

Whack-a-Mole?: Ecologies of young adults with intellectual disabilities as they transition from school to open employment

Whack-a-Mole?: Ecologies of young adults with intellectual disabilities as they transition from school to open employment

Donna Rooney, University of Technology Sydney
Kirsty Young, University of Technology Sydney

Abstract

This paper begins by addressing the question of *why* young Australians with intellectual disability (ID) remain underrepresented in open employment despite significant investment by various stakeholders. It uses the analogy of Whack-a-Mole (an arcade game) to draw attention to a range of barriers young people face during transition, and to illustrate how addressing one barrier in isolation is unlikely to result in successful transitions. In response to repeated calls for more holistic understandings of the transition process for young adults with ID, the paper draws upon the work of Urie Bronfenbrenner, to present an adaptation of Bronfenbrenners' model that maps young people with ID's learning ecologies as they seek to transition from school to open employment. The model illustrates the complexity of transition, a proliferation of stakeholders and traces how transition is contingent on much more than young adults with ID's capabilities alone. It invites further consideration of, and utility for, an ecological model as a basis for imagining possibilities to increase the number of people with ID in open employment. It concludes by raising some questions that various stakeholders might ask.

Introduction

Gaining meaningful work on completing compulsory school education or post-school vocational education is a goal for many young adults with intellectual disabilities (ID). While supported workplaces are a common post-school employment option, some young adults with ID are shifting the goal to getting a job in *open* employment. By this, we mean in organisations where the *raison d'être* is not simply to provide opportunities for people with disabilities. Realising this goal can mean increased participation in economic society and social participation (Laragy, Fisher, Purcal & Jenkinson, 2015, p. 283), greater self-determination (Donnelly et al., 2010, p. 236) and improved wellbeing (Meltzer, Robinson & Fisher 2018, p. 90).

However, the goal of open employment is one that few young adults with ID achieve. Poor employment outcomes for people with disability are common (Gouvea & Li, 2021), and Australians with ID are even less likely to participate in open employment compared to those with sensory, speech and/or physical disability (Australian Bureau of Statistics, 2020). Further, if young adults with ID *do* find a job, they are likely to be in insecure positions (Meltzer et al., 2018). Overall, despite the best efforts of some individuals or organisations, it remains a dismal situation.

In Australia, as elsewhere, there is significant investment in educational initiatives to support the transition of young people with ID from school to work (e.g., ARTD 2016; Beyer, Meek & Davies 2016; Dunn, Shannon, McCullough, Jenda & Qazi, 2018). This ranges from school-based initiatives to post-school institutions, including specialised employment programs focusing on skill development specifically tailored for young adults with ID (e.g., Smith, Grigal & Shepard, 2018). Further still, the Disability Employment Service (DES) provides services, such as dedicated support workers, to advocate and support young people in the workplace. Yet, the under- and unemployment of people with ID belies the significant investment in these initiatives.

This prompts us to ask *why is it that young Australians with ID remain underrepresented in open employment?* In response, we suggest that educational institutions are engaged in a game of 'whack-a-mole' (originally a popular arcade game, but here a useful analogy) where, despite their efforts, issues beyond the scope of any educational initiatives arise. The whack-a-mole analogy is further evident in considering the stakeholders that can operate in isolation while being key contributors to realising

employment goals' success (or failure). For instance, while a young adult might want to work, their family might be sceptical about their capacity (Southward & Kyzar 2017). While an educational institution might teach relevant work skills, this is futile if there are few willing employer organisations (Domin, Taylor, Haines, Papay & Grigal, 2020; Ross-Gordon & Procknow, 2020). Even when an organisation is willing, employment can be difficult to maintain if employers are not also open to working with support workers, creating appropriate jobs, making suitable workplace adjustments or providing adequate training (Joshi, Bouck & Maeda, 2012; Ross-Gordon & Procknow, 2020). Overt and covert discrimination and the attitudes of work colleagues and customers can also make maintaining a job challenging (Shier, Graham & Jones, 2009; Meltzer et al., 2018). In addition, broader social structures can hinder educational programs from being translated into employment opportunities: e.g., inadequate or inefficient policy, complex funding arrangements, societal views on disability, labour market demands, and overall economy (Leonard et al., 2016).

The whack-a-mole analogy is also evident in research. Various tranches of research concerned with the transition of young people with ID often approach studies with singular foci (e.g., family engagement, employer attitudes or educational interventions). While the spectre of competing issues is noted, recommendations are often framed in response to the specific issue under investigation. However, like a game of whack-a-mole, addressing a singular issue does not ensure success(ful transition). In all, we agree with Trainor et al. that 'improving secondary and postschool outcomes for individuals with disabilities [is] an incredibly complex endeavor[sic]' (2019, p. 1). This sentiment is echoed by Foley, Dyke, Girdler, Bourke and Leonard, who conclude:

The range of issues related to transition from school to adult life for individuals with intellectual disability are complex and multi-faceted. Over the past two decades, there have been many initiatives implemented within the developed world to try to facilitate a smooth and successful transition from secondary school, although very few have had positive outcomes. (2012, p. 1760)

In their own way, these authors see transition as a 'wicked problem': 'where there are many decision makers and clients with conflicting values, and where the ramifications in the whole system are confusing' (Churchman, 1967, as cited in McCall & Burge, 2016, p. 200). This invites the production of more holistic accounts of school-to-work transition for people with ID. We address this invitation by framing the transition of young adults with ID in a manner that sheds light on its multifaceted and complex nature. Drawing from Bronfenbrenner's Ecological Systems model (1979, 1994), we map the ecologies of young adults with ID at a point in their lives when they are transitioning from school to employment and illustrate the ever-evolving system that surrounds them as they enter early adulthood. Depending on the characteristics of the individual, this may include final years of schooling as well as post-schooling (pre)vocational education and early experiences in the workplace. Our purpose is not to solve the 'wicked problem' of transition but to offer a modest way of understanding the complexities by framing transition in a new and different way. In doing this, we invite stakeholders to imagine where innovations might be generated and perhaps *then* lead to more frequent and more successful transitions.

Transition As a Time of Learning

Transitioning from school to work is a period of much learning. In Australia, this begins at school and is directed by a National Curriculum, which includes *Work Studies* modules and (ideally) work experience opportunities for *all* students in their final school years (e.g., Dunn et al., 2018.).

Following compulsory education, further learning opportunities are available through post-school education and training institutions: for example, mainstream providers (some providing specialised programs) and specialised institutions that work specifically with young adults with ID. These opportunities may include learning particular work skills (e.g., for retail or hospitality), employment skills (e.g., resume writing, interviews), soft skills (e.g., communication) and developing life skills (e.g., catching public transport, personal grooming). Work experience, while desirable, can be difficult to secure. Some institutions innovate to offer alternatives (e.g., microbusiness, institutionally based work experience etc.). While school and post-school programs are generally independent, some

call for better collaboration in senior school years so that ‘individual post-school transition plan[s] are] put in place *prior* to leaving school’ (Shergold et al., 2020, p. 22, emphasis added).

Learning is not limited to involvement in educational institutions. Once in the workforce (work experience or a job), further learning occurs through onboarding, mentoring programs and/or simply as young adults find their feet in new roles. Support workers (funded under the young person’s National Disability Insurance Scheme [NDIS] plan) can also accompany young people on the worksite and act as job coaches as well as advocate for the young people when necessary (NDIA, 2021).

Finally, learning during transition is not only a requirement for young adults with ID. A resounding finding in research is that families (Leonard et al., 2016), employing organisations (Meltzer et al., 2018; Shier et al., 2009) and educators (Ross-Gordon & Procknow, 2020; Domin et al., 2020; McDonnell & Hardman, 2010) require further learning to better understand the abilities and aspirations of young people with ID alongside the complex systems in which they operate.

Conceptual Resources to Foster Understandings

We approach the transition of young adults with ID from a strengths-based position, believing that they possess (or have the potential to develop) the skills and capabilities necessary to engage in meaningful employment. We distance ourselves from medical models of disability where potential is viewed solely on cognitive, psychological or physiological states (Ross-Gordon & Procknow, 2020, p. 392). The latter view frames barriers to open employment in terms of limitations and deficits (e.g., *the young person does not have the skills/capabilities required*), thus limiting possibilities. Further, these views see people purged of personal biographies, aspirations and dreams for the future, social contexts and broader structures that enable and/or hinder possibilities. In contrast, a sociocultural view of disability recognises these as well as the range of external constructs presenting barriers for young people with ID transitioning to employment.

To this end, we look towards conceptualisations that offer alternatives to individualised views of learning, towards social and situated views. Merriam and Baumgartner point out that ‘there has always been an interlocking of learning needs with the social context in which they occur’ (2020, p. 6). Illeris adds, ‘all learning is situated’ (2017, p. 115). We extend these ideas by adding that, just like learning, the transition period is also situated in a particular social and structural context.

The concept of learning ecologies has been deployed by those seeking situated accounts of learning informed by human and environmental relationships and contexts. Drawing inspiration from ecologies in nature, ecological accounts of learning focus on the broad context and are attuned to people, relationships, entities, activities, structures and materialities that might otherwise go unnoticed. Like *systems thinking* approaches, ecological accounts tease out the ‘interrelations and interdependencies’ of various parts of the system and how these interact ‘with other systems and subsystems’ (Gonzales, 2020, p. 3).

Ecological accounts of learning are popular in childhood educational research. Several models have been generated to illustrate various influences on learning beyond everyday teacher/student relationships. For example, Epstein (2011) presents a Venn model depicting relationships between schools, families and communities. Her model emphasises shared responsibility for a child’s learning (2011) and convincingly exemplifies its idiom ‘taking a village’. However, while the school/family/community triad is appropriate for naming spheres of influence on a *child’s* development, the workplace and other influences must also be considered when it comes to the school-to-work transition. Ecological accounts of learning are not limited to children either. They are also seen in workplace learning (Evans, 2020), higher education (Jackson & Barnett, 2020) and adult life (Jackson & Barnett, 2020).

A common influence underpinning ecological accounts of learning is the work of Urie Bronfenbrenner. Inspired by Lewin and Vygotsky, Bronfenbrenner (1979) was interested in the complex environments and relationships that enfold children and how this impacts their development.

He established a model consisting of various interconnecting systems that range from the young person's immediate situation to broader social structures and dominant social norms. The framework's explanatory power lay in its capacity to take account of a wider view of context and the interconnectedness of various systems and as an 'antidote to theories that reduced development of the individual to single factors such as genetics' (Quickfall, 2021, p. 96).

The interconnected systems central to Bronfenbrenner's work include the *microsystem*, the *mesosystem*, the *exosystem* and the *macrosystem*. These are typically presented as concentric circles that move from microsystems in the centre through to macrosystems on the outer circle. This enables the tracing of the impacts of wider phenomena on everyday relationships, interactions and attitudes. In later work, he introduced a fifth system, the *chronosystem*, acknowledging changes over time that impact young people's development (Bronfenbrenner, 1994).

Bronfenbrenner's ideas remain popular among educational scholars, including studies interested in the education of children with disabilities (Anderson, Boyle & Deppeler, 2014; Gonzales, 2020; Laragy et al., 2015). With a focus on children with special needs, Gonzales suggests that the 'application of Bronfenbrenner's system model will help school leaders to develop a holistic view of the complex layers of family, school and community relationship, while having a sharp focus on the student's development' (2020, p. 82). Concerned with inclusive education, Anderson et al. turn to Bronfenbrenner's model to better understand child development by drawing attention to the relationships and connections of various layers through a 'snapshot of a single point in time' (2014, p. 9). In this paper, we build on these existing applications to create a 'snapshot' of a *different* 'point in time' where young people with ID are transitioning from school to work.

Deploying Bronfenbrenner's Model

Bronfenbrenner's model is particularly helpful in understanding the transition to work because it enables a holistic account of the complexities involved. It makes explicit the impact of multiple (and sometimes) competing stakeholders and broader social structures. When viewed together, the interconnected systems invite new considerations of the context in which a young adult with ID is embedded as they transition from school to work. A further advantage is that it invites exploration of the temporal dimensions, notably how the ecology of a young adult with ID transiting to work includes continuity *and* change as they transition to life beyond school.

To unpack Bronfenbrenner's ideas and illustrate them with literature related to the ecologies of young people with ID, Figure 1 provides a snapshot of the layers of a young person with ID's ecology during transition. Importantly, while it shares similarities with the ecologies of transitioning young people *without* ID, it draws attention to additional considerations that are specifically relevant to the lived experiences of those *with*.

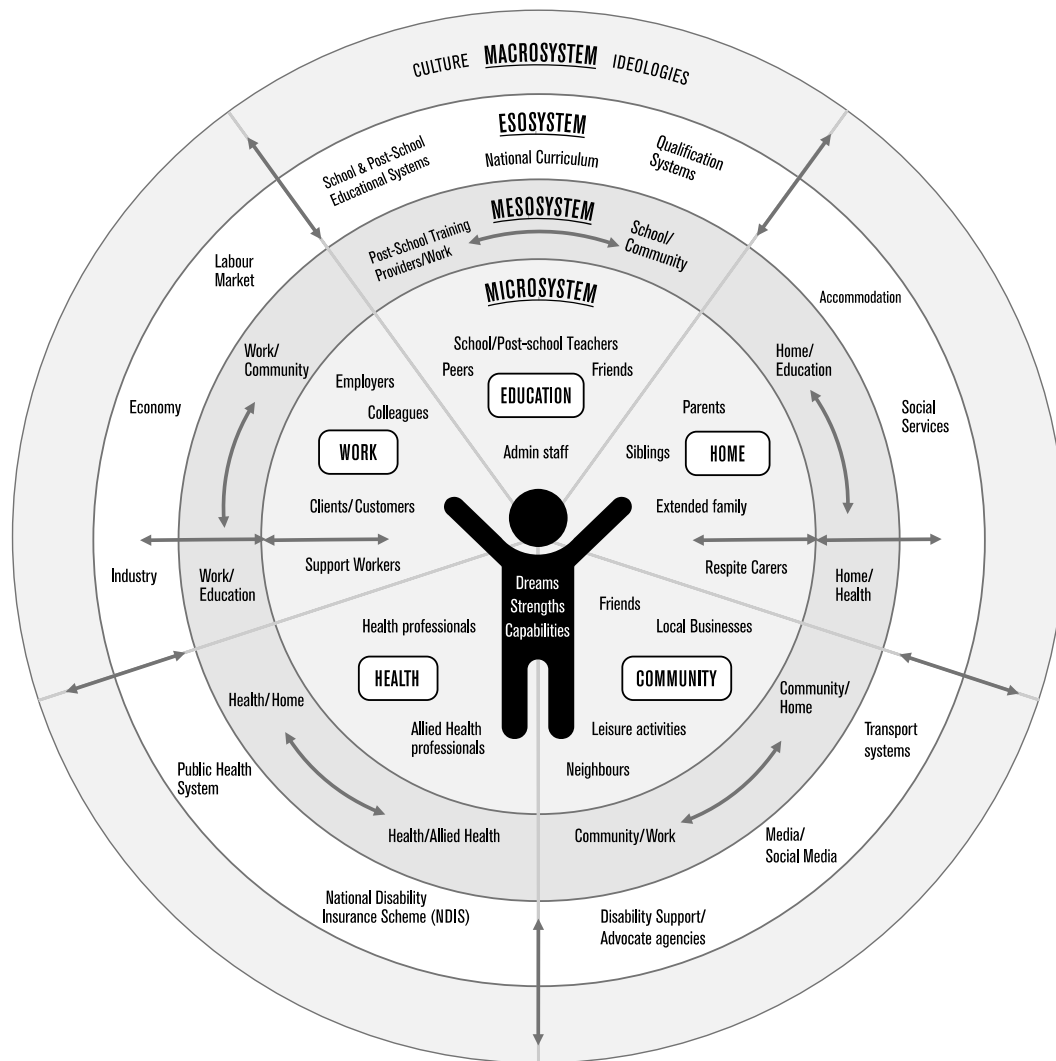


Figure 1. A young person with ID's ecology during transition.

Unpacking the Model

The Microsystem

The inner circle of the ecosystem is the microsystem, and central to this is the young person with ID themselves (Quickfall, 2021). This necessarily includes their work dreams, likes and dislikes, beliefs and the experiences leading up to the transition: all critical for promoting self-determination (Maia-Pike, 2021). It also includes individual strengths and developing capabilities that have the potential to be relevant to future employment.

Surrounding the young person in the microsystem is a network of people who play a pivotal role in their daily lives (Donnelly et al., 2010; Anderson et al., 2014). These stakeholders regularly interact with the young person, although the interactions occur in various physical sites.

Home is one important physical site in a young person with ID's microsystem. It is here that they interact with their family. Research on families' influence on the employment of people with ID is widespread and resounding, showing that parents and families influence the likelihood of successful transitions (O'Brien & Murray, 2018; Donnelly et al., 2010). One example is conversations families have about the future. These shape aspirations and attitudes towards work and create expectations for all concerned. Chronologically, these conversations can (and should) occur long before transition begins (Kelley & Prohn, 2019). Despite the importance of parent/child relationships, transition can also be a considerably stressful time for parents. Parenting any child has its challenges, but challenges are compounded when a child has ID (Kelley & Prohn, 2019; Leonard et al., 2016). As the young

person leaves school, the responsibility for securing appropriate support services largely falls to the family. Navigating disability support systems is a source of stress for many parents/carers (Hirano, Rowe, Lindstrom & Chan, 2018; Leonard et al., 2016). Parental anxiety also gains momentum during transition and is not limited to employment issues alone; transport to and from work and even future accommodation weigh heavily for families as their young person matures and they themselves age.

Schools and post-school education institutions are other significant sites in the transition process—thus, teachers, admin staff peers and close friends become important inclusions in the microsystem. The daily interactions (pedagogical or otherwise) between teacher and student mean that, next to parents, teachers are the most likely to know the dreams and capabilities of their charges. They are thus placed in a good position to nurture and guide them. Non-teaching school staff members and teaching support staff can also have frequent interactions with the young person. Learning institutions are also important sites for forming friendships, and these friendships can shape attitudes to work.

Various people in the local community where a young person might engage in leisure, retail, sport, recreational or faith-based activities matter too. Community participation plays an important (often understated) role in the microsystem and is an important transition component (McDonnell & Hardman, 2010, p. 126). If a young person's friendship group consists predominately of school-based friends, there is potential for friendships to wain on graduation. Participation in communities can help form new/broader friendship groups and help develop social skills that may be of use in workplaces.

Until this point, the described microsystem appears much like most school children's. However, a notable difference for young people with ID is the number of health and allied health professionals in the microsystem. Some will be under the care of, or interact with, one or more health and allied health professionals (e.g., physicians, speech therapists, occupational therapists) regularly.

A further significant feature within the microsystems of young adults transitioning is the interactions with employers and work colleagues. Interactions might occur as part of work experience programs and paid or unpaid work. This warrants the inclusion of employers, work colleagues and even customers in the microsystem. Employer attitudes towards disability can influence decisions about employing a person with ID. The employer also determines the actual work that the young person undertakes. Employers' willingness to incorporate workplace accommodations such as flexible hours, adjusted job roles and modified training and supervision all contribute to employment success (or failure) (McDowell & Fossey, 2015; Ross-Gordon & Procknow, 2020). Government-funded incentives can also sway these decisions. Supportive work colleagues can help ensure young people's successful transition. Alternatively, non-supportive colleagues can adversely impact success. Disability-based discrimination in workplaces can (and *does*) impact the success or failure of securing and maintaining employment (Ross-Gordon & Procknow, 2020). However, it is not just what colleagues or employers do and say either; customers'/clients' interactions with the young person can also be discriminatory.

The (variously named) support workers also play an important role in the transition process. In Australia, the NDIS funds Disability Support Workers who can accompany the young person in the workplace. The ongoing role of a support worker is critical in ensuring success for some young adults with ID (Certo et al., 2008). In an ideal workplace, support workers negotiate arrangements best suited to the young adult with the employer (McDowell & Fossey, 2015; Beyer et al., 2016).

In summary, the microsystem is in a state of flux during transition. It is subject to simultaneous exiting and expansion. While teachers farewell students, new stakeholders like employers, work colleagues, customers/clients and DES support workers expand it. A parallel exiting and expanding can occur with friends. While work can expand a young person's microsystem, it is important to note that friendships formed at school can dwindle upon graduation. While work and day activities can provide an alternative forum for creating new friendships, post-school can be a lonely time for young people who have not yet 'transitioned' (Foley et al., 2012, p. 1756).

The Mesosystem

Moving outwards from the microsystem is the mesosystem, which comprises ‘interrelations among two or more settings in which the developing person actively participates’ (Bronfenbrenner, 1979, p. 25). Importantly, this involves relationships and interactions that may *not* include the young person with ID but *can* impact their transition.

In the early school years, teachers and parents may interact over the child’s educational progress and individualised learning goals. However, interactions expand to include post-school options in senior years and possibly conversations about work experience. Incidentally, many work experience opportunities arise from teachers’ or parents’ personal contacts (Young & Rooney, 2021).

Like the microsystem, the mesosystem expands as young people with an ID transition to employment. During transition, interactions can also involve parents conversing with other educational providers about post-school education and training options. At this time, parents must also renegotiate support available through the NDIS because there are differences between support provided while at school and support available *after* leaving school. In many cases (not all), schools try to make this seamless by organising parent information events and bringing together parents and others who can speak to the newly available services. These events are not a formal requirement of schools. Rather, justification is often schools’ concern for young people leaving the supportive school environment and concerns for consequences of young people no longer being nurtured by educators and support staff with an in-depth understanding of their needs (Young & Rooney, 2021, p. 17).

Parents and health/allied health practitioners’ relationships and interactions, while continuing through transition, can take on new foci. Discussions may turn to specific workplace adjustments required to support the young person in employment and how this can be communicated to employers (McDowell & Fossey 2015). In addition, health practitioners are typically embedded in interprofessional networks involving other health and allied health professionals, and networking can include interactions about people with ID and employment.

Overall, a significant amount of brokering, negotiations and interactions concerning a young person with ID occurs in the mesosystem. While there is increasing acknowledgment of the value of including young people with ID in such negotiations, many interactions in the mesosystem (*about* the young person) continue to occur without them (Young & Rooney, 2021). Considering this point suggests scope for expanding young adults’ self-determination (Maia-Pike, 2021).

Finally, there are a few other relationships and interactions to expand an already burgeoning mesosystem. These are ones that perhaps rightfully do not include the young person but have the potential to impact transitions. These relationships are identifiable when understanding that other systems also influence each person within the young person’s microsystem. Like health providers, they are embedded in their own professional and personal networks. For instance, a parent may have a job; siblings have their friends; teachers have their families and friends, as do employers and work colleagues. Few of these other people’s networks would directly interact with the young person at the centre of the ecology. Yet, each relationship has the potential to indirectly influence it—not least of all through perpetuating or contradicting broader attitudes to disability. An example, to finish on, is of an employer who knows or is related to someone with a disability. This almost-inconsequential relationship has been cited as one of the main reasons an employer agrees to employ a person with disability themselves (Young & Rooney 2021).

The Exosystem

The exosystem ‘refers to one or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person’ (Bronfenbrenner, 1979, p. 25). Central to this exosystem are the structures that indirectly impact the experiences of young persons with ID (Quickfall, 2021, p. 89). One such structure is the educational system, which impacts and influences the everyday activities

and experiences of the young person with ID. For instance, it is in the exosystem that three tiers of schools are conceived and made available in Australia: specialised school settings, support units in mainstream schools and inclusive mainstream classrooms. Parents' choice of school among these options can impact successful transitions (Joshi et al., 2012, p. 105). The educational system itself includes a National Curriculum. This manifests as *Work Studies* units that incorporate *Skills for Learning* and *Work and Career* and *Life Design* (along with acceptable modifications for students with ID). However, this itself is influenced by the federal system in Australia, which means Australian states and territories engage in different approaches to program delivery.

Broader health systems constitute another important inclusion in the exosystem. This includes accepted knowledges, treatment, management, and classifications of ID. These 'matter on the ground' but can also present competing views. For instance, the medical classification of disability used by health professionals may not be the same system used by education systems (e.g., in schools) or by other support systems (e.g., NDIS). These competing views can filter down to relationships and activities in the meso- and microsystems; for example, informing competing views of employability of the young person between teachers, parents, employers, and disability advocates.

The Australian NDIS is also an important feature of the exosystem. It significantly influences the daily matters of people with an ID. Not untouched by ideologies of marketisation (macro), the scheme makes available financial support for individuals who must then 'purchase' services. This requires personalised planning (often undertaken by families in consult with the person with ID), identifying a range of suitable services, and then finding and purchasing them on the open market. Some school students with ID are eligible for an NDIS plan to provide funds to access allied health, respite care and specialised equipment. On leaving school, people with ID can access support for accommodation, other educational provisions, health care services and employment support. The NDIS has been subject to much critique with its complexity for those who must navigate often cited (Laragy et al., 2015). Additionally, its dedifferentiated nature can be further disadvantaged those with ID (Bigby, 2020).

With a focus on transition to work, some further related systems are also acknowledged; for example, the broader economy, industry, labour market, social services, housing, accommodation and even transport systems. Each of these can potentially impact a young person with ID's capacity to secure and maintain employment. Lastly, the exosystem also spans from disability advocacy agencies to mass/social media. These both disseminate views on disability, which may subtly or overtly influence perspectives for an inclusive society and potentially perpetuate or change broader opinions. For instance, opinions accepted by a wider public 'trickle down' to potential employers, work colleagues and customers/clients. This impacts how employment might be secured and/or maintained. Broader opinions of disability also trickle down to influence young people's self-identities and how families, teachers and others position them.

The Macrosystem

Finally, Bronfenbrenner describes the macrosystem as the 'consistencies, in the form and content of lower-order systems (micro-, meso- and exo-) that exist, or could exist, at the level of the subculture or the culture as a whole, along with any belief systems or ideology underlying such consistencies' (1979, p. 26). This outer layer of the framework involves cultural elements that impact young people with an ID. It includes dominant societal attitudes towards and beliefs about disability, education, and people's roles in society, which impact entities, activities and relationships available (or not) in other systems. It is also here that ideologies of neoliberalism, human rights, and democracy also lay foundations and justify what is possible (or not) at other levels of the ecology.

Across the Ecology

This paper began by suggesting that the transition of young people with ID—from school to open employment—is a 'wicked problem' where the nature of the explanation determines the solutions on offer (Rittel & Webber, 1973, as cited in McCall & Burge, 2016 p. 200). Here we have highlighted the complexities through deploying an ecological model and drawn attention to the subsystems that

influence the likelihood of young adults with ID successfully transitioning from school to open employment. The ecology demonstrates the interdependency of various systems and how something in one system can impact something elsewhere in the ecology. Notably, it illustrates how the decisions, entities, activities, roles, and relationships beyond the immediate experience of a young adult with ID (micro) can influence successful transitions from school to work.

Changes and Inflections

Transition is, by definition, a time of change, and Bronfenbrenner's inclusion of the chronosystem acknowledges 'changes to the whole context of the individual over time' (Quickfall, 2021, p. 94). For instance, choices made early in life, the curriculum and previous learning of the young person enable skills and capabilities can later be 'put to work'. The interrelated systems are not impervious to change either. Temporal elements of the ecology are also evident in the shift of broader understandings of disability, for example, the move away from sheltered workshops providing the only employment option.

While the chronosystem focuses on temporal elements and the 'shifting environment over time' (Evans, 2020), not everything changes. We accept that young people's transition to adulthood is a period involving some continuity. The presence of ID is likely to continue (although it may be more pronounced in adulthood). Family's enduring relationships are another example of continuity—as is their ongoing support of the young person through multiple transitions: for example, transition to school, from one level of school to another, as well as the transition from school to employment as well as life-stage transitions (McDonnell & Hardman, 2020, pp. 123–124). Perhaps it is more accurate to think about the ecology in terms of *inflections*, that is, something that continues but takes new or different emphasis or intensity.

A notable feature of the ecology described here is the exponential growth in the mesosystem through transition. It demonstrates how various stakeholders can be 'the village' that embraces young adults with ID. It lends weight to the calls for shared responsibility for transition (Butterworth, Christensen & Flippo, 2017; Francis, Fuchs, Johnson, Gordon & Grant, 2016). Indeed, stakeholder collaborations feature in many educational initiatives that claim successful transitions (Sheppard, Harrington & Howard, 2017; Xu & Stancliffe, 2019). However, the number of interactions happening *about* the young person but *without* including them suggests activities in the mesosystem invite critique. It illustrates parallel but competing views about disability and capability of those with ID. This said, it may also be in the mesosystem where future possibilities might be conceived.

Possibilities

Assuming general agreement on the need for better/more inclusive employment outcomes for young adults with ID, then this ecological model has something to offer. First, it can explain complex issues involved in transition and absolve individuals, or individual agencies, of the blame for poor employment outcomes. As with many social issues, transition to employment for young adults with ID is a complex issue not solved through a single solution. However, there may be potential for stakeholders in the ecosystem to join forces. Therefore, secondly, this ecological model might provide direction for imagining ways that various stakeholders can collaborate to achieve a shared goal. Thus, we move to concluding by proposing some stakeholder questions.

- *Educators might ask:* Are shared programs possible so that the move from school to post-school education is more seamless? Are work preparation programs centred around what young adults can do? Can educational efforts be further supported by including other stakeholders?
- *Program funders might ask:* Is realistic acknowledgement given to the significant amount of brokering many already do or see possibilities for doing?
- *Employers might ask:* Who in the microsystem can help you know the young person's strengths? Are job roles based on the young person's strengths? What training is available for existing workforce, and who can you collaborate with to deliver it?

- *All stakeholders might ask:* What are the parallel conversations happening (meso) that work with or against what you are trying to achieve? Are there other stakeholders in the mesosystem or microsystem you could link with? Are the young people with ID involved in the discussions that impact them? How are we perpetuating or challenging dominant views?
- *Young adults with ID might ask:* What are your dreams for the future, and who can help you achieve them?

Conclusion

This paper began by likening the transition from school to work for young people with ID as a game of whack-a-mole. This referred to the complexities of the environment where transition occurs and how educational interventions alone, are not solely responsible for underrepresenting people with ID in open employment. The ecological model presented here sought to illustrate the complexity of transition and trace how transition is contingent on much more than young adults with ID's capabilities. It invited further consideration of, and utility for, the ecological model as a basis for imagining possibilities to increase the number of people with ID in open employment. It was never our intention to prescribe possibilities; however, we see potential in imagining more effective 'whack-a-mole hammers' in the form of collective efforts.

References

- Anderson, J., Boyle, C. & Deppeler, J. (2014). The ecology of inclusive education: Reconceptualising Bronfenbrenner. In H. Zhang, P. Wing Keung Chan & C. Boyle (Eds.), *Equality in education: Fairness and inclusion* (pp. 23–34). Leiden, The Netherlands: Brill Sense.
- ARTD. (2016). *Ticket to Work pilot outcomes study: A quasi-experimental evaluation of pathways from school to economic and social inclusion*. ARTD Consultants. Retrieved from <http://www.tickettowork.org.au/wp-content/uploads/2016/10/Ticket-to-work-pilot-outcomes-study-2016.pdf>
- Australian Bureau of Statistics. (2020). *Disability and the labour force*. Retrieved from <https://www.abs.gov.au/articles/disability-and-labour-force>
- Beyer, S., Meek, A. & Davies, A. (2016). Supported work experience and its impact on young people with intellectual disabilities, their families and employers. *Advances in Mental Health and Intellectual Disabilities*, 10(3), 207–220. doi: 10.1108/AMHID-05-2014-0015
- Bigby, C. (2020). Differentiation and people with intellectual disabilities in the Australian National Disability Insurance Scheme: Bringing research, politics and policy together. *Journal of Intellectual & Developmental Disability*, 45(4), 309–319.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *International encyclopedia of education* (Vol. 3, 2nd ed., pp. 1643–1647). Oxford, UK: Pergamon Press.
- Butterworth, J., Christensen, J. & Flippo, K. (2017). Partnerships in employment: Building strong coalitions to facilitate systems change for youth and young adults. *Journal of Vocational Rehabilitation*, 47(3), 265–276.
- Certo, N. J., Luecking, R. G., Murphy, S., Brown, L., Courey, S. & Belanger, D. (2008). Seamless transition and long-term support for individuals with severe intellectual disabilities. *Research & Practice for Persons with Severe Disabilities*, 33(3), 85–95. doi: 10.2511/rpsd.33.3.85
- Domin, D., Taylor, A., Haines, K., Papay, C. & Grigal, M. (2020). ‘It’s not just about a paycheck’: Perspectives on employment preparation of students with intellectual disability in federally funded higher education programs. *Intellectual and Developmental Disabilities*, 58(4), 328–347. doi: 10.1352/1934-9556-58.4.328
- Donnelly, M., Hillman, A., Stancliffe, R., Knox, M., Whitaker, L. & Parmenter, T. (2010). The role of informal networks in providing effective work opportunities for people with an intellectual disability. *Work*, 36, 227–237. doi: 10.3233/WOR-2010-1023
- Dunn, C., Shannon, D., McCullough, B., Jenda, O. & Qazi, M. (2018). An innovative postsecondary education program for students with disabilities in STEM. *Journal of Postsecondary Education and Disability*, 31(1), 91–101.
- Epstein, J. L. (2011). *School, family, and community partnerships: Preparing educators and improving schools* (2nd ed.). Boulder, CO: Westview Press. doi: 10.4324/9780429494673
- Evans, K. (2020). Learning ecologies at work. In R. Barnett & N. Jackson (Eds.), *Ecologies for learning and practice: Emerging ideas, sightings, and possibilities* (pp. 163–176). London, UK; New York, NY: Routledge.
- Foley, K.-R., Dyke, P., Girdler, S., Bourke, J. & Leonard, H. (2012). Young adults with intellectual disability transitioning from school to post-school: A literature review framed within the ICF. *Disability & Rehabilitation*, 34(20), 1747–1764.
- Francis, G. L., Fuchs, E., Johnson, A. D., Gordon, S. & Grant, A. (2016). Developing parent-professional partnerships in a postsecondary education program for students with disabilities. *Psychology in the Schools*, 53(10), 1045–1056. doi: 10.1002/pits.21974
- Gonzales, M. (2020). The Bronfenbrenner micro- and meso- systems. In M. Gonzales (Ed.), *Systems thinking for supporting students with special needs and disabilities: A handbook for classroom teachers* (pp. 81–92). Singapore: Springer. doi: 10.1007/978-981-33-4558-4_6
- Gouvea, R. & Li, S. (2021). Smart nations for all, disability and jobs: A global perspective. *Journal of the Knowledge Economy*. doi: 10.1007/s13132-021-00796-9

- Hirano, K. A., Rowe, D., Lindstrom, L. & Chan, P. (2018). Systemic barriers to family involvement in transition planning for youth with disabilities: A qualitative metasynthesis. *Journal of Child and Family Studies*, 27(11), 3440–3456.
- Illeris, K. (2017). *How we learn: Learning and non-learning in school and beyond* (2nd ed.). London, UK: Routledge.
- Jackson, N. & Barnett, R. (2020). Introduction: Steps to ecologies of learning and practice. In N. Jackson & R. Barnett (Eds.), *Ecologies for learning and practice: Emerging ideas, sightings, and possibilities* (pp. 1–15). London, UK; New York, NY: Routledge.
- Joshi, G., Bouck, E. & Maeda, Y. (2012). Exploring employment preparation and postschool outcomes for students with mild intellectual disability. *Career Development and Transition for Exceptional Individuals*, 35(2), 97–107. doi: 10.1177/0885728811433822
- Kelley, K. & Prohn, S. (2019). Postsecondary and employment expectations of families and students with intellectual disability. *Journal of Inclusive Postsecondary Education*, 1(1), 1–14. doi: 10.13021/jipe.2019.2455
- Laragy, C., Fisher, K. R., Purcal, C. & Jenkinson, S. (2015). Australia’s individualised Disability funding packages: When do they provide greater choice and opportunity? *Asian Social Work and Policy Review*, 9, 282–292.
- Leonard, H., Foley, K. R., Pikora, T., Bourke, J., Wong, K., McPherson, L., ... Downs, J. (2016). Transition to adulthood for young people with intellectual disability: The experiences of their families. *European Child & Adolescent Psychiatry*, 25(12), 1369–1381.
- Maia-Pike, L. (2021) A new transition planning framework supporting inclusive and democratic actions in schools. In S. Riddle, A. Heffernan & D. Bright (Eds). *New perspectives on Education for Democracy: Creative responses to local and global Challenge* (pp. 37-50). London: Routledge.
- McCall, R. & Burge, J. (2016). Untangling wicked problems. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 30(2), 200–210. doi: 10.1017/S089006041600007X
- McDonnell, J. & Hardman, M. L. (2010). *Successful transition programs: Pathways for students with intellectual and developmental disabilities*. Newbury Park, CA: SAGE Publishing. doi: 10.4135/9781452275024
- McDowell, C. & Fossey, E. (2015). Workplace accommodations for people with mental illness: A scoping review. *Journal of Occupational Rehabilitation*, 25, 197–206. doi: 10.1007/s10926-014-9512-y
- Meltzer, A., Robinson, S. & Fisher, K. R. (2018). Barriers to finding and maintaining open employment for people with intellectual disability in Australia. *Social Policy Administration*, 54(88), 88–101. doi: 10.1111/spol.12523
- Merriam, S. & Baumgartner, L. (2020). *Learning in adulthood: A comprehensive guide*. Hoboken, NJ: John Wiley & Sons. ProQuest Ebook Central, <http://ebookcentral.proquest.com/lib/uts/detail.action?docID=6007459>
- National Disability Insurance Agency. (2021). *Supports in employment provider handbook*. Retrieved from <https://www.ndis.gov.au/understanding/supports-funded-ndis/supports-employment>
- O’Brien, P. & Murray, R. (2018). A conversation with families of young people with intellectual disability for whom the dream of attending university came true. In M. L. Bonati, F. Gadow & R. Slee (Eds.), *People with intellectual disability experiencing university life: Theoretical underpinnings, evidence and lived experience* (pp. 195–203). Leiden, The Netherlands: Brill Sense.
- Quickfall, A. (2021). ‘Down here, it’s out time’: Bronfenbrenner’s ecological system and The Goonies. In N. Barnes & A. Bedford (Eds.), *Unlocking social theory with popular culture: Remixing theoretical influencers* (pp. 83–99). Switzerland: Springer International.
- Ross-Gordon, J. & Procknow, G. (2020). Adult education and disability. In T. Rocco, M. Smith, R. Mizzu, L. Merriweather & J. Hawley (Eds.), *The handbook of adult and continuing education* (pp. 392–400). Sterling, VA: Stylus Publishing.
- Sheppard, L., Harrington, R. & Howard, K. (2017). *Elements of effective school to employment transitions. Research to action guide, rapid review*. NDS Centre for Applied Disability Research. Retrieved from <https://www.cadr.org.au>

- Shergold, P., Calma, T., Russo, S., Walton, P., Westacott, J., Zoellner, D. & O'Reilly, P. (2020). *Looking to the future: Report of the review of senior secondary pathways into work, further education and training*. Canberra, ACT: Council of Australian Governments Education Council.
- Shier, M., Graham, J. R. & Jones, M. E. (2009). Barriers to employment as experienced by disabled people: A qualitative analysis in Calgary and Regina, Canada. *Disability & Society*, 24(1), 63–75. doi: 10.1080/09687590802535485
- Smith, F., Grigal, M. & Shepard, J. (2018). Impact of postsecondary education and employment outcomes for youth with intellectual disability served by vocational rehabilitation. *Think College Fast Facts*, 18. Retrieved from https://thinkcollege.net/sites/default/files/files/resources/FF18_R.pdf
- Southward, J. & Kyzar, K. (2017). Predictors of competitive employment for students with intellectual and/or developmental disabilities. *Education and Training in Autism and Developmental Disabilities*, 52(1), 26–37. <https://www.jstor.org/stable/26420373>
- Trainor, A. A., Carter, E. W., Karpur, A., Martin, J. E., Mazzotti, V. L., Morningstar, M. E., ... Rojewski, J. W. (2019). A framework for research in transition: Identifying important areas and intersections for future study. *Career Development and Transition for Exceptional Individuals*, 43(1), 5–17. doi: 10.1177/2165143419864551
- Xu, T. & Stancliffe, R. J. (2019). An evaluation of employment outcomes achieved by transition to work service providers in Sydney, Australia. *Journal of Intellectual & Developmental Disability*, 44(1), 51–63. doi: 10.3109/13668250.2017.1310809
- Young, K. & Rooney, D. (2021). *Steps to employment: Transition to work for young people with an intellectual disability*. University of Technology Sydney and Onemda, Melbourne. <http://hdl.handle.net/10453/148589>