



ISSN: (Print) (Online) Journal homepage: <u>www.tandfonline.com/journals/riie20</u>

Changing representations of student achievement: The need for innovation

Rola Ajjawi & David Boud

To cite this article: Rola Ajjawi & David Boud (2024) Changing representations of student achievement: The need for innovation, Innovations in Education and Teaching International, 61:3, 597-607, DOI: <u>10.1080/14703297.2023.2192513</u>

To link to this article: <u>https://doi.org/10.1080/14703297.2023.2192513</u>

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



0

Published online: 17 Mar 2023.

Submit your article to this journal 🗹

Article views: 1264



View related articles 🖸

🕨 View Crossmark data 🗹



Citing articles: 2 View citing articles

OPEN ACCESS Check for updates

Routledae

Favlor & Francis Group

Changing representations of student achievement: The need for innovation

Rola Ajjawi (D^a and David Boud (D^{a,b,c}

^aCentre for Research in Assessment and Digital Learning (CRADLE), Deakin University, Melbourne, Australia; ^bFaculty of Arts and Social Sciences, University of Technology Sydney, Sydney, Australia; ^cWork and Learning Research Centre, Middlesex University, London, UK

ABSTRACT

Transcripts and testamurs serve to confirm the award of a degree but offer limited information on what a student can actually do. This conceptual paper considers the problem of how graduate achievements are represented by universities in typically reductive and limited ways that do not enable student achievements and distinctiveness to be communicated to future employers, communities and students themselves. It argues that refinements to existing methods for the design and development of assessment are needed to encompass both university validated and contextualised credentials along with student-constructed portravals of achievement and personas. Significant change is needed to assessment design, data capture and storage and the ways in which learning outcomes are tracked across a program and over time. Innovations in assessment representation should strengthen employer trust in the value of degrees, student trust in assessment processes and scaffold student agency in curating their employability narratives.

KEYWORDS

Assessment: achievement: testamur; portfolio; persona

Introduction

Students who graduate from university typically do so with a testamur and a transcript. For a prospective employee, a transcript represents the assurity that the graduate has completed a given course and provides a rough guide of relative achievement in the subjects taken. There is little by way of indicating or contextualising what the graduate can do, nor, surprisingly, the extent to which key learning outcomes and graduate attributes have been met. The few attempts that have been made to add useful information, as in the attachment of degree descriptions to transcripts, have focussed on the structure and gualities of the degree undertaken and are silent on the qualities of the graduate

This paper problematises current ways in which student achievements in summative assessment are represented for external consumption. We build on previous arguments for the need to transform assessment practices to take account of students' distinctiveness (Jorre de St Jorre et al., 2021) and to better represent their achievements (Boud & Ajjawi, 2019) by

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

CONTACT Rola Ajjawi 🖾 rola.ajjawi@deakin.edu.au 🖃 Centre for Research in Assessment and Digital Learning (CRADLE), Deakin University, 727 Collins Street, Tower 2, Level 13, Melbourne VIC 3008, Australia

proposing a possible way forward for the academy. The paper argues that graduates need opportunities to portray their achievements that are richer and more authentic than conventional representations of marks and grades. It considers the problem of what is necessary and legitimate for a university to provide and validate, and what needs to accompany this to set such achievements in context and to depict the person producing them.

We introduce our arguments against a backdrop of technological advancement where new digital credentials are created to foster a transition between education and employment by allowing graduates to readily share their verified education records with prospective employers to showcase their achievements (Lizcano et al., 2020). Certainly, our capacity for storage and representation of data has vastly improved from the original days of the transcript. There is no reason why we cannot provide further information about students' achievements within our regular suite of accredited degrees. The building blocks are already in train through existing digital credentialling and emerging blockchain technologies, what is missing is an overall vision and direction for transforming the ways in which student achievement through assessment is represented. At a time when the value of degrees is being questioned (Corliss et al., 2020) and there have been decades of employer criticism from different countries of what graduates have to offer (Cai, 2013; Succi & Canovi, 2020; Tran, 2015), this might be a fruitful endeavour to strengthen community trust in the benefit of higher education and what it offers our graduates.

We start by highlighting the problems with current representations of assessment and then move towards assessment portrayal. We then draw on ideas of persona from the field of celebrity studies, highlighting their value for creating a wider notion of assessment design that encompasses learner-defined goals and achievements. Finally, we illustrate the approach with examples of assessments to showcase features of portrayal.

The problem with current representations of assessment

While the literature on assessment design and marking is vast, there has been little attention paid to how outcomes of assessment are assembled and communicated to those who have a legitimate interest. When discussion has occurred, it has focussed on technical matters such as whether a class of honours or a grade point average be awarded (Burgess, 2007); or whether a testamur requires the addition of a covering statement describing the characteristics of the qualification awarded (HEAR, 2012). The question of whether an often-single page transcript communicates in a meaningful way what a student has achieved to any audience, or what learning outcomes have been met, has been neglected.

Current forms of representation of achievement, through marks or grades, make several assumptions about whether the data can be decoded, what it signifies, and how it can be aggregated across tasks, units and criteria (see Boud, 2017 for a fuller exposition). These practices misrepresent student achievements. Some steps have been taken to address the problem of over-homogenisation through distinct projects or substantial pieces of final year work, such as capstone assessments (Butler et al., 2017). However, even then the name or nature of the project is often omitted from transcripts.

Several important issues arise from the current limited means of communicating assessment outcomes, including lack of clarity about whether students have met all the learning outcomes of the course. Representing achievement through a focus on marks

and grades does not communicate what a student can do, at least in terms understandable by outside parties. This renders them less than useful when hiring employees for employers who must make nuanced judgements of students' transferable skills (Miller & Jorre de St Jorre, 2022). Because of this dearth of richness of formal institutional portrayals, a space is created for the curation of achievements by graduates on online networks, such as *LinkedInTM* or on websites which include a multiplicity of sometimes self-serving, incommensurate representations not endorsed by the institution.

The challenges to be faced are as follows: how can there be more contextualised representations of assessment that reflect what students have done in ways that others can understand? How can we respond to the diversity of students and the variety of their achievements? And, how can accounts of achievement that have been officially validated, that is, officially endorsed by the institution, sit alongside portrayals constructed by students themselves? These are questions of accountability (and therefore trustworthiness) to multiple stakeholders.

Tensions between representation and portrayal

In discussing these matters, we need to distinguish between what is meant by the terms assessment representation and assessment portrayal. Here, we use representation as a generic term that encompasses all the ways in which student achievement can be shown, whether formal or informal, by the institution or the individual. Portrayal, however, is an active construction of achievements for particular purposes and audiences; it would normally involve some form of student agency in the construction (Ajjawi et al., 2020).

The use of marks and grades to represent assessment achievements belongs to a techno-rational paradigm of assessment characterised by the concept of transparency, use of scientific language and an emphasis on measurement and freestanding standards (Orr, 2007). Such a paradigm holds that knowledge is something that is separate from the knower and untainted by culture, values or power (Mulcahy, 2014). It can therefore be objectively reported to others who will ascertain its meaning. We see this clearly in a transcript where a particular subject or unit of study is allocated a mark and/or grade indicating achievement. It does not show what a student can do in context, nor under what conditions the grade was achieved. There is an assumption that a grade or mark should be able to be decoded or 'reconstituted' later, in a different place or by a different group of individuals as representative of student achievement (Sadler, 2014). The oversimplicity of such representation has been critiqued as it belies much complexity, situatedness and nuance (Ajjawi et al., 2021; Bloxham & Boyd, 2012).

This critique, which points to the pseudo-objectivity represented in lists of grades, does not imply that assessment practices at university may not be robust. There are multiple checks in place to ensure their robustness, such as benchmarking, moderation practices during all stages of assessment, peer review, multiple marking for a sample of assignments, opportunities for appeal and recheck, emphasis on good assessment design, etc. The marks or grades may have been carefully generated but may not be informative of achievement.

We use the word portrayal in recognition that assessment is a 'messy practice where multiple subjectivities and contingencies affect the ways that judgements are made about students' work' (Orr, 2007, p. 647). Therefore, competence is a judgement that is constituted through performances of assessors, learners, frameworks, university policies, assessment tasks and others. Not only do we need to explicate the conditions in which competence has been judged but also to enable students to be able to communicate (or portray) their achievements during their programs of study. Portrayals then account for the social, cultural and material conditions that influence performance, recognising achievement as dynamic, situated and emergent (Ajjawi et al., 2021).

Adopting a more contextual approach to assessment representation and portrayal might include specifying the supports and scaffolds within which learners demonstrate competence, for example, where specific software or exam conditions were used to complete the assessment task (Dawson, 2020). The ways assessment is designed could be used to encourage students to curate their achievements over their course of study for both learning and assessment purposes (Boud & Ajjawi, 2019) or to self-assess their achievements against the exit/course learning outcomes with the support of evidence (Flournoy & Bauman, 2021) thus constructing a personal narrative of their development. The use of assessment portfolios represents the most common example of this whole-of-program approach to assessment (Clarke & Boud, 2018). Assessment might then help students to define the value and purpose of their degrees; to curate items that show their developing professional selves alongside their academic achievements. What is portrayed would include not just examples of assessed coursework, but also other artefacts that may not have been formally assessed but which exemplify features of who the student is or what they can do; that is, their portrayals of self.

Portrayals of student achievement

The challenge of portrayal of student achievement is to incorporate elements of student volition and agency alongside accredited achievements. Of course, the validated aspects need to be rich and contextualised also. While it is not possible to point currently to a fully developed version of this, two examples illustrate elements of what it might comprise. The first, the co-curricular record, has been established in North America for nearly 40 years. It is designed to document students' educational experiences beyond what is already accounted for on the academic transcript (Green & Parnell, 2017). It provides a database of co-curricular activities, identifies respective competencies, and validates participation on an official institutional document (Elias & Drea, 2013).

The second approach, the hallmark, combines specific student initiatives more closely related to the curriculum with digital credentialling. Hallmarks can be university-wide in areas of the global learning outcomes of the institution, or discipline-specific. Students submit a range of evidence for a given hallmark which is judged by a panel of academics and external industry parties against a set of pre-determined criteria (Jorre de St Jorre et al., 2016). The digital credential link verifies the standards and criteria, as well as identifying the industry panel that endorsed the award and is digitally transportable. Students can choose what kind of evidence they wish to put forward.

While the co-curricular record and the hallmark provide portrayals of particular student achievements, they do not do so comprehensively, because they are additional to the required curriculum. By their nature these activities then add a burden to students and staff which may limit their sustainability. Alternatively, these forms of evidence, along with

other elements, may be fulsomely curated in what we term a persuasive portfolio. This combines student curation of a comprehensive set of achievements with selective credentialling to provide a fuller picture of what a student can do that communicates with others within and outside the university.

In addition, the forms of curation and representation of achievement we argue for prompt students to consider who they are in relation to their achievements and their future aspirations. Hence, not only are students personalising their achievements, but the act of doing so is intimately interwoven with who they are becoming and the values they ascribe to. The act of portrayal engages students with the need to review their trajectory, identify where they want to go further and identify artefacts that represent their pathway.

While the widespread uptake of such processes has been limited by their positioning in co-curricular spaces, a body of knowledge and expertise on the construction of portfolios has been established. What we are suggesting here is a conceptual shift from an idea which primarily focuses on students reflecting on their own development to the active use of portfolios for portrayal by students to external audiences. By scaffolding and supporting active construction and curation, while they still have access to the resources of being a student, they might set up such habits following graduation.

Portrayals of student personas

In a previous work (Ajjawi et al., 2020), we suggested that the field of celebrity studies might help us to conceptualise new purposes for assessment – including assessment-asportrayal. Celebrities must learn to negotiate and strategically construct their public personas primarily, now, online. Persona is a social construct that requires individual agency in the negotiation and construction of a strategic identity into a collective world (Marshall & Henderson, 2016). It can be considered a form of strategic identity: 'a fabricated reconstruction of the individual that is used to play a role that both helps the individual navigate their presence and interactions with others and helps the collective to position the role of the individual in the social' (Marshall & Henderson, 2016, p. 1). In this poststructural sense, each of us has multiple, constructed personas, e.g. private and public, personal and professional. Persona is a strategic construction that shifts and changes depending on the audience, the purpose and the form of media.

Our regular assessment processes can contribute to students learning to build a coherent public identity that is valuable for themselves and for the profession or discipline they seek to join. Assessment tasks can enable students to 'try on' different personas and build social networks prior to graduation and to prompt feedback dialogue on these, including through connections outside the academy. Representing assessment in more contextual and personal ways forms a bridge between relatively safe higher education communities and the world of enterprise.

We see increasing recognition of the bridging work of assessment in the authentic assessment literature in examples that orient towards portrayal of self and community (e.g. Nieminen et al., 2022). For instance, assessment tasks that require students to exercise their authorial agency in making decisions around designs for an industry client, thus encouraging their growth as designers and thinkers (Kohnke et al., 2021). Or the use of Wikipedia assessment designed to support students to participate in a knowledge-intensive economy beyond the academy, thus curating a networked reputation (Johinke,

2020). Unfortunately, many current authentic assessment practices inadequately prepare students for the digital world (Nieminen et al., 2022).

Common to these examples is the use of the digital to connect to a wider professional or disciplinary audience. They also encourage students' reflexivity and positioning within the assessment task and in relation to society beyond university; in so doing develop their digital and authorial agencies. Assessment designs that seek to develop students' digital identities, challenge the notion that identities are fixed or stable, instead emphasising that students need to actively construct their online persona through networked platforms and practices with specific attention to one's positionality within these.

Persuasive portfolio presentations as a means for portrayal of student achievements

The term 'portfolio' in higher education encompasses a wide variety of practices for a variety of educational purposes: a collection of artefacts, a medium for reflection, and a record of achievements (Clarke & Boud, 2018; Farrell, 2020). Within disciplines such as art and design portfolios have a long history. In the present context we consider a particular kind of portfolio for the purpose of portraying achievements, the persuasive portfolio with the main function of characterising student achievement and persona construction to external audiences. It focuses on a particular purpose: that of persuading the reader of the rich range of accomplishments and positioning of a particular student. Constructed by the student it includes parts validated by the institution in which they are enrolled and those generated by the student. This goes beyond the common use of portfolio assessment, even with an extended notion of artefacts (Habib & Wittek, 2007), to portfolio presentation.

A persuasive portfolio, like many other forms of portfolio, draws on a repository of artefacts – completed assessment tasks, micro-credentials, feedback and commentaries by others, official results – curated by the student to portray a version of their achievements. These achievements can be justified by evidence they educe from the repository and from other sources on which they can draw, such as testimonials of achievements from workplace supervisors during placements. Such an approach needs to be supported institutionally, technically, and pedagogically. The missing element is the means to incorporate validated and authenticated assessments alongside student curated material.

If this limitation can be addressed, persuasive portfolios could readily be constructed, but in what sense could they be regarded as representative? Students will wish to portray their achievements to their best advantage and may not want to include assessments that do not reflect well on themselves. Different representations can also be assembled for different purposes and demonstrate different versions of achievement. This may not be an issue if they are seen only as a student construct, but without well-defined protocols to ensure that official assessments are fully and appropriately incorporated, they run the risk of being regarded merely as advertisements, rather than evidence-based representations of a broad range of achievements.

We can also draw on the model of the persuasive portfolio which goes beyond the typical professional curriculum vitae or logbook (collection of evidence of completed activities) through allowing and incorporating expressive and unverified representations that can paint a picture of student personas. This could show a more rounded individual

engaged beyond the course with aspirations to do more. Thus, the portfolio could include:

- formally validated curriculum achievements ratified by authority through normal assessment processes; digital credentials from other sources, e.g. MOOCs;
- formal industry or online community-validated contributions, validated co-curricular records, e.g. contributing code to an open-source project; and
- informal achievements, unratified but curated (and recontextualised) by the student to suit their professional aspirations, e.g. blog entries, multimedia created resources, professional network maps.

Noticeable in these three forms of representation, is that we are not advocating for everything the student does to be validated and credentialled by the university. There needs to be space for exploration, creativity and personal growth that drives some of the content of the portfolio. The production of such representations need not be about the final product of the portfolio *per se* but prompt a deeper form of reflection and meaning-making that can influence students' choices within their course, that is, assessment as learning.

Discussion and next steps

We have argued for the need for students to be involved in generating representations of achievements and personas for external purposes. This work we suggest is not peripheral to a student's studies, but integral to managing the transition from higher education to other roles in society. It is as vital as any of the curriculum changes introduced through the employability agenda.

There is an important role for educational institutions both centrally and at a course level to help scaffold students in constructing various narratives of portrayal for different audiences. Without their enabling role, committed individual students may be able to develop portrayals using their own access to social media, but these will be unvalidated and potentially untrustworthy. Further, we risk advantaging students with greater social and digital literacies without necessary supports and scaffolds for all students. Issues of scale and disciplinarity need careful consideration.

One clear pathway is provided using the technology of digital credentials. If the officially assessed parts of a portrayal can be accessed through a digitally recorded assessment, a single click can immediately validate the achievement and can also include contextual information on the associated learning outcomes and mechanisms for assessment through which the assessment was made. The conversion of conventional student record-keeping systems into ones that can accommodate digital credentialing may be the single greatest enabling mechanism to open new hybrid forms of representation and portrayal that include both institutionally validated and student moderated information. The ICDE (The International Council for Open and Distance Education) claims that the development of digital credentialling systems will be necessary to remain competitive in the sector. Further, there are claims that students and employers welcome digitally accessible systems to validate and document capabilities beyond traditional transcripts (McGreal & Olcott, 2022)

although some capacity building might be necessary (Miller & Jorre de St Jorre, 2022).

There has been much discussion of the need for capstone activities that enable students to pull together the variety of things they have learned across their courses (Lee & Loton, 2019). The persuasive portfolio acts as a more compelling capstone as it is explicitly designed to draw together experiences, achievements and personas and presents them in forms that can be appreciated by an external audience. It provides a raison d'etre for capstone activities and does not leave the act of consolidation to the final task of a degree. It also enables a comprehensive view of achievement to complement the deep dive into a single issue commonly used in final year projects.

To maintain credibility as university-enabled devices, there needs to be clarity in portrayals about what kinds of evidence are being put forward for what kinds of claims and for there to be institutional access for validation of a sub-set of the claims being made. A particular role for the institution is to ensure policies for the construction of portrayals guard against students omitting validated elements from institutionally endorsed representations which students would not like to include. Validated assessment must remain robust. Academics can play a role in persona construction through orienting students to contexts, language, and competencies.

While the changes we propose might seem far-reaching, other than resolving the technicalities and support systems, they are relatively straightforward and necessary. Absence of greater public transparency in assessment, its regulation and what students have done can lead to a loss of trust and suspicion of students and institutions. Clearer and contextualised communication of what a student can do (verified and elective) and who they are becoming might strengthen trust in graduates and trust in the university's claims. At the very least, it signals to students and the community what is valued, that is, valid accounts of achievement and respect for the distinctiveness of the student. This communication can speak to employers and the public directly, to assure them of the rigour of assessment processes and the value of public investment in graduates. The various examples presented in this paper demonstrate that at least in defined pockets, we see these shifts in practice already occurring. What is required is larger scale coordinated shifts in assessment practices as well as the reporting of them.

Ultimately, though it is the student who needs to put this altogether. Students will require support to curate assessment data and artefacts to show how they are developing (Buchanan et al., 2020) as well as support to understand the language, values, and norms of the communities they wish to join. Some students have already taken to the challenge of portraying their achievements for others, and it is with this group that the initiative might commence. Many students identify the need to add value and distinction to university credentials in creating their narratives of employability and career identities, and so it might not be such a hard sell to such students. It may also strengthen student trustworthiness in assessment structures when their agency, contexts, multiple perspectives on quality and multiple enactments are taken into account. By enabling richer and more diverse representations of achievements, students might learn to value the role of assessment in preparing them for the future, rather than it being merely a hurdle to surmount.

Conclusion

The argument of this paper is that universities do not represent student achievements well. It is not sufficient for them to leave responsibility for this in students' hands without support or validation. The process needs to be diversified, it needs to reflect the distinctiveness of what students can do and students need to take a more agentic role in the process. However, the ramifications of accepting this are many. It challenges universities to make its credentials meaningful and provides an impetus for universities to change their student record keeping systems to represent outcomes rather than overall marks for course units. Significant change is needed to assessment design, data capture and storage and the ways in which learning outcomes are tracked across a program and over time. Beyond this, better communication about student achievements, competence and portrayal might establish new forms of trust with students and community.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Rola Ajjawi is Professor of Educational Research at the Centre for Research in Assessment and Digital Learning at Deakin University, Australia, where she has led an extensive program of research into student failure and success, with particular interest in equity, feedback, and learning cultures.

David Boud is Alfred Deakin Professor and Foundation Director of the Centre for Research in Assessment and Digital Learning at Deakin University, Australia. He is also Emeritus Professor at the University of Technology Sydney and Professor of Work and Learning at Middlesex University. His current work is in the areas of assessment for learning in higher education, academic formation, and workplace learning.

ORCID

Rola Ajjawi () http://orcid.org/0000-0003-0651-3870 David Boud () http://orcid.org/0000-0002-6883-2722

References

- Ajjawi, R., Bearman, M., & Boud, D. (2021). Performing standards: A critical perspective on the contemporary use of standards in assessment. *Teaching in Higher Education*, *26*(5), 728–741. https://doi.org/10.1080/13562517.2019.1678579
- Ajjawi, R., Boud, D., & Marshall, D. (2020). Repositioning assessment-as-portrayal: What can we learn from celebrity and persona studies? In M. Bearman, P. Dawson, R. Ajjawi, J. Tai, & D. Boud (Eds.), *Re-imagining university assessment in a digital world* (pp. 65–78). Springer International Publishing. https://doi.org/10.1007/978-3-030-41956-1_6
- Bloxham, S., & Boyd, P. (2012). Accountability in grading student work: Securing academic standards in a twenty-first century accountability context. *British Educational Research Journal*, *38*(4), 615–634. https://doi.org/10.1080/01411926.2011.569007
- Boud, D. (2017). Standards-based assessment for an era of increasing transparency. In D. Carless,
 S. M. Bridges, C. K. Y. Chan, & R. Glofcheski (Eds.), *Scaling up assessment for learning in higher education* (pp. 19–31). Springer. https://doi.org/10.1007/978-981-10-3045-1_2

- Boud, D., & Ajjawi, R. (2019). The place of student assessment in pursuing employability. In J. Higgs,
 G. Crisp, & W. Letts (Eds.), *Education for employability: Learning for future possibilities* (Vol. 2, pp. 167–178). Brill.
- Buchanan, J., Harb, G., & Fitzgerald, T. (2020). Implementing a teaching performance assessment: An Australian case study. *Australian Journal of Teacher Education*, *45*(5). https://doi.org/10.14221/ajte. 2020v45n5.5

Burgess, R. (2007). Beyond the honours degree classification: The burgess group final report.

- Butler, D., Coe, S., Field, R., McNamara, J., Kift, S., & Brown, C. (2017). Embodying life-long learning: Transition and capstone experiences. Oxford Review of Education, 43(2), 194–208. https://doi.org/ 10.1080/03054985.2016.1270199
- Cai, Y. (2013). Graduate employability: A conceptual framework for understanding employers' perceptions. *Higher Education*, 65(4), 457–469. https://doi.org/10.1007/s10734-012-9556-x
- Clarke, J. L., & Boud, D. (2018). Refocusing portfolio assessment: Curating for feedback and portrayal. Innovations in Education and Teaching International, 55(4), 479–486. https://doi.org/10.1080/ 14703297.2016.1250664
- Corliss, M. C., Daly, A., & Lewis, P. (2020). Is a university degree still a worthwhile financial investment in Australia? *Australian Journal of Education*, 64(1), 73–90. https://doi.org/10.1177/ 0004944120901883
- Dawson, P. (2020). Cognitive offloading and assessment. In M. Bearman, P. Dawson, R. Ajjawi, J. Tai, &
 D. Boud (Eds.), *Re-imagining university assessment in a digital world* (pp. 37–48). Springer International Publishing. https://doi.org/10.1007/978-3-030-41956-1_4
- Elias, K., & Drea, C. (2013). The co-curricular record: Enhancing a postsecondary education. *College Quarterly*, *16*(1). https://files.eric.ed.gov/fulltext/EJ1016461.pdf
- Farrell, O. (2020). From portafoglio to e-portfolio: The evolution of portfolio in higher education. *Journal of Interactive Media in Education*, 2020(1), 1–14. https://doi.org/10.5334/jime.574
- Flournoy, E. L., & Bauman, L. C. (2021). Collaborative assessment: Using self-assessment and reflection for student learning and program development. *The Canadian Journal for the Scholarship of Teaching and Learning*, 12(1). https://doi.org/10.5206/cjsotlrcacea.2021.1.14207
- Green, T., & Parnell, A. (2017). *Comprehensive student record project: Final report AACRAO and NASPA*. https://www.naspa.org/project/comprehensive-learner-record.
- Habib, L., & Wittek, L. (2007). The portfolio as artifact and actor. *Mind, Culture, and Activity, 14*(4), 266–282. https://doi.org/10.1080/10749030701623763
- HEAR. (2012). Bringing it all together: introducing the higher education achievement report. The final report of the burgess implementation steering group.https://dera.ioe.ac.uk/26234/1/ BringingltAllTogetherIntroducingTheHEAR.pdf
- Johinke, R. (2020). Social production as authentic assessment: Wikipedia, digital writing, and hope labour. *Studies in Higher Education*, 45(5), 1015–1025. https://doi.org/10.1080/03075079.2020. 1750192
- Jorre de St Jorre, T., Boud, D., & Johnson, E. D. (2021). Assessment for distinctiveness: Recognising diversity of accomplishments. *Studies in Higher Education*, *46*(7), 1371–1382. https://doi.org/10. 1080/03075079.2019.1689385
- Jorre de St Jorre, T., Johnson, L., & Oliver, B. (2016 November 27-30). Deakin hallmarks: Principles for employability credentials. In S. Barker, S. Dawson, A. Pardo, & C. Colvin (Eds.). ASCILITE 2016: Shaping the future of tertiary education: Proceedings of the Australasian Society for Computers in Learning in Tertiary Education 2016 conference, Adelaide, pp. 305–311.
- Kohnke, L., Jarvis, A., & Ting, A. (2021). Digital multimodal composing as authentic assessment in discipline-specific english courses: Insights from ESP learners. *TESOL Journal*, 12(3), e600. https:// doi.org/10.1002/tesj.600
- Lee, N., & Loton, D. (2019). Capstone purposes across disciplines. *Studies in Higher Education*, 44(1), 134–150. https://doi.org/10.1080/03075079.2017.1347155
- Lizcano, D., Lara, J. A., White, B., & Aljawarneh, S. (2020). Blockchain-based approach to create a model of trust in open and ubiquitous higher education. *Journal of Computing in Higher Education*, *32*(1), 109–134. https://doi.org/10.1007/s12528-019-09209-y

- Marshall, P. D., & Henderson, N. (2016). Political persona 2016 an introduction. *Persona Studies*, 2(2), 1–18. https://doi.org/10.21153/ps2016vol2no2art628
- McGreal, R., & Olcott, D. (2022). A strategic reset: Micro-credentials for higher education leaders. Smart Learning Environments, 9(1). https://doi.org/10.1186/s40561-022-00190-1
- Miller, K. K., & Jorre de St Jorre, T. (2022). Digital micro-credentials in environmental science: An employer perspective on valued evidence of skills. *Teaching in Higher Education*, 1–17. https://doi.org/10.1080/13562517.2022.2053953
- Mulcahy, D. (2014). Re-thinking teacher professional learning: A more than representational account. In T. Fenwick & M. Nerland (Eds.), *Reconceptualising professional learning: Sociomaterial knowledges, practices and responsibilities* (pp. 52–66). Routledge.
- Nieminen, J. H., Bearman, M., & Ajjawi, R. (2022). Designing the digital in authentic assessment: Is it fit for purpose? *Assessment & Evaluation in Higher Education*, 1–15. https://doi.org/10.1080/02602938.2022.2089627
- Orr, S. (2007). Assessment moderation: Constructing the marks and constructing the students. *Assessment & Evaluation in Higher Education*, 32(6), 645–656. https://doi.org/10.1080/02602930601117068
- Sadler, D. R. (2014). The futility of attempting to codify academic achievement standards. *Higher Education*, 67(3), 273–288. https://doi.org/10.1007/s10734-013-9649-1
- Succi, C., & Canovi, M. (2020). Soft skills to enhance graduate employability: Comparing students and employers' perceptions. *Studies in Higher Education*, 45(9), 1834–1847. https://doi.org/10.1080/ 03075079.2019.1585420
- Tran, T. T. (2015). Is graduate employability the 'whole-of-higher-education-issue'? *Journal of Education and Work*, 28(3), 207–227. https://doi.org/10.1080/13639080.2014.900167