it is both an ethical imperative and required to bridge 'do-no-harm' approaches into strategies that 'do-more-good'. This approach is particularly important in sensitive research topics, such as gender equality, which are at risk of adverse assessment consequences. This strategy is in alignment with emerging literature on ethical evaluation practice (van den Berg et al., 2021). For example, to avoid potential harm or distress, qualitative assessments must be 'respectful' following careful ethical principles – not just in the data generation phase, but also in the selection of participants (as highlighted in **Paper VIII**).

At the centre of **Figure 28**, I have highlighted the bridge of transformative potential between a 'do-no-harm' and a 'do-more-good' approach to qualitative assessment practice. In her foundational 1994 work, Naila Kabeer defined the transformational potential of development programs as the ability to bridge welfare focused practical gender interests into empowerment focused strategic gender interests. While Kabeer's framing was not speaking directly to the process and outcomes of conducting assessments, my analysis suggests that that her thinking holds in this additional domain. In this mindset, to strengthen the gender-transformative potential of assessments, partitioners must bridge practical gender interests in assessments towards strategic gender interests. As such, I suggest that transformative potential increases when assessments move from a 'do-no-harm' approach towards a 'do-more-good' approach.

6.5.1 Efficacy: Ensuring quality gender-related insights

The first tenet highlights efficacy – the requirement that assessments genuinely ensure quality insights related to gender equality. While this might seem self-evident, the inquiry identified that generating effective insights was in fact not simple. Quality insights require efficacy in data generation, synthesis and utilisation. This tenet was seen in a variety of ways throughout the inquiry and requires critical reflection by those facilitating assessments across each stage and with each technique and tool used within an approach. Here I highlight two examples related to transformative significance of efficacious approaches: (1) techniques and (2) tools.

This inquiry highlighted opportunities to strengthen response efficacy through the use different prompts to elicit narratives from respondents. **Paper IV**, which investigated prompting techniques, emphasised the difficulty in eliciting gender-related responses from participants, especially in remote and hybrid circumstances. Within the study I identified four dimensions of good respondent narratives (**Paper IV** – Table 2) and suggest that an approach can only be

gender-transformative if it can in fact explore gendered experiences. This requires consideration of the gendered experiences of women, men and where appropriate individuals of other gender alongside the gender dynamics and structures which govern their interactions (Murthy, 2018). **Paper IV** highlighted the value of embodiment and verb-based prompts to elicit rich stories of change – therefore efficacious in achieving a focus on gender equality within participant responses.

The inquiry also explored the efficacy of different technical tools to support the generation of quality narratives with respondents. In the visual **Report VII**, I focused on innovative technical tools and critically assessed the effectiveness of audio surveys in generating useful micronarratives. The analysis suggested that audio surveys were in fact effective in eliciting responses (longer and more detailed gender-focused stories), but raised concerns around inclusivity and potential harm, which I explore in the next section. Other authors have highlighted that the use of technologies have created complications in generating effective insights (Bartels et al., 2018, 2019). This therefore serves as a caution to researchers adopting new technologies uncritically and reinforces the importance of efficacy in every layer of a research process, including approaches, techniques and tools.

6.5.2 Inclusivity: Engages diverse participants throughout the research process

Next, gender-transformative assessments require an inclusive process that avoids tokenism and spans all stages, techniques and tools. Whereas the tenet of efficacy highlighted the importance of quality outcomes, this tenet clarifies the importance of a quality process. Cornwall and Rivas argue that “genuine inclusiveness is not only about giving people chances to have a say, it is also about creating the conditions of mutual respect in which people can not only give voice but also be heard” (2015, 409) Ultimately, they caution against the ‘add women and stir’ approach. The importance of inclusivity emerged in several of the inquiry’s studies focused on the (1) full research process, (2) data generation, and (3) data interpretation.

In **Paper VIII**, I argued for the importance of inclusivity across each stage of photovoice – including participant selection, orientation, data generation, interpretation, and utilisation. The article also suggested that inclusivity requires care to avoid tokenism and to mitigate potential distress especially in short-term research projects. I also argued that inclusivity is not just related to gender but must adopt intersectional perspectives to ensure polyvocality (Maclean and Woodward, 2013).

In **Report VII**, I suggested that while the audio recording process was effective, hidden gender dynamics led to women’s discomfort in using the tool and therefore it was not fully inclusive. Women were statistically less likely to record audio and in reflection interviews described wanting to have time and space to clarify their thoughts before sharing. Therefore, I recommended the use of both text and audio options to ensure that voices are more likely to be heard. Future research could also explore opportunities to merge a variety of techniques, tools

and timeframes emphasising to increase the chances that each participant will find an appropriate means to comfortably express themselves.

In the synthesis section in the last chapter (**Section 5.4**), I highlighted the value of respondent-led interpretation and evolving the role of researcher to facilitator. This process of interpretation – or involving participants in the analysis of their own data – is a frequently overlooked aspect of amplifying voices (Snowden, 2002). The self-signification process led to rich insights and simplified synthesis. The value of inclusivity across stages, techniques and tools expands traditional perspectives of inclusivity in research and recasts research respondents as active participants.

6.5.3 Reflexivity: Cognisant of power dynamics and structures

The third tenet harkens back to the inquiry's foundations in **Chapter 2** and argues that gender-transformative assessments must be cognisant of power, politics and structures through critical reflexivity. With reference to decolonising qualitative research practices, Thambinathan and Kinsella suggest that “critical reflexivity is powerful for examining researchers’ epistemological assumptions, their situatedness with respect to the research, and crucial in addressing power dynamics in research” (2021, 3). The importance of reflexivity in gender-transformative assessments can be seen in a variety of ways throughout the whole inquiry including the processes of data generation, synthesis and sensemaking; here I highlight four ways.

The principle of ‘reflexivity’ was incorporated to the set of quality qualitative assessments (**Paper VI**) by the research collaborator team and was not part of the initial principles which I had proposed. This addition enriched the set and helped to ground the principles in practice. The addition of reflexivity to the set of principles aimed to not only address the power dynamics within the inquiry's collaborative process, but also to support the dynamics in future research.

Second, reflexivity was foregrounded in the inquiry's focus on storytelling, emphasising ‘other ways of knowing’ beyond the common use of surveys and semi-structured interviews in qualitative practice. Storytelling is often described as an important technique in indigenous and decolonising methodologies and counters linear ways of knowing (Archibald, 2014; Archibald et al., 2019). I also purposefully connected storytelling with visuals to reduce barriers for visual learners. Future research could explore opportunities to utilise other artforms such as collage, drawing and sculpture to redress extractive power dynamics in interview processes.

Related to my own personal reflexivity, in **Paper VIII**, I highlighted the journey of decolonising my language related to photography, which I have adopted in my own photography practice. Moving away from words such as ‘capture’, ‘take’, and ‘shoot’ (Czarnecki, 2021), has made me more conscious of the extractive nature of photography and helped me become more reflective about (and active in redressing) the power dynamics of photography and research.

My use of photovoice also created opportunities to decolonise research practice by addressing the extractive nature of research. In **Paper VIII**, I argued for the importance of purposefully including an orientation process with skill development in photography to redress the extractive nature of research. Responding to an expressed need from the project team, I included smartphone photography skills for the team in the photovoice orientation, sharing back a desired capacity within the research process. As such the inquiry actively sought opportunities to foster beneficence.

6.5.4 Purposefully transformative: Aiming to transform gender dynamics

Lastly, the fourth tenet highlights the importance of beginning with a transformative objective for gender-transformative assessments. This tenet overlaps with the first principle of gender-transformative approaches introduced in **Paper III** – ‘Motivated towards profound gender-transformations’. This tenet is connected to what other researchers describe as research values or worldviews (Creswell, 2014; Mitchell et al., 2015; Sudarshan and Nandi, 2018; Thambinathan and Kinsella, 2021).

Ultimately, my inquiry suggests that assessments are rarely accidentally transformative, but that a transformative paradigm and objectives must be built into the research design. I suggest that gender-transformative assessments have twin objectives as highlighted in the framing of this thesis: first to explore gender-transformative outcomes and second to foster gender-transformations in the process. Here I highlight an example of a shift from a positivist research paradigm to become purposefully transformative for three members of the collaboration team.

During the research process, three of the research collaborators in Cambodia with positivist backgrounds expressed concerns around having explicit transformative objectives and saw it as conflicting with objectivity in assessment processes. The team had in-depth conversations about the virtues of data collection versus generation and of ‘not leaving a mark’ versus aspiring to ‘do-more-good’ (Creswell, 2014, van der Berg et al., 2021). In the end, these team members determined that a diversity of approaches could be valuable for the program. The journey of the research collaborators mirrors my own transformation from a postpositivist engineer towards a feminist advocate for transformative approaches.

6.6 Limitations

This chapter, bridging the *practice* and *evaluate* phases, should be read within its limitations related to the types of included outputs and the emerging nature of the synthesis. First, the format of **Report VII**, as a visual report, is purposefully not a peer-reviewed scholarly output, yet aimed to demonstrate alternative approaches to improve uptake of more complicated forms of statistical and mixed-methods analysis, in alignment with the creative mandate of the inquiry. Second, the four emerging tenets are not to be read as a final list, but to be understood as the beginning discussions on opportunities to strengthen gender-transformative assessment

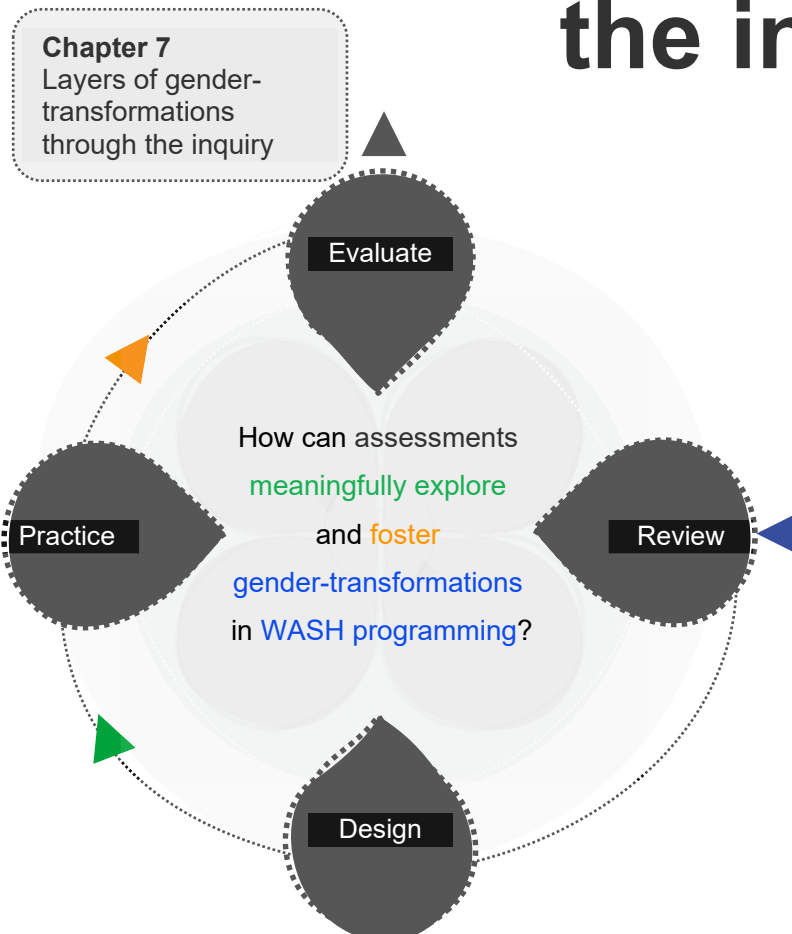
practice. I welcome dialogue and opportunity to further evolve these tenets through both practice and scholarship.

6.7 Summary

In this chapter, I have argued for the value of fostering gender-transformative change through assessments and demonstrated how two visual storytelling approaches can foster transformative change. In the first output (**Paper VI**), I have introduced six collaboratively identified principles of qualitative assessment practice and argued for the importance of quality to foster beneficence. Prepared as a visual report, in **Report VII**, I have demonstrated that transformative objectives are not always achieved and that transformative modalities should be pursued within each tool and technique. In **Paper VIII**, critically evaluating both examples of participatory photography in WASH as well as this inquiry's use of photovoice, I argued that transformation should be pursued across all the stages of assessment – from participant selection to insight utilisation. Synthesising the insights from these three outputs along with insights from the full inquiry, led to the identification of four emerging tenets of a gender-transformative assessment. Namely, that assessments should encourage *efficacy* (ensuring quality gender-related insights), *inclusivity* (engaging diverse participants throughout the research process), *reflexivity* (cognisant of power dynamics and structures) and lastly that assessments should seek to be *purposefully transformative* (aiming to transform gender dynamics). In the next two chapters, I evaluate the extent to which the process has led to transformations and reflect on the inquiry's implications for and contributions to scholarship.

Chapter 7

Layers of gender-transformations through the inquiry



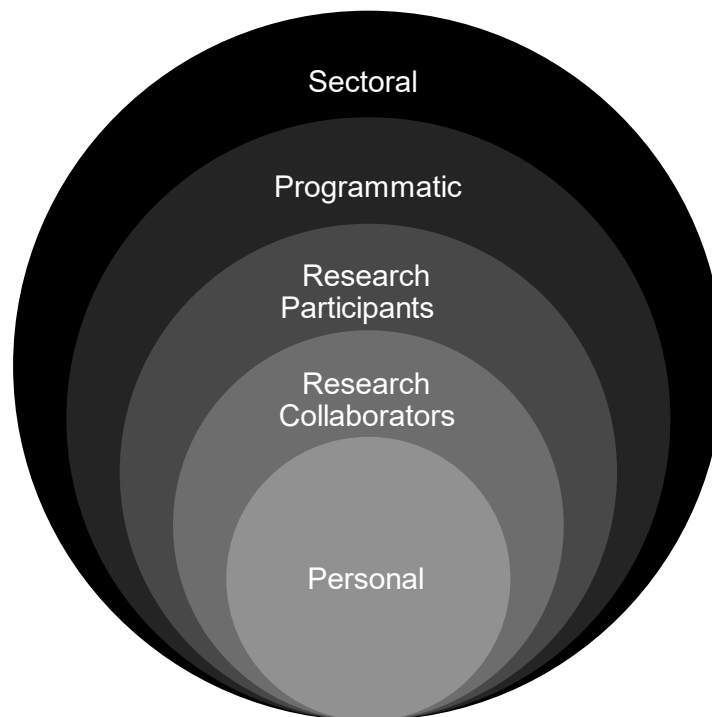


As I neared the end of my doctoral journey, I had the chance to practice my new-found knowledge within a multisectoral food security program in Zimbabwe. The program team had recognised the importance of improved sanitation for food security, but had not been able to increase latrine adoption in their working communities. Building on the approaches included in this doctoral inquiry and leveraging the practice of design thinking, I collaborated with the team to identify opportunities to improve the promotion and installation of latrines. This work solidified my confidence in the transformative paradigm. The research included a series of community walks, interviews, and focus groups – all centred on identifying the reasons that households were not purchasing or repairing latrines. Notably, we partnered with local government officers who collaborated in the entire process. As I watched households think deeply about why their latrines didn't have roofs or fly screens, I saw a transformation in the way they thought about the latrine itself. As I observed local government stakeholders facilitate interviews, I saw a new-found appreciation for the confusion that rural families had about what makes a 'good latrine'. And as I debriefed with the program team, I heard about personal transformations regarding the importance of deep engagement with communities, the usefulness of visual storytelling to untangle complexity, and a reformulation of the true problem – from 'they are just too poor' to a more nuanced understanding of the situation. I watched the welding together of investigation and intervention and a transformation in critical consciousness regarding the nature of poverty in these communities. While this example is not related to gender equality, it speaks to the wider opportunity the transformative paradigm has in shaping practices for participants, collaborators and even the researchers.

7.1 Overview

As the final step of the action research process, I now evaluate the contributions and implications of this doctoral inquiry through five layers of transformed practice, illustrated in **Figure 29**. These five layers, first introduced in **Chapter 2**, represent the ‘rippling out’ of changes in practice in the collaborative action research process. I describe changing practices from the personal level through to the sectoral. For each layer, I identify the key contributions to practice and summarise implications from reflection processes as workshops, manuscript drafting and personal sensemaking. I conclude each layer with a critical reflection on the limitations and challenges towards transformative change and perspectives for future research and practice.

Figure 29. *Layers of transformed practice*



7.2 Sectoral transformations

At the sectoral level, conceptual and methodological contributions of this inquiry were promoted online and in-person as was appropriate during the COVID-19 pandemic to help shape both intervention and assessment practices. Insights related to audio surveys, personas, VOICE coding, photovoice and gender-transformative WASH were shared in a number of practitioner-focused forums. First, this included webinars with the Water for Women Fund (Australian funded) and PRO-WASH⁴⁰ (American funded) partners, both of which are supporting WASH

⁴⁰ PRO-WASH (Practices, Research and Operations in Water, Sanitation and Hygiene) has been a 5-year project led by Save the Children and funded by the USAID Office of Food for Peace (FFP). PRO-WASH works with partners to

programs in Asia, the Pacific and Africa. Second, the work was presented at World Water Week (2021, 2022), the Asia-Pacific Water Summit (2022) and gLOCAL Evaluation Week (2022). Third, I participated in the development of a short training course on gender-transformative WASH and measurement for practitioners in collaboration with the WASH-GEM quantitative tool. Lastly, the inquiry led to the development of the qualKit – an online portal for practitioners focused on assessing gender equality and social inclusion in the WASH sector. Five of the approaches and techniques designed as part of this doctoral inquiry are included in the qualKit (see page x for details) and focused on building confidence in WASH practitioners conducting qualitative assessment practices. Additional funding from Water for Women, also allowed methods identified in the *review* phase (see **Section 4.5**), but not tested in this doctorate to be added into the qualKit and piloted in further contexts in Asia and the Pacific.

The sectoral implications aligned with both conceptual and methodological insights. Conceptually, the emergent definitions of gender-transformative WASH have been adopted by a number of practitioner forums. One webinar participant contacted me to share how the concepts of gender-transformative WASH (summarised in **SM.6**) has impacted their practice: “this new ‘upside-down’ understanding of gender-transformative WASH, has radically changed my thinking. It is easy to understand and explain”.⁴¹ Methodologically, the qualKit has been adopted and shared within the WASH sector. Practitioners in Cambodia, Pakistan, India, Bangladesh, Ethiopia, Madagascar and the Democratic Republic of the Congo have used the materials in the exploration of gender outcomes in WASH programming. Additionally, the approach webpages (including photovoice and micronarratives supported in this doctoral inquiry) will soon be translated to support francophone WASH programs in West Africa.

Despite this early uptake of the qualKit and wider sectoral sharing, the WASH sector is diverse and often siloed (see **Paper II**), and therefore opportunities to contribute to intervention and assessment practices primarily remained within certain communities of practice. In particular, I found it difficult to influence perspectives within the field of public health (a large subset of the WASH sector), whose members are often more aligned with a positivist paradigm and therefore less open to transformative forms of both research and practice. Additionally, while the qualKit has been used in a variety of contexts, the extent to which the techniques and approaches have fostered transformative change remains unexplored. Finally, while several practitioners have found my framing of transformative WASH valuable as mentioned above, there remains debate around its definition, which has yet to be resolved. Looking to the future, there are opportunities to (a) continue promotion and refinement of the inquiry’s conceptual and methodological insights with wider audiences, (b) identify ways to engage with different epistemological

strengthen the quality, effectiveness and sustainability of WASH practices in FFP-funded development and emergency food security activities.

⁴¹ The ‘upside-down’ phrasing was used to describe how gender equality can be an outcome of WASH programs, which in turn leads to a transformation of how WASH programs are implemented and therefore supporting better WASH outcomes. This is upside-down, as traditionally WASH programs adopt a gender equality mandate as a steppingstone to improved WASH outcomes.

communities such as public health, (c) follow-up on the transformative outcomes from uses of the qualKit, and (d) collaborate with other scholars and practitioners to help refine the working definition of gender-transformative WASH.⁴²

7.3 Programmatic transformations

The inner layer of this doctoral inquiry, the pilot midline assessment, focused on exploring and strengthening gender-transformations within SMSU3 in Cambodia (as described in **Chapter 4**). Insights included the identification of 14 personas of observers, reflectors and actors of gender-transformative change and a curated set of 25 photo-stories of gender-transformative change. To ensure utilisation and uptake of the insights, contributions to the program included two visual reports (**SM.1 and 2**), four workshops, and support in drafting a section of the midline assessment report.

The implications of this inquiry to the SMSU3 project and iDE programming in other contexts focused on the importance of staff as the first line of gender-transformation in WASH. Here I highlight three examples. First, reflections from the SMSU3 team articulated the value of gender training: “the assessment helped validate the importance and impact of the gender training. It is easy to use these insights to encourage other iDE programs to adopt the training.” And “five of the key personas have been used in the design of the next iteration of the gender training for staff.” Second, insights during the sensemaking workshop from photo-stories sparked an internal review process for staff maternity leave policies. Third, the inquiry catalysed a review of the language used to describe female change agents in the program; namely, a change from latrine business owner’s wives to women latrine business owners.

Despite these small influences on the SMSU3 project, my inquiry’s midline assessment did not radically shift the direction of the program. In early documentation and conversations with the SMSU3 team, the program has displayed instrumental tendencies – such as a desire to work with women sales agents as they are more effective sales representatives, or with women latrine producers as they tend to be better bookkeepers. In alignment with other feminist evaluators (see for example Podems, 2010), I recognise the limitations of a single assessment in shaping the direction and focus of a large program with multiple program objectives. Additionally, while the results from the photovoice and micronarrative studies were included in the midline evaluation report and interrogated during sensemaking, there is still work to be done to find ways to support the final step of integrating findings into project workplans. In particular, future work could explore opportunities to explain aspects of gender and development theory in more accessible formats which could help clarify the importance of avoiding instrumental activities.

⁴² I hope to start this process through the co-development of the forthcoming paper on gender-transformative WASH with *Frontiers in Water* (2022).

7.4 Transformations for research participants

So far in this chapter, I have explored how my inquiry supported transformations for the SMSU3 program and wider sector, however, transformation was also pursued through the process of inquiry for the research participants. I argue throughout this thesis, that this type of personal transformation is a distinct characteristic of the transformative research paradigm. Nonetheless, as argued in **Paper VIII**, it is difficult to assume gender-transformations for individuals, rather one must rely on indicators of transformative potential towards gender equality. A detailed description of the transformative potential of photovoice is included in **Paper VIII**, focused on the different stages of the research process and using Kabeer's (1999) empowerment framing. Therefore here, with a concentration of the transformative potential of micronarratives, I draw on the reflection survey and interviews with micronarrative participants. I frame the implications of individual transformations (participants, collaborators and personal) as changes in critical reflection and critical action drawing on Freire's (2000) framing of the practice of critical consciousness.⁴³

The processes of story generation and interpretation by participants of the micronarrative study led to increased critical reflections on gender dynamics. Notably, 78% of the micronarrative respondents strongly agreed that "this survey helped me think more deeply about gender equality". Additionally, in the reflection interviews, one of the program managers noted that "besides learning a new technology, the team members have a chance to recall the gender knowledge when answering the questions." Reflecting on the whole process, one collaborator described the impact of the collaborative action cycle this way: "digging deeper into meaning of the word 'gender' as it relates to impact pushed a more gender-critical perspective of the team towards our work..." that it "nudged staff to think harder about how their roles/experiences are related to gender impact and to articulate this."

Evidence of critical action was less apparent as there were fewer opportunities to explore evidence from the participants after the process. However, during a reflection interview, one participant noted: "what I like about the survey is that maybe the questions can empower women staff members." The research assistants also noted that the micronarrative sharing began conversations amongst participants about their own actions and experiences. For example, discussions in the Svay Rieng office after the survey was administered, focused on how having a woman leader shaped the gender dynamics within the team and led to brainstorming about how this could be replicated in other more male-dominated field offices.

Overall, it is difficult to identify the nature and status of transformative change from both the SMSU3 program and the midline assessment for participants. The process of evaluating change, therefore, must rely on indicators and indications of transformative potential. The complexity of social change also is best understood as a network of influences, rather than a

⁴³ Freire (2000) calls this process of reflection and action 'praxis'.

linear progress of intervention to benefit (Freire, 2000). Importantly, while the previous paragraphs do highlight several examples of change, these changes cannot be assumed for all participants, as the assessment will not have impacted everyone in the same way (as evidenced in the breadth of responses to the micronarrative study). Additionally, it cannot be assumed that change is always positive or desired (Kabeer et al., 2011) and one male respondent in a reflection interview described feeling “on the outside” as women are often “now first” in the project. Lastly, throughout this inquiry, I have identified the difficulty of drawing a line between practical and strategic gender interests; as such, I suggest that all changes moving towards gender equality have transformative potential.⁴⁴ Future research could conduct follow-up explorations with the inquiry’s micronarratives and photovoice participants adopting a network-like conceptualisation of change rather than the more linear model used in this inquiry. Future research could also compare the impact of different forms of assessments.

7.5 Transformations for research collaborators

Descriptions of personal transformations for the research collaborators were sought through two reflection workshops (see **Table 5** in **Section 2.3**). Collaborator transformations were more easily documented than for the research participants of the micronarrative survey, due to more interactions to elicit feedback. Here I provide several examples of collaborator transformations framed as critical reflection and critical action.

Reports of critical reflection for research collaborators focused on the importance of words and the cultural nuance required to avoid normative definitions of gender equality in international development programming. For example, one American collaborator described that “I learned that there’s no word for ‘gender’ in Khmer. Words are so important! We need to lay a firm, conceptual foundation before we can really dig into these topics.” Another noted that “as a foreigner, [the process] helped me become more mindful and check assumptions regarding linguistic/cultural differences in gender.” Descriptions of critical reflection were more common for non-Cambodian collaborators working out of the global support offices.

Descriptions of critical action for the research collaborators were shared as projected action for the future and focused on management practices. For example, one collaborator shared “I will encourage our management team to continue creating more enabling environments and opportunities for women staff to lead activities in the program where their ideas are not just heard but actually have authority to be heard and make a change.” Another described how he would adapt his practice in a new program “as we set up our sales operation, I’ll be checking in constantly to make sure our new field staff, especially the women, are feeling safe and in control of their work environment.” Lastly, another collaborator described actively wanting to recruit

⁴⁴ I rely on Paulo Freire’s (2000) understanding of social change and see changes towards equality as changes observation, reflection, and action as described in the personas report (**SM.1**) and **Paper V**.

more women into the program team. These descriptions of anticipated action were primarily from staff in the Phnom Penh office.

Although my multiple forms of engagement with the research collaborators allowed me to hear about their experiences of the research process throughout the inquiry, there remained some challenges in eliciting honest feedback. Most notably, my role as both insider and outsider (as a former management employee of iDE described in **Section 2.4.2**), led to some challenges in ensuring honest reflections, especially from more junior collaborators. While the senior collaborators were more open with negative reflections – especially during the *design* phase in testing and piloting the two approaches – non-management colleagues were much more likely to avoid sharing negative feedback. I suggest that this is due to the power dynamics related to both my external status and previous role. As such, although I sought feedback on personal transformations from all the collaboration team, as an optional process, responses were primarily from the senior collaborators. Future research could identify other forms of generating feedback that redress power dynamics such as collaborator diaries or engaging research assistants to conduct reflection interviews.

7.6 Personal transformations

The final layer of transformation explores my own personal changes through the collaborative action research process and highlight my journey from practice to scholarship and back into practice. These personal transformations have been myriad; here I highlight a few notable examples, once again through the lenses of critical reflection and critical action.

As highlighted in **Chapter 2**, reflexivity was an integral part of the collaborative process. As such, I provide three examples of my critical reflection: integration of critical theories, refinement of my own conceptualisation of gender equality, and evolution from a postpositivist paradigm towards a transformative one. Firstly, the collaborative nature of the inquiry encouraged deep engagement with critical theories such as decolonisation and intersectionality with which I was previously unfamiliar (see **Paper III** and **VIII**). This process led me to consider how normalised definitions of gender equality were potentially re-colonial (McShane, 2021) and explore opportunities to decolonise research (Thambinathan and Kinsella, 2021). Secondly, my own conceptualisation of gender equality morphed from an economic and potentially instrumental perspective towards a feminist standpoint (as in **Paper I**). Third, my personal methodological practice evolved, from a postpositivist paradigm focused on uncovering ‘the truth’, to reflect a more transformative approach in generating new ideas through the practice of research and evaluation.

Through the lens of critical action, I now identify two practices adopted during the inquiry inspired by my process of critical reflection. Namely, a more purposeful approach to collaboration and increasing nuance in my own language. First, motivated by reflection on transformative modes of participation (see **Figure 5** in **Chapter 1**), I actively sought

engagement of a breadth of collaborators in the process of the inquiry and in the drafting of the manuscripts. This also manifested in my emphasis on respondent-led forms of interpretation. Secondly, the inquiry catalysed further nuance in my language both in speech and writing. For example, I shifted from phrases such as 'data collection' to 'data generation'. I also conducted a rich semantic review of how words such as 'in', 'and', 'for', and 'to' reveal potentially instrumental perspectives leading to a more careful approach in my own language. As a visual learner, adopting more nuance in my words was partnered with more nuance in how visual languages (colour, shape, size etc.) contribute to cross-cultural understanding.

Ultimately, this inquiry has shaped my own critical consciousness related to gender equality – both in my reflections and in my actions. And while my inquiry is soon ending, my journey of critical consciousness continues. My initial desire to pursue a doctorate in gender, assessments and WASH emerged out of a gap in my own experience – as I struggled to conduct gender assessments within my own WASH practice. As such, I began this doctorate by moving from practice into scholarship, and now I plan to re-enter practice from a more scholarly foundation. I plan to continue to support development programs in the use of qualitative, creative and innovative approaches, grounded in my new appreciation of the transformative paradigm. I hope to continue to develop and refine techniques, tools and approaches to support social inclusion. I also plan to continue identifying ways to strengthen gender-transformative thinking in the WASH sector and in development interventions more broadly. Applying what I have learned in this inquiry to my future practice, I know that I will inevitably continue to develop both as a scholar and as a practitioner.

7.7 Summary

Finalising the collaborative action research process, this chapter has described the transformation of practices within the WASH sector, within the SMSU3 program, for the research participants, for the research collaborators, and finally for myself. For the individuals, I have highlighted changes in both critical reflection and critical action aligning with a Freirean perspective of social transformation. For SMSU3, I have highlighted how the research process has shaped the ongoing program activities. At the sectoral layer, I have indicated aspects in which practical tools (qualKit) and concepts (a gender-transformative approach to WASH) have begun to influence practice. In this chapter, I have also clarified the limitations and challenges of seeking transformation within an assessment, both from the perspective of defining transformation and in eliciting reflections. Ultimately, this chapter has illustrated that an assessment process is capable of fostering transformative change across layers and levels, expanding current definitions of the transformative paradigm beyond traditional research outputs.

Chapter 8

Contributions and conclusions



Engineers graduating in Canada participate in a ritual reminding them of the social significance of their profession. The ceremony directs new engineers towards a conscious do-no-harm mandate and participants receive a ring to remind them of their obligation.

The iron ring, worn on the little finger of the signing hand, “serves as a reminder to the engineer and others of the engineer’s obligation to live by a high standard of professional conduct” (The Wardens of Camp One, 2017). I too, have worn a ring on my right little finger since graduating and it has served as a reminder of the significance of my work.

In the final drafting of this thesis, I have reflected on how my consciousness of a do-no-harm approach within engineering can and should spill over into my research practice. Should researchers also be required to take an oath of service in their practice? And how could this oath expand perspectives from a do-no-harm towards a do-more-good perspective of research? This reflection has helped me refine my own framing of transformative research practice, focusing not only about the outcomes of research, but also about the processes of research.

8.1 Overview

In the final chapter of this thesis, I outline the scholarly contributions of the inquiry and introduce areas for future research. I begin the chapter by describing the inquiry's scholarly outputs as journal papers and conference presentations. Next, I describe the methodological contributions of the research – highlighting implications for the transformative paradigm as well as for the approach and techniques piloted in this study. Following, I briefly describe the conceptual contributions of the inquiry with reference to the refinement of gender-transformative approaches. I then outline areas for future research before offering concluding remarks.

8.2 Scholarly outputs

To encourage utilisation and adoption of the emerging insights from this inquiry by both practitioners in the Water for Women Fund and academics, I published and presented work throughout the action research cycle. As of the finalization of this thesis, six papers have been published in peer-reviewed scholarly journals (Papers I, II, III, IV, VI and VIII). One further paper has been submitted to an academic journal (Paper V). **Report VII** will be adapted to a journal publication in the near future, yet has been presented in this thesis in a visual reporting format demonstrating the value of novel techniques to support the utilisation of mixed-methods reporting. The inquiry's insights were also presented at a variety of academic forums, this included the Australian Evaluation Society (2019) and the UNC Water and Health Conference (2019, 2020, 2022).

8.3 Strengthening transformative research and evaluation practice

At its core, this inquiry has sought to expand and refine transformative evaluation practice with reference to gender equality and international development as introduced in **Chapter 1**. My insights contribute to both the scholarship on gender-transformative approaches and to the definitions of transformative research and evaluation. Here I highlight three ways in which my inquiry has contributed to transformative research and evaluation practice: (1) by expanding transformative research and evaluation practice to include both the process and outcomes of inquiry, (2) by bridging practitioner-focused descriptions of gender-transformative assessments from grey literature into more formal scholarship and (3) by bridging aspects of reflexivity and transformation into principles of qualitative assessment practice.

First, existing scholarship on transformative research and evaluation predominantly focuses on the transformative nature of the outcomes of research and evaluation (Mertens, 2009), with emerging examples of the transformative nature of the process (Mertens and Catsambas, 2021; Mertens, 2022). However, in its structure and framing, this thesis has argued that (gender)-transformative potential can arise both from the outcomes of research, but also through the research process (**Paper VIII**). Much research and evaluation in development and other social sectors is rooted in the postpositivist paradigm in which researchers observe and collect data

with as little impact to respondents as possible (Bamberger and Podems, 2002; Mayoux and Chambers, 2005; Creswell, 2014). This approach is centred on a 'do-no-harm' mandate. However, in this inquiry, I have demonstrated the value of adopting a purposefully transformative approach and nurturing a 'do-more-good' beneficence mindset, an emerging modality of best practice in evaluation literature (van den Berg et al., 2021). A 'do-more-good' approach is especially relevant in the context of gender equality assessments in which raised critical consciousness of societal inequalities through interviews, surveys or focus groups can be distressing, but also can be an opportunity to catalyse change.

Second, gender-transformative evaluation, a specific sub-field of transformative evaluation, has emerged within grey literature over the last decade with a focus on international development interventions (see for example Hillenbrand et al., 2015; Khanna et al., 2016; Morgan, 2014; Mullinax et al., 2018). However, very little has been written in academic scholarship. This thesis has aimed to clarify and ground gender-transformative approaches in feminist theory and transformative practice (as described in **Paper III**). The inquiry has also aimed to enrich gender-transformative assessment practices by integrating theories of intersectionality, decolonisation and reflexivity (**Papers III and VIII**) leading to the identification of four emerging tenets of gender-transformative assessments.

Third, while qualitative evaluation practice has a growing body of scholarly evidence on the importance of reflexivity – especially in discourses of decolonisation and feminist practice – few practical tools grounded in scholarship exist to support practitioners. In **Paper VI**, through a collaborative and experiential process, I introduced six principles to support quality in qualitative assessments. These principles highlight being reflexive and transformative, both of which were missing from reviewed guidance. While research quality is not required to pursue transformative outcomes, I argue that it is required to bridge 'do-no-harm' approaches into strategies that 'do-more-good'. By grounding the design of these principles both in literature and practice, the process has contributed to a set of practical yet academic principles to support future assessments.

8.4 Contributions to gender-transformative assessments

Within the emerging sub-field of gender-transformative assessment, this inquiry has contributed both methodologically and conceptually. Methodologically – in relation to the piloted approaches for explorations of gendered change in programs; and conceptually – through principles towards fostering gendered change through assessments. Transformative change is never a guarantee, but the pilot results suggested micro-transformations are occurring for both women and men as a result of engagement with a gender-transformative intervention and within the flow of social

change.⁴⁵ The inquiry's focus on transformative potential has clarified that studies must focus on the bridge between practical and strategic change.

8.4.1 Methods to explore gender-transformative change

With reference to the exploration of gender-transformative change, the collaborative design process clarified creative methods to (1) elicit, (2) synthesise, and (3) utilise stories of gender-related change with transformative potential, from both women and men.

To support the generation of micronarratives, the inquiry provided empirical evidence that verb-based prompts were most likely to elicit rich personal responses about gender-transformative changes from both women and men in Cambodia (**Paper IV**). My engagement with theories of embodiment offered a lens through which to understand these findings and to support future assessments (**Section 5.4**).

The inquiry refined a variety of techniques for synthesising stories of gender-transformative change including respondent-led interpretation through the VOICE framework (**Box 1**) and the use of personas to clarify and codify textual data (**Paper V**). These methods prioritised ease of use to support future practitioners.

To encourage the uptake of evidence of gender-transformative change by program teams, the inquiry also piloted forms of communication through visual reporting modalities (**SM.1**, **SM.2** and **Report VII**). These formats were designed in collaboration with practitioners and offer a way of balancing academic rigour with accessibility in cross-cultural contexts.

8.4.2 Four emerging tenets of gender-transformative assessments

With a goal of understanding the transformative potential of visual storytelling processes, this inquiry conducted meta-evaluations on the use of micronarratives (outputs **IV**, **VI** and **VII**) and photovoice (**Paper VIII**) leading to the identification of four emerging tenets of gender-transformative assessments to support future scholarship and practice (detailed in **Section 6.5**). These tenets sit within a backdrop of the importance of *quality* as highlighted in **Paper VI**. Assessments should encourage *efficacy* (ensuring quality gender-related insights), *inclusivity* (engaging diverse participants throughout the research process), *reflexivity* (cognisant of power dynamics and structures) and lastly aim to be *purposefully transformative* (to transform gender dynamics). Ultimately, these four tenets suggest that methodological discussions related to fostering gender-transformative change should shift from 'what methods' to 'how can methods'.

⁴⁵ The breadth of transformative changes experiences by staff members of SMSU3 is outside the scope of this methodological thesis.

8.5 Contributions to literature review methodologies

Beyond contributions to gender-transformative research and evaluation practice, this inquiry has also contributed to academic practices of reviewing and synthesising literature. Drawing from the digital humanities and bibliometrics, I sought to highlight the importance of scholarly breadth through the use of novel techniques. In the digital humanities these techniques are used to explore a wide corpus of literature at one time (such as all of Shakespeare's work) and in bibliometrics, they are used to identify publication trends often centred on individual scholars or institutes. Much of the scholarship on systematic reviews focuses on the process of identifying a small number of articles for review (Grant et al., 2009). However, in all of my reviews, I prioritised mapping the breadth of scholarship before exploring articles in detail. This approach allowed me to identify emergent trends and areas where research is nascent and to clarify how different disciplines were engaging with these cross-cutting topics.⁴⁶ Here I briefly describe my contributions to scholarly work in adapting techniques for literature: (a) analysis and (b) visualisation as seen in Papers **I, II, III, IV, and VIII** with a focus in **Chapter 3**.

Within the inquiry, I introduced four techniques to literature analysis practice for international development, gender equality and WASH scholarship from the digital humanities and bibliometrics.⁴⁷ In Papers **I and II**, I demonstrated the value of conducting two layers of analysis within literature reviews, first using distant reading practices with a larger set of relevant articles and second adopting close reading practices with a more targeted set. In **Paper I**, I suggested that theoretical conceptualisations can be traced using bibliometric co-citation analysis and visualised using network mapping. Third, in **Paper III**, I introduced processes of 'emergence' and 'timeline' analysis as methods to explore the evolution of concepts and themes within a subset of literature, and the use of co-locates for assessing the breadth of applications of a phrase. Fourth, I demonstrated the value of a 'semantic' review to explore language of question prompts in **Paper V**. These four literature analysis approaches could be adopted by researchers in a variety of contexts to explore concepts and practices in existing scholarship.

Drawing on the significance of visual storytelling, this inquiry also demonstrated the value of data visualisation techniques in synthesising breadth in literature review processes. My use of visualisations aimed to both develop and illustrate analytic insights. This included network maps to illustrate connections between clusters of literature (**Paper I**), alluvial diagrams to show the breadth of literature within a context (Papers **I, II and VIII**), dot plots to show the distribution of literature over time (**Paper III**), and landscape maps to illustrate the relative proportion of different aspects of literature (**Paper III and VIII**). This use of visualisation is hoped to create

⁴⁶ Much the same way that the persona technique introduced in **Paper V** uses breadth to avoid removing potentially important themes during synthesis.

⁴⁷ I use the word 'introduce' as I have not seen these techniques described in literature review scholarship or used in reviews from international development, WASH, and gender equality. Recognising, however ironically, that one cannot be across the full breadth of any scholarship.

more engagement (Gendron, 2019) from practitioners and scholars alike who may be less likely to read academic content (Taylor and Coffey, 2008).

8.6 Conceptual contributions

From a conceptual perspective this inquiry clarified and expanded scholarly understandings of gender-transformative approaches in the development sector and more specifically within WASH. This occurred within: (a) Papers I, II and III; and (b) the sensemaking which emerged from their synthesis.

Insights from the three papers forming **Chapter 3**, have helped clarify the scope and nature of investigations related to gender equality in development and WASH scholarship. In **Paper I**, the inquiry identified four conceptual lenses used in assessments of gendered change, providing a perspective on differences between feminist-informed and other disciplinary-specific assessment approaches. With a focus on the WASH sector, **Paper II**, contributed insights on the historical integration of gender equality in the WASH sector within existing published academic literature, identifying five practical areas of focus for researchers interested in designing gender-transformative studies. **Paper III** contributed a novel description of the evolution of gender-transformative language in international development and the collaborative design of five unifying principles for future gender-transformative approaches.

Additionally, while outside practical boundaries for inclusion within this thesis, the collaborative action research process contributed to a working definition of gender-transformative WASH included in supplementary materials (**SM.6**). This gap in knowledge and practice was identified during the *review* phase of the inquiry and summarised in the introduction of this thesis (**Chapter 1**). The definition drew on (1) the a critical reflection of the principles of gender-transformative approaches in **Paper III**; (2) the analysis of a transformative approach to the WASH sector in **Paper II**; and (3) additional WASH gender literature syntheses (van Wijk-Sijbesma, 1987; Heijnen and van Wijk-Sijbesma, 1993; Caruso et al., 2022). The working definition has been presented and adopted in a number of working forums through webinars and discussion groups. This working definition will be codified in a forthcoming collaborative publication with *Frontiers in Water* (2022).

8.7 Future research: Recommendations for future methodological scholarship and practice

The multi-layered and multi-phased approach of this doctoral inquiry means that opportunities for future methodological research are widespread. As such, I have identified two broad areas for future methodological studies focused on (1) further testing the designed techniques, and (2) further refinement of the identified principles.

It should be noted that there are numerous non-methodological opportunities for future research including: (1) a refinement of a gender-transformative approach to WASH (as begun in SM.6),

(2) richer explorations of the findings of the photovoice and micronarrative studies related to critical consciousness, (3) studies into the diverging motivations for gender-transformative change across diverse cultural and geographic contexts, and (4) more robust explorations of the unintended positive and negative outcomes of gender-transformative (WASH) programming.

This doctoral inquiry has designed, piloted and refined a number of techniques appropriate for gender-transformative research and evaluation. These techniques span the generation, interpretation, synthesis and utilisation of visual storytelling data as well as the review and synthesis of existing literature. Future research could test these techniques in further sectoral, geographic, programmatic and cultural contexts to explore their broader relevance. This could include explorations in contexts outside the fields of WASH and gender equality and in other complex research settings such as climate or systems change. Additionally, the techniques could be tested with other types of program actors including change agents (for example latrine business owners or local government officers) and beneficiaries. As the techniques were also piloted during COVID-19, further testing could explore their validity for in-person assessments. Lastly, further work could be done to codify these techniques and approaches in guidance materials for future academic scholarship.

This doctoral inquiry has also identified a series of framing principles to support researchers and practitioners. Namely, four emerging tenets of gender-transformative assessments (**Section 6.5**), five principles of gender-transformative approaches (**Paper III** and used in the synthesis of **Chapter 3**), and six principles of quality qualitative assessments (**Paper VI**). Drawing from only one set of studies, these principles require further refinement and grounding in practice. Future research could apply and refine these principles in different sectors, geographies and programs to strengthen their usability.

8.8 Concluding remarks

This inquiry has investigated the extent to which assessments can both explore and foster gender-transformative change in the international development sector more broadly, and the WASH sector more specifically. Embedded within a collaborative action research process with the SMSU3 sanitation program in Cambodia, I have reviewed, designed, piloted and evaluated two creative and innovative assessment approaches: photovoice and micronarratives.

First, the inquiry critically analysed a large corpus of gender and development literature, identifying areas of strength and opportunities to apply transformative approaches. This process yielded insights related to: (1) disciplinary tensions between feminist and common constructions of a gendered approach; (2) a focus on symptoms rather than systems of gender inequality; (3) a lack of certainty on how to apply aspects of strategic gender interests to research and assessments; (4) a strong emphasis on the empowerment of women, without taking into consideration diverse gender identities; and (5) a tendency to adopt pragmatic or postpositivist methodological practices rather than seeking opportunities to enable transformative outcomes.

Next, bridging elements of design and practice, the collaborative research process identified opportunities to: (a) elicit meaningful gender-focused responses through verb-based prompts; and (b) analyse, synthesise and share large datasets comprising complex descriptions of change through the use of personas as an analytical technique. I argued that respondent-led interpretation and theories of embodiment can help strengthen the design of approaches.

Third, the inquiry critically reflected on the pilot experience to identify the extent to which assessments can foster transformative change. This included (1) collaboratively identifying five principles of quality qualitative assessments, (2) analysing the inclusivity and effectiveness of an audio survey technique, and (3) critical reflection on the transformative potential of photovoice both in our case and in the WASH sector more broadly. Synthesis led to the identification of four emerging tenets of gender-transformative assessments, building on a foundation of assessment *quality*. The tenets assert that assessments should pursue *efficacy* (ensuring quality gender-related insights), *inclusivity* (engaging diverse participants throughout the assessment process), *reflexivity* (cognisant of power dynamics and structures) and lastly, be *purposefully transformative* (aiming to transform gender dynamics).

Overall, this inquiry has brought a gender-transformative approach to evaluation from practitioner-focused conversations into academic scholarship. In this process, the inquiry has argued for an expansion of the transformative paradigm of research and evaluation to more explicitly highlight the *process* of inquiry alongside the outputs of an inquiry for social transformation. Within the overall framing of this thesis, the collaborative design of principles and techniques, and the critical reflection on the pilot assessment, I argue for the value of integration of together investigation and intervention and demonstrate the benefits of adopting a purposefully transformative approach, moving from 'do-no-harm' to 'do-more-good'. Adopting the methodological advancements and insights generated through this inquiry, the WASH sector and the development sector more broadly, has potential to better explore and support gender-transformative change within programs and assessments.

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Supplementary materials

SM 1 Micronarrative report

MacArthur, J., & Moun, V. (2021). Exploring gender transformations for staff members of iDE Cambodia's SMSU3 WASH Program. Visual Persona Report. Institute for Sustainable Futures, University of Technology Sydney. <http://hdl.handle.net/10453/151932>

SM 2 Photovoice report

MacArthur, J., & Koh, S. (2021). Exploring gendered experiences within iDE Cambodia's SMSU3 WASH Program: Photo-stories. Institute for Sustainable Futures, University of Technology Sydney. <http://hdl.handle.net/10453/159765>

SM 3 Sample micronarrative submission form

Qualtrics online survey printout

SM 4 Sample photovoice submission form

Qualtrics online survey printout

SM 5 Blogpost – VOICE-SR Framework

MacArthur, J., & Megaw, T. (2022). Untangling significance: A simple framework to support descriptions of change. Blog post qualKit. waterforwomen.uts.edu.au/qualkit/tools/significance

SM 6 Working definition of gender-transformative WASH

MacArthur. (2022). A working definition of gender-transformative WASH. [Expert from unpublished manuscript]. Institute for Sustainable Futures, University of Technology Sydney.



**Exploring gender transformations for staff members of iDE
Cambodia's SMSU3 WASH Program: Visual Persona Report**

Jess MacArthur
Vandy Moug

August 2021



1

This study and visual report has been completed as a part of Jess MacArthur's doctoral research on gender transformations in the WASH sector (UTS HREC REF NO. ETH19-4343) and funded Australian Government's Water for Women Fund and in collaboration with iDE Cambodia's SMSU3 program.

The persona analysis was conducted with Moug Vandy of the iDE Innovation Lab.

Visuals, graphics and cartoons by Jess MacArthur.
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Citation

MacArthur J. & Vandy M. (2021). Exploring gender transformations for staff members of iDE Cambodia's SMSU3 WASH Program: Visual Persona Report. Institute for Sustainable Futures, University of Technology Sydney.

2

Project Background

Water for Women is Australia's flagship water, sanitation and hygiene (WASH) program supporting improved health, equality and wellbeing in Asian and Pacific communities through socially inclusive and sustainable WASH projects. Water for Women is delivering 18 WASH projects in 15 countries together with 11 research projects (2018-2022).



Sanitation Marketing Scale-Up Program 3 (SMSU3), a water and sanitation intervention implemented by iDE Cambodia contains multiple funding streams including DFAT's Water for Women fund. The program operates in six rural provinces supporting the promotion and sale of latrines, water filters, faecal sludge management and handwashing systems through private enterprises.

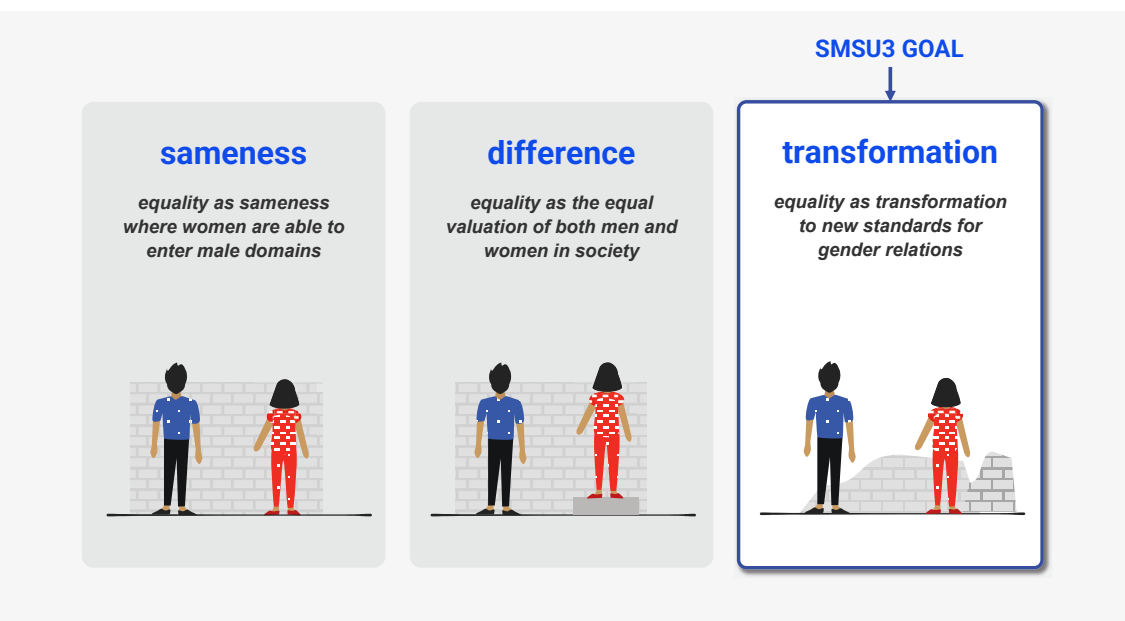
iDE

waterforwomen.uts.edu.au

3

SMSU3 Program Objectives

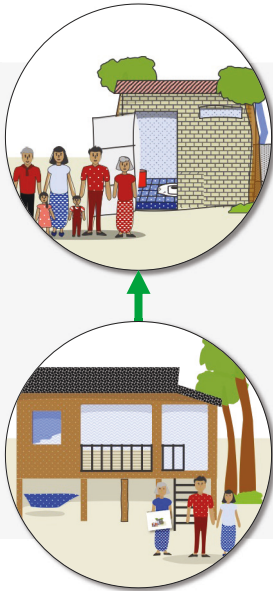
Gender transformations for staff, change agents and beneficiaries



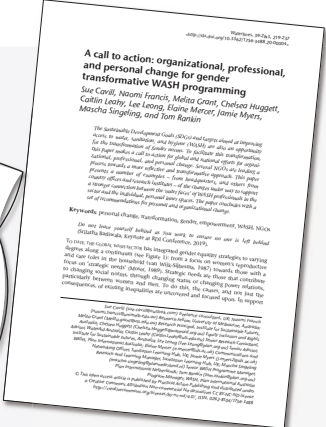
Rees T (1998) Mainstreaming equality in the European Union: Education, training and labour market policies. London: Routledge.

4

Assessments often focus on beneficiaries
 However, gender transformations begin with staff



“Gender transformation is required at all levels in the WASH sector: **individual (staff), programme, organization, donor, government, and partner level.**”



Cavill S, Francis N, Grant M, et al. (2020) A call to action: organizational, professional, and personal change for gender transformative WASH programming. *Waterlines*, 39(2-3): 219-237

5

How are **gender transformations** occurring for staff of SMSU3?

How can we **strengthen future gender training** for staff of SMSU3?

SMSU3 is seeking changes for beneficiaries, change agents (LBOs) and staff. Ideally, the program is hoping to create gender transformative change.

This research seeks to understand what changes are occurring for staff members and the mechanisms towards this change.

6

Data Collection:

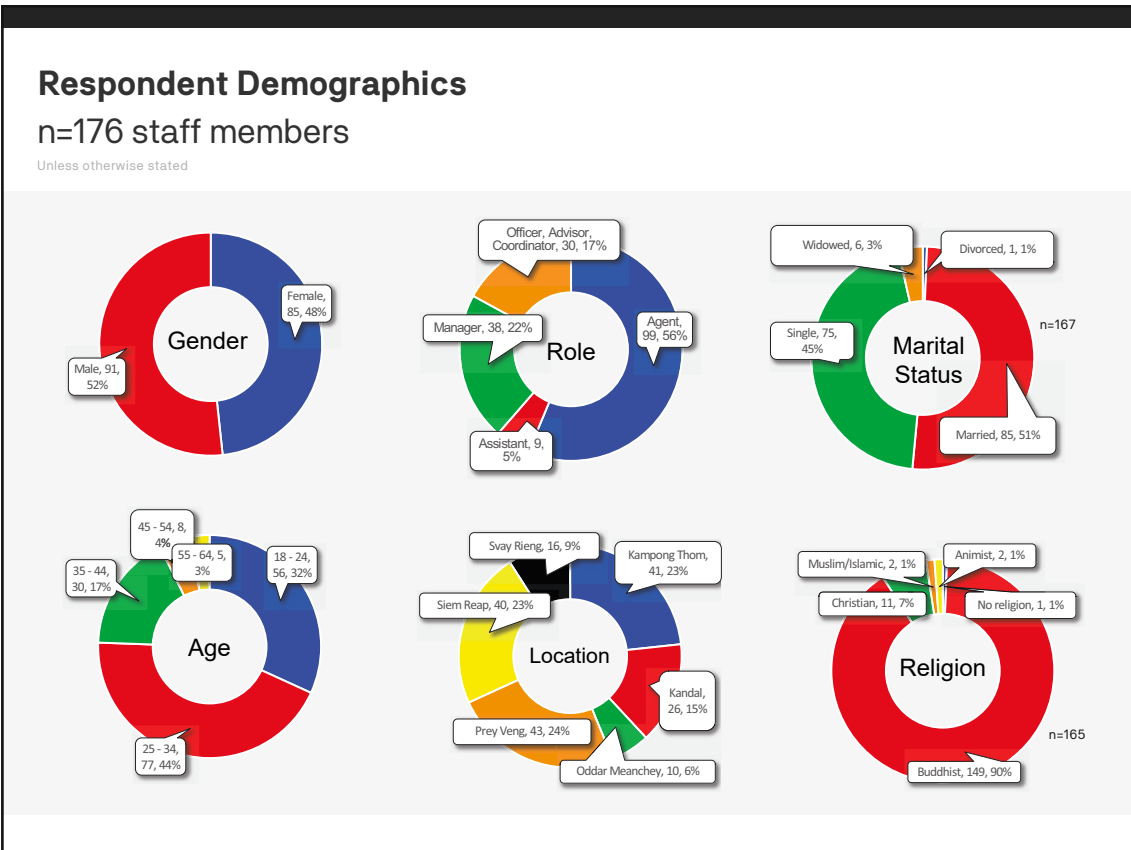
- Respective (backwards looking) stories of change were collected using **micro-narratives**.
- Micro-narratives are short audio or text stories which describe changes that the participants report on.
- Stories were to be true, personal and related to the program.
- Staff used their own phones to share their stories using an online survey format in Qualtrics and Phonic.
- The prompts solicited personal changes related to SMSU3 for all field staff members during October 2020.
- 176 staff participated as several opted out of the study.

Data Analysis and Sensemaking:

- Reported changes were then clustered based on the verbs (action words) that were used in the stories.
- From these verbs, personas were developed that represent the different types of staff changes.
- Personas were triangulated using natural language processing algorithms (Latent Dirichlet Allocation and Structural Topic Modelling).
- Personas were then reviewed with key project leadership in a Sensemaking Workshop in June 2021.

176 SMSU3 staff participated in the research.
200 stories of change shared. 19 stories were unusable.

7



8

Critical Consciousness Gender Awareness Score

Poor <65%	Average 66-71%	Good 72-78%	Very Good >79%
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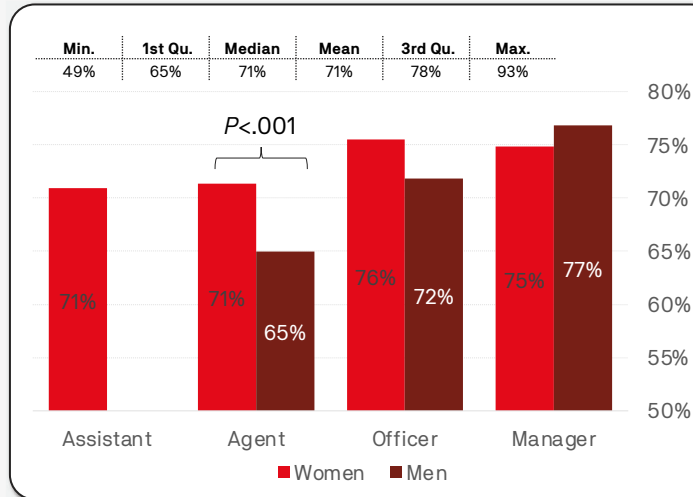
Drawing on a quintile analysis of the CC scores.

Critical consciousness (CC) varies across staff members within SMSU3. We calculate it on a CC scale of 0-100%. Higher scores relate to higher CC.

This chart suggests that women have a higher CC score than men. CC is also more stable across job roles than man.

We can see that male CC increases with job level. The lowest CC is with male agents and the highest with male managers ($P < .001$).

Average CC scores by gender and role
SMSU field staff (n=176)



Section of y-axis show to more clearly explore the differences been women and men.

9

For SMSU3 staff, Gender transformations carry four underlying motivations



These four motivations align with the concept of achievements in Sen's Capability Approach

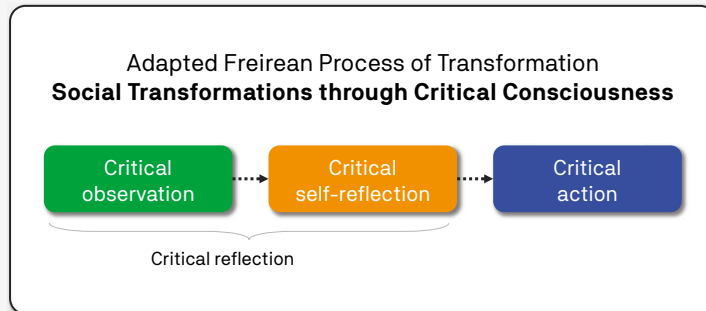
10

Theory of Change

Transformational gender equality through critical consciousness

Paulo Freire was Brazilian philosopher who studied social transformations which involving empowering communities and individuals to overcome inequalities. He worked closely with adult education and learning.

Freire identified that social transformations occur through critical consciousness, a process of critical reflection leading to critical action. We have adapted this model to suggest that critical reflection happens as observation and self-reflection.

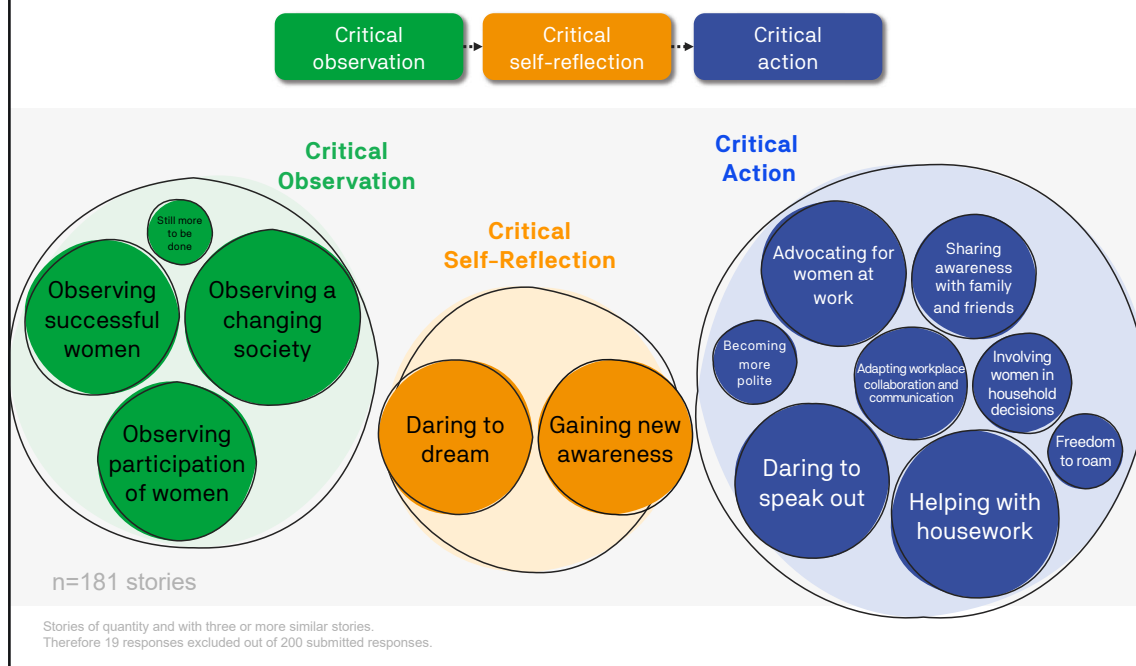


Freire P (1970) *Pedagogy of the Oppressed*. London: Penguin Books.

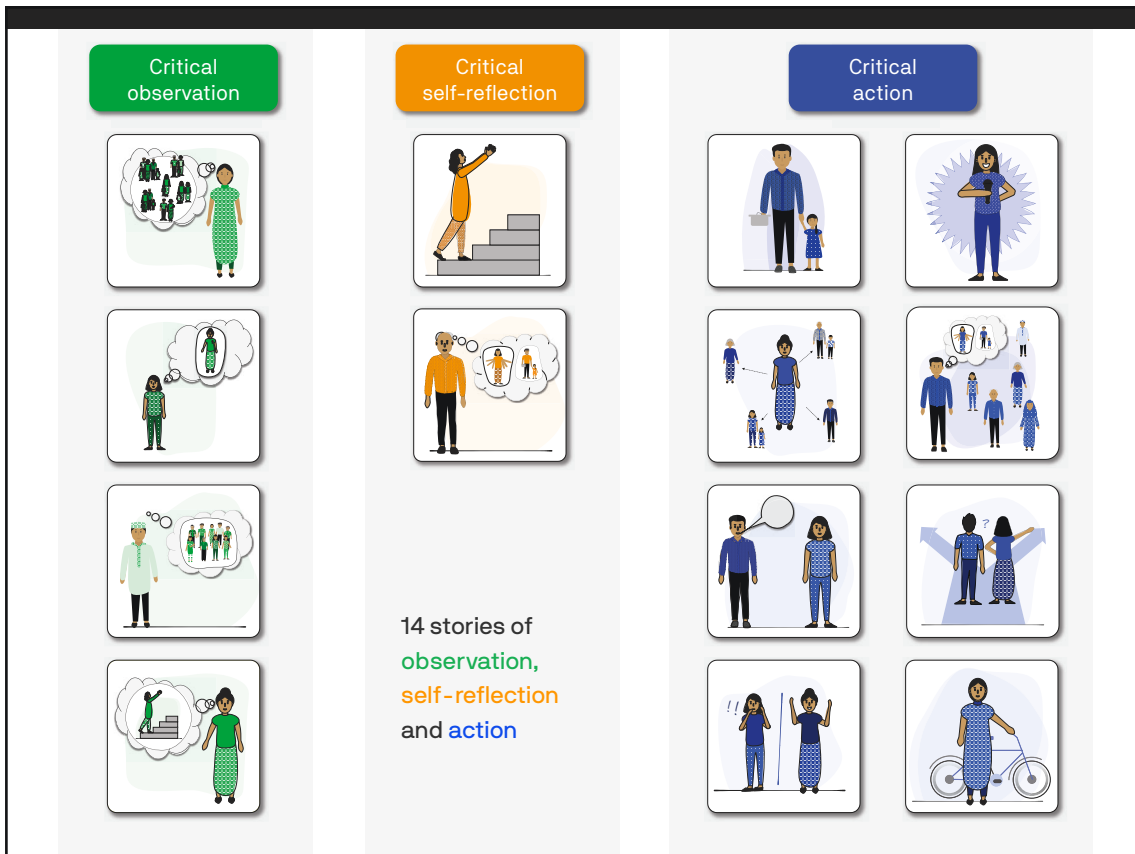
11

Personas of Change within SMSU3

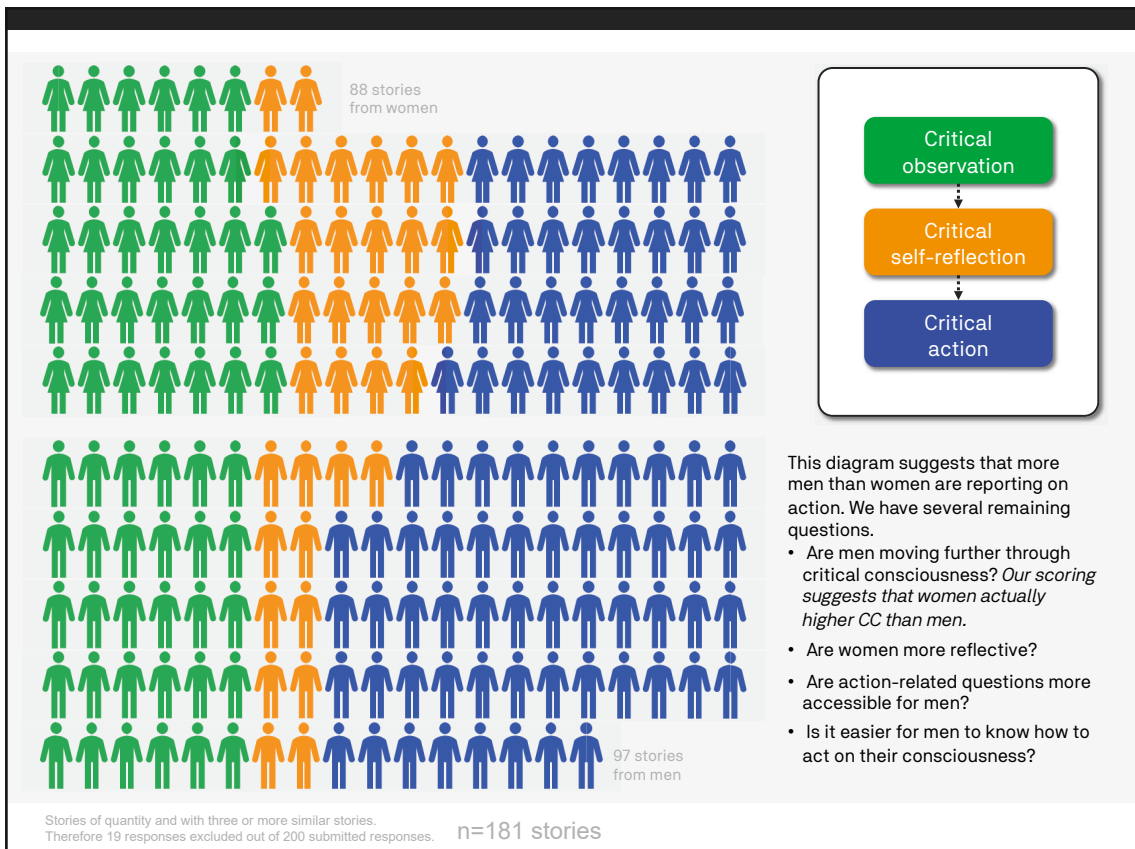
14 stories aligning to observation, self-reflection and action



12



13



14

Visual Representation of the Personas

Description of the components of the single-page persona summary

The diagram illustrates the layout of a single-page persona summary. It features a central white box with a black header and several content areas. Red callout boxes provide detailed descriptions for each element:

- Persona title:** Located in the black header bar at the top.
- Number of participants with similar stories:** Represented by a row of small human icons in the top right corner of the header.
- Brief story of the persona character:** A block of horizontal lines on the left side of the main content area.
- Actual quotations from participants:** Three speech bubbles containing horizontal lines, positioned to the right of the brief story.
- Cartoon image of the persona character:** A central illustration of a woman in a blue dress, surrounded by smaller icons of family members and a person in a wheelchair.
- Gender awareness score:** A horizontal bar chart below the cartoon image, showing a score out of 100% with a relative comparison.
- Location of the change:** A map-like interface with several blue-colored regions, indicating where participants reported change.
- Coding on the significance of the story:** A grid of colored boxes (dark blue, light blue, and grey) representing different significance levels assigned by participants.

15

This image shows a detailed visual representation of a single-page persona summary. It includes a black header bar with a grey title box and a row of 15 human icons. The main content area is divided into several sections:

- Left side:** A vertical column of horizontal lines representing a brief story.
- Middle:** Three speech bubbles containing horizontal lines, representing actual quotations.
- Right side:** A central cartoon illustration of a woman in a blue dress, surrounded by smaller icons of family members and a person in a wheelchair. Below this is a horizontal bar chart representing a gender awareness score.
- Bottom left:** A map-like interface with several blue-colored regions, representing the location of change.
- Bottom right:** A grid of colored boxes (dark blue, light blue, and grey) representing coding on the significance of the story.

16

Critical Observation

17

17

Observing a changing society



There are 22 people (12 women and 10 men) with similar types of changes in the SMSU3 program.

My name is Sotear. I am 26 years old and Sales Agent in the SMSU3 project.

Over the last few years I have noticed a lot of change in Cambodian society.

Families are really changing. Girls used not be able to go to school and women weren't allowed to work outside of the home. It wasn't proper.

As the saying goes "women should stay at the stove". But that really is changing in my community.

Changes in society have happened because the **perspective of the Cambodian family changed.**

In the past, women could not go to distant schools and not be allowed to study. But society is changing **women can get higher education and become leaders.**

In the past, women at home took care of their children, took care of the house, cooked, did the laundry, and did not go far from home. **Now women can do the same work as men,** can find outside work to support the family, while men can help with household chores in their spare time or time off from work like women.

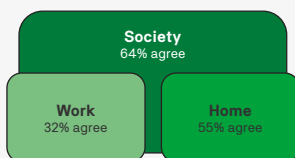


Awareness of Gender Equality

72% good

average of all women 72%

This change is happening at/in:



- V** Value
- O** Occurrences
- I** Importance
- C** Contributions
- E** Expectations

What is the outcome of the change?	Positive 68%	Neutral 32%	Negative 0%
How many people like you are also changing like this?	Very 56%	Somewhat 44%	Not 0%
How important is this change to you?	Very 95%	Somewhat 5%	Not 0%
What contributed to this change?	Gender Training 68%	General Training 26%	Societal Changes 26%
Was it surprising to you?	Very 72%	Some 27%	Not 0%
Will this change last?	Yes 86%	Maybe 9%	No 5%

18

Observing successful women



There are 19 women (out of 85 women) with similar types of changes in the SMSU3 program.

My name is Chanlina. I am 27 years old and a Village Mobilizer in the SMSU3 project.

I help to get people excited about latrines. It's a really fascinating job!

After I attended training for SMSU3, I started noticing the women who are working within the SMSU3 and as community leaders.

I have been noticing how bold and confident they are. I see that they can lead just as well as men.

Before, there were not many women leaders, but **now there are many women leaders in the SMSU3 program.**

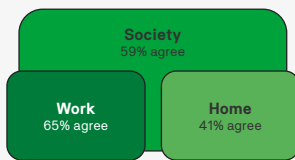
But now it is observed that **women** can be highly educated and **can stand as leaders**, can stand as politicians, can earn money without relying on men.

We can see the **female commune chief, a female village chief, female district governor or female member of the district council.** So we can see the changes.



Awareness of Gender Equality **72%** good (average of all women 72%)

This change is happening at/in:



V Value
O Occurrences
I Importance
C Contributions
E Expectations

What is the outcome of the change?	Positive 94%	Neutral 6%	Negative 0%
How many people like you are also changing like this?	Very 26%	Somewhat 55%	Not 9%
How important is this change to you?	Very 100%	Somewhat 0%	Not 0%
What contributed to this change?	Gender Training 41%	General Training 29%	Societal Changes 35%
Was it surprising to you?	Very 71%	Some 29%	Not 0%
Will this change last?	Yes 82%	Maybe 18%	No 0%

19

Observing the participation of women



There are 18 people (7 women and 11 men) with similar types of changes in the SMSU3 program.

My name is Sokhem. I am 29 years old and a PPP in the SMSU3 project.

I've had a really interesting few months.

After I joined the gender mainstreaming training, I began seeing how iDE is supporting women.

I see less discrimination of women and more women participating and expressing themselves. In Svay Rieng I see a lot of women. Its really inspiring.

Women didn't usually participate in expressing their opinions. But now, because **women participate more, they express their opinions** just as much as men, so they can help to contribute to improving the society as well as their family.

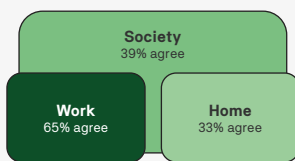
In the past, women could not work like men due to a lot of discrimination. But now I see that **women can work like men without any discrimination.**

I've noticed that there is **more priority given to women in SMSU3 hiring and recruitment.** And that within iDE in the Svay Rieng province most of the staff are women.



Awareness of Gender Equality **72%** good (average of all men 70%)

This change is happening at/in:



V Value
O Occurrences
I Importance
C Contributions
E Expectations

What is the outcome of the change?	Positive 68%	Neutral 32%	Negative 0%
How many people like you are also changing like this?	Very 56%	Somewhat 44%	Not 0%
How important is this change to you?	Very 95%	Somewhat 5%	Not 0%
What contributed to this change?	Gender Training 68%	General Training 26%	Societal Changes 26%
Was it surprising to you?	Very 72%	Some 27%	Not 0%
Will this change last?	Yes 88%	Maybe 9%	No 5%

20

Still more to be done



There are 3 people (2 women and 1 man) with similar types of changes in the SMSU3 program.

My name is Ary.
I am 22 years old and a Manager in the SMSU3 project.

I've seen some change around gender equality within the office over the last few months.

But, there is a lot more to do.

I still see discrimination, I still see women being treated unequally.

I really want the project to improve, but I'm not sure how to make this happen.

Sometimes there is **still inequality and gender inequality in the team.** There is blame when sitting at a table, people judge you for where you want to sit.

Occasionally there is still gender inequality. **There are definitely some shortcomings.**

Men still do not know about women's rights. It seems that they still do not value, do not trust women. **I feel like they think that women do nothing.**

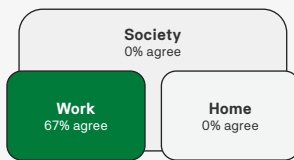


Awareness of Gender Equality

70% average

average of all participants 7%

This change is happening at/in:



V Value	What is the outcome of the change?	Positive 50%	Neutral 32%	Negative 50%
O Occurrences	How many people like you are also changing like this?	Very 0%	Somewhat 0%	Not 100%
I Importance	How important is this change to you?	Very 100%	Somewhat 0%	Not 0%
C Contributions	What contributed to this change?	Gender Training 33%	General Training 33%	Societal Changes 33%
E Expectations	Was it surprising to you?	Very 0%	Some 100%	Not 0%
	Will this change last?	Yes 50%	Maybe 50%	No 0%

21

Critical Self-Reflection

22

Daring to dream



There are 17 women (out of 85 women) with similar types of changes in the SMSU3 program.

My name is Soboen. I am 29 years old and a Sales Agent in the SMSU3 project.

As part of my role, I spend my time travelling within rural communities, building networks and connections.

My experiences in the project have been building on one another.

I have begun to dream about what I can be in the future. I used to think that I couldn't really have a big future, but now, I am really excited about what is to come.

In the past we thought women we did not have rights. However, after we learned the gender course, we change our negative thoughts. Now it makes me think that I have more opportunities than before, I can dare to say yes, dare to do what I want to do, and I have the opportunity to participate. I am not afraid and always want to do what I think of doing.

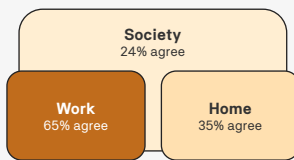
"I want to change myself to become a leader to a model that society recognizes. Women can do all the things men can."

"Talking to other people makes us realize that we have a change of heart, we are afraid to think before doing something and think that if men can work, women can do it too."



Awareness of Gender Equality **73%** good average of all women 72%

This change is happening at/in:



V Value	What is the outcome of the change?	Positive 66%	Neutral 12%	Negative 0%
O Occurrences	How many people like you are also changing like this?	Very 41%	Somewhat 59%	Not 0%
I Importance	How important is this change to you?	Very 88%	Somewhat 12%	Not 0%
C Contributions	What contributed to this change?	Gender Training 47%	General Training 41%	Societal Changes 12%
E Expectations	Was it surprising to you?	Very 76%	Some 24%	Not 0%
	Will this change last?	Yes 95%	Maybe 6%	No 0%

23

Changing my thoughts



There are 4 women and 12 men (out of 176 people) with similar types of changes in the SMSU3 program.

My name is Thom. I am 26 years old and a Manager in the SMSU3 project.

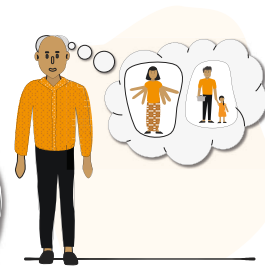
When I started in the SMSU3 program, I began attending meetings, workshops and trainings about gender mainstreaming and making the program more equal.

Since being in this program, the biggest change for me has been in my awareness, knowledge and understanding. I have a better understanding of why equality is important and am thinking about how to make steps in my team.

"I had different ideas, such as not giving much value to gender, especially women. Now I understand a lot about gender equality; and I always think of men and women are equal rights."

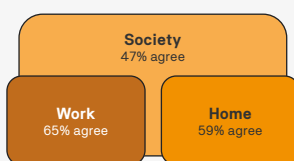
"Now, I understand that women are an important driver for our families as well as in our society as a whole."

"After studying this training course, I have a better idea, realizing that women have the same rights as men, what men can do, women can do."



Awareness of Gender Equality **69%** good average of all men 70%

This change is happening at/in:



V Value	What is the outcome of the change?	Positive 94%	Neutral 6%	Negative 0%
O Occurrences	How many people like you are also changing like this?	Very 40%	Somewhat 60%	Not 0%
I Importance	How important is this change to you?	Very 100%	Somewhat 0%	Not 0%
C Contributions	What contributed to this change?	Gender Training 65%	General Training 53%	Societal Changes 41%
E Expectations	Was it surprising to you?	Very 82%	Some 18%	Not 0%
	Will this change last?	Yes 94%	Maybe 6%	No 0%


24

Critical Action

25

25

Helping out at home



There are 19 men (out of 91 men) with similar types of changes in the SMSU3 program.

My name is Samay. I am 41 years old and a Manager at the SMSU3 project.

I have two children who are in school, a boy and a girl.


After I attended a **gender mainstreaming training** as part of my project, I began thinking a lot about my what happens in my home.

I started helping out more – washing dishes, helping with my children and even cooking! It is quite different, but I see the value.

"I have specific changes for myself, such as every day, when I am home, I always **help out with chores** like taking care of children, cleaning house, and washing clothes every week."

"Before, I never really paid any attention to my family. But **now, I help my wife with the housework, and share the workload with my family** to take some weight off of their shoulders."

"There is a real change, I know how to help with **housework**, know how to **look after children**, and know how to **cook** for my wife. It is different from now... because after I learned about gender, I understood how hard it was for her to manage all of the work in the house."



of Gender Equality **73%** good average of all men 71%

This change is happening at/in:

- Society: 35% agree
- Work: 40% agree
- Home: 85% agree

V	Value	Positive	Neutral	Negative
	What is the outcome of the change?	84%	16%	0%
O	Occurrences	Very 39%	Somewhat 61%	Not 0%
	How many people like you are also changing like this?	Very 100%	Somewhat 0%	Not 0%
I	Importance	Very 100%	Somewhat 0%	Not 0%
	How important is this change to you?	Gender Training 81%	General Training 19%	Societal Changes 19%
C	Contributions	Gender Training 81%	General Training 19%	Societal Changes 19%
	What contributed to this change?	Very 68%	Some 32%	Not 0%
E	Expectations	Very 68%	Some 32%	Not 0%
	Was it surprising to you?	Yes 95%	Maybe 5%	No 0%
	Will this change last?	Yes 95%	Maybe 5%	No 0%

26

279

Daring to speak out

There are 16 women (out of 85 women) with similar types of changes in the SMSU3 program.

My name is Veata. I am 22 years old and a Sales Agent in the SMSU3 project.

My job is to sell latrines to families in the village. I love it!

A few months ago, I attended a **gender mainstreaming training** as part of my project. I learned a lot in the training.

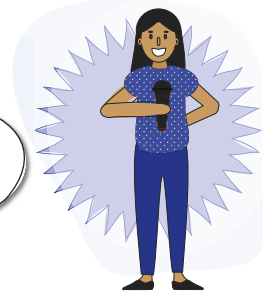
The biggest change for me has been in my **confidence**. I used to be shy, but now I am not afraid to speak out. I feel **brave** and **courageous**.

"In the past, before I learned about gender, I was very hesitant in making decisions, but after I learned about gender, I am **more sure of myself** when I make decisions."

"In the past, I did not know how to speak. I was **shy** and **afraid to speak**. Now I can talk a lot and have fun communicating."

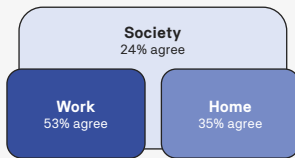
"iDE has taught me to be **brave**, patient, and knowledgeable."

I change is **more courageous and articulate.**



Gender Equality **69%** average of all women **72%**

This change is happening at/in:



V Value	What is the outcome of the change?	Positive 100%	Neutral 0%	Negative 0%
O Occurrences	How many people like you are also changing like this?	Very 50%	Somewhat 50%	Not 0%
I Importance	How important is this change to you?	Very 88%	Somewhat 12%	Not 0%
C Contributions	What contributed to this change?	Gender Training 81%	General Training 19%	Societal Changes 19%
E Expectations	Was it surprising to you?	Very 82%	Some 18%	Not 0%
	Will this change last?	Yes 88%	Maybe 6%	No 6%

27

Sharing back with my family

There are 11 women (out of 85 women) with similar types of changes in the SMSU3 program.

My name is Mony. I am 26 years old and a Village Mobilizer in the SMSU3 project.

After I went to a gender training hosted by iDE, I started thinking about my own family differently.

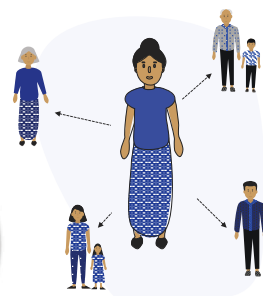
Although it has been difficult, I have begun sharing ideas with my family members about gender.

Things like respect and about involving women in decision making. There has been some push back, but I feel bold to speak to them.

After I learned about gender at iDE... I have **shared what I have learned on decision-making with my father**. I told him to consider the other members' opinions and respect them when making any decisions in family.

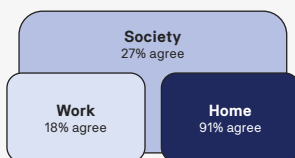
I once saw my brother insulting his wife, saying, "trying to be a businessman, but failing to keep the house" Now, I am mature and knowledgeable **enough to explain to my brother** that insults and disrespect don't make a happy home.

In the past, my father did not help with housework because he thought it was women's work. But now he seems more changed than ever. **He changed because I taught him about gender** and he saw us doing the same job as him.



Gender Equality **70%** average of all women **72%**

This change is happening at/in:



V Value	What is the outcome of the change?	Positive 100%	Neutral 0%	Negative 0%
O Occurrences	How many people like you are also changing like this?	Very 45%	Somewhat 55%	Not 0%
I Importance	How important is this change to you?	Very 100%	Somewhat 0%	Not 0%
C Contributions	What contributed to this change?	Gender Training 81%	General Training 18%	Societal Changes 0%
E Expectations	Was it surprising to you?	Very 73%	Some 27%	Not 0%
	Will this change last?	Yes 81%	Maybe 18%	No 0%

28

Advocating for women at work



There are 11 men (out of 91 men) with similar types of changes in the SMSU3 program.

My name is Nimith. I am 37 years old and a Manager in the SMSU3 project.

Since the beginning of SMSU3, I have worked hard to create change within our team.

I invite women to meetings and help them to participate.

I prioritize women in recruitment and have changed my mind about women's ability to work in remote areas. We now have a good strategy to ensure female SA success.

It's **changed my mind about recruiting**. In the past, I used to think that I did not want to recruit women to work in the community, but now I have **recruited 50% women** and I see that the work is effective.

Currently, for teamwork, we cultivate the priority of everyone's rights within the team, particularly for women. **We prioritize their right to make decisions** in the team as well as to participate and express their ideas.

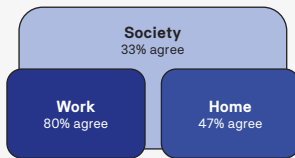
Now that I have learned a lot, I **have started giving women a chance to express** their thought and ideas.

I have changed my perception towards women and **that women cannot only be responsible for chores**. I promote women in participation as well as promote the way we listen to women and what they share.



Gender Equality **69%** average of all men 71%

This change is happening at/in:



Value	Positive	Neutral	Negative
V Value	87%	13%	0%
O Occurrences	40%	0%	0%
I Importance	93%	7%	0%
C Contributions	86%	40%	27%
E Expectations	73%	27%	0%
Will this change last?	100%	0%	0%

29

Adapting communication and collaboration



There are 7 people (5 men and 2 women) with similar types of changes in the SMSU3 program.

My name is Visna. I am 33 years old and a Manager in the SMSU3 project.

As part of my role in this project, I have attended quite a few trainings. And have starting thinking about our team can work together better.

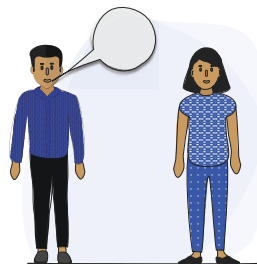
I am working harder to be more respectful of the women on my team and recognizing that my words have impact.

We are working much better together as a team.

There is a change in the workplace, **mutual respect in words and deeds**.

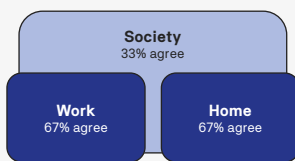
Before the SMSU3 Project, I felt that we did not pay attention to our working group. **We were working as competitors** in order to just beat one another. But...I can see that our teamwork is going smoothly. There is a change.

"For me, before, all my words and expressions **were never thought to affect women**, and before I spoke, I did not think much about them. After attending the training, I became more cautious in my words."



Gender Equality **69%** average of all participants 71%

This change is happening at/in:



Value	Positive	Neutral	Negative
V Value	100%	0%	0%
O Occurrences	86%	14%	0%
I Importance	100%	0%	0%
C Contributions	57%	71%	0%
E Expectations	57%	42%	0%
Will this change last?	71%	28%	0%

30

Involving women in decisions



There are 6 men (out of 91 men) with similar types of changes in the SMSU3 program.

My name is Vithu. I am 27 years old and a male Sales Agent in the SMSU3 project.

After participating in trainings within iDE, I started thinking about how to involve my wife and mother in our family decisions.

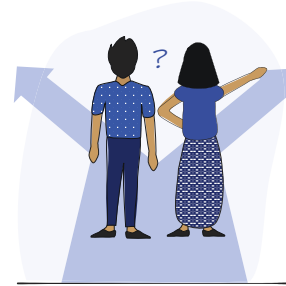
Previously I made all the decisions, as I made the money.

We are better at taking decisions together and I have also thought about how to do this in our team meetings too.

"In the past, I thought that men were the deciders of all in the family, because they are the working ones. Now I have completely changed."

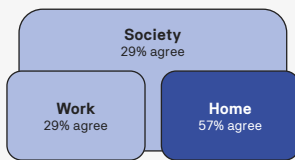
Previously, all decisions were on me alone. Now all the important decisions in the family have to be discussed and agreed smoothly.

"Before, I didn't prioritize women's ideas on the team when I made decisions. Now, I am actively trying to bring more women into program decisions, prioritizing whole team participation."



Gender Equality **69%** average of all men 71%

This change is happening at/in:



V Value
O Occurrences
I Importance
C Contributions
E Expectations

What is the outcome of the change?	Positive 100%	Neutral 0%	Negative 0%
How many people like you are also changing like this?	Very 43%	Somewhat 57%	Not 0%
How important is this change to you?	Very 100%	Somewhat 0%	Not 0%
What contributed to this change?	Gender Training 83%	General Training 50%	Societal Changes 17%
Was it surprising to you?	Very 71%	Some 29%	Not 0%
Will this change last?	Yes 86%	Maybe 14%	No 0%

31

Becoming more polite



There are 5 women (out of 85 women) with similar types of changes in the SMSU3 program.

My name is Leap. I am 35 years old and an Administrative Assistant the SMSU3 project.

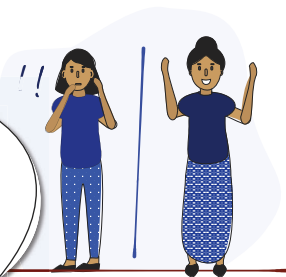
As apart of my work within the SMSU3 programs, I have been learning a lot of new things which have influenced the way I work.

The biggest change for me has been in my outlook on life. I used to be quite rude, but now I am feeling very positive and I see the value of other people on my team. I'm more polite now.

"In the past, I was an arrogant person who liked to find out about friends who were not very friendly. Now I am a polite person, friendly even."

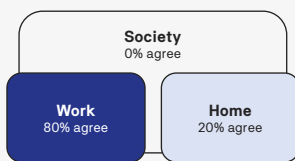
"In the past, I was easily angered, lacked confidence, lacked confidence, and acted irresponsibly. Now I can control my emotions, make progress and do it myself."

"I have changed. I used to see other people in a negative light but now I am more positive."



Gender Equality **68%** average of all women 72%

This change is happening at/in:



V Value
O Occurrences
I Importance
C Contributions
E Expectations

What is the outcome of the change?	Positive 100%	Neutral 0%	Negative 0%
How many people like you are also changing like this?	A lot 40%	Some 60%	Few 0%
How important is this change to you?	Very 100%	Somewhat 0%	Not 0%
What contributed to this change?	Gender Training 60%	General Training 60%	Societal Changes 0%
Was it surprising to you?	Very 80%	Some 20%	Not 0%
Will this change last?	Yes 100%	Maybe 0%	No 0%

32

Freed to roam and work



There are 4 women (out of 85 women) with similar types of changes in the SMSU3 program.

My name is Pheakdey. I am 20 years old and Sales Agent in the SMSU3 project.

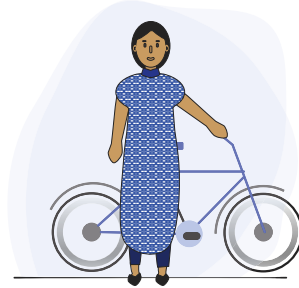
I used to be really afraid to travel on my bike or motorbike in the village. **I was scared as many people told me it wasn't lady-like and that it was dangerous.**

But my boss has been really supportive and we jointly made a plan to make sure that I can travel. Like closer locations, day-time travel and going in a group. It's totally changed my mind. I'm really good at selling latrines!

In the past, my mother always forbade me to **go far away**. Now I have the **right and freedom on my own** without asking her and no more pressure on me. It is because she has a great understanding of gender

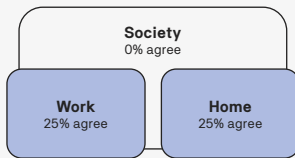
I did not dare to go to work thinking that I **could not work**

Before, I thought I **could not work far away or ride a motorbike** for fear of getting hurt because I was a woman and suffered a lot. Now I think women can work as far away as men.



Gender Equality **69%** average of all women **72%**

This change is happening at/in:



- V** Value
- O** Occurrences
- I** Importance
- C** Contributions
- E** Expectations

What is the outcome of the change?	Positive 100%	Neutral 18%	Negative 0%
How many people like you are also changing like this?	Very 100%	Somewhat 0%	Not 0%
How important is this change to you?	Very 100%	Somewhat 0%	Not 0%
What contributed to this change?	Gender Training 91%	General Training 27%	Societal Changes 36%
Was it surprising to you?	Very 75%	Some 25%	Not 0%
Will this change last?	Yes 75%	Maybe 25%	No 0%

33

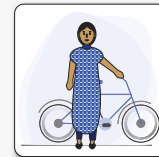
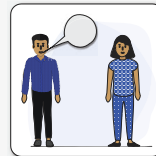
Critical observation



Critical self-reflection



Critical action



34

Recommendations to strengthen the gender transformative potential of SMSU3

35

Gender mainstreaming training

Recommendations

1. Encourage **training facilitators to review Freire's Critical Pedagogy** and approaches to adult education. There are many good resources online that outline this thinking.
2. Encourage **training facilitators to review the 14 personas** and reflect on how those individuals can be further supported. Have facilitators review the material while thinking like each of the personas in a human-centered design approach.
3. Embed the **3-stage critical consciousness framework** into the training. This will help participants to reflect on how they can become 'actors' of change.
4. Add a **visioning exercise** to the end of the gender mainstreaming training. Include aspects of observation, reflection and action. See details and an example at: waterforwomen.uts.edu.au/toolkit/tools/visioning.

36

Gender mainstreaming activities

Recommendations

1. Conduct **cross learning visit to or discussion meeting** with Svay Rieng around the gender parity changes in the provincial office. Svay Rieng has the highest proportion of women staff (63%). Explore the levers and barriers to this success.
2. Foster **a mentorship or coaching network** for women leaders with the organisation. Connect this network to an external resource centre for women's leadership.
3. Create a **poster, video, or newsletter series on positive deviant personas** (such as helping out at home or daring to speak out) to share throughout the organisation. Ideally this should be beyond SMSU3. The personas in this deck could be adapted for this purpose.
4. Create a **meeting template guideline** to support women during meetings. This could include guidance on voting for major decisions, rotating note-taking, keeping to time (especially at the end of the day), reflecting on seating patterns, and allowing for bathroom breaks during long meetings.

Gender Mainstreaming Activity Idea Bank

- Trainings
- Workshops
- Cross Learning Visits
- Meetings
- Coaching
- Mentorship
- Networks
- Positive Deviant Stories
- Posters
- Videos
- Newsletters
- Guidelines
- Gender Audits
- Office Layout Review
- Policy Review

37

SMSU3 Gender Mainstream training

Key lessons learned

+ Positive things

1. The SMSU3 Gender Mainstreaming approach was very effective in supporting managers and officers to think critically about how they engage with gender equality in the workplace.
2. The training was effective at 'rippling out' from the workplace to the home and the community.
3. The training was effective at creating a shared definition of gender equality for the team. This included a good foundation on the importance of rights of women within Cambodian society and law.

- Things to work on

1. We can strengthen the impact of the training on agent level staff. This may include the recommendations from the previous section and by critically reflecting on the power-balance between trainers and agent level staff.
2. We can help support staff to move from observers to doers and help to solidify that gender equality is not a job for women, but a task for everyone.
3. We can help support staff to think critically about 'why' gender equality is important. Peace, prosperity, happiness, and progress were all mentioned.

38



Exploring gendered experiences within iDE Cambodia's SMSU3 WASH Program: Photo-stories

Jess MacArthur
Samrach Koh

UTS HREC REF NO. ETH19-4343

1

Project Background

Water for Women is Australia's flagship water, sanitation and hygiene (WASH) program supporting improved health, equality and wellbeing in Asian and Pacific communities through socially inclusive and sustainable WASH projects. Water for Women is delivering 18 WASH projects in 15 countries together with 11 research projects (2018-2022).

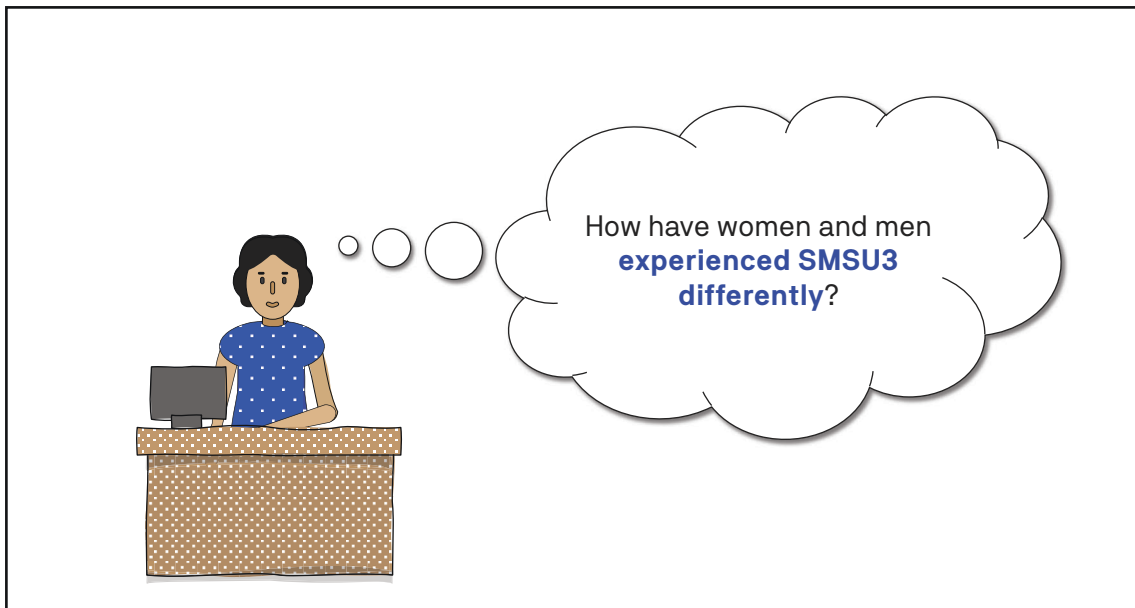


Sanitation Marketing Scale-Up Program 3 (SMSU3), a water and sanitation intervention implemented by iDE Cambodia contains multiple funding streams including DFAT's Water for Women fund. The program operates in six rural provinces supporting the promotion and sale of latrines, water filters, faecal sludge management and handwashing systems through private enterprises.



waterforwomen.uts.edu.au

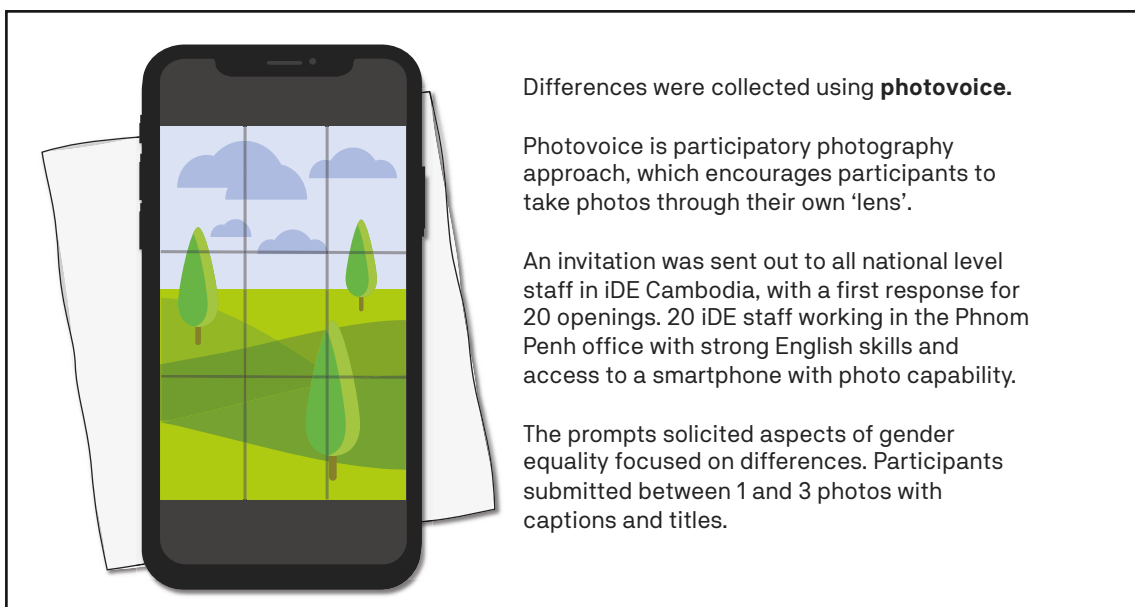
2



SMSU3 is seeking changes for beneficiaries, change agents (LBOs) and staff. Ideally, the program is hoping to create gender transformative change.

This research seeks to understand how SMSU3 is experienced by different people differently, with a specific focus on gender.

3



Differences were collected using **photovoice**.

Photovoice is participatory photography approach, which encourages participants to take photos through their own 'lens'.

An invitation was sent out to all national level staff in iDE Cambodia, with a first response for 20 openings. 20 iDE staff working in the Phnom Penh office with strong English skills and access to a smartphone with photo capability.

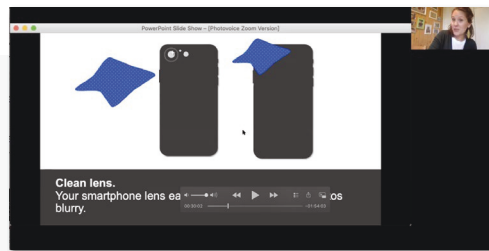
The prompts solicited aspects of gender equality focused on differences. Participants submitted between 1 and 3 photos with captions and titles.

20 iDE Cambodian staff participated in the research.

32 photos were submitted. 25 photos had gender-related content.

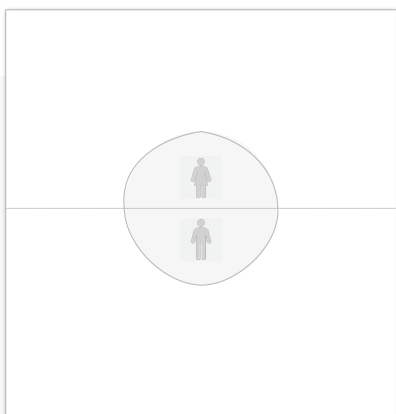
4

1. Introduce the concept of photovoice as a monitoring and evaluation approach
2. Build capacity and confidence of participants in photography skills
3. Introduce the concept of ethical photography
4. Introduce the photo submission and selection process
5. Introduce prompts through an activity to collect GESI-related photographs



Kick-off Workshop

5



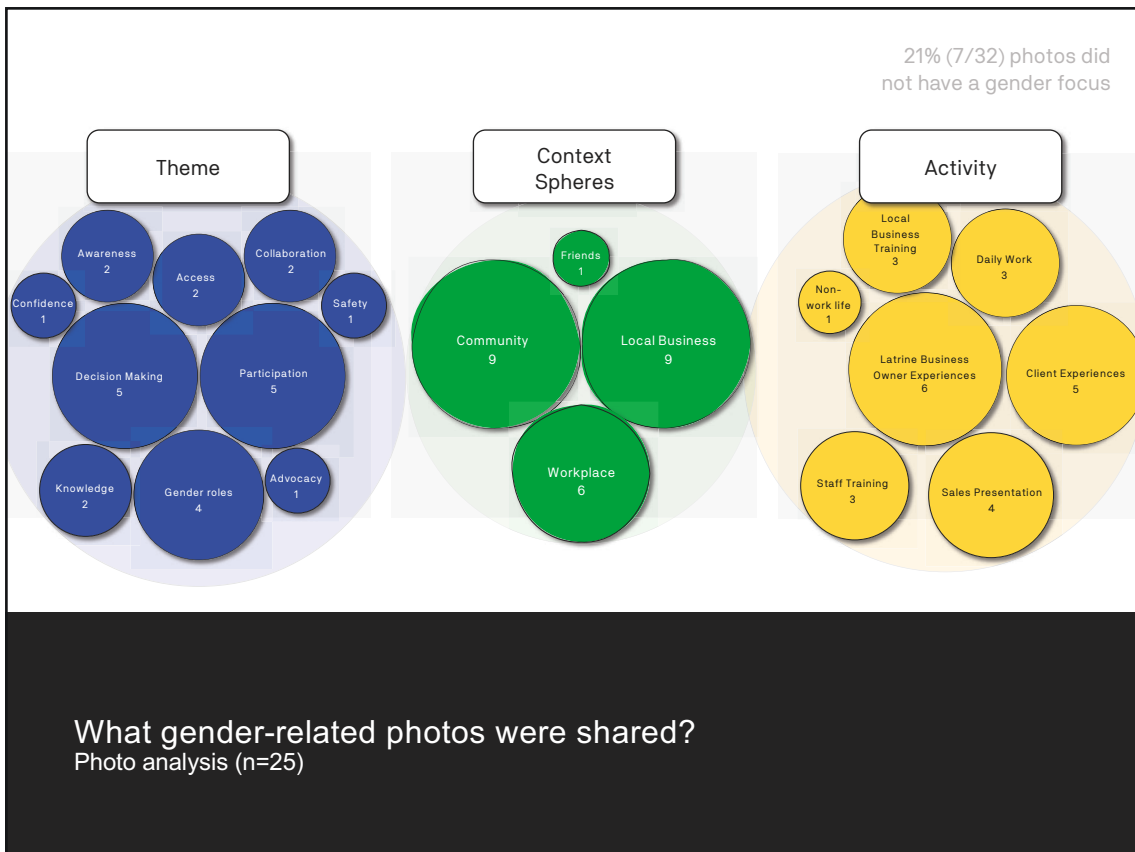
- **Please give your photograph a title.**
- **What is this photograph representing? *What happened? Where? When? Who was involved? How did it end?***
- **Why did you choose to share this particular photo?**
- **How does this photograph make you feel?**
- **Why do you think this photo is important to gender equality?**

Photo Prompt

6



7



8

V	Value	What is the outcome of the change?	Positive 94%	Neutral 6%	Negative 0%
O	Occurrences	How widespread is this type of change?	Very 47%	Somewhat 4.4%	Not 9%
I	Importance	How important is this change to you?	Very 85%	Somewhat 15%	Not 0%
C	Contributions	How much has the project been involved?	Very 75%	Somewhat 25%	Not 0%
E	Expectations	Was the change surprising to you?	Very 78%	Some 22%	Not 0%
		Will this change last?	Yes 31%	Maybe 34%	No 34%

What is the **context** and **significance** of these photos?
Participant coding of stories (VOICE)

9



10

The working woman

Sar Sovaneath

For this photo, I want to talk about the activities of a woman, **even though she is pregnant, she can still come to work normally.**

This photo makes me feel excited and happy.

Even though she is pregnant, she is able to come to **work with the encouragement and support of the team.**

Title and caption edited for clarity.



11

Ladies in social training

Krech Kimhong

In this picture we see ladies participating in a social training that I joined last week. The training was in Aceda Institute of Business and focused on woman behaviour change, critical consciousness woman and woman wellbeing. After the training, we have all understood the content instructions. Furthermore, we are ready to apply it to our real lives effectively.

I chose this photo because it shows that the woman can join many activities.

Gender equality? Because the training content has woman behavior change, critical consciousness woman and woman wellbeing

Title and caption edited for clarity.



12

DPM random list clients for QAO check toilet quality

Poy Dy

In this photo we can see a Quality Assurance Officer (QAO) making a plan to check the quality of installation.

Gender equality? This is important to gender equality, because the client list is women.



Title and caption edited for clarity.

13

Chromebook Training for Village Mobilizers

Anonymous

Since October 2019, iDE has been conducting Chromebook training with all Village Mobilizers. Village Mobilizers use their Chromebook (like a computer) for daily activities such as supporting the claims for open defecation free declaration for villages.

Village mobilizers are male and female and all have Chromebooks.

The main of our WASH projects is to ensure that villages are open defecation free (ODF), so the department very important. But some of the mobilizers find using their Chromebooks difficult as it's different from a normal computer.

This photo is from a training in Kampong Thom.

Gender equality? Because Male and female are have chance to attended



Title and caption edited for clarity.

14

How to Submit Case by Taroworks

Anonymous

In this photo, the district sales manager shows sales agents how to file a complaint through Taro-Works (an online survey system). Here, the district sales manager holds a mobile phone showing three sales agents in Ba Phnom District, Prey Veng Province. The complaint management system is important to our project. But our team cannot train all sales agents, because they are based in the field. Even if we invite them to train at the provincial office, we have to pay a lot, and they could miss their sales targets. Therefore, we only teach to some office staff, such as district sales managers. And then, they share this knowledge with each of them at a specific time. In this way, we have trained all sales agents, whether male or female.

iDE created this complaint management process to ensure that all products and services can be used confidently and safely. In short, all sales agents can understand the system and are determined to use the system to support better work. In addition, our sales agents can transfer this skill to new sales agents or communities to promote our work and organization.

I chose this photo because this photo makes me feel to be surprised as they actively teach and get new experiences.

Gender equality? Because they sit the same in the space and have the same things like a bag, notebook, pen, and mask. They have the chance to attend the training from their direct supervisor.



Title and caption edited for clarity.

15

Village Sanitation Mapping

Ros Khemra

Village sanitation mapping is part of village activation and is implemented by a Village Mobilizer (VM). This photograph was taken in the Ou Kralagn village, Kralagn Commune, Kralagn District, in Siem Reap province. Normally, VM invites village leaders, including the village chief, deputy chief, and member, to draw a village map to identify and collect the household's status and help villages to become ODF (Open Defecation Free). The process of village sanitation mapping contains 4 steps. First, the group draws the main and sub road in the village. Next, they identify the status of each household and their names. Next, they mark who has and doesn't have a latrine. Finally, they verify the map and add a legend.

In this process, VMs involve local authorities - and especially women - to map out non-latrine owners in the community. They can map out clearly the poorest household in the villages and plan for supporting and helping them to access latrine. In the past, leaders would never invite women to join such meetings because they consider that only men can do such planning. When we allow women to attend such meetings, they can advocate more specifically to the commune council to support the poorest households to access latrines. VMs provide capacity building and coach local authorities to do this mapping. This helps them figure out the current open defecation (OD) households. They set up their plan to encourage those households to purchase latrines.

It is important for gender equality in the community.



Title and caption edited for clarity.

16

Personal Life

17

Group Cycling Adventure on the weekend

Krech Kimhong

Group Cycling Adventure is an activity that happens every weekend and we cycle around the community near by the town with a group of friends – we are making a habit of this. We decided to start cycling for three reasons. First is for adventure in rural area, second is to see changes in community development, and third is for health during this the Covid situation.

In fact, I have noted that it is a big change for people who live in the city day by day who can now ride much further. They are changing their habits, and their thinking.

And last by not least, more and more women have been joining our group cycling adventure. One told me that, 21st century women are independent, they can work and join social activities.

We all took photos because it makes us feel good. When we see something, there is something in our gut, or in our heart, that compels us to take a photograph.

Often I think photographs are important in sharing emotion and soul when making images and memories. I often think a lot about the composition, how “good” the photos will be, and how many “likes” we will link to real life activities.

Gender equality? Because this photo has women participating in a new activity.



Title and caption edited for clarity.

18

Local Businesses

19

Conducted business incubator training to own business latrine in Kandal Province, Cambodia.

Nhek Sreytey

This photograph shows latrine business owners participating in business training. This presentation is helping business owners to think about the next 5 to 10 years of their business. During a training course on business incubator on October 24, 2020, this presentation took place at the iDE office in Kandal province. This training course lasts for 8 days, once a month for a total of 4 months, and ends in January 2021.

I took this picture because I am impressed that this course is important for them, and what is even more special is that they, as business owners, are attentive and act well from the reflection of their business owners. They have mutual respect, especially for male participants, which shows that they have a better understanding of gender action and meaning and greater respect for women.

Gender equality? Because many of the participants are men, but they understand the importance of gender, so I expect to increase gender awareness activities after completing this training.



Title and caption edited for clarity.

20

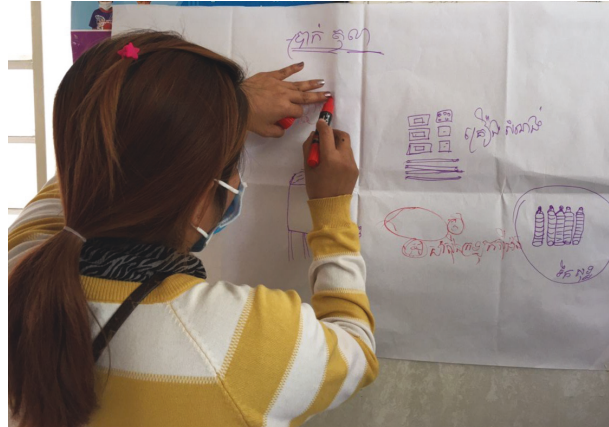
Business goal drawing activities

Nhek Sreytey

This photograph is of the wife of a latrine business owner. She is thinking about her role in the business and what the business could be like in the next 10 years. It is one of the training course activities on the basics of business organized by IDE Cambodia at the Kandal provincial office, where the participants own the toilet business. And this training course will end in January 2021.

This picture makes me feel proud that she can think and show her dreams, she is not very talkative and shy, but she can do it.

Gender equality? This photo for me is that she is a woman who comes alone and does not talk much and is still young, but because of curiosity about doing more business, she came to study.



Title and caption edited for clarity.

21

A strong woman behind a successful man

Chuon Pisey

Mr. Sun Samnang is a latrine business owner in Oddour Mean Chey province. He has been working with iDE for many years since the SMSU2 program. He always goes to households to install and deliver latrines to customers. His wife, Khoem Phoeun, is a housewife, and she also manages labor and production quality. She keeps the business records and sells latrines from home. Mr Samnang said that his wife is his personal assistant and he cannot run the business without her. In summary, although women are physically weaker than men, if both of them join together, they can make something magical. A successful family or business requires women and men to come together.

Gender equality? Women and men work together with the same goal.



Title and caption edited for clarity.

22

The Couple Latrine Business Owner who just investing in an Interlocking Brick Machine

Anonymous

Mr. Phang Samoeurn and Ms. Thun Vantha are located in Prey Veng province and own a latrine business. They have just expanded their latrine business by purchasing Interlocking Brick Machine from Thailand. The couple has been received technical training from iDE Sanitation Engineering Team from 20-22 October 2020. The technical training was successful, and they can manufacture bricks from the machine.

I'm very impressed that both the husband and wife are very confident about the new product in their market.

Gender equality? The couple has decided together, and they went to the Cambodia-Thai border to bring this machine into their shop. The decision on the investment has been made between husband and wife so they will run this business altogether, and as usual, when the wife joins and helps in the WASH business, the company always runs very well. We are very proud of this LBO team who understands the market demand during working with the iDE-Cambodia team. So they are ready to invest more and expand their business more to catch up with the current market demands.



Title and caption edited for clarity.

23

A vision board by LBOs

Koh Samrach

Mr. Hor Ratha and his wife, Ms. San Theary, are a Latrine Business Owner (LBO) team in Kandal province. They are attending the training and so active in the class. They work on their business together and make their own future goals for the business and family. They learned and understood the basics of gender equality. iDE provided business incubator training and also business technical training. For short-term impact, they have changed their mindset on business and start to build their business capacity. For long-term impact, they will be a good part of the open defecation free achievement in their areas and more latrine coverage in the community.

There is a gender change because they're keen to improve their business and are learning about business together.



Title and caption edited for clarity.

24

Beautiful Interlock Brick

Sok Phearom

This photo represents how latrine business owners have made up bricks. I wanted to show our this new product, that looks beautiful.

Gender equality? Because it shows that men and women are able to work and expect to earn income the same



Title and caption edited for clarity.

25

The interlocking brick

Lay Kimheng

This photo represents one type of interlocking brick called "the standard interlocking brick." It was taken at a latrine business owner's manufacturing place in Prey Veng Province, Cambodia. Currently, this interlocking brick has prompted a huge increase in profitability and effectiveness for latrine businesses. This should increase their business sustainability. The bricks mean that building latrine shelters or even house walls is speedier and requires less-skilled workers as the blocks are assembled dry and stacked on one another.

In terms of manufacturing, these bricks require less-skilled workers and take less energy, which means both men and women can easily do this work.



Title and caption edited for clarity.

26

Ideas

Kheang Ratana

The soil for manufacturing interlocking bricks in Prey Veng was hard to use, especially during the rainy season, 14th October 2020. Therefore, the local business owner started to design this own machine which could respond to his need. He has now designed a simple machine to break down the soil from extra materials from his home and local markets. It costs a lot less than buying a brand new machine. Also, by using extra materials, this machine is good for the environment.

I felt that that machine looked complicated, but he could make it, and all materials he took for it were easily accessed.

Gender equality? Because his wife also understood how it works and the process.

Title and caption edited for clarity.



27

Beneficiaries

28

ADP changed her life

Phoung Punlork

Mrs. Vong Raksmei, 39 years old, is a farmer living in Pro Ma village, Svay Yacommune, Svay Chrum district, Svay Rieng province. She has a husband named Sun Hy, 42 years old, a construction worker, and has three children living in the family.

Back in 2014, Mrs. Raksmei's husband purchased a latrine because of difficulty in defecating, a lack of hygiene, and concern for the safety of children when defecating in the forest. After he built the toilet, his family became healthier. They also gained respect from the neighbors.

But after five years of using the toilet, the toilet pit was full and leaking out. The waste caused a foul odor that made the neighbors unhappy, and it caused his family to get sick through flies and other pests. He added that he spends about 800,000 riel for medical treatment every year.

In April 2020, he met with iDE Cambodia's outreach agency in Svay Rieng and consulted on his issues. The agency explained the hardships, harms, and losses he continued to use full toilets and recommended an ADP (Alternating Dual Pit). After he built an ADP by iDE LBO, his toilet was reusable and odor-free. His neighbors praised his solution, and his family stopped suffering from poor hygiene. Now he can save a lot of money, about 500,000 riel from cost reduction by using a safe sewer, and he also feels happy.

Gender equality? She has the right to make decisions in the family equally with her husband for the development of their family.

Title and caption edited for clarity.



29

ADP Product Group Sales Presentation

Anonymous

This is the sales event on the alternating direct pit latrine product. During the sales event, iDE Sales Agents first learn the current problems and costs for toilet owners during pit emptying. The event has been supported by the local villager chief so that our sales agent can promote this product to the clients and the clients can decide to buy.

Gender equality? Many female participants are responsible for taking care of their house and can explain this solution to their family members. As we can see, most attendees are female, and they can share what they are challenging with their current sanitation problems even though they have a toilet.

Title and caption edited for clarity.



30

Home have good sanitation

Nhoem Pechbrathna

This picture shows a model of one of iDE's new latrines. People that purchase this latrine can have good health and happiness in their families. When families know about the importance of sanitation, it can start families on the path to better health. It finishes when they know about the importance of sanitation in their daily life, family, community, and social lives.

Gender equality? This photo is related to the decision to buy a latrine. So they need to discuss with the whole family.



Title and caption edited for clarity.

31

Want to Have a Happy Family, Wash Your Hands.

Pun Soly

This photograph represents that all people have to wash their hands whenever their hands are dirty. It is a simple message to remind people about this important habit and makes the community better.

Gender equality? Because this photo shows that all people need to care of their health, all people need to clean their hands - men, women, and children.



Title and caption edited for clarity.

32

Role of Village Sanitation Champion to Bring Open Defecation Free

Ros Khemra

Hout Sokchea is a village supporting member. She is nominated by the commune chief and council as village sanitation champion as part of her current role. Her village has 328 households. There are 9 non-latrine owners in this village. As a sanitation champion, she needs to educate and encourage those 9 non-latrine households to purchase latrines. She wants her village to become ODF (Open Defecation Free) by the end of 2020. So, she needs to work hard to find the best solutions for the poorest households to have the ability to purchase latrines. This represents the changes in women's role to support the community to become ODF. She said that she is very happy that she can work in the community to help poor households to access latrines. She said that "women know women better than men do." Thus women play an important role in supporting other women in the community.

Hout Sokchea received training and coaching from iDE's village mobilizer (VM). After completing the training, the VM set up a clear monthly plan to meet with households to purchase latrines. Usually, she sets up a work plan and encourages them to buy latrines.

Gender equality? This photo shows the unique role of women in bringing a community to become open defecation free.



Title and caption edited for clarity.

33

Happy to get a latrine

Anonymous

I took this photo during a field visit with a sale agent at Prey Veng province on 27 October 2020. It was just the sale agent, customer, and me. The picture is from the end of a sales meeting. She was so happy after she registered to install a latrine. I want to show other people in the community the change in behavior in using a latrine. Previously women were always asking her husband to purchase a latrine. But now it seems that they understood each other very well, which it means that they are involved together to make thing well in his/ her families

Gender equality? The woman can decide to purchase a latrine by herself.



Title and caption edited for clarity.

34

Sales presentation

Klann Mab

This photo represents a main part of the SMSU3 project – selling.

The photo is from the Prey Veng province and involves a district sales manager.

Gender equality? In this photo we can see women participating within the program.



Title and caption edited for clarity.

35

Direct Sale Presentation

Sok Phearom

This photo represents the process for new clients to access a new latrine.

I chose this photo because it is part of our working and coaching sale.

Gender equality? This photos is about gender equality, because most often in the community men are the decision makers. But in this one, the woman is standing to make the decision.



Title and caption edited for clarity.

36

Interlocking Shelter Latrine

Sok Phearom

This interlocking shelter is a new latrine product from the iDE team. In designing it, we have considered people with disabilities who can access it easily and beneficiary to their living life.

I felt joy with this photo and love the product that my people can access, **especially people with disabilities.**

Gender equality? Because it is representing that all people can access an improved latrine, especially people with disabilities.



Title and caption edited for clarity.

37

A toilet under the rain

Yoem Vichet

Last October, I traveled to Oddar Meanchey Province with the project administration manager for the quality control of Easy Latrine for business owners there. I was surprised to see a toilet with multi-colored zinc walls that have just been built. I interviewed the toilet owner, and they replied that they used the materials they already had, such as plywood left over from the house construction and old zinc for the building of the toilet.

They like the toilet very much, especially when it is raining, because they do not have to walk through the rain to the bush behind their house anymore, and they no longer worry about their daughters and young kids. **Now they feel warm and safe every time.**

I shared this photo because I want to show that toilets are essential for men, women, and children. We do not need to build expensive toilets; we can use the materials that we already have to build the toilet shelter, reducing the costs. Toilets help keep families healthy, hygienic, and safe. They ensure privacy and promote gender equality.



Title and caption edited for clarity.

38



English ▾

Voicing Change

UTS HREC REF NO. ETH19-4343

Welcome. **Welcome!** •

Today you will participate in a story-telling activity.

This activity will help us to understand the types of changes that occur in WASH programming for staff.



Switch the language in the top right corner.



Scroll down using your finger on the far right hand side of the screen.



To go to the previous page, click on the blue back arrow at the bottom or top of the page.

Help 1.2. To move to the next page, click on the blue button with an arrow at the bottom of the page. You may get a reminder that not all questions have been filled in.



1. Consent

1.1. We will start by getting your consent to conduct this story-telling.

To proceed you must respond “Yes” to all these questions.



Click on an item with your finger (phone/tablet).

Your selection will turn blue to indicate it has been selected.

I understand that this story-telling is about gender equality.	Yes
I understand that I will answer questions about my own life and people close to me. These questions could be difficult for me.	Yes
I understand I can skip any question or stop the story-telling at any time.	Yes
If I have any questions I will ask the facilitator.	Yes
I am over 18 years old.	Yes

If you are agreed to start this story-telling, please sign below.

You can use finger (tablet/phone).



1.7. Date

8/6/2022

2. Background

2.1. We will now get comfortable using the audio recording system.

Tell me about yourself using the audio recording system. (1-2 minutes of recording)

- Click on the red button with the microphone to start recording.
- Speak into your phone.
- Click on the red button again to submit recording.

You may be asked by your phone to allow your microphone to be used. Please press "Agree/Yes"

Help 2.1.



2.2. **Your Gender** Click on one (1).

- Male Female Other

2.3. **Your Age** Click on one (1).

- 18 - 24 25 - 34 35 - 44 45 - 54 55 - 64 65+

2.4. **Your Life** Click all that apply.

If your response does not appear. Please enter a short phrase into the textbox.



SM.3 Sample micronarrative submission form

Qualtrics online survey printout

Married Single Widowed Divorced Have children

Sexual or Gender Minority Other (please specify)

2.5. Your Ethnicity

Ethnic Khmer Vietnamese Chinese Tai Cham Khmer Loeu

Other (please specify)

2.6. Your Religion

Buddhist Christian Muslim/Islamic Animist Atheist/No religion

Other (please specify)

2.7. Permanent Disabilities

Permanent difficulty seeing, even with glasses

Permanent difficulty hearing, even if using a hearing aid

Permanent difficulty walking or climbing steps

Permanent, severe difficulty concentrating or remembering

Permanent difficulty with self-care such as washing all over or dressing

Permanent difficulty speaking or communicating, for example understanding or being understood

None

2.8. Your Job Role

Click on one (1). If your response does not appear, enter a short phrase into the textbox.

Sales Agent (SA)

Deputy Provincial Manager (DPM)

District Sales Manager (DSM)

Quality Assurance Officer (QAO)

Sanitation Business Advisor (SBA)

VM

Sanitation Finance Coordinator (SFC)

PPM

- Sani-Tech
- Provincial Manager (PM)

- RA
- Other (please specify)

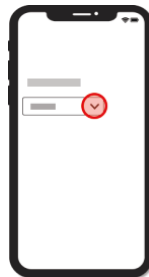
2.9. Your Job Location

Click on one (1). If your response does not appear, enter a short phrase into the textbox.

- Kampong Thom
- Kandal
- Prey Veng
- Oddar Meanchey
- Siem Reap
- Svay Rieng
- Other (please specify)

Help 2.2. Your Experience

Select the number of years.



2.10. How long have you been working in the development sector or NGO work?

2.11. How long have you been working with SMSU (1, 2 and 3)?

2.12. Have you ever had gender-equality training before?

- Yes
- No

2.13. Have you had a refresher gender-equality training in 2020?

- Yes
- No

3. Critical Consciousness

Help 3.1. Now we will explore a few questions about your personal beliefs related to gender.

There are no right or wrong answers. You will not be judged for your responses. Your ideas may be different than other people. That's okay. Feel free to be honest.

Click one (1) option per question.

3.1. Men are better leaders than women.

Strongly agree Agree Disagree Strongly disagree

3.2. Having women in politics is important.

Strongly agree Agree Disagree Strongly disagree

3.3. Nowadays men should participate in looking after children and household chores rather than leaving it all to the women.

Strongly agree Agree Disagree Strongly disagree

3.4. The father is the one who should have the final say in the household.

Strongly agree Agree Disagree Strongly disagree

3.5. A husband should be more educated than his wife.

Strongly agree Agree Disagree Strongly disagree

3.6. A woman should obey her husband in all things.

Strongly agree Agree Disagree Strongly disagree

3.7. Education is valuable for daughters or daughters-in-law.

Strongly agree Agree Disagree Strongly disagree

3.8. Women are just as capable as men of earning an income.

Strongly agree Agree Disagree Strongly disagree

3.9. A woman's role is to serve her husband.

Strongly agree Agree Disagree Strongly disagree

3.10. Men should have greater rights to inherit money and land than women.

Strongly agree Agree Disagree Strongly disagree

3.11. If a young girl is not married by the time she is 18, it reflects badly on the family.

Strongly agree Agree Disagree Strongly disagree

3.12. Girls are more limited than boys in what they can do.

Strongly agree Agree Disagree Strongly disagree

3.13. If there is a new technology, women should be the first to be taught how to use it.

Strongly agree Agree Disagree Strongly disagree

3.14. Having women in elected positions is important.

Strongly agree Agree Disagree Strongly disagree

3.15. Girls should be allowed to study even if it is far away.

Strongly agree Agree Disagree Strongly disagree

4. Micro-narrative _verbs

Help 4.1.

Both this study and SMSU3 are focused on gender equality
how experiences and interactions are becoming more equal between women
and men.

4.1. Thinking about your involvement in the SMSU3 program,

Pick one of these cards which represents a significant change for you
personally, related to gender equality.



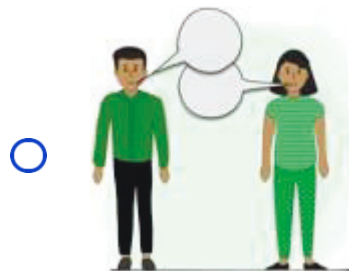
Change in what you know



Change in how you feel



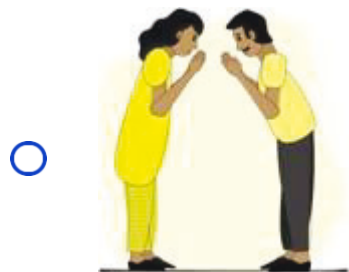
Change in what you have



Change in how you speak



Change in what you think



Change in what you do

4.2. What specifically changed? You can tell me like you would tell your friend.
You can type, audio message or both.

4.3. What were things like before?
You can type, audio message or both.

4.4. What are things like now?
You can type, audio message or both.

4.5. Why did this change happen?
You can type, audio message or both.

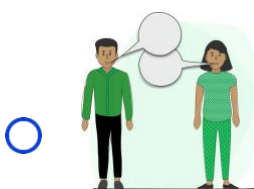
4.6. What is this change? Select the (1) most relevant card.



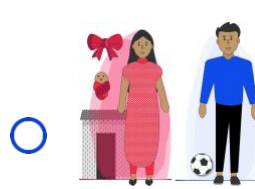
Changes in workloads between men and women



Changes in participation of women



Changes in communication between men and women



Changes in what is considered normal for men and women





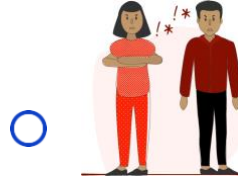
Changes in attitudes towards women leaders



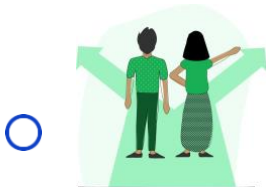
Changes in confidence for women



Changes in skills and knowledge for women



Changes in the level of conflict between men and women



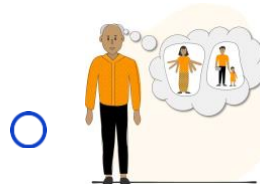
Changes in decision making between women and men



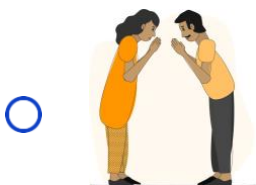
Changes in personal safety for women



Changes in freedom of movement for women



Changes in self-awareness of gender inequalities



Changes in respect for and trust in women

Other (please describe)

4.7. Who else was involved in this change?

Click all the options that apply or add your own option in the other box.

- | | | |
|--|--|---|
| <input type="checkbox"/> Your family as a whole | <input type="checkbox"/> Your organization as a whole | <input type="checkbox"/> Your community as a whole |
| <input type="checkbox"/> Several members of your family | <input type="checkbox"/> Several members of your organization | <input type="checkbox"/> Several members of your community |
| <input type="checkbox"/> A member of your family (older) | <input type="checkbox"/> A member of your organization (older) | <input type="checkbox"/> A member of your community (older) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SM.3 Sample micronarrative submission form

Qualtrics online survey printout

A member of your family
(younger)

A member of your
organization (younger)

A member of your
community (younger)

Other (Please describe)

Your project

4.8. Pick and share an emoji that describes how you feel about this change.

Select one (1) or add your own option.

- 😄 - very happy
- 😊 - happy
- 😐 - unsure
- 😞 - sad
- ☹️ - unhappy
- 😡 - mad
- other

4.9. On a scale of 1-10, what is the **outcome value** of this change to you?

Negative Neutral Positive
0 1 2 3 4 5 6 7 8 9 10

4.10. Which of these things is/are connected to this change?

Click all the options that apply or add your own option in the other box.

- | | |
|--|---|
| <input type="checkbox"/> SMSU3 General Training | <input type="checkbox"/> SMSU3 Training of Trainers |
| <input type="checkbox"/> SMSU3 Gender Training | <input type="checkbox"/> SMSU3 Mentorship |
| <input type="checkbox"/> Selling WASH Product | <input type="checkbox"/> Networks |
| <input type="checkbox"/> SMSU3 Advocacy | <input type="checkbox"/> Conversations |
| <input type="checkbox"/> SMSU3 Community Sessions | <input type="checkbox"/> General Societal Changes |
| <input type="checkbox"/> SMSU3 Government Meetings | <input type="checkbox"/> Other (Please describe) |
| | <input type="text"/> |

4.11. How much was the project involved in this change?

Not 0 1 2 3 4 Somewhat 5 6 7 8 9 Very 10

4.12. How **common** is this change with **other people similar** to yourself?

Few 0 1 2 3 4 Some 5 6 7 8 9 A lot 10

4.13. How **important** is this change to you?

Not 0 1 2 3 4 Somewhat 5 6 7 8 9 Very 10

4.14. How **surprising** is this change to you?

Not 0 1 2 3 4 Somewhat 5 6 7 8 9 Very 10

4.15. Do you think this **change will last**?

No 0 1 2 3 4 Maybe 5 6 7 8 9 Yes 10

4.16. **What do you hope will come from this change in the future?**

You can type, audio message or both.

4.17. **Briefly share any other changes that you have experienced personally related to gender equality and your involvement in the SMSU3 program.**

You can type, audio message or both.





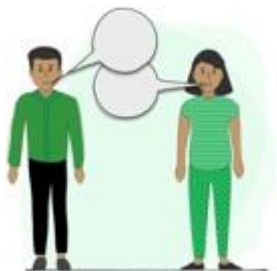
Change in what you have



Change in what you think



Change in how you feel



Change in how you speak



Change in what you do

5. Visioning

5.1. I would like you to dream about what 2030 could be like at home, work and in the community.

In this future, women are gems just like men. There is equality for women.
What are possible things that would be different from your current world?

1

2

3

5.2. You are welcome to provide more details by typing, recording your voice or both.

6. Reflection

6.1. What was your mood when doing this story-telling?

- | | |
|--|-------------------------------------|
| <input type="radio"/> Fully comfortable | <input type="radio"/> Mild stress |
| <input type="radio"/> Somewhat comfortable | <input type="radio"/> Severe stress |

6.2. Why did you find this story-telling uncomfortable or stressful?

- | | |
|---|--|
| <input type="radio"/> Interface / technical reasons | <input type="radio"/> Questions are confusing |
| <input type="radio"/> Gender equality is confusing | <input type="radio"/> Questions reminded me of a difficult time in my life |
| <input type="radio"/> Questions are very personal | <input type="radio"/> Other (please describe) |

6.3. Please note how you found the story-telling by saying if you agree or disagree.

SM.3 Sample micronarrative submission form
Qualtrics online survey printout

	agree	Agree	disagree	disagree	disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interesting	Strongly agree	Somewhat Agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enjoyable	Strongly agree	Somewhat Agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Easy	Strongly agree	Somewhat Agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clear	Strongly agree	Somewhat Agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe	Strongly agree	Somewhat Agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevant to me	Strongly agree	Somewhat Agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right amount of time	Strongly agree	Somewhat Agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6.4. How effective do you think different aspects of the story-telling are?

Interface



Extremely effective	Very effective	Moderately effective	Slightly effective	Not effective at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Questions



Extremely effective	Very effective	Moderately effective	Slightly effective	Not effective at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Audio Recordings



Extremely effective	Very effective	Moderately effective	Slightly effective	Not effective at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Help GIFs

Extremely	Very	Moderately	Slightly	Not effective
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SM.3 Sample micronarrative submission form

Qualtrics online survey printout



effective effective effective effective at all

Graphics



Extremely effective Very effective Moderately effective Slightly effective Not effective at all

6.5. How effective do you think different aspects of the story-telling are?

Consent



Extremely effective Very effective Moderately effective Slightly effective Not effective at all

Background



Extremely effective Very effective Moderately effective Slightly effective Not effective at all

Your perceptions



Extremely effective Very effective Moderately effective Slightly effective Not effective at all

Storytelling



Extremely effective Very effective Moderately effective Slightly effective Not effective at all

Visioning

Extremely effective Very effective Moderately effective Slightly effective Not effective at all



6.6. Please note how you found the story-telling by saying if you agree or disagree.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
My answers can make SMSU3 even better for staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My answers can make SMSU3 even better for clients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This survey helped me think more deeply about gender equality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people answered truthfully	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6.7. Can we contact you after this story-telling to discuss your answers further?

Yes No thank you.

6.8. Please provide your contact details below.

Name	<input style="width: 250px; height: 20px;" type="text"/>
Email Address	<input style="width: 320px; height: 20px;" type="text"/>
Phone Number	<input style="width: 320px; height: 20px; border-left: none; border-right: none;" type="text" value="+855"/>

6.9. Is there anything else you would like to ask or tell us? (optional)

Photovoice - Photo Submission

UTS HREC REF NO. ETH19-4343

Consent

Name

I understand that I will answer questions about my own photos.

Yes

I understand that as these questions may be personal, I can skip any question or stop at any time.

Yes

I understand that I will not receive money for my photos.

Yes

If I have any questions I will ask.

Yes

I give permission for ISF and iDE to use my photographs ethically.

Yes

I want to be named as the photographer of my photos (optional).

Yes No

Date

×

SIGN HERE

[clear](#)

Background

Your Age Click on one (1).

18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65+
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Your Job Title and Team. Type in the boxes below

Title

Team

What are three tasks that are apart of your job on a regular basis? Type in the boxes below

1

2

3

Your Experience

Select the number of years.

How long have you been working in the development sector?

How long have you been working with iDE?

Have you participated in a gender-equality training before?

Yes

No

Have you participated a gender-equality training in 2020?

Yes

No

In your role as a photovoice specialist you participated in a training and been taking ethical photographs as you go about your normal work.

Now you are going to select up to three (3) photographs that you want to share with the team.

Take a moment to identify which photos you want to share.

How many photographs do you want to share with us? Click on one (1).

- 1 2 3

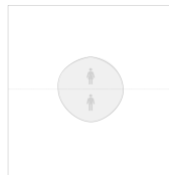
Photo 1

- Section repeated as required

Let's discuss the photographs that you have selected.

Remember the photo should represent something that represents how men and women experience the impacts of iDE differently.

It should be related to gender equality.



Pick one of your photographs.

What ethical considerations are required for this photograph?

- No people No identifiable people Identifiable people - with consent form

Please upload a picture of the completed consent form here.

If you are on your phone or tablet, you can click below and take a photo right now.

Or write the consent form number in the box below.

Please upload the photograph.

Please give your photograph a title. Type in the box below.

What is this photograph representing? Type your caption in the box below.

What happened? Where? When? Who was involved? How did it end?

Why did you choose to share this particular photo? Type in the box below.

How does this photograph make you feel? Type in the boxes below.

Text

Emoji

Why do you think this photo is important to gender equality? Type in the box below.

Who is this photograph representing?

Click all that apply.

- Yourself
- Your family
- Your community
- Your work

- iDE
- Your working areas
- Other (Please describe)

Which of these things is/are connected to this photo?

Click all the options that apply or add your own option in the other box.

- | | | |
|---|---|---|
| <input type="checkbox"/> General Training | <input type="checkbox"/> Community Sessions | <input type="checkbox"/> Networks |
| <input type="checkbox"/> Gender Training | <input type="checkbox"/> Government Meetings | <input type="checkbox"/> Conversations |
| <input type="checkbox"/> Selling Product | <input type="checkbox"/> Training of Trainers | <input type="checkbox"/> General Societal Changes |
| <input type="checkbox"/> Advocacy | <input type="checkbox"/> Mentorship | <input type="checkbox"/> Other (Please describe) |
| | | <input type="text"/> |

What do you think about what is represented in the photograph?

Click on one option in each row.

	Positive	Neutral	Negative
Is the final outcome good, bad or neutral?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is this happening to other people?	A lot <input type="radio"/>	Some <input type="radio"/>	Few <input type="radio"/>
How important is this?	Very <input type="radio"/>	Somewhat <input type="radio"/>	Not <input type="radio"/>
How much was the project involved?	Very <input type="radio"/>	Somewhat <input type="radio"/>	Not <input type="radio"/>
Was it surprising to you?	Very <input type="radio"/>	Somewhat <input type="radio"/>	Not <input type="radio"/>
Do you think this will last?	Yes <input type="radio"/>	Maybe <input type="radio"/>	No <input type="radio"/>

Please select the card that you think best represents this photograph.

Changes in what
people know

Changes in how
people speak

Changes in how
people feel

Changes in what
people think

Changes in what
people have

Changes in what
people do

You can add further notes here (optional)

Conclusions

Thank you for participating as a photovoice specialist!

Your insights are really valuable and it's so important that stories like yours help us to understand how to help others.

If you would like to provide feedback on any part of this research or project please refer to the information sheet.

What was your mood when doing these activities?

Fully comfortable	Somewhat comfortable	Mild stress	Severe stress
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Can we contact you to discuss your answers further?

Yes

No thank you.

What did you learn from the Photo-voice training?

What changed about how you take photos since the Photo-voice training?

What is one way to make Photo-voice training or submission better next time?

Is there anything else you would like to ask or tell us? (optional)

Untangling significance



A simple framework to support descriptions of change

Jess MacArthur and Tamara Megaw

Tags: qualitative, evaluation, assessment, transformative change, meaning, significance, salience, unintended outcomes

Abstract - Assessing complex change is difficult and nuanced. One such example of complex change includes gender transformative change – which seeks to transform gender dynamics towards equality by focusing on the systems and structures which perpetuate inequalities. Other forms of complex change include systems change and resilience. Measurement of such complex change often leads researchers and evaluators to participatory, qualitative, and creative methods. However, the interpretation of stories, images, and other qualitative descriptions of change remains challenging. In this blog post, we introduce a simple framework to help unpack descriptions of change and provide two examples of its tailored use.

Social development programs, such as those promoting gender equality, often rely on qualitative forms of evaluation. These qualitative descriptions of change regularly engage stories, observations, and images crafted through open-ended questionnaires, interviews, and focus groups. To move from data to sense-making, these descriptions must be placed in perspective with broader program objectives and goals.

To support exploration of descriptions of transformative change, I (Jess MacArthur) designed and piloted a novel framework. The framework is used in the data collection and interpretation phases of evaluation, helping to illuminate different perspectives between the evaluator and respondents. The framework also aims to honour respondents' knowledge within their communities, offering an opportunity for co-evaluation. The framework builds on Jabeen's (2018) framework of unintended outcomes and Waffi's (2017) creative participatory self-evaluation methodology. The framework can be used both research participants, program staff or both to help unpack significance.

The framework follows the acronym 'VOICE,' which conveys a desire to listen to various voices throughout the assessment process. Each letter represents a different aspect relevant to making sense of change, with specific reflections on unintended outcomes. The final letter 'E' has two aspects

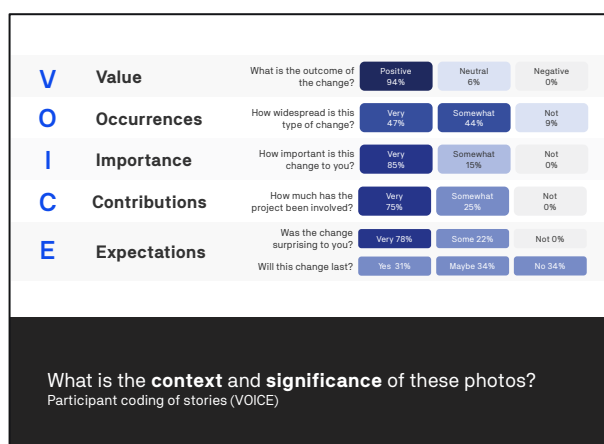
SM.5 – Blogpost: VOICE-SR Framework

MacArthur, J., & Megaw, T. (2022). *Untangling significance: A simple framework to support descriptions of change*. Qualkit. waterforwomen.uts.edu.au/qualkit/tools/significance

associated with it. Further piloting of the framework has added two optional aspects: 'setbacks' and 'risks'.

We highlight two pilot examples of the framework. First a qualitative mid-line evaluation of a gender mainstreaming component for program staff of a sanitation-focused project in Cambodia (October 2020). And second, to explore transformative social accountability outcomes in an inclusive sanitation-focused project in rural Bangladesh (2022).

1. In Cambodia, the framework was used as part of photo submission template for a photovoice activity, with program staff of a sanitation program by Jess MacArthur. Participants were asked to respond to each aspect through a simple multiple-choice question and in essence were asked to 'code' their submitted photos using a three-point scale. Responses were summarised in a simple dashboard as depicted below.



2. In Bangladesh, the framework is being used in an assessment of gender-transformative social accountability outcomes in an inclusive sanitation-focused project in rural Bangladesh (2022). The framework was adapted by Tamara Megaw to reflect that transformative change is a long-term goal and some progress in some domains may be accompanied by setbacks in others (Hillenbrand et al. 2015). In some contexts, when challenging power relations, there can be risks of backlash and unintended negative consequences that need to be recognised and addressed early. The setbacks and risk questions were added in this phase.

Drawing on these two examples, we have identified four uses for the VOICE(-SR) framework as a starting point.

- **Conversation starters to unpack descriptions of change during data collection** – The framework aspects can be used as probe questions with participants in interviews or focus groups to follow-up on a reported change. This is the arrangement for the Bangladesh example.
- **Targeted questions to quantify descriptions of change during data collection** – The framework can be used to elicit 'participatory coding' (using Likert or 0-10 scales) with participants in interviews, focus groups, or in self-administered surveys. This was used in the Cambodia example.
- **Analysis of themes to unpack stories of change** – The framework can be used as an analysis scaffolding for evaluation teams to enrich descriptions of change.

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- **Illuminating differences between evaluators and respondents** – Bridging the first three uses, the framework can also compare how the research teams' analysis overlaps and diverges from research participants and evaluator views.

Aspect	Definition	Potential Questions
Value	The direction of change and overall meaning of the change. Change is not always positive, and this aspect explores the trajectory of the change on a spectrum of positive to negative.	<i>What does this change mean to you? Is it positive, negative, or neutral? Why?</i>
Occurrences	The salience, frequency or 'signal strength' of a particular type of change within reported data. Change is not homogenous, and this aspect aims to understand frequency of occurrence of a change amongst a particular group or population.	<i>Is it happening for other people? What other people? Is there anyone it isn't happening for?</i>
Importance	The significance or weight of a change, both from the viewpoint of participants and program implementors. Changes which evaluators find significant may not be for respondents, and vice versa. This dimension helps to clarify the importance of a change within a context.	<i>How important is it? Why?</i>
Contributions	The connections between the change and the specific program under review. Transformative change is influenced by social programming, but it is always situated within a wider current of societal change.	<i>How much has (project name) been involved? How so?</i>
Expectations 1	The extent to which an outcome is foreseen or surprising. Unforeseen outcomes, and in particular those with negative consequences, remain critical for evaluators.	<i>Was it surprising to you? Did you expect this change? Why or why not?</i>
Expectations 2	A prediction of the lasting impact of the change. Ideally, positive change 'sticks' or doesn't fade away after a program ends. This aspect helps to explore the future expectations of the change.	<i>Do you think it will last? Why or why not?</i>
Setbacks	A reversal or check in progress. Change is not a linear-process and there may be barriers to change that are useful to learn about. Resistance and backlash may also be explored in this dimension.	<i>Are you aware of any setbacks in the change process? If yes, what were they?</i>
Risks	The current or future risks involved with development interventions for participants, their family members or program implementors. It is particularly important to monitor any risk of harm to marginalised groups.	<i>Do you identify any current or future risks associated in your community? If yes, what are they?</i>

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SM.6 Working definition

MacArthur. (2022). *A working definition of gender-transformative WASH*. [Expert from unpublished manuscript]. Institute for Sustainable Futures, University of Technology Sydney.

A working definition of gender-transformative water, sanitation and hygiene

Jess MacArthur, August 2022

Gendered thinking in the water, sanitation and hygiene (WASH) sector was integrated in the overlap of the International Decade for Women and the International Decade for Water and Sanitation (1975 to 1981). Nonetheless, in the years which have followed, transformative models of gender equality for policies, programs, and projects are only just emerging. Building on gender-transformative theory in feminist development practice, this brief proposes a working definition of gender-transformative WASH.

To support practitioners in identifying and designating different models of gender equality, feminist scholars often refer to a continuum of gender approaches. Policies, interventions, and assessments can be placed onto a spectrum first conceptualized by Naila Kabeer and promoted by the International Gender Working Group (IGWG, 2002; Kabeer, 1994). In the twenty years which have followed, the continuum has appeared in many forms and in three streams of practice focused on relational health, institutional structures, and sectoral change. However, to date, the continuum has not been interrogated and adapted for the WASH sector.

The development of this working definition draws on a critical reflection of gender-transformative approaches with reference to existing syntheses of gender and WASH literature (Caruso et al., 2022a; Heijnen & Wijk-Sijbesma, 1993; MacArthur et al., 2020; van Wijk-Sijbesma, 1987). This reflection led to the delineation of gender -specific and gender-sensitive approaches – which both occur frequently in WASH related literature. The adapted spectrum is visualised below.



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The following descriptions provide clarity and definition to the five proposed modalities of WASH-gender practice as identified in literature.

Gender-insensitive – Insensitive approaches do not consider any gender dimensions and are sometimes referred to as gender blind, harmful or unaware. In WASH, a gender-insensitive approach is often associated with technology transfer programs (Wijk-sijbesma 1985).

Gender-instrumental – Instrumental approaches to gender in the WASH sector often focus on the functionality, efficiency and sustainability of WASH systems and services (Emenike et al., 2017; Figueiredo & Perkins, 2013; Freeman et al., 2012; Mommen et al., 2017) as well the engagement of women in increasing the health and wellbeing of children (Cavill & Huggett, 2020; Ubheeram & Biranjia-Hurdoyal, 2017). Instrumental approaches do not aim to address gender inequalities but seek to use women to strengthen other outcomes. When these instrumental outcomes remain sole objectives, the process is potentially exploitative of women's engagement – adding to women's existing work burdens (Indarti et al., 2019; Moser, 1993).

Gender-specific – Connected to the challenges faced by women and girls related to water and sanitation including menstruation, pregnancy, and menopause (Baker et al., 2017; Caruso et al., 2017; Hulland et al., 2015; Sahoo et al., 2015); gender-specific approaches in the WASH sector focus only on women and girls. Other forms of gender-specific approaches focus on women's water security (Aihara et al., 2016; Boateng et al., 2018; Graham et al., 2016; Radonic & Jacob, 2021; Stevenson et al., 2016; Wutich, 2009) and safety related to the access of latrines (Jadhav et al., 2016; Pommells et al., 2018; Sommer et al., 2015; Winter & Barchi, 2016). Gender-specific approaches do not aim to address the gender norms and stigmas connected with women's WASH concerns. Gender-specific approaches are more common in WASH than in other development sectors such as agriculture, climate-change, and education; yet are closely aligned to modalities found within maternal and child health.

Gender-sensitive – Gender-sensitive approaches to WASH are responsive to the traditional domestic roles of women and girls including, water collection, cooking, cleaning, and childcare; while considering the gender dynamics which perpetuate these roles and responsibilities. Such approaches engage a range of participants focusing on gendered differences in education outcomes (Agol & Harvey, 2018; Alexander et al., 2014; Garn et al., 2013), workloads (Arku, 2010; Crow et al., 2012; Gross et al., 2018), participation in water committees (Adams et al., 2018; Balasubramanya, 2019; Caizhen, 2008; Dasthagir, 2009; Elias, 2017; Guo et al., 2011; Hannah et al., 2021; Merkle et al., 2012), and decision-making (Coulter et al., 2019; Hirai et al., 2016; Kevany & Huisingsh, 2013; Magami & Ibrahim, 2016; Routray et al., 2017).

Gender-transformative – Lastly, gender-transformative approaches to WASH are slowly emerging in the sector. These approaches adopt a synergistic approach to strengthening both WASH outcomes

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and equality simultaneously (Carrard et al., 2013; Willetts et al., 2009, 2010b), often through small adaptations to a gender-sensitive approach. Gender-transformative WASH is often connected to themes of participation (Das, 2014; Leahy et al., 2017; Lee et al., 2014; Willetts et al., 2009, 2013) and leadership (Grant et al., 2019; Indarti et al., 2019; Soeters et al., 2021).

Drawing on a spectrum of approaches to integrate gender in WASH practice, this brief has defining gender-transformative WASH both by what it is and what it isn't (insensitive, instrumental, specific, and sensitive). This working definition of gender-transformative will be interrogated through the lens of WASH practice through the co-development of a manuscript with partners in the Water for Women fund and feature in an upcoming special issue of *Frontiers in Water* focused on gender and social inclusion in WASH.

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