ROUTLEDGE

Overcoming Adversity in Education

EDITED BY
ANDREW J. HOLLIMAN
AND KIERON SHEEHY

OVERCOMING ADVERSITY IN EDUCATION

Education exists within a complex and changing world and many learners face a variety of risk factors – conditions, circumstances, situations, or events – that threaten to negatively impact upon their development and achievement. These factors include disability, race, gender, poverty, violence, and natural disasters. It is adversities such as these that this book addresses – what they are, how they impact on learners, and how to successfully address them. Uniquely, *Overcoming Adversity in Education* takes an international approach, with structured chapters by experts from around the world, to inform successful local practices. The book explains why understanding adversity in education is so important, and explores, through practical case studies, ways in which individuals, institutions, and cultures/societies can help create positive outcomes for learners. The reader will find, and be able to draw upon, exemplars of practice that illustrate the principles of creating and implementing successful proactive approaches, interventions, and coping strategies.

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This book is dedicated to my (Andrew's) beloved father, John David Holliman *(or* J.B. *as I liked to call him). Just six days prior to the submission of this work, my world, and my family's world, was rocked when we discovered my father had advanced and inoperable cancer of the lung and other secondary sites. In the challenging weeks that followed, we tried to cherish every single moment with my father and make his life as enjoyable and as comfortable as possible. Sadly, just after midday on May 3, 2022, with his family at his bedside and to a flood of tears, my father passed away. My father's favourite song was 'Bridge Over Troubled Water' by Simon & Garfunkel; so, I thank you, Dad, from the bottom of my heart, for being* my *bridge over the troubled waters of the world. In a world full of adversities, as testified by the chapters in this volume, I thank you dad, for your selfless and tireless efforts to create a positive world for me and all those fortunate enough to be around you. Thank you for teaching me* many *life lessons that I will forever carry with me and bestow (as best I can) upon my young children. I am indebted to you more than words can ever say, and if my children love and respect me half as much as I do you, I will know that I have done a very good job as their father. Thank you, dad, for absolutely everything. I miss you dearly, as does everyone who knows you, but your hard work here is done – may you now* Rest in Peace.

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OVERCOMING ADVERSITY IN EDUCATION

Challenges and opportunities in a complex and changing world

Andrew J. Holliman and Kieron Sheehy

Welcome to overcoming adversity in education

Education exists within a complex and changing world and many learners face a variety of risk factors (adversities) that threaten to negatively impact upon their learning, development, and achievement. *Adversity* then, in the context of education and for the purposes of this volume, can be defined as a risk factor – condition, circumstance, situation, inequality, or event – that threatens to negatively impact upon an individual's learning, development, and achievement. Experiences of adversity can encompass disability, race, sexuality, poverty, violence, and natural disasters (among others). In fact, this volume was produced during the COVID-19 pandemic, which epitomises notions of adversity in education and how we, as citizens of the world, need to adjust to help manage and overcome these adversities. This volume, therefore, seeks to address what (the many) adversities are, how they impact upon the lives of learners, and how individuals, institutions, cultures, and societies can address them successfully.

In an effort to produce a truly global and inclusive volume, contributions are drawn from all over the world. The 54 authors of this volume are affiliated to institutions across Europe (the United Kingdom, Ireland, Germany, Spain), the Americas (Brazil, the United States of America), Oceania (Australia, New Zealand), Asia (Hong Kong, SAR of China, India, Indonesia), and Africa (Zimbabwe). The subjects of this volume are also of global importance, such as how to build harmonious multicultural communities; how to respond to and recover from large-scale crises; and how to create more inclusive environments with chapters on diversity, disability, and sexuality (among other aspects) and accompanying chapters on bullying and belonging. The volume consciously embraces a variety of styles to help learn the stories of minority and marginalised groups. For instance, in one chapter, race is considered using a 'personal narrative approach' drawing on first-hand experiences

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of hate within the education system. In other chapters, personal testimonies are used to help share and amplify the voices of under-represented groups, such as marginalised adolescent girls in Zimbabwe, those in rural and remote schools in a semi-arid region of Brazil, and those students with disabilities in higher education in Indonesia.

The volume explains why understanding adversity in education is so important and explores ways in which individuals, institutions, cultures, and societies can help create positive outcomes for learners. It also serves to illustrate the positive impacts that can occur when educators seek to address adversity in its many guises, in often challenging and threatening circumstances. The reader will find, and be able to draw upon, exemplars of practice that illustrate the principles of creating and implementing successful proactive approaches, interventions, and coping strategies that may help to overcome adversities in education. Taken together, this volume provides a global account of adversities in education and looks for commonalities across borders and cultures, areas of good practice, and lessons that can be learned and applied in different contexts throughout the world.

It was challenging to find a compelling structure and order of chapters for this volume. This was partly because adversity is a complex construct influenced by a multitude of complex interrelated factors (further justifying the need to incorporate into this volume different methods, levels of analysis, and incorporating different voices). As such, chapters often draw on wide-ranging issues, rendering them uncomfortably and inappropriately limited to any encapsulated area. For example, chapters often recognise that adversity is not static and has constantly shifting parameters; adversity can be examined through factors that are endogenous or exogenous; adversity can be considered in different contexts and at different levels (e.g., within child or located within the family, school, system, or sociocultural environment); adversity may serve as a cause or consequence of one's circumstances (not exhaustive). Nevertheless, in an effort to offer some structure for our readers, we present chapters (loosely) in adherence with Bronfenbrenner's (1979) ecological systems theory starting with chapters more proximal to the child (the microsystem), such as the environment in which the child lives, their family, and school, to those more progressively distal (the macrosystem), such as the wider society in which one lives, cultural values, structures, and economic conditions.

- In Chapter 1, Rachel R. Romeo and Joanna A. Christodoulou consider the contribution of neuroscience for understanding and remediating adversities in education. It is argued that adversities affect the structure and function of the developing brain and that advances in educational neuroscience might continue to reduce disparities and help students overcome a variety of adversities in education and learning.
- In Chapter 2, Nenagh Kemp discusses how difficulties with understanding and producing language can have profound and long-lasting effects on students' experience and progress in the education system. Several suggestions for schools (teachers and children) are offered that may support children and

young people to manage (or even overcome) the educational adversities that may stem from language difficulties.

- In Chapter 3, Yijun Ruan and Catherine McBride focus on dyslexia, dysgraphia, and poor reading comprehension across cultures as possible sources of adversity in education. They argue that educators and practitioners should focus on different aspects and strategies when helping individuals with different kinds of literacy difficulties rather than adopting any 'one size fits all' approach and highlight the importance of early interventions to prevent adversities in education.
- In Chapter 4, Mike McLinden, Graeme Douglas, Emmanouela Terlektsi, and Rachel Hewett consider how to promote positive educational outcomes for children and young people with sensory impairments. They examine the need for educational interventions that balance 'access to learning' approaches (i.e. those which emphasise fair and optimised access to the school curriculum and community) with 'learning to access' approaches (i.e. those which emphasise the development of access skills). Achieving this balance, they argue, is most likely to maximise inclusive practice and promote positive educational outcomes for those with sensory impairment.
- In Chapter 5, Andrew J. Holliman, Catriona Connolly, Andrew J. Martin, and Rebecca J. Collie consider some of the challenges associated with the transition to primary, secondary, and higher education. They present evidence to illustrate how a positive educational transition requires not only the development of individual-level self-regulatory skills, such as adaptability, but also adaptability and flexibility on the part of the adults and educational environments surrounding the student.
- In Chapter 6, Erica Bowen considers the developmental impact of domestic violence on children's educational attainment and seeks to identify factors that may buffer against adverse outcomes. Although numerous child and family factors have been identified as ameliorating this influence, the chapter shows how the school context in particular (where pupils spend significant time) may offer a range of potential buffers, from the relationships children develop with teachers to broader systemic multi-agency partnerships between schools and other agencies.
- In Chapter 7, Simone Lehrl considers the home learning environment as an important factor in the emergence of adversities in education but also an important means to overcome such adversities. Her conclusions argue that families may require support, perhaps from day-care centres, so that they are able to act as a mediator of risk factors early in a child's life. In this way, families can create a positive learning environment for children that influences subsequent outcomes in various important domains.
- In Chapter 8, Carol A. Mutch discusses how school teachers and principals may play an integral (but often unrecognised) role in supporting their students, families, and wider communities respond to and recover from large-scale crises and disasters. Evidence and examples illustrate ways in which educators

provide support, in which schools operate as community hubs, principals and teachers take on differentiated roles, and where the active participation of children is acknowledged.

- In Chapter 9, Cirenia Quintana-Orts, Conor Mc Guckin, Rosario Del Rey, and Joaquín A. Mora-Merchán focus on bullying, which is framed as an adversity in education that affects not only the pupils involved but also the wider school community. Therefore, if approaches to bullying prevention are to be successful then they should be developed from a bio-ecological perspective and involve everyone in the school community (bullies, victims, bystanders, parents, teachers, government), not just those pupils immediately affected or their teachers.
- In Chapter 10, Kelly-Ann Allen, Christopher Boyle, Margaret L. Kern, Denise Wong, and Angela McCahey consider how to help those who feel isolated, lonely, and without a sense of belonging at school. It is argued that even though there are competing demands within schools, prioritising strategies to support belonging is a critical endeavour and that fostering belonging may provide a positive path towards supporting the holistic development and well-being of current and future generations in what is becoming an increasingly fragmented society.
- In Chapter 11, Sujarwanto and Kieron Sheehy consider the adversities that disabled Indonesian students face and the impact that this may have on their lives. The authors draw on feedback from disabled students themselves to illustrate where progress remains problematic, and also offer positive initiatives that may act as models for supporting the development of inclusive higher education across Indonesia.
- In Chapter 12, John Butcher focuses on widening participation in higher education. Butcher argues that despite increased participation, the diversity of higher education learners has not sufficiently widened and that individuals from disadvantaged backgrounds continue to face barriers to access and participation. Some institutional and policy mitigations are offered, which might help remove these barriers and enable participation in higher education to become more inclusive.
- In Chapter 13, Meena Hariharan, Sandra Roshni Monteiro, Meera Padhy, and Usha Chivukula focus on childhood stress in education (i.e. the experience of stress, its causes, and its consequences). They reveal the need for radical changes in national education policies around curricula, teaching methods, and other aspects to make education more pupil-focused and embrace a holistic perspective on child development.
- In Chapter 14, Graeme J. Dobson considers the role of the Special Educational Needs Coordinator (SENCO) in overcoming school adversity for children with special educational needs. It is argued that SENCOs have the potential to operate effectively within the different systems of the ecology of inclusive education and that they need to do so. By working within and between the different systems that surround the child, SENCOs are seen as able to develop

and strengthen this ecology for the benefit of those whose adversities they seek to address.

- In Chapter 15, Keri Ka-Yee Wong offers a cross-cultural perspective on children's mental health in schools (an issue exacerbated by the COVID-19 pandemic). A dimensional preventive approach to mental health is promoted, in which the need to improve school-based support for mental health would be met through approaches that are designed for, and able to reach, all children, not only those most immediately and seriously affected.
- In Chapter 16, Adam Jowett demonstrates that lesbian, gay, bisexual, and transgender (LGBT+) students often experience significant adversity at school. Interventions are offered that might support LGBT+ youth and promote their wellbeing. These approaches to LGBT+ inclusion are seen as being most likely to bring about optimal change where they are whole school in nature and consider the needs of LGBT+ students, staff, and parents.
- In Chapter 17, Festus E. Obiakor considers how to build harmonious multicultural communities by eliminating hate in colleges/schools of education. Using a personal narrative approach, Obiakor argues that power inequalities (e.g., white privilege) exist and disadvantage those who come from culturally and linguistically diverse and vulnerable backgrounds and that institutions (and societies more broadly) need to dig deeper to reverse traditional thinking, behaviours, techniques, and policies.
- In Chapter 18, Andrew J. Martin, Lauren Tynan, Rebecca J. Collie, Michelle Bishop, and Kevin Lowe consider academic adversity among Indigenous (Aboriginal, First Nations) students and identify three psychoeducational factors that may assist Indigenous students in the face of academic adversity: educational resilience, motivation and engagement, and teacher–student relationships. It is proposed that multidimensional efforts towards enhancing educational access and equity for First Nations children and young people are needed.
- In Chapter 19, Liz Chamberlain, Alison Buckler, Kelly Worwood, Obert Chigodora, Charlotte Y.P. Chishava, and Claire Hedges draw on personal testimonies from marginalised adolescent girls in Zimbabwe, to share and amplify their voices and experiences as they access an informal, community-based education programme. These underpin a perspective that adversity is not a static state and that there is a need to think more open-mindedly and creatively about what it means for at-risk groups to have reliable access to education, what it means to be a learner, and what it means to learn.
- In Chapter 20, Alexandra Okada, Karine Pinheiro de Souza, Miriam Struchiner, Cíntia Rabello, and Luziana Quadros da Rosa examine key issues in empowering less well-represented groups through open schooling in the context of the COVID-19 pandemic. Drawing on a case study of extreme adversity, with 1,129 participants from Indigenous, rural, and remote schools in 184 municipalities in Ceará, Brazil, they show how educators can play a key role in enhancing innovative ecosystems and benefit local communities

by empowering youth through participatory and democratic educational processes.

- In Chapter 21, Andrew J. Martin and Rebecca J. Collie offer a new conceptual lens – the Academic and Cultural Demands-Resources (ACD-R) Framework – for addressing a comprehensive range of factors implicated in students' academic experiences and outcomes, including how they navigate adversities in education. This conceptual guidance is seen as a way of helping researchers and practitioners identify barriers faced by culturally/ethnically diverse students and create strategies that optimise their educational development.
- In Chapter 22, Kieron Sheehy and Andrew J. Holliman (the editors of this volume) reflect on the preceding 21 chapters to offer some closing remarks on the subject of *overcoming adversity in education*. It is argued that the experience of adversity is not evenly distributed; that an ecosystemic perspective of adversity is required; where a collective response to address issues at different levels of the system is necessary; and that much can be gained through engagement with the chapters in this volume, which offer examples, from across the world, of theories and opportunities that can be drawn upon for those wishing to overcome adversity in education.

The chapters in this volume include coverage of influential thinkers, events, and ideas that have shaped current understanding and inform future developments in the area. They are also designed to take the reader beyond standard textbook coverage and into engagement with current issues, cutting-edge research, and future directions in the field from an international perspective. This is an ambitious target given the word limits to which authors were required to adhere. It is simply not possible for chapters to cover all relevant themes in the depth they deserve, but plenty of references are provided at the end of each chapter for readers to explore the issues in more detail.

Notes on contributors appear in the front of this volume and ORCID IDs for each corresponding author, where available, can be found at the beginning of each chapter.

It is hoped that this volume will be of value to educational practitioners, researchers, teachers, their students, and others who are interested in learning more about how we can overcome adversities in education from an international perspective.

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1

HOW NEUROSCIENCE CAN HELP TO OVERCOME ADVERSITY IN EDUCATION

Rachel R. Romeo, and Joanna A. Christodoulou

Many children arrive at school having already experienced one or more types of adversity. Early life adversity can be associated with factors that are *endogenous* and/or *exogenous* to the child. Factors described as endogenous are rooted in biological constitution, such as a genetic predisposition for learning disability. Exogenous factors are environmental influences on child outcomes, such as a child's socioeconomic status and early learning environment characteristics. Cognitive neuroscience research can help us understand the contribution of endogenous and exogenous adversities – and their intersection – to children's cognitive and academic development. We focus on reading disabilities (endogenous) and socioeconomic status (exogenous) as types of adversity.

Reading disabilities and socioeconomic disadvantage offer two perspectives on adversity based on prevalence and shared impact across societies. Among different learning disabilities, reading disabilities (RDs) are the most common, affecting up to 20% of the school-age population (Edwards et al., 2021). RDs impact the ability to accurately and/or fluently read words (commonly referred to as dyslexia), and/or understand written text (Lyon et al., 2003). While many children struggle with reading and educational outcomes associated with RDs, children who grow up in socioeconomically disadvantaged homes are disproportionately at risk of academic disparities and of not reaching their learning potential (Duncan & Murnane, 2011). While each of these topics has respective neuroscientific literatures, significantly less attention has been paid to the critical intersectionality of adversities associated with RDs and socioeconomic disadvantage.

Socioeconomic disadvantage and RDs impact developmental trajectories, academic achievement, and outcomes beyond the classroom. Socioeconomic status (SES) refers to an individual's access to financial and educational resources and the commensurate social status (Entwisle & Astone, 1994). SES may influence cognitive development in a myriad of ways, including through access to material

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resources, such as educational toys and books, as well as the frequency and quality of cognitive stimulation, such as language exposure in the home and high-quality school instruction (Farah, 2017). Children in lower SES contexts are also disproportionately exposed to early life stress, which can affect learning capabilities (Sheridan & McLaughlin, 2016). SES disparities in academic achievement have grown wider over recent decades (Reardon, 2011) and influence disparities in post-academic outcomes such as lifetime earnings, health, and wellbeing (e.g., Braveman et al., 2011).

Reading disabilities can also have implications beyond reading words or understanding text. Challenges associated with RDs extend to compromised socioemotional wellbeing (Willcutt & Pennington, 2000) as well as negative stigma, financial burden, and impact on work (Livingston et al., 2018). Relatedly, RDs can prevent an individual from learning content knowledge in school as well as from benefiting from reading for fun. A cycle can emerge wherein lower reading ability leads to less time reading, to avoiding reading because it is challenging, and therefore learning fewer concepts, vocabulary, and language. This sequence is often referred to as the Matthew Effect (i.e. the 'rich get richer, while the poor get poorer'; Stanovich, 1986). The Matthew Effect is a common framework in considering the experiences and risks of RDs that can spiral. A parallel framework is evident from the perspective of socioeconomic disadvantage, termed the 'faucet effect' (Entwisle et al., 2000). This theory is relevant for extended out-of-school learning, with summer vacation as the most common example. During the summer months, students often have suspended access to the consistent resources they may have had during the academic year. The flowing 'faucet' of resources can be significantly slowed, representing reduced resources available to support student learning. In both cases, the effects of reading ability and socioeconomic resources are evident in short- and long-term impacts on education.

Intersectionality of SES and RD

The intersectionality of RD and SES exemplifies the overlap of exogenous and endogenous factors contributing to reading outcomes. For children with socioeconomic disadvantage who also struggle to read, several issues arise in considering their reading achievement. Factors impacting reading performance exist in a broader social context and impact who is identified, how they are labelled, and how student needs are addressed in education and clinical settings. We posit that a student's performance is an outcome of the goal, the context, and the learner. For students (the learner) who are tasked with a reading activity (the goal) that is beyond their skill set or are provided with insufficient resources, guidance, or structure to complete a task (the context), there is a higher likelihood of difficulty. This apparent challenge can be compounded for students with a disposition toward RDs genetically or circumstantially.

The critical intersection of SES and reading outcomes is evident in the disproportionality of reading difficulty in students with lower SES. The annual appraisal

of reading performance for US students in grades 4, 8, and 12 reports that almost 50% of students who are low income perform below 'basic' standards, in contrast to about 20% of their higher-income peers (NAEP, 2019). Children from lower SES backgrounds are also diagnosed with specific learning disabilities, including reading disorders, at disproportionately higher rates than children from higher SES backgrounds (Kincaid & Sullivan, 2016; Shifrer et al., 2011).

One possible explanation for this is purely exogenous in nature – children from lower SES backgrounds are, on average, not receiving high-quality, evidence-based literacy instruction, and when they do not perform on par with their higher SES peers, it may be misconstrued as a reading disability or disorder. This is partially supported by evidence from gene-by-environment interactions, in which children with reading difficulties from higher-SES backgrounds tend to have stronger genetic influences on reading ability while children from lower-SES backgrounds tend to exhibit stronger environmental influences on reading ability (Friend et al., 2008). The implication is that when children experience 'optimized environments' with the direct and indirect consequence of socio-economic advantage, then genetics is likely contributing notably to reading difficulties of students who still exhibit them. In contrast, for students from lower SES backgrounds, economic disadvantage constrains reading progress such that the environment has a greater effect than genetics. However, this does not mean that genetically-based reading disorders do not occur in lower-SES populations. In fact, some research suggests that less enriching environments may lead to *greater* genetic liability from dyslexia-susceptible genes, which would be less likely to emerge in more enriched, supportive environments (Mascheretti et al., 2013). Further complicating the genetic story are recent discoveries in epigenetics, in which an individual's behaviors and environments can cause changes to gene expression.

At present, it is difficult to pinpoint the precise endogenous and exogenous roots of a given child's reading difficulties, and as noted earlier, in many cases, both genetic and environmental risk factors likely interact. However, the field of cognitive neuroscience has begun to provide insights into how adversities affect the developing brain, revealing significant opportunities to support children in overcoming these adversities and reaching their academic potential.

Cognitive neuroscience of SES

The human brain develops and matures differentially by areas, generally in the order of importance for survival. Subcortical regions deep in the brain are generally responsible for life-sustaining functions (e.g., seeking food and protection) and are the first to develop, largely *in utero*. The next to develop are regions of the cortex – the outer layer of the brain responsible for much of higher cognitive function – responsible for sensation (e.g., visual and auditory processing) (Houston et al., 2014). Cortical regions responsible for higher-level cognition (e.g., language and reasoning) undergo a protracted period of development throughout childhood and adolescence (Houston et al., 2014).

The cortex is largely composed of gray matter, primarily neuronal cell bodies that support the brain's functions. Different brain regions are connected to each other through white matter pathways composed of neuronal axons, which connect to other neurons at junctions called synapses. Both in utero and throughout childhood, the cortex folds in on itself (gyrification) which allows for more gray matter surface area within the confined space of the skull. In the first years of life, the brain makes many more neuronal connections than are needed. Throughout development, the most used pathways are insulated and reinforced, while the least used pathways are pruned away to improve efficiency. These patterns of gray and white matter changes serve as the basis of brain development, maturation, and the correlates of endogenous and exogenous factors.

The first discoveries about the role of early experiences on brain development were largely made in animal models, which revealed that access to enriching, stimulating environments resulted in more cortical gray matter (Diamond, 1988). Since the 1990s, advances in neuroimaging, and particularly magnetic resonance imaging (MRI), have allowed researchers to investigate similar phenomena in vivo in humans. This work has revealed critical relationships between individuals' experiences and their brain *structure* (the size and shape of gray and white matter) and *function* (strength and location of activation when performing a task).

Numerous MRI studies have revealed relationships between SES and brain structure in children and adolescents. Most of these studies have found that lower SES is associated with reduced cortical gray matter, including measures of thickness (e.g., Lawson et al., 2013; Mackey et al., 2015; Romeo et al., 2018a), surface area (e.g., Merz et al. 2020; Noble et al., 2015), and volume (e.g., Hair et al., 2015; Jednorog et al., 2012). The strongest associations are typically found in the frontal and temporal cortices (Merz et al., 2019), which exhibit the most protracted courses of development and thus are most vulnerable to environmental effects. This pattern of associations is presumed to underlie the disproportionate effect of SES on the domains of language and executive function, which are supported by both frontal and frontotemporal cortical networks (Merz et al., 2019). SES also correlates with the volume of subcortical structures such as the hippocampus (Hair et al., 2015; Hanson et al., 2011), which supports memory, and the amygdala (Hanson et al., 2011; Merz et al., 2018), which is involved in emotion and reward processing.

SES has been examined in relation to the microstructure of white matter connections between regions using diffusion-weighted imaging (DWI). These studies find that SES is correlated with the integrity of several white matter pathways, particularly tracts with cortical terminations in inferior frontal regions (Ozernov-Palchik et al., 2019; Rosen et al., 2018; Ursache et al., 2016). Recent work suggests that these differences are a result of SES differences on the pace of brain development, such that higher SES leads to a protracted period of structural brain development that ultimately leads to more efficient cortical networks (Tooley et al., 2021).

In addition to associations with brain structure, SES is strongly related to measures of brain functioning during tasks assessing cognitive skills critical to learning and educational success (for review, see Farah, 2017). Pertinent to literacy

development, higher SES is associated with greater activation in language-relevant left perisylvian regions during phonological processing tasks (Conant et al., 2017; Younger et al., 2019) and in left fusiform regions during text processing (Noble et al., 2006). SES also moderates the brain activation patterns during mathematical processing. Children from higher SES homes rely more on verbal processing brain regions to complete subtraction tasks, while children from lower SES homes rely more on spatial processing skills; these findings may be linked to early language exposure that tends to be higher in higher SES homes (Demir et al., 2015).

Children from higher SES backgrounds have also exhibited greater activation in prefrontal and parietal regions supporting executive function (EF) during tasks requiring inhibition of distracting/irrelevant information (D'Angiulli et al., 2012; Stevens et al., 2009) and working memory (Finn et al., 2017; Rosen et al., 2018). However, SES has also been found to be *negatively* associated with activation patterns during more complex EF tasks (Sheridan et al., 2017), possibly suggesting that higher SES youth utilize a more efficient EF processing network. These findings suggest that a child's SES influences how they process information critical to academic learning.

Socioeconomic disadvantage affects both the structure and function of the developing brain before a learner even enters school. However, it is critical that these early-arising differences are viewed as opportunities to tailor educational opportunities rather than suggestive of fixed negative trajectories. Just as negative experiences affect the developing brain, so do positive ones. There is a growing literature demonstrating how social interventions and educational practices induce beneficial neuroplasticity (Raizada & Kishiyama, 2010) and sometimes with even greater benefit to children from lower SES backgrounds (Romeo et al., 2018a). In this way, cognitive neuroscience may be well poised to inform entry points for reducing disparities among children facing adversity.

Cognitive neuroscience of reading disabilities

Reading disabilities typically fall into two categories that can overlap: impaired word reading (i.e. dyslexia) and impaired reading comprehension. Practically, dyslexia presents as difficulty matching sounds and letter patterns, and reading can be halting, inaccurate, and/or imprecise. While it is more common for educators to notice difficulties with accuracy of word reading, difficulties with fluency are an equally important concern. Children with fluency challenges may read a word correctly, but the process is effortful and inefficient, and the rate is slow. In cases of reading comprehension challenges, students can read connected text correctly but struggle to describe what the material was about and demonstrate understanding. Dyslexia and reading comprehension impairment can also overlap, which often results in significant reading struggles.

The cognitive neuroscience of reading disabilities has largely focused on dyslexia. Over decades of research, there has been converging evidence regarding the brain basis of reading and dyslexia. Reading development for most children relies

on a largely left-lateralized brain network of regions that become coordinated in the effort to read words including circuits in temporo-parietal, occipito-temporal, and frontal systems. These regions draw on the ability to perceive visual information, recognize letter and letter patterns (or other script types), match sounds to print, assign meaning to strings of sounds, and articulate sounds forming words (Gabrieli et al., 2010).

As readers become more adept at these coordinated and integrated skill sets, the way in which they recruit the reading brain systems is modified. For example, a region in the posterior left hemisphere widely recognized to support automatic word recognition, termed the visual word form area (VWFA), is recruited in proportion to reading experience. Research has shown greater activation for Hebrew words for readers of Hebrew but not for nonreaders of Hebrew (Baker et al., 2007). Another study showed that brain responses become enhanced for the particular written language that the reader engages with in the VWFA for adults who acquired literacy during childhood or later as adults but not for adults who remained illiterate (Dehaene et al., 2010). In this way, exogenous and experiential factors largely driven by education (in school and at home) impact the development of the reading brain.

The brain signature of dyslexia is distinguished by the under-activation of posterior left-hemisphere regions supporting purposeful decoding and automatic word recognition in English as well as other alphabetic languages (Pollack et al., 2015). Interestingly, although dyslexia is defined as single word-level challenges, variations in the brain signature emerge based on differences in language demands (e.g., Paulesu et al., 2001). Importantly, the brain signature of dyslexia does not differ between struggling readers with average versus high cognitive skills (Tanaka et al., 2011). This research points to an important feature of dyslexia, which is that a disproportionate or unexpected difficulty in learning to read at the single word level can show a similar brain signature across diverse contexts for reading acquisition.

Reading development is highly responsive to effective instruction and experience with print; this offers multiple pathways for adversity associated with a reading disability to be prevented or attenuated. Indeed, brain systems show immense plasticity in response to reading intervention for readers experiencing difficulty (Barquero et al., 2014). This and other cognitive neuroscience evidence of responses to education suggest promising pathways for the field to support students experiencing adversity to reach their highest academic potential.

Contributions of neuroscience to overcoming adversity in education

Neuroimaging tools provide an unrivaled view of the brain throughout learning and development. However, these methods are more costly, resource intensive, and specialized than other psychological and educational research methods. These challenges have prompted a vigorous debate about the 'value added' of neuroscience over and above behavioral techniques. We argue that neuroscience research

provides unique insights that transcend basic research and have the potential to significantly influence educational practice, for example, by informing educators, families, and stakeholders about the brain basis of reading difficulty and improving opportunities for prevention and intervention. Specifically, through identifying mechanisms, predicting reading trajectories, and reframing misconceptions, neuroscience can help reduce academic disparities and overcome adversity in education.

Neuroscience helps to identify mechanisms underlying adversities

Sometimes, when a student is struggling to learn, the reason is obvious. But often, the source of the struggle is less clear from just observation. For example, two children may both score poorly on a reading assessment, but they may struggle for very different reasons. Neuroimaging may identify differences in the ways that children's brains process the components of reading – the orthography, phonology, syntax, and semantics of the text – to help reveal where in the brain's reading network the breakdown occurs (e.g., Cutting et al., 2013). Neuroimaging can also reveal which experiences are most associated with specific neural patterns indicative of learning. For example, we have found that children's early experience with dyadic conversation explains SES disparities in the development of language-related brain regions, but the sheer volume of passive language exposure does not (Romeo et al., 2018b, 2018c). Both kinds of studies reveal mechanisms underlying learning differences, and the findings can be used to target interventions to the specific processes needing the most support and/or the experiences with the greatest impact on learning.

Neuroscience helps to predict trajectories of academic development

Beyond increasing our understanding of learning difficulties, neuroscience can also help us to predict future performance. 'Biomarkers' are biological indices that predict a cognitive or behavioral outcome, and when these indices are structural or functional brain measures, they are termed 'neuromarkers' (Gabrieli et al., 2015). Many studies have found that early alterations to reading-related brain regions – *before* a child learns to read – predict dyslexia and poorer reading outcomes (e.g., Molfese, 2000; Myers et al., 2014). Other studies find that neuroimaging measures predict the course of children's reading development better than behavioral measures alone (e.g., Hoeft et al., 2011; Maurer et al., 2009). Thus, neuromarkers may indicate which children are at greater risk of future learning difficulties, allowing for earlier intervention before those difficulties become ingrained. Brain measures may also help to predict which instructional or intervention strategies are optimal for each learner. Importantly, the core evidence-based practices for effective reading instruction are largely consistent across learners; however, some students may benefit from variations in intervention strategies. For example, we have found that children with RD from lower-SES backgrounds exhibit greater gains in reading

and associated cortical plasticity following intensive reading intervention offered during summer vacation, as compared to children from higher SES backgrounds (Romeo et al., 2018a). While it is still too early to use neuroimaging techniques to predict diagnoses or individualize instruction, neuroscience techniques present exciting opportunities for future research to identify practices to optimally support learners' strengths and weaknesses.

Neuroscience helps to reframe misconceptions and spur societal action

A common misconception about learning disabilities is that they are the result of laziness (Cortiella & Horowitz, 2014). Similar misconceptions may befall students experiencing socioeconomic disadvantage and/or reduced learning resources. Cognitive neuroscience offers a unique way to debunk such myths about student performance. With the visualization of brain differences apparent in children with dyslexia compared to their peers, cognitive neuroscience offered an alternative perspective to better understand why students may struggle and shift blame from the student toward an underlying difference in neurocircuitry. Neuroscience findings played a significant role in grassroots efforts to implement dyslexia screening laws in almost every state. Recent discoveries of how poverty detrimentally affects early brain development have also helped spur a number of policies to provide families in need with financial and social supports. Further, there is a growing push to reframe neurocognitive variations from being viewed as 'deficits' to simply being viewed as differences, or instances of neurodiversity, among a constellation of strengths and challenges for each learner relative to the goal and context. As neuroscientific investigations continue to expand to more diverse populations, so grow the opportunities to use findings to reframe misconceptions and implement policies to support learners facing a variety of adversities.

Conclusions

Adversity in education takes many forms, including predispositions or differences children are born with, as well as detrimental experiences that happen to them. Both occurrences have the power to shape brain development, and in turn, affect children's learning. Over the past several decades, cognitive neuroscience has helped to reveal how these adversities alone and in confluence affect the structure and function of the developing brain. Neuroscience has also begun to uniquely impact education by helping to identify the mechanisms underlying learning, predict outcomes, and influence positive societal shifts in thinking and practice. Future discoveries in educational neuroscience are poised to continue reducing disparities and help students surmount a variety of adversities in education and learning.

Acknowledgments

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2

LANGUAGE DIFFICULTIES AND EDUCATION

Nenagh Kemp

Introduction

Worldwide, schools provide the environment in which children and young people learn academic skills, as well as skills in interacting with their peers and teachers. Nearly all this learning takes place via the medium of language. Although written language becomes increasingly important as students progress through the school years, spoken language (or for deaf students, sign language) is the primary method of communication in both the classroom and the playground. For children with language difficulties, however, school can be a frustrating and isolating experience. With appropriate support and accommodations, school can also provide a valuable and safe place for learning and for developing friendships. Difficulties in using language in an educational setting may arise when a child has a specific language disorder or difficulty, but challenges can also exist for children who are not fluent in the language of instruction because they speak another language at home. This chapter discusses the obstacles to scholarly and social achievement that language difficulties can pose. The chapter also provides examples of ways to support students during classroom activities and assessment, with the aim of reducing the educational adversities.

What is language difficulty?

A range of terms have been applied to describe children who experience difficulty with language: language delay, developmental language disorder (DLD), developmental dysphasia, and specific language impairment (SLI). Some also mention speech (e.g., speech and language difficulty, SaLD). One widely accepted definition of DLD is that it occurs when a child has difficulties in receptive and/or expressive language that cannot be attributed to hearing or cognitive impairment (Bishop et al., 2016). This diagnosis applies to approximately 7.5% of children (Norbury

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et al., 2016; Tomblin et al., 1997). The problems that those with DLD experience in acquiring, using, and understanding spoken language become evident early on in life and often persist into adulthood (McGregor, 2020).

The educational adversities described in the current chapter, however, apply also to students whose home language does not coincide with that of the classroom. Most have no language impairment; they are disadvantaged instead by their reduced ability to use the school language to learn and interact. The number of students learning in a non-native language has increased over the past five decades and represents, for example, approximately 16% of students in England (Strand et al., 2015) and 22% in Australia and the US (AEDC, 2015; Statista, 2021). Because of the range of reasons that students might face challenges in using language in the educational setting, this chapter uses the generic term "language difficulty" to capture this diversity of experience.

Difficulties with language often co-occur with difficulties reading and writing. This link might not be always obvious in the primary school years, when some children with language difficulties can keep up with the demands placed upon their literacy skills. However, by secondary school, students must read and write more complex material, and it is then that more subtle difficulties with spoken language may contribute to literacy problems (Patchell & Hand, 1993). This chapter not only focuses on problems that students may experience in understanding and producing spoken language, but also acknowledges the adversities posed by difficulties with written language as well.

Language difficulty and academic learning

One of the main functions of schools is to teach children academic subject areas (e.g., literacy, mathematics) and some broader skills (e.g., physical education, art). When we think of formal education, we may picture students sitting at their desks, reading instructions, and writing their answers. In reality, much classroom interaction takes place through spoken language. Even at high school, teachers use oral language to introduce new content, provide instructions, ask questions, and encourage discussion (Patchell & Hand, 1993). If they are to participate fully in class, students of all ages must be able to understand, recall, and act on the instructions given by their teacher (Calhoon et al., 2000). They also need to feel confident about asking and answering questions and engaging in class discussion. Students with language difficulty may struggle to understand or remember complex information, especially if they also have specific problems with verbal memory (Bishop & McDonald, 2009). They may also find it difficult to gather their thoughts quickly enough to produce a coherent comment. As discussed in more detail later, students with language difficulty often find social interactions challenging. This can affect their academic progress, for example, during group-work assignments or discussions. For such students, the classroom can be an overwhelming and dispiriting place. It is not surprising that language difficulties can lead to children having a generally negative experience at school (e.g., Calhoon et al., 2000).

Students with developmental language delay (DLD) are more likely than their peers to experience problems dealing with specific academic topics. Language delay is often associated with difficulty in learning new vocabulary (McGregor et al., 2013), and reduced vocabulary size can in turn contribute to poorer reading development (Snowling et al., 2007). Indeed, compared to their typically developing classmates, students with DLD are six times more likely to have problems with reading and spelling (Young et al., 2002), and children whose language delay persisted beyond the age of five-and-a-half years performed more poorly on literacy tasks, as well as general academic achievement, at age 16–17 years (Snowling et al., 2001). The effects of language delay can extend to other academic topics as well. Students with DLD are four times more likely to have difficulties with maths than their peers (Young et al., 2002). Children need adequate comprehension skills to understand and integrate the separate pieces of information in a maths problem, and their success at this step can determine how they will try to solve it (e.g., Mereku & Cofie, 2008).

Unfortunately, children with DLD are not always easily identified and do not always receive the extra help that they need (Skeat et al., 2010). By school age these children can usually carry on a basic conversation and follow simple instructions and do not necessarily sound different from their peers (McGregor, 2020). In a large-scale study of two cohorts of kindergarten children, Morgan et al. (2017) found that of the children who were identified as needing speech-language services, those who found it more difficult to regulate their own emotions were more likely to receive those services than children who had better self-regulation skills. Thus, "well behaved" children with language difficulties more often miss out on intervention than children who cause more disruption in class. As discussed further later, these results underscore the importance of training teachers to identify children with language difficulty and to help them access the intervention services they need.

The discussion so far has centred on children who have a disorder of language processing. However, language difficulty in the classroom can also arise for an entirely different reason: when the child speaks a different language at home and is not yet proficient in the language of the school. Of course, learning more than one language is a great positive in the long run. However, in the shorter term, a lack of familiarity with the school's language can hinder academic and social progress. Children may be unable to demonstrate the extent of their knowledge if that knowledge is assessed via vocabulary that they have not yet acquired or by sentences that are too complex to understand (García, 1991). This can mean that language learners perform more poorly than their peers in classroom tests (Abedi et al., 2004), leading to reduced opportunities for academic progression (Robinson, 2007).

In many cases, bilingual (or multilingual) children are better at speaking the language of the classroom than they are at reading and writing it (Cummins, 1980). For this reason, care must be taken in assessing these children's school language proficiency. If written language demands are too high, the child is faced with a range

of challenges to learning, and poorer performance in turn can lead to reduced self-confidence and motivation (Robinson, 2007). Further, some second language learners also have a language disorder, but this combination can be difficult to identify, as communication problems can be easily attributed to lack of fluency in the language of the school. Failing to identify a language disorder in this context can mean that second language learners can miss out on support. For example, Morgan et al. (2017) found that, even after controlling for SES and parents' education level, children who had English as an additional language were only half as likely to receive speech-language services than their monolingual English peers. It is important to assess bilingual children in both languages to properly identify their abilities and additional needs (Håkansson et al., 2003).

Language difficulty and social/emotional development at school

Living with language difficulty is associated not just with poorer academic outcomes but also with social and emotional problems (e.g., Botting & Conti-Ramsden, 2010; Forrest et al., 2018). This can have a substantial negative impact on students' engagement with school, which can lead to reduced educational attainment (e.g., Chase et al., 2015). Children with language difficulty can find it hard to join in with others' conversations (Brinton et al., 1997) and may struggle to fully understand what their peers are saying or to explain their own ideas clearly (Forrest et al., 2018). This can make it particularly challenging to engage fully in class discussions and group-work assignments. Further, young people with language delay, compared with their typically developing peers, are often rated as "less preferred" by their classmates (Andrés-Roqueta et al., 2016) and may end up being socially excluded (Forrest et al., 2018). Students who do not enjoy close relationships with their peers may not be included in peer-chosen pairs or groups for classwork, and if allocated to groups by a teacher, they may not be easily integrated. The problems and embarrassment caused by any language problems can therefore mean that students cannot easily contribute to classroom discussion or group work. Thus, problems with socialisation have the potential to exacerbate problems with educational attainment.

Children's social difficulties can also impede teachers' abilities to identify children's language problems, especially without receiving sufficient training. For example, a child who fails to follow their teacher's instructions may be considered a poor listener, or even deliberately noncompliant, when in fact they have failed to understand what was required of them (Dockrell & Lindsay, 2001). Even "good" behaviour can lead to disadvantage: as noted earlier, children with speech/language delay who appear well behaved in class are less likely to receive support services than their more disruptive peers (Morgan et al., 2017). Missing out on intervention from early on can make it harder to progress, let alone try to catch up, with typically developing peers.

Social–emotional problems are also experienced by students who are learning the language of the school as an additional language. It can be hard to tease apart

the many reasons why these language learners might experience difficulty in the classroom: some might be attributable to the stresses of leaving one country and moving to another and others to differences in culture and expectations. Niehaus and Adelson (2013) found that English language learners (ELLs) in the US had lower interpersonal skills and fewer adaptive skills than their English-speaking classmates. ELLs with a Spanish language background learned English more slowly, and experienced more anxiety about school, than those with an Asian language background. However, Spanish-speaking ELLs, who formed the majority of ELLs in their classrooms, reported more friends and more positive interactions than the minority Asian-language ELLs (Niehaus & Adelson, 2013). Such findings suggest that simply having classmates from one's own language background can mitigate some of the social–emotional problems that can arise for students still acquiring the language of the school. However, class make-up is not a factor that schools can control, and other supports are also necessary.

Supporting children in the classroom

Worldwide, children with language difficulties are more likely to be found in mainstream classrooms rather than in special educational centres. Children who are still learning the school language are also integrated into normal classrooms. This approach helps children to feel better integrated and allows them to focus on all aspects of the curriculum rather than just on language skills. In their report on the outcomes of the Better Communication Research Programme, Lindsay et al. (2012) recommended that support for speech, language, and communication should be provided at three levels. There should be access for all children to effective teaching, but the system should also provide targeted support for those in mainstream classes who need extra help, and finally, specialist support for those who need more direct intervention. Lindsay et al. (2012) and Law et al. (2017) agree that further improvements would be gained by aiming for earlier identification, more systematic assessment over time, and by recognising parents/caregivers as critical partners in the intervention process.

Alongside system-level educational interventions, there are numerous small changes that can be made to improve the school experience of students with language difficulty. Many suggestions made for young children apply just as well to children with problematic receptive or expressive skills. For example, it can help to ask short, simple concrete questions, using words such as "who", "what", "where", rather than "when" and "why" (Welsh & Bierman, 2003). If the question is too difficult to understand, the child may either not reply or give a meaningless answer (e.g., Kaler & Kopp, 1990). If the question is too broad, the child may understand it but be unable to formulate an appropriate response. It is better to use literal than figurative language and to make requests direct rather than indirect (Patchell & Hand, 1993). For example, the teacher could say "Please could you say that again more loudly?" rather than "I'm sorry, I didn't quite catch that". Teachers can also endeavour to slow their rate of speech and repeat complex instructions,

emphasising the important words (NEPS, 2015). For older children, whose literacy skills are better developed, writing the instructions on the board can be helpful: this slows down the rate of input and remains as a visual record that students can refer back to if unsure (Patchell & Hand, 1993).

It is also important to allow students enough time to consider and respond to requests or questions. Students who do not respond promptly can easily be assumed not to be paying attention, or even deliberately ignoring the teacher, but in many cases their behaviour reflects genuine difficulty in processing the instructions (Dockrell & Lindsay, 2001). It can help to remind the student that they can ask for help if they need it, perhaps by using a visual signal rather than words (NEPS, 2015). Teachers should also bear in mind, and remind other students, that a student with expressive language difficulty can find it difficult to modify their speech to suit the situation. Otherwise, the student might be perceived as rude or overly formal when in fact they lack the skills to vary their speech style (Patchell & Hand, 1993). To assess the understanding of children who find it difficult to formulate responses, teachers could give yes/no questions or ask the student simply to point to the right answer. However, care must be taken to vary the nature of the questions to avoid students' common tendency to say "yes" and to point to the most recent item.

Children who struggle to learn the language of the classroom should be assessed with care. As noted earlier, when a student seems to have trouble expressing ideas in the school language, these difficulties may be attributed to the fact that they are still learning this second language. However, it is advisable to speak to the child's parents as well: it may transpire that the child has similar difficulties speaking their home language as well (Patchell & Hand, 1993). Formal testing can then be carried out so that support services can be sought if required. If a student with a developmental language delay is learning a second language along with the rest of their class, a range of presentation modes can be used. For example, the teacher could rotate the use of reading aloud, writing, role play, and pictures to teach new vocabulary and grammatical structures (Hamilton & Berberi, 2005).

Interventions and accommodations

When children with language difficulty do receive intervention, there are practicalities to consider about how this intervention should be offered. Individual or small-group support might be the ideal but can be difficult to enact in practice. Students with language difficulty can feel embarrassed about having to go out to "special lessons" and many would prefer to receive their support in the classroom (e.g., Ehren, 2002). Whole-class interventions can work for certain topics, such as teaching vocabulary, and can reduce the impost on availability of support staff and space (Lowe et al., 2019). Law et al. (2004, 2017), in reviews of language-related interventions, concluded that many types had a positive effect, especially on vocabulary measures, although there was more evidence for efficacy with expressive than receptive language difficulties, and no single intervention type seemed better than

others. They noted that focus on evidence-based programmes, on the inclusion of parents/caregivers, and on continued monitoring are all important.

When it comes to assessment, it is common to provide accommodations for children with a disability, to help level the playing field. Such accommodations are especially valuable for children struggling with language at school, whether for developmental or cultural reasons. Most teachers are already working hard to teach and assess the range of children in their class, often with less-than-adequate resources and support (Dockrell & Lindsay, 2001). For this reason, teachers usually prefer accommodations that don't require them to make individual changes to tasks for individual children or extensive overhauls of entire tests (Gajria et al., 1994). The most common method is simply to provide students with additional time to complete a given task (see Cormier et al., 2010; Thompson et al., 2002, for reviews). However, the possible advantages of extra time may vary with the task's language demands (Fuchs et al., 2000). Further, some studies have shown it can allow students with learning disability to perform better on standardised tests (e.g., Lewandowski et al., 2008), whilst others have shown no significant effect (e.g., Munger & Loyd, 1991).

Another cost-effective accommodation is for teachers to read test items aloud rather than asking students to read them themselves (Cormier et al., 2010; Thompson et al., 2002). Removing the requirement of reading aloud allows students to then focus on interpreting the meaning of the spoken task items (although it can also strain working memory). This is especially useful for questions which require students to use their reading and writing skills to solve word-based problems (Fuchs et al., 2000), for example, in problem-based maths tests (Calhoon et al., 2000). Read-aloud accommodation can be done for the whole class at once (time-efficient but can make some students feel bored and others feel rushed) or for individual students (more resource-costly but allows those students to work at their own pace) (Thompson et al., 2002).

For children who are still learning the language of the school, different accommodations might be more appropriate. Some standardised tests are published in multiple languages, especially if they are widely spoken (Robinson, 2007). However, if a child speaks a dialect of the official language, the official-language version might not be much easier than the school-language one (Olson & Goldstein, 1997). A child might also have learned school-related vocabulary in the language of the school rather than the home language and might be disadvantaged by a home-language task version (Butler & Stevens, 1997). English language learners can also be provided with extra time to complete tasks than their English-speaking classmates, since most task timings will be based on English-speaking samples (García & Pearson, 1994). Extra time has usually, but not always, been shown to help improve scores (Abedi et al., 2000).

When accommodations are provided to help children with language difficulty, these accommodations should be designed carefully. In some cases, students might end up with more support than they need. This can reduce students' motivation to improve, but more importantly, it can give the impression that a child is doing

well and may not be in need of extra help after all. If this leads to the removal of previous supports, it can have a detrimental effect on the child's future progress (McDonnell et al., 1997). Academic progress can also be inhibited if a student does not receive the accommodations they need, with potential damage to academic self-confidence as well (Fuchs et al., 2000; Robinson, 2007). Regular reviews of accommodations can help to reduce these potential problems.

Conclusions

Children can experience difficulty with using and understanding language at school for developmental reasons or because they are still learning the language of the classroom. These difficulties can have profound and long-lasting effects on students' experience and progress in the education system. However, there are various ways that teachers and other professionals can help these children to find the classroom experience a more positive one. Formal programmes of intervention can lead to overall improvements, but smaller changes within the classroom can also be used to support students' understanding and progress. Finding ways to help students to interact and learn more effectively in the classroom has obvious benefits for their academic, social, and emotional trajectory and will help children and young people to manage, or even overcome, the educational adversities that can be caused by language difficulties.

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3

OVERCOMING LITERACY DIFFICULTIES IN EDUCATION

Yijun Ruan and Catherine McBride

Literacy difficulties have several forms and represent a significant source of adversity in educational settings. Furthermore, children who experience social adversity early in development appear to be at increased risk of experiencing literacy difficulties. In this chapter, we focus on dyslexia, dysgraphia, and poor comprehension in particular. Research in each area has been carried out across languages and scripts (e.g., Cain et al., 2000; Daniels & Share, 2018; McBride, 2019). Definitions of literacy difficulties differ depending upon the perspectives of the researchers. Here, we simplify the definitions as follows: dyslexia entails a specific word reading difficulty. Dysgraphia is defined as a specific difficulty in writing words. Again, the focus is at the word level rather than at a higher level of writing (e.g., for comprehension). Poor reading comprehension involves a specific difficulty in comprehension of text. Although these definitions may be overly simplistic, they are perhaps useful because they can be considered across cultures, languages, and scripts with minimal confusion (e.g., McBride, 2019). In the following, we first consider what typical literacy acquisition entails. We then move on to elaborate on our understanding of dyslexia, dysgraphia, and poor reading comprehension. In the following section, we review some possible remediation strategies for these difficulties. We conclude by recommending some ways forward in efforts to understand literacy difficulties and interventions for such difficulties.

Typical literacy development

When considering the development of literacy skills from a cross-cultural perspective, we must first acknowledge that more than half the world's children learn to read first in a language that is not the language they speak at home (e.g., Saiegh-Haddad et al., 2022). For example, many children in China speak a language other than Mandarin at home, although Mandarin is the medium of instruction at

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school. In India, there are more than 20 scripts and 22 official languages (Department of Official Language, n.d.). In many places in Africa, the medium of instruction is a colonial language (e.g., English, French, Portuguese), but this language is not the one they speak with their families. Similar situations can be identified the world over (e.g., Tupas & Lorente, 2014). We begin with this central point because, ultimately, literacy learning involves mapping print to speech. When children have a limited grasp of the spoken language, their early literacy skills are almost guaranteed to suffer with serious implications for educational attainment.

Apart from this important issue across cultures, there are both similarities and differences in early literacy acquisition. Everywhere, the world over, early reading involves mapping spoken language to print. Early literacy learning begins with recognition of symbols. These could be the letters of an alphabet (e.g., in Greek, Arabic, or English), Abugida as used for Hindi, or broader representations such as Korean Hangul or Chinese characters or Japanese Kanji.

Learning to read at the word level ultimately involves an integration of phonological, orthographic, and semantic/morphological knowledge. The weighted importance of each of these differs depending upon the script and language, but all are at least of some importance worldwide. Phonological skills refer to speech sounds. How easy or difficult learning to read is in a given script depends a lot on how transparent the phonological system is (e.g., Seymour et al., 2003). For example, word reading is relatively easy in Spanish or German and more difficult in English because of the consistency with which letters represent the same or different sounds. Orthographic knowledge in part comprises the visual complexity of a script. Again, there are great differences across scripts in this parameter depending upon visual complexity (e.g., Chang et al., 2016) and "inventory size of symbols" (e.g., Daniels & Share, 2018), which can range from the approximately 20 to 30 letters of a given alphabet to the thousands of different characters used for Chinese. Semantic, or meaning-related, knowledge is also contained in every script, sometimes in very different ways. For example, in English, plural is often indicated with "s" or "es"; in Chinese, semantic radicals, which are not independently pronounced but indicate something about the character's meaning (e.g., related to animals or plants), are integral to Chinese character recognition. A focus on meaning is critical to literacy development for many reasons. At the word level, among many important aspects is how to distinguish homophones and homographs in print (e.g., Lin et al., 2019).

Learning to write/spell at the word level involves the confluence of phonological, orthographic, and semantic/morphological knowledge along with visual–motor integration skills. Typical development of word reading seemingly transitions from more of a pure visual (e.g., M looks like two mountain tops) to a more visual–orthographic focus over time. Visual–orthographic awareness involves attention to how things look in print. For example, words can contain "ss" in the middle (as in "assessment") or the end (as in "dress") but not in the beginning in English.

At the level of reading comprehension, literacy development depends not only on word-level recognition but also on language processing. The Simple View of

Reading highlights the importance of higher-level language skills in addition to decoding (Gough & Tunmer, 1986). Thus, poor comprehension is the product of poor decoding, poor listening comprehension, or both (Gough & Tunmer, 1986). Some researchers have suggested that oral language deficits play a causal role in poor reading comprehension (e.g., Clarke et al., 2010).

Common literacy difficulties

Given this brief introduction to typical literacy development, we turn now to literacy difficulties. From a global perspective, it is important to consider such difficulties in relation to a statistically normal distribution of the general population. Indeed, it is clear that both definitions and rates of literacy and other learning difficulties are very much subject to particular societal norms, variability, and resources (e.g., McBride, 2019; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2018). One example comes from the estimates of Parrila and Protopapas (2017) that between 3% and 20% of all English-speaking children of school age are affected by developmental dyslexia. This broad range is particularly notable given a relatively long history of the US, the UK, and other native English-speaking countries of identifying and remediating dyslexia. The way in which people conceptualize literacy difficulties varies across different countries or regions. For example, places like Zambia include attentional difficulties when defining dyslexia while some regions in Austria consider spatial skills in the concept of dyslexia (McBride, 2019). Furthermore, the tools used to screen literacy difficulties are different across regions. Such factors result in diverse estimates of literacy difficulties around the world. With such diverse estimates even in English-speaking countries, a globally consistent understanding of literacy difficulties is not easy to agree on. Nevertheless, there are some emerging trends in identification and manifestation that are worth noting here.

Overall, learning difficulties typically stem from a confluence of factors, at both the individual and environmental levels (e.g., Pennington, 2006). Individual factors related to word reading and word writing include variabilities in working memory (Swanson, 2016), speed or fluency, phonological sensitivity, orthographic skills, morphological awareness, and visuo–motor skills (for a review see, e.g., McBride, 2019). Researchers appear to agree both on the multifaceted nature of reading difficulties and on the importance of recognizing multiple deficits across cultures (e.g., Ho et al., 2002; Pennington, 2006). The script itself will likely affect what difficulties emerge as prominent for dyslexia in a given language, cultural context, and script (e.g., Daniels & Share, 2018), but the cognitive constructs related to dyslexia and other literacy-related difficulties are fairly universal, albeit weighted differently. Neurologically, those with dyslexia often manifest subtle deficits in brain volume, connectivity, or structure (e.g., Tong & McBride, 2020). Because poverty is one of the most important factors in the manifestation of learning difficulties (UNESCO, 2018), the interactions of neural development and socioeconomic status are particularly implicated in dyslexia and other learning disabilities (e.g., Hackman & Kraemer, 2020).

Definitions for literacy difficulties

According to International Dyslexia Association (2002), dyslexia is a specific learning disability characterized by impairment in accurate and fluent word recognition and by poor word decoding and spelling abilities. Dyslexia is neurobiological in origin and cannot be explained by low intelligence, poor visual and auditory sensitivity, other mental difficulties, or inadequate professional instruction/education (American Psychiatric Association, 2013).

Dysgraphia is a specific learning difficulty related to impaired writing ability. As with many definitions of dyslexia, dysgraphia is often defined as substantial difficulties in writing words despite adequate learning and intelligence (e.g., Nicolson & Fawcett, 2011). Handwriting, spatial, and motor difficulties are common manifestations of dysgraphia. Children with dysgraphia often exhibit generally slow and laboured writing with some unfinished words and other words that lack proportionality (McBride, 2016).

Poor comprehenders are generally defined as individuals who fail to understand sentences and longer text effectively (Cain et al., 2000). Some poor comprehenders experience difficulties in word reading, leading to their comprehension failure. This type of poor comprehension is related to dyslexia. However, many poor comprehenders demonstrate significant reading comprehension problems in syntactic, semantic, and narrative tasks despite having age-appropriate word reading and vocabulary skills (Adlof et al., 2010). Researchers refer to this type of comprehension difficulty as specific reading comprehension difficulties (e.g., Tong et al., 2013). Most studies on poor reading comprehension have focused on this type. It is estimated that approximately 10% of school-age children show significant impairments in reading comprehension (Hulme & Snowling, 2011).

Help for children with literacy difficulties

Given this overview, how can we help children with literacy learning difficulties? At a very broad level, most countries support the rights of those with special learning needs to receive an appropriate education (UNESCO, 2018), often highlighting the importance of inclusive education (e.g., Hayes & Bulat, 2017), but clarity on precisely how to support those with literacy difficulties is often lacking. Many teachers have little or no knowledge of or training in specific learning difficulties such as dyslexia (e.g., UNESCO, 2018). Global efforts to provide such training, for example, via Massive Open Online Courses (MOOCs) (e.g., World Learning, 2019) and systematic training programmes (e.g., Berninger & Joshi, 2016), based systematically on the science of reading should be welcome given considerable needs.

Because the origins of literacy difficulties are typically multifaceted, researchers highlight the importance of identifying children's specific learning needs early (McBride, 2019; Preston et al., 2016). This is in contrast to the so-called wait-to-fail models in which children were not given access to specific interventions or

support until they were formally diagnosed with a literacy difficulty, by which time the difficulty had persisted for a relatively long period of time. This "wait to fail" model often ensures that such difficulties are entrenched and that frustration and other negative emotions related to literacy learning further exacerbate the learning difficulty (e.g., Preston et al., 2016). At a general level, early interventions for literacy learning difficulties should focus on cognitive-linguistic skills related to speech sounds, print identification, and meaning across scripts and languages (e.g., McBride, 2019). A broad focus on oral language in addition to print is crucial (Gough & Tunmer, 1986), as is a specific emphasis on writing (e.g., Berninger & Joshi, 2016). In addition, providing more resources, such as computerized literacy games and online learning materials, to help children with learning difficulties can be helpful.

Interventions for helping with dyslexia, dysgraphia, and poor reading comprehension share some universals. We can apply at least two broad sets of strategies to help individuals with literacy difficulties (e.g., McBride, 2019). The first set of strategies is referred to as work-through strategies, which target optimizing skills that those with literacy difficulties need to improve because they facilitate reading and writing. Facilitating cognitive-linguistic skills such as phonological awareness or orthographic skills is an example. The second set of strategies is referred to as workaround strategies; these focus on using alternative methods to complete given assignments. For example, allowing children with dyslexia to present a report orally rather than in written form might be a good strategy under this category (McBride, 2019). Beyond these general concepts of working through and working around, remediation of different literacy difficulties also involves specific strategies and rules.

Interventions for dyslexia mainly target training lower-level cognitive-linguistic skills related to reading. In general, work-through interventions for dyslexia can be divided into four primary approaches, namely phonological, fluency, morphological, and orthographic interventions. Phonological interventions typically target phonological awareness including syllable awareness, onset-rime awareness, and phonemic awareness via tasks and games (e.g., Kyle et al., 2013). Certain phonological interventions have been effective in remediating dyslexia across alphabetic (e.g., Bailet et al., 2009) and non-alphabetic scripts (e.g., Wang, 2017). Suprasegmental phonological information, focusing on sound sensitivity across the word, is also important for those with dyslexia (Cheung et al., 2009). Several meta-analyses have demonstrated that phonics interventions are a good way to improve the reading and spelling performance in dyslexia (e.g., Galuschka et al., 2020). For example, GraphoGame, which is based primarily on the idea of teaching phonological skills involving both individual letters and larger letter units, is a program widely used in phonics interventions (e.g., Kyle et al., 2013).

Fluency intervention developed to promote processing speed for word recognition has demonstrated good efficacy for dyslexia in several intervention studies (e.g., Horowitz-Kraus et al., 2014; Wolf et al., 2009). For example, Wolf et al. (2000) designed a fluency-based intervention, the RAVE-O (Retrieval, Automaticity,

Vocabulary, Engagement, and Orthography) programme. This programme involves comprehensive emphases both on fluency in word attack, word identification, and comprehension and on automaticity in underlying componential processes (Wolf et al., 2000). The efficacy of the RAVE-O programme has been examined across multiple settings (e.g., Wolf et al., 2009). Another programme, called the Reading Acceleration Program (RAP), is also widely used in fluency interventions. This programme trains individuals to read at their fastest self-paced rate and appears to be helpful for children with reading disabilities (e.g., Horowitz-Kraus et al., 2014).

In general, the focus of morphological instruction is on improving individuals' morphological awareness, identification of the morphemic structure of words, and the ability to reflect on and manipulate that structure (Goodwin & Ahn, 2010). Many studies have revealed that morphological interventions improve the reading abilities of children with dyslexia (e.g., Vaknin-Nusbaum & Raveh, 2019). A meta-analysis exploring the efficacy of morphological interventions for children with literacy difficulties revealed that many literacy outcomes have shown significant improvements following the intervention (Goodwin & Ahn, 2010).

The orthographic intervention emphasizes the importance of word structure and formation rules of a given script. Individuals in orthographic interventions often practise judging whether letters within a word are in the right sequence in alphabetic scripts or whether parts within the word/character are in the right position in non-alphabetic scripts, such as in Chinese. Several studies have found that orthographic interventions can improve the word reading skill of those with dyslexia (e.g., Law & Cupples, 2017). However, researchers have also suggested that combining orthographic interventions with other strategies can result in even better intervention results (e.g., Chen et al., 2016).

Apart from these four types of interventions, some other training methods for dyslexia have also demonstrated a facilitating effect for reading ability. For example, working memory training (e.g., Maehler et al., 2019) and visual skills training (e.g., Zhao et al., 2019) have yielded some solid effects in improving the reading abilities of children with dyslexia in several intervention studies. These methods can also be considered in helping children with dyslexia. Overall, training on cognitive-linguistic skills is relatively effective for those with dyslexia. However, interventions that combine different targeted cognitive-linguistic skills together may attain a more positive outcome as compared to those that focus only on one skill (e.g., Chen et al., 2016).

Similar to the interventions for dyslexia, work-through strategies that focus on the weak skills are often applied to help those with dysgraphia. Visual skills difficulty and motor difficulty are two main characteristics that might lead to dysgraphia (Tal-Saban & Weintraub, 2019). Therefore, many work-through strategies that have been suggested for those with dysgraphia emphasize the importance of motor skills practice, fine motor coordination, and attention to visuo-orthographic configurations. Copying practice seems to be a simple and effective work-through strategy for helping dysgraphia. For example, Beeson et al. (2003) suggested that copying treatment could enhance spelling skills, which in turn, help with problems

related to dysgraphia. In addition, McBride (2019) also reviewed suggestions from practitioners highlighting how training in coordinating the right and left hands to work together can bring some benefits for children with dysgraphia. Furthermore, some researchers have attempted to use neurofeedback (e.g., Walker, 2012) and multisensory approaches (e.g., Tafti & Abdolrahmani, 2014) to help those with dysgraphia and observed some improvements. With the development of technology, the use of workaround strategies to facilitate those with dysgraphia is becoming more possible. An example of a workaround strategy is allowing those with dysgraphia to use alternative ways to write. Speech-to-text technology (e.g., Thiel et al., 2015) and using a keyboard for typing (e.g., Penso, 1990) are two important alternative ways for children with dysgraphia to help remediate their writing difficulties.

Helping poor comprehenders can take the form of focusing on either lower-level or higher-level skills. Some researchers have demonstrated that interventions targeting lower-level reading-related skills are effective for improving the reading comprehension of poor comprehenders. For example, instruction on morphology is thought to be a key to remediating reading comprehension difficulties (Tong et al., 2011) because morphological decoding facilitates recognition of morphemes in complex words and thus offers key relevant information towards text comprehension (e.g., Mackay et al., 2017). Other researchers have argued that facilitating higher-level skills, such as inference making, in poor comprehenders is a better way to enhance their comprehension skills (e.g., Yuill & Oakhill, 1991). Thus, Pimperton and Nation (2014) asserted that dividing poor comprehenders into subgroups based on their underlying deficits and providing different subgroups with different targeted interventions could result in better intervention outcomes. These interventions belong to the work-through strategies. Workaround strategies may include allowing students to translate texts into pictures, audiobooks, and videos so that poor comprehenders do not need to read the written form of the texts. Instead, they can understand the contents of the texts through vivid related materials. Furthermore, Kamhi and Catts (2017) proposed several rules for developing instruction for reading comprehension. First, reading comprehension instructions should emphasize the importance of content knowledge of specific topics. Providing individuals with enough content knowledge on various topics enables the individuals to engage successfully in a variety of comprehension tasks (Kamhi & Catts, 2017). Second, reading comprehension instructions should focus on language knowledge. Based on this rule, the Nuffield Early Language Intervention (NELI) programme might be a potentially effective intervention for helping poor comprehenders. NELI combines small group and individual sessions targeted at improving children's vocabulary knowledge, developing narrative and active listening skills, and building confidence in independent speaking (West et al., 2021). Some intervention studies have found that this method significantly improved children's reading comprehension skill (e.g., Fricke et al., 2013). Third, reading comprehension instructions should also focus on integrating new knowledge with prior knowledge.

Conclusion

Overall, literacy difficulties likely result from multiple deficits in a wide range of skills and have high prevalence rates across different scripts. They are sources of adversity in education. Identifying and providing interventions for literacy difficulties early can help to reduce the extent of adversity in educational settings. Use of a combination of work-through and workaround strategies is essential and effective for helping those with literacy difficulties. In addition, educators and practitioners should focus on different aspects and strategies when helping individuals with different kinds of literacy difficulties. Further research should attempt to develop more effective and applicable interventions for literacy difficulties based on the specific characteristics of different scripts and to design rigorous experiments to examine the efficacy of the existing and newly developed interventions across scripts.

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4

PROMOTING POSITIVE EDUCATIONAL OUTCOMES FOR CHILDREN AND YOUNG PEOPLE WITH SENSORY IMPAIRMENTS THROUGH A DUAL APPROACH TO ACCESS

Mike McLinden, Graeme Douglas, Emmanouela Terlektsi, and Rachel Hewett

Introduction

Children and young people with sensory impairment are a varied and heterogeneous population of learners. For the purpose of the chapter, we are particularly concerned with two 'groups' of learners within this population, namely deaf children and young people (DCYP) and children and young people with vision impairment (CYPVI). A number of these learners will have dual sensory impairment (commonly referred to as 'Deafblind' or 'multisensory impaired'), but given there is an established literature to guide educational practice (e.g., Hodges et al., 2019), our focus in this chapter is predominantly on learners with either vision *or* hearing impairment.

We start the chapter with a brief overview of the role of vision and hearing in learning and development and draw out distinctive features of each sense. We then consider key characteristics of learners with significant sensory loss which can result in them being assessed as having a 'hearing' or 'vision' impairment. Despite the different implications of reduced sensory function for these two groups, the concept of 'access' can be usefully drawn upon. The notion of access is helpful because it is multi-layered. On the one hand, it refers to 'access' to information as a key barrier to education associated with both vision impairment and hearing impairment (e.g., access to print material, access to auditory conversations). Nevertheless, access also has a social and political meaning, such as fair and equal 'access' to education (e.g., access to trained teachers, suitably designed schools, positive attitudes of peers). It is these combined meanings that highlight that access to education must be achieved through a combination of approaches with an individual and social focus. This is captured in a dual approach to access with a focus on 'access to learning'

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and 'learning to access' educational strategies. This approach was first developed to inform the field of vision impairment education (e.g., Douglas et al., 2019; Hewett et al., 2018; McLinden et al., 2016) and has since been drawn upon to guide educational interventions in the fields of hearing impairment education (Terlektsi et al., 2019) as well as broader curriculum design for children with disabilities (Lynch et al., 2021). We consider how this approach to access can guide intervention and report that selected strategies should have a focus on 'access to learning' to ensure learners can access the curriculum, complemented with 'learning to access' skills that involve providing appropriate equipment and teaching to encourage efficient and independent access to information and help in promoting a learner's personal agency. We examine some practical implications and applications of a dual access approach and conclude the chapter by emphasising the importance of ensuring there is a suitable balance in curriculum access that ensures learners have opportunities to engage in inclusive educational provision as well as develop and use their personal agency.

Accessing information through vision and hearing

A distinction is often made in the literature (e.g., McLinden et al., 2020) between our senses which provide us with information about the world which is close to us (e.g., touch and taste), and those which can also provide us with information about the world at a distance (e.g., vision, hearing, smell). Each of these senses has evolved in different ways and has a distinctive function in the sensory information we are able to access through it. Vision is considered to play a key role in linking different types of sensory information during learning and development and as such is often described as an 'integrating' or 'co-ordinating' sense (e.g., McLinden et al., 2020), which allows us to bring together information gathered from other senses.

In comparison with sighted peers, therefore, learners with vision impairment may have had fewer or reduced opportunities to

- explore their environment;
- learn through incidental and unplanned experiences; and
- refine motor skills by observing and copying actions of others.

Similarly, hearing is the sense that obtains information from the world using the sound which is full of information. Speech is the main means of communication making hearing the central sense enabling us to interact with other individuals and with the environment, as sounds can warn us for danger (Plack, 2013). Deaf children may not have full access to incidental learning through overhearing the language of others, and as a result hearing loss is strongly related to language development, communication and interaction, cognition and learning (Marshall et al., 2015) and social, emotional, and mental health difficulties (Terlektsi et al., 2020). Even with the advent of newborn hearing screening which reduced the age of diagnosis from 17 months to a few weeks and the advancement of technology with cochlear

implants that can enhance language comprehension and production, deaf children can still lag behind in literacy compared to their hearing peers (e.g., Harris et al., 2017). As Marschark (2001) highlights, deaf children with cochlear implants are still deaf children with cochlear implants and not hearing.

In comparison with hearing peers, deaf learners might have less opportunities or might face difficulties to

- access the surrounding environment and to learn via incidental learning;
- develop speech and language skills commensurate with their age; and
- communicate effectively with other individuals.

As we consider next, recognition of these distinctive functions is important given that long-term and significant functional loss in either sense can result in assessment of a child or young person as having a hearing or vision impairment.

Characteristics of children and young people with hearing impairment

Description

Deafness is described by World Health Organization (WHO) as a disabling condition where there is a degree of hearing loss of more than 30 dB in the better ear and is categorised (British Society of Audiology) as follows:

- Mild hearing loss (21–40 dB)
- Moderate hearing loss (41–70 dB)
- Severe hearing loss (71–95 dB)
- Profound hearing loss in excess of 95 dB

Hearing loss can further be described as:

- Unilateral (affects one ear) or bilateral (affects both ears)
- Pre-lingual (hearing loss took place before a person learned to talk) or post-lingual (after a person learned to talk)
- Symmetrical (degree of hearing loss is the same in both ears) or asymmetrical (different in each ear)
- Progressive (deteriorates over time) or sudden (happens quickly)
- Conductive (interruption in the way the sound passes or is conducted through the outer or middle ear, for instance otitis media) or sensorineural (the problem is in the cochlear or in the auditory nerve and the damage is permanent) or mixed

Pre-lingual deafness can have negative implications on language and communication and social and emotional outcomes. Advancements in identification with the

roll-out of the Universal Newborn Hearing Screening in 2005 in the UK, and amplification (digital hearing aids and cochlear implants) has reduced the mean age of diagnosis of hearing loss from 17 months to a few weeks (Davis et al., 1997) and, as a result, early intervention is possible, providing better language and educational outcomes for deaf individuals (Kennedy et al., 2006).

Population

The prevalence of deafness is about one per 1,000 births whilst 50–90% more children are diagnosed with permanent childhood hearing impairment by the age of nine years (Butcher et al., 2019). In addition, about 23% of deaf children are recorded as having some form of additional or special need (CRIDE, 2021). In the UK, the term deaf is preferred by the individuals themselves to describe individuals with any degree of hearing loss whilst 'hearing impaired' is seen as having a negative connotation although individuals with lesser degrees of hearing loss might not like to be classified as deaf. People who are active members of the deaf community (i.e. a society where deaf people who traditionally use sign language are drawn together through sharing experiences, activities, news), share the same culture and language with the other members of the community are called 'Deaf'.

Education provision and support

Closely linked to the early diagnosis and technological advancements (digital hearing aids and cochlear implants) is the mode of communication used by DCYP and as a result the setting where they are educated. According to the most recent Consortium for Research in Deaf Education (CRIDE, 2021) report in England, about 88% of deaf children communicate using spoken English as their main language in school or other education settings, 7% mainly use spoken English together with signed support whilst 2% mainly use British Sign Language. Similarly, the majority of DCYP (78%) attend mainstream schools; 6% attend mainstream schools with resource provisions; 2% attend special schools for deaf children; whilst 14% attend special schools not specifically for deaf children.

Characteristics of children and young people with vision impairment

Description

Vision impairment is a broad term that describes a wide range of reduction in visual function (McLinden et al., 2020). According to the WHO, "vision impairment results when an eye condition affects the visual system and one of more of its visual functions" (WHO, 2019, p. 10). A limitation of the WHO definition is that it refers only to conditions that affect the *eye* and in some parts of the world, vision impairment in children particularly, can often result from problems associated with

the visual pathways leading to, and within, the *brain*. In the context of the UK, following a clinical assessment an individual can be classified as being either of the following.

- Severely sight impaired/blind
- Sight impaired/partially sighted – a learner will have sufficient vision to manage some tasks but may require the help of specialist teaching methods and materials in school to account for his or her vision difficulties

The term 'low vision' is also commonly used to describe people who have reduced visual function but are able to make use of their vision for learning with appropriate modification.

A broad distinction is often made between vision conditions, being either 'ocular' or 'cortical/cerebral' in nature. Ocular conditions affect parts of the eye itself. The loss arising from a given ocular vision condition can include a number of areas of function such as visual acuity (the ability to resolve detail), accommodation (the ability to focus), field of vision (the area which can be seen), colour vision, and adaptability to light. Cortical vision impairment (CVI) affects the child's processing of visual information. However, medical descriptions of vision impairment (based on a clinical assessment of visual function) do not provide an accurate indication of how the child is able to use their vision in everyday life. For this reason, educational services for children and young people with vision impairment will usually make decisions about services they offer based upon learner need, which draws upon functional implications of vision impairment as well as clinical assessments.

Population

In the context of the UK, vision impairment is considered a 'low incidence' disability in children with approximately two children per 1,000 having a vision impairment of some kind. Further, a high proportion of children have additional disabilities in combination with a recognised vision impairment. For the purposes of this chapter, we use 'vision impairment' as a generic term to include *all* learners who are blind or partially sighted, including those whose visual difficulties are located in the brain, the visual pathways, and in the eye.

Education provision and support

The shift towards greater inclusive practice globally over the last four decades has seen significant changes in educational access and placement for learners with vision impairment in most national contexts (e.g., McLinden et al., 2020). A majority of learners with vision impairment and no additional disabilities in many countries are increasingly educated in mainstream settings and will therefore participate in most subject areas alongside their sighted peers with individual teaching activities limited to particular 'additional' curriculum areas (e.g., mobility, braille instruction, and

technology). Additional support for learners with vision impairment educated in mainstream settings can be provided by several practitioners within a multidisciplinary team including specialist advisory teachers and habilitation specialists, who have a key role in supporting schools to ensure the curriculum is appropriately designed and delivered to meet an individual child's needs (e.g., McLinden et al., 2018).

Promoting a dual approach to access

As we noted earlier, loss of function in either vision or hearing can create distinctive barriers to access. To some extent, these barriers can be reduced through appropriate design (inclusive design), distinctive types of teaching approaches (inclusive teaching), and the use of specialist resources (for example, tactile graphics for learners with vision impairment or assistive hearing devices for deaf learners). However, there are also issues to be considered about what 'additional' skills might need to be taught to ensure that a learner is not disadvantaged and has equality of opportunity in terms of curriculum 'access' (Douglas et al., 2019).

Educational practice for learners with sensory impairment has an established tradition of focusing upon two broad areas of targeted support.

- Ensuring learners have fair and optimised access to the school curriculum
- Ensuring learners have opportunities to develop their independence and social inclusion

The first area is concerned with promoting equal access to education to ensure learners can access the curriculum. The second area is concerned with developing independent learners within the educational environment, as well as preparing them for adult life, independent living, and employment. As noted by Douglas et al. (2019), the distinction between these areas has been examined through a dual model of 'access' with a particular focus on balancing *access to learning* approaches (inclusive practice and differentiation ensuring that the learner's environment is structured and modified to promote inclusion, learning, and access to the core curriculum, the culture of the educational setting, and broader social inclusion) and *learning to access* approaches (teaching provision which supports the child to learn independence skills and develop personal agency in order to afford more independent learning and social inclusion).

A dual access model can therefore be considered a mechanism for mapping a pedagogical and curriculum response to the distinctive educational needs of DCYP (Terlektsi et al., 2019) and CYPVI (Douglas et al., 2019). The progressive nature of the relationship between 'access to learning' and 'learning to access' strategies over a given educational pathway is illustrated in Figure 4.1.

The philosophy underpinning the distinction between 'access to learning' and 'learning to access' is to some extent drawn from a rights-based agenda which demands fair and equal access to education for all children, as well as a concern that individual learners should have structured opportunities to develop their

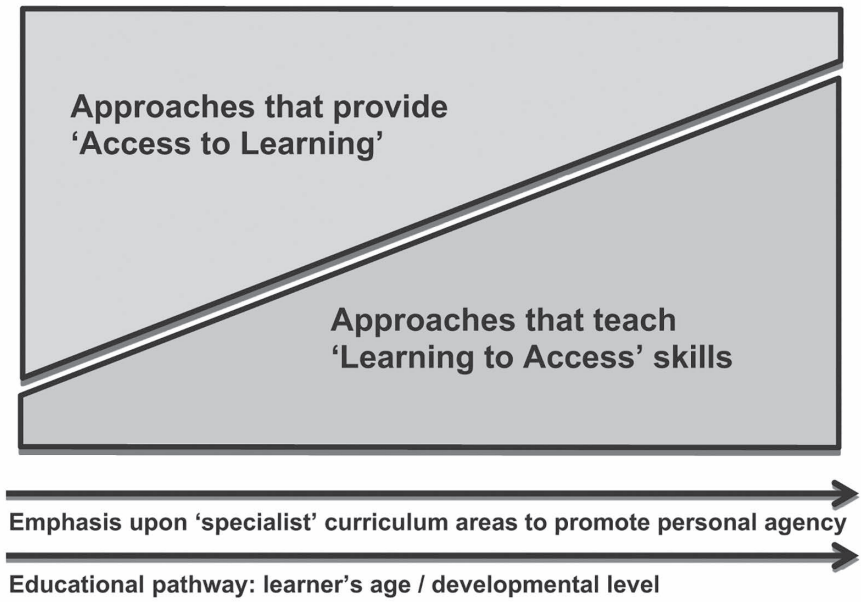

FIGURE 4.1 Balancing 'access to learning' and 'learning to access' approaches for DCYP and CYPVI throughout a given educational pathway

Source: Adapted from Douglas et al. (2019) and McLinden et al. (2016).

Long Description: Figure 4.1 shows the relationship between 'learning to access' and 'access to learning' as broad areas of intervention in the field of vision impairment education. Intervention approaches captured within 'access to learning' triangle are primarily concerned with promoting equal access to education for learners with vision impairment. In comparison, intervention approaches in the 'learning to access' triangle are closely aligned with maximising a learner's ability to develop as an independent learner within a given educational context and are also part of a broader agenda about promoting personal agency through empowering learners for adult life, independent living, and employment.

independence to whatever extent is possible (e.g., Douglas et al., 2019). As an example, Article 24 of the *UN Convention on the Rights of Persons with Disabilities* (CRPD) has a focus on education and offers a clear directive in stating that State Parties shall ensure that:

- children with disabilities are not excluded from general education on the basis of disability;
- persons with disabilities can access an inclusive, quality, and free primary and secondary education on an equal basis with others;
- reasonable accommodation of the individual's requirements is provided;
- persons with disabilities receive the support required to facilitate their effective education; and
- effective individualised support measures are provided in environments that maximise academic and social development, consistent with the goal of full inclusion.

The first four points have a focus on promoting equal access for all individuals with the final point emphasising the importance of providing *individual* support to develop their potential. In the context of vision impairment education, this area has been referred to as an 'additional' or 'specialist' curriculum (e.g., Douglas et al., 2019; McLinden et al., 2016). Examples of curricula frameworks that have been developed to promote these independence skills for learners with vision impairment include the Expanded Core Curriculum (ECC) in the US and the Learner Outcomes Framework (LOF) in the UK. Similarly, in the context of deaf education, the ECC developed by the Iowa Department of Education is a useful resource used when designing educational plans and identifying essential skills and concepts for all deaf students.

The broader application of this approach to the design of educational strategies is illustrated in a systematic review carried out by Lynch et al. (2021) to examine how educational technology can be drawn upon to ensure that children and young people with disabilities have fair and optimised access to the school curriculum and promote opportunities to develop their independence, agency, and social inclusion.

Intervention approaches

The intervention approaches for learners with sensory needs with respect to 'access to learning' in the home and school commonly focus upon ensuring intervention approaches and the learning environment are accessible. As such, these approaches commonly seek to develop communication, literacy, and in the context of the school curriculum, academic attainment more generally. The use of 'learning to access' approaches in the home and school has a greater emphasis on developing distinctive skills, which can broadly be recognised as independence skills to seek to promote personal agency, for example, by supporting a learner's ability to use a range of educational technologies. As noted by Douglas et al. (2019), it is also recognised that these targeted outcomes are interrelated and are therefore considered to be complementary.

The intervention approaches (and associated targeted educational outcomes) in relation to 'access to learning' are more closely aligned with what can be described as 'inclusive' or 'universal' practice and accommodations/adjustments. The particular intervention approaches (and associated targeted educational outcomes) in relation to 'learning to access' are aligned to areas of a 'specialist' curriculum. For vision impairment education, these approaches include the teaching of mobility and habilitation approaches; the use of access technology; as well as long cane use (Douglas et al., 2019). For deaf education, these areas include understanding of hearing loss and amplification management as well as identification with the hearing and/or deaf world (Terlektsi et al., 2019). To sum up, for both vision impairment and deaf education, learning to access is linked to a number of common areas such as education in relation to access technology, independent living skills, and self-advocacy skills.

In practice, however there will be overlap between these broad areas (e.g., Douglas et al. 2019). Indeed, Sapp and Hatlen (2010) argue that many of the

independence access skills can in practice be embedded within a 'core' curriculum, noting that 'general education curricula include skills that overlap the ECC, such as working in groups (social skills), learning about different jobs (career education), reading a map ([orientation and mobility] O&M, and managing money (independent living skills)' (p. 344). Further, central to this distinction is the change in emphasis as learners develop over time, that is it is considered to be *progressive*. Therefore, the type of inclusive practice required will be adapted accordingly as the learner develops a range of independence skills including, for example, increased communication skills, technology skills, mobility, and literacy.

Similar frameworks to those outlined in the ECC have been developed for use in other national contexts. A recent example in the context of England is a 'Learner Outcomes Framework' (LOF) for children and young people with vision impairment (Keil, 2016). The LOF considers both short- and medium-term outcomes that are specific to the individual child or young person, as well as longer-term outcomes that aim to prepare the individual for independent adulthood. It is organised around eight outcome categories, which map onto the ECC, covering the skills that children and young people are considered to need to enable them to take part in lessons as independent learners, carry out everyday activities, and get around by themselves and to ensure the child has some control over their own inclusion. While the broad 'access to learning/learning to access' distinction can be recognised as reflecting vision impairment and deaf education in a range of international settings, different national contexts will operate a curriculum in particular ways that reflect particular historical, social, and cultural norms (McLinden et al., 2020).

A wide range of people will be involved to effectively put these interventions into practice. Specialist teachers and professionals are often important because they have specialist training to carry out assessments of need and the technical knowledge to design and/or undertake some teaching approaches. Related to this, vision and hearing impairment are relatively low-incidence conditions in the UK, with which many teachers and parents will be unfamiliar. Therefore, specialist professionals will also have an important advisory and training role. These specialists include qualified teachers of children with vision impairment (QTVI); qualified teachers of the deaf (QToD); specialist teaching assistants; communication support workers for deaf learners; and habilitation specialists or low vision specialists (such as an orthoptist or optometrist). Nevertheless, the implementers in many interventions include teachers, teaching assistants, parents, and carers. This is because many approaches are implemented within the daily routines of education as well as home life and often require consistency of implementation and practice.

Practical applications

In this final section, we briefly consider ways in which those supporting children with sensory impairment can help to manage and overcome the barriers to access outlined earlier to promote positive academic and non-academic outcomes.

Douglas et al. (2019) report that desired educational outcomes for all young people can be usefully considered within three areas:

- Happiness
- Independence
- Academic attainment

With respect to vision impairment education, they note that

> Personal agency and improved mental health is associated with maximising academic achievement and maximising the ability to navigate one's physical and social environment. Such outcomes also maximise the opportunities for young people to achieve independent living, employment, inclusion in their community and ultimately well-being.
>
> *(p. 25)*

Skilful and efficient access to information is recognised as an important educational outcome for learners with sensory impairment and this should form a key area of assessment and decision-making. As we noted earlier, 'Access to learning' will have a primary focus on supporting the learner in the 'here and now', given it emphasises ensuring pedagogy and learning environment is such that learners with sensory impairment can access a shared or 'core' curriculum with their sighted/hearing peers. Examples of commonly drawn upon 'access to learning' approaches for learners with vision impairment in a school environment include:

- adaptations to the physical environment including, for example, large print, braille signs and object symbols so that the learner with vision impairment can access and navigate the environment;
- adaptations to physical resources including, for example, producing books in large print, braille or with tactile imagines so the learner is able to access these; and
- adaptations to the teaching strategies that are drawn upon in the classroom environment to ensure that these are suitably inclusive of learners with vision impairment.

Examples for deaf learners include:

- adaptations to the listening environment including for example, the development of acoustically treated rooms and the use of radio aids (i.e. assistive hearing devices that enhance the use of hearing aids, cochlear implants) so that the background noise is minimised, and the learner has better access to speech;
- use of access strategies such as the provision of sign language interpreters or communication support workers to enable the learner to access the curriculum; and

- adaptations of teaching materials such as the use of captions to access any audio-recorded material.

At one level, these adaptations may be sufficient in ensuring the learning environment is suitably optimised to ensure the learner with sensory impairment is able to 'access' the curriculum. For example, adapted signage can mean she or he is able to locate the different classrooms with increasing independence; adapted resources mean that she or he is able to access reading materials with greater independence and inclusive teaching strategies should be designed to ensure that the learner is suitably included in the lessons. Acknowledging a 'learning to access' dimension also recognises the distinctive learning needs that are associated with a particular sensory impairment. Such recognition indicates a need for 'additional' or 'specialist' curriculum areas to be offered to promote greater learner independence over time.

With respect to the 'access to learning' examples presented earlier for vision impairment education therefore, intervention approaches will need to consider how the learner with vision impairment will learn how to effectively navigate the school environment to locate the signs on the door (requiring for some learners the need for specialist O&M instruction); how the learner will access large print/braille or object symbols effectively (requiring the need for some learners to have literacy/communication instruction over and above that required by sighted peers), or how the learner is able to communicate with the teacher to ensure his or her needs are understood (potentially requiring instruction in what might be called 'self-determination' or 'self-advocacy' skills). Similarly, the 'access to learning' intervention approaches for deaf education will need to consider how the deaf learners will be able to become skilled readers (requiring the explicit teaching of phonological skills for some learners), how to interact effectively with their peers or the teaching staff (requiring the need for whole school training in signing and deaf awareness training) and as a result having a positive effect on their wellbeing and their happiness, and how to use the audiology equipment effectively (possibly requiring auditory training).

Conclusions

Living with vision impairment or deafness can mean reduced world knowledge, reduced peer interaction, and reduced access to the environment creating distinctive learning and support needs, which require targeted and specialist input to help achieve positive academic and non-academic outcomes. We have argued in this chapter that optimal outcomes for these learners are associated with educational interventions which seek to balance 'access to learning' approaches that emphasise fair and optimised access to the school curriculum and community, with 'learning to access' approaches, which emphasise the development of access skills (e.g., for CYPVI the use of technology and mobility and independence; for DCYP understanding of the hearing loss and audiology equipment, communication, and self-advocacy skills). However, although educational practice demonstrates the value of

many interventions, there is often little precise evidence of what works, when, and with whom (e.g., McLinden et al., 2021). Given the heterogeneous nature of the population, this is unsurprising. While further formal research is needed, practitioners must design interventions based upon the broad approaches described and combine this with gathered evidence of progress.

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5

ADAPTABILITY AND EDUCATIONAL TRANSITIONS

Andrew J. Holliman, Catriona Connolly, Andrew J. Martin, and Rebecca J. Collie

Educational transitions

Confucius (551 BC–479 BC) famously said: they must often change, who would be constant in happiness or wisdom. Although interpretations of this can vary, the point is that the only constant in life is change, and that change – within oneself and within one's surrounding environment – is an inevitable part of life. Taken further, the implication is that unless one can successfully navigate this ever-changing world, they are unlikely to perform optimally in terms of either their intellectual development or their psychological wellbeing. This notion forms the basis of this chapter. We focus on three major transition milestones in education: the transition from preschool to primary school, from primary school to secondary school, and from school or college to higher (university) education. In each case, we consider how to optimize educational transition and to promote positive student outcomes, such as achievement and psychological wellbeing. To do this, we examine the role of factors predominantly external to the individual (e.g., teachers, schools) and those predominantly within the individual (e.g., adaptability – next section), each of which plays an important role in the navigation of new educational environments.

Adaptability

Adaptability refers to an individual's ability to manage (i.e. regulate, direct, and adjust) their thoughts, behaviours, and emotions in situations of change, novelty, and uncertainty (Martin et al., 2012, 2013). For example, in the context of this chapter, cognitive regulation might involve adjustment to one's thinking in new or uncertain educational situations or environments, such as evolving classrooms, different teachers, a broader range of subjects, and less familiar social groups; behavioural regulation might involve adjustment to one's actions under these

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circumstances; and emotional regulation might involve adjustment to one's affect. Adaptability is firmly rooted in a number of theoretical approaches and traditions, such as self-regulation frameworks (e.g., Winne & Hadwin 2008; Zimmerman, 2002) and 'lifespan theory of control' approaches (Heckhausen et al., 2010), each of which emphasizes the importance of self-management systems (i.e. monitoring, controlling, and directing one's thoughts and behaviour) in order to respond effectively to the demands of the environment (affective adaptability was added later; see Martin et al., 2012, 2013). We argue here that each of these dimensions (cognitive, behavioural, and affective adaptability) is important for the maintenance of a positive relationship between oneself and one's (educational) environment. It should also be noted that adaptability was identified as the most fitting construct given the scope and focus of this chapter (on educational change, variability, novelty, uncertainty, and transition). However, we acknowledge that other cognate adversity constructs such as resilience and buoyancy – that are related to but separate from adaptability – are also of importance.

Preschool to primary school

The transition from preschool to primary school is often the first time members of a family unit begin to interact with the education system. The interaction patterns established during this crucial time can lay the foundation for future relationships with that school and the education system in general. Positive relationships between families and schools are a protective factor in keeping children in education and are associated with a range of positive social, emotional, and behavioural outcomes. A positive transition to school experience has also been linked with better academic and interpersonal outcomes (Goble et al., 2017), better classroom climate (Moen et al., 2019), and improved maintenance of gains made in preschool (OECD, 2017). Conversely, more negative outcomes, such as poorer social and emotional skills, have been associated with a less successful transition from home to primary school (see Miller et al., 2003).

Children transition to primary school from diverse settings including full- or part-time day-care by family members, babysitters, or Early Childhood Care and Education (ECCE) settings. Each of these settings contributes to the history and individual differences a child brings with them in the transition to primary school. Reciprocal roles and bidirectionality of influence may not be overtly recognized during transitions, with many jurisdictions continuing to take the approach that children will 'settle in' after an initial transition period. This approach requires children and families to assimilate to the dominant culture of the school. In Ireland and the UK, this is often a predominantly white, English-speaking, middle-class culture, where greater value is assigned to ways of being, and ways of knowing, that align with this culture. This may not reflect the backgrounds of the children attending the school or the community within which the school is based. Students who differ from the norm of the majority group, or from the school culture, may experience greater difficulties during the transition to school (Paulick, 2021).

Although adaptability is undoubtably a crucial capacity for children upon entry to school, researchers have yet to examine the construct directly among this age group. However, research on self-regulation provides understanding relevant to adaptability across the transition to school (Blair & Raver, 2015). Self-regulation for this age group can be conceptualized as an increased ability to manage impulses, negative emotions, motivation, and attention (Neuenschwander et al., 2012) through the use of executive functioning and emotional regulation skills. These skills enable children to adapt to the behavioural requirements of their new school setting and take advantage of the school's educational and social opportunities. The formation of self-regulation skills can be challenging for any child at this age but can be particularly difficult for children with additional needs or neurodevelopmental differences such as autism or ADHD (Granziera et al., 2021; Ros & Graziano, 2020). Children who have faced early adversity, experienced high mobility and homelessness, are from underserved communities, or present with social, emotional, or behavioural difficulties may also be at increased risk of a poor transition experience (Pears & Peterson, 2018). In practice, a child may belong to more than one of these groups, compounding this risk. Skill differences and deficits may arise for these groups due to increased exclusion and missed opportunities to participate at preschool (Giordano et al., 2020), misalignment between previous experiences and current expectations in the school setting (Vitiello et al., 2019), or unmet needs related to developmental or other disabilities (Fontil et al., 2019). Deficits in self-regulation skills may make the establishment of positive teacher–child relationships more challenging, leading to conflictual relationship patterns which compound existing difficulties and maintain poor outcomes over time (Moen et al., 2019). When this occurs, behavioural difficulties across the transition to school may become viewed as a child trait rather than a manifestation of multisystemic factors for vulnerable and minority groups.

Despite these risk factors, children can be prepared for the transition to school through teaching the skills necessary for success in advance. 'Foot in the door' skills are the abilities children bring with them during the transition to school, which allow them to capitalize on the learning opportunities available in the new school setting. 'Maintaining environments' are those which allow children to demonstrate, improve, and generalize these skills. Both teaching children useful skills and ensuring that the receiving environment is suitable for their needs are part of a wider approach to transition referred to as 'transition practices'. These practices facilitate adaptive and supportive experiences for children through connections between families, children, preschool, and primary school staff (LoCasale-Crouch et al., 2008). Research suggests that contextually appropriate transition practices may mitigate the risks for the most vulnerable children and families during the transition to school.

Although preschool ECCE attendance has become increasingly common (OECD, 2017), this route to school and provision of associated transition practices such as information sharing and preparatory skills teaching may not be possible for all. Children who arrive unknown to the school can be described as making

'invisible transitions' (Dockett & Perry, 2021). Invisible transitions may occur when a child is enrolled after the start of term, a family is new to the area, the spoken languages of the home and school differ, a child is travelling a greater distance than usual to access a specialist class within the school, or any number of individual factors. Children making less planned transitions to school may have fewer opportunities to access transition practices which support their short- and long-term success. Resource challenges have been identified as influencing the types of transition practices children may receive. Area poverty and low school resources can impede provision of high-intensity supports such as cross-setting collaborative working (Daley et al., 2011). Relationships and information sharing between a child's support systems have been described as essential for successful transition, consistent understanding of the child, and stable relationships across settings. Without this alignment and contextual understanding, children's needs may be misunderstood and misinterpreted (Sulek et al., 2019), resulting in poor outcomes during the preschool to primary school transition. A positive transition to school, characterized by successful engagement with the learning and social opportunities afforded by the new school environment, requires not only self-regulation skills on the part of the child but adaptability and flexibility on the part of the adults around the child, so that their emerging self-regulation can be scaffolded until the child has mastered these skills and can apply them independently.

Primary school to secondary school

The shift from primary school to secondary school is another major educational transition to which students must habituate and adapt. Problematic transition to secondary school adversely impacts wellbeing, whereas positive transition has beneficial effects (Evans et al., 2018). If not managed well, this transition can result in negative academic and personal wellbeing outcomes; however, if students are well supported and the transition is effectively managed, it can result in sustained and/or enhanced outcomes (Benner et al., 2017).

Theorizing around this transition has identified numerous factors and processes implicated in how well students can adapt to their new contextual, academic, and social–emotional circumstances. For example, refinements of Bronfenbrenner's ecological systems theory have identified the passage of time in development (the chronosystem; Bronfenbrenner, 2001) as a key factor shaping adaptation to one's environment. Educational transition research has drawn on these ideas to explore and explain students' adaptation to secondary school from primary school (Martin et al., 2015b). Eccles and Midgley (1989) pointed to theorizing underpinning 'stage-environment fit' to explain transition effects. According to them, there are declines in academic outcomes (e.g., motivation and engagement) during the transition from primary school to secondary school because the change of demands and context in secondary school does not align with the developmental needs of students during early adolescence. In related work, exploring transition-related ideas around expectancy-value theory, Wigfield and Eccles (2002) reported

declines in students' expectancy and valuing between elementary and high school, and through elementary and high school.

More recently, job demands-resources (JD-R) theory has been applied to educational settings to explain how secondary school students navigate new learning situations. JD-R theory states there are specific contextual factors in the workplace that help or hinder employees' outcomes (Schaufeli & Bakker, 2004). JD-R theory, as applied to education, is based on the premise that there are specific contextual factors in academic learning that help or hinder students' educational outcomes (Martin et al., 2021). Accordingly, job demands in the educational setting refer to aspects of learning that require psychological or physical exertion (e.g., meeting new peers, adjusting to multiple teachers, navigating complexities of secondary school timetables) and are linked with psychological or physical costs (e.g., stress, disengagement, underachievement) (Martin et al., 2021). Job resources in the educational context are aspects of learning (e.g., teacher support) that help students attain desired goals, such as adjusting effectively to a new school and cohort and are linked with positive outcomes (e.g., enjoyment, engagement, achievement) (Martin et al., 2021). For personal resources, Martin et al. (2021) and Collie et al. (2020) identified adaptability as a modifiable capacity that can help students navigate educational change and lead to positive learning outcomes. Self-efficacy is another personal resource that can lead to positive outcomes (Xanthopoulou et al., 2007). Notably, Collie et al. (2020; see also Collie & Martin, 2016) hypothesized that adaptability fosters mastery and efficacy experiences – and following this, Martin et al. (2021) contended that secondary school students' capacity to navigate novelty and change (i.e. adaptability) would lead to enhanced domain-specific competence (self-efficacy) and enhanced performance outcomes.

Bringing the theories together, it is evident there are various social–emotional and cognitive factors implicated in positive transitions, including adaptability and related constructs that are key to transition, such as self-efficacy. Indeed, research is supportive of these contentions. Evidence suggests students experience a decline in perceived academic competence in the transition to secondary school (Fredricks & Eccles, 2002; Jacobs et al., 2002) while higher self-efficacy is associated with positive motivation and achievement across the transition (Gutman & Midgley, 2000). Martin et al. (2015b) found engagement declines between primary and secondary school were connected to declines in self-efficacy across this period. As relevant to adaptability and self-efficacy, Martin et al. (2021) found that during a period of educational novelty and change for secondary school students (a shift to or from online learning and in-class learning during COVID-19), adaptability significantly predicted self-efficacy and gains in later achievement. Self-efficacy also mediated the relationship between adaptability and achievement. Their findings confirmed the hypothesized role of adaptability as an important personal resource during a time of educational transition.

In sum, given (a) recent applications of JD-R theorizing formally articulating a role for adaptability and self-efficacy during educational transition in secondary school, (b) the well-documented role of self-efficacy in successful transitions

from primary to secondary school, and (c) recent research showing adaptability significantly predicting self-efficacy and academic outcomes during educational transition – we suggest there is strong theoretical and empirical rationale for locating adaptability as a pivotal construct that can assist successful transition from primary school to secondary school.

School/college to higher education

The previous sections have focused on 'compulsory schooling' and we now turn our attention to non-compulsory higher education (university). The number of students enrolled in higher education has increased from 100 million in 2000, to 250 million in 2020, and it is estimated that this number will increase further to 594 million in 2040 (Calderon, 2018). It is also noteworthy, that an increasing number of students are travelling abroad for their studies; for example, in 2019/2020, the number of non-UK domiciled students studying at UK universities was 556,625 (Higher Education Statistics Agency, 2021). For both local and international students alike, the transition to college and/or university education marks a period of immense change. The extent to which students can adjust to successfully navigate this change will likely impact upon their educational outcomes.

Not only is adaptability associated with educational outcomes at secondary school (previous section), but it has also been found to influence academic and non-academic outcomes at university (see Holliman et al., 2020, 2021). To explain the association between adaptability and achievement outcomes, Holliman et al. (2020) argue that adaptable students are more likely to exhibit higher positive engagement behaviours (e.g., persistence, planning, and task management) and are less likely to exhibit negative engagement behaviours (e.g., disengagement and self-handicapping). These engagement behaviours, in turn, are predictive of students' achievement outcomes. Indeed, there is empirical support for these conceptual relations in predicting both achievement (grade-point average) outcomes (Collie et al., 2017) and completion/dropout rates (see Holliman et al., 2018).

Adaptability has also been implicated in non-academic outcomes, such as students' psychological wellbeing. To account for these findings, recent work has drawn upon the conservation of resources (COR) model (e.g., Hobfoll, 1989). Accordingly, students harness personal (individualistic and internal) and conditional/situational (environmental and contextual) resources to help protect themselves from stress (see also earlier discussion on JD-R theory). In line with the work at secondary level (previous section), adaptability can be considered a personal resource, which supports students to adjust in the face of new and uncertain environments. Indeed, recent studies have demonstrated the association between adaptability and a range of psychological wellbeing outcomes (Holliman et al., 2021). However, the model also draws attention to conditional/situational factors that can protect personal resources. In fact, in a sample of first-year university students, Zhou and Lin (2016) found that while adaptability and social support were independent predictors of psychological wellbeing (life satisfaction in this case), social

support was able to moderate the association between adaptability and psychological wellbeing. In a subsequent study, Holliman et al. (2021) replicated these independent effects but failed to find evidence for a moderating role of social support. Taken together, the evidence suggests that students who are less able to adjust to the university environment are more likely to experience adverse consequences, such as poorer academic performance, psychological wellbeing, and dropout. Conversely, those who are more adaptable, who experience a positive transition, are more likely to experience positive educational outcomes.

One of the key points of challenge in transitioning to higher education is the lack of alignment between old and new educational environments (e.g., Eccles & Midgley, 1989). However, the burden should not just be down to the individual and their capacity to adapt. For example, stakeholders involved in all aspects of the university transition need to collaborate to ensure that students are supported in their transition from school/college to university. This way, the magnitude of change between educational institutions should be more anticipated, planned for, and supported to help optimize students' outcomes and reduce adverse consequences (we elaborate on practical implications in the next section).

Practical implications

This chapter has shown that student adaptability is important for navigating ever-changing education environments; therefore, a 'capability building approach' that supports children to become more adaptable would likely yield positive results. As an alterable construct (see Putwain et al., 2019), promoting one's ability to adapt would likely lead to improved adjustment and improved academic and non-academic outcomes. For example, building on the work of Martin et al. (2015a), students undergoing an educational transition might be supported to recognize change, novelty, and uncertainty within this environment that might require a particular regulatory response. They might then be supported to effectively adjust/modify their thoughts, behaviour, and emotions to successfully navigate these changing educational environments. This cyclical process might enable children to respond more effectively and constructively to changing, novel, and uncertain circumstances, situations, and environments, which may result in more positive educational outcomes across schooling.

Self-regulation and other skills which contribute to adaptability during educational transitions have been successfully taught by preschool teachers and parents. Interventions which explicitly teach the desired skill and include behaviour shaping such as feedback and reward systems have been found to be most successful for younger children and result in changes which persist over time (Graziano & Hart, 2016). The contribution of relationships and interpersonal support to the development of social–emotional and self-regulation skills has also been highlighted in the literature. Phillips et al. (2022) report that teachers who used higher levels of punishment and disapproval were likely to have students who learned self-regulation skills at a slower pace. Parents have been identified as playing a key role in the generalization

of skills across the transition to school, with the working alliance between parents and the professionals supporting them noted as a mediator of improved language, attention, and social adjustment as the child aged through school (Nix et al., 2018). In the context of transition, while the staff working with children will change, the influence of parents, and perhaps groups of peers, will remain and continue to shape the further development and consolidation of this new skill set. At later education levels, this burden will likely be more down to academic staff.

In their review of early years education, OECD (2017) identified inconsistent goals, inadequate curriculum, and pedagogical practices between settings and lack of collaboration among actors as common challenges during the transition to school. These 'disconnections' between old and new settings may arise during any of the educational transitions described in this chapter. Dockett and Perry (2021) argue that promoting a transition to school that is responsive and respectful to the diversity of those involved is part of school's ethical duty of care. They also highlight the importance of adaptability on the part of the receiving school so that they can flexibly respond to the individual needs of the transitioning child. They use the term 'ready schools' (Dockett & Perry, 2009) to highlight the onus that must be placed on the school system to be ready rather than the individual. While an individual's capacity to flexibly adapt to the requirements of new settings will develop over their educational life, adaptable schools and systems are likely to remain important, even for later educational transitions, such as those considered in this chapter.

Conclusions

The transition to primary school is a major event in a child's life (OECD, 2017). It has been described as a time of increased vulnerability for the child and may impact on their later schooling (e.g., Puccioni et al., 2020). The transition to secondary and higher education also involves significant change, novelty, and uncertainty, and students who experience a positive transition are more likely to complete their studies, do well in their studies, and have higher psychological wellbeing. This chapter argues that a positive educational transition, characterized by successful engagement with the learning and social opportunities afforded by the new educational environment, requires not only self-regulation skills on the part of the student (i.e. personal adaptability) but also adaptability and flexibility on the part of the adults and environments around the student to help foster a smooth transition between education institutions. Taken together, an approach to educational transitions that takes account of the students' existing capabilities and the attributes of the environments they are transitioning from and to is most likely to yield positive educational and personal outcomes.

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6

HOW MIGHT DOMESTIC VIOLENCE PREVENT A CHILD FROM FULFILLING THEIR ACADEMIC POTENTIAL?

Erica Bowen

Introduction

In 2020, it was estimated that 4% of the population of England and Wales aged 16–74 had experienced violence or abuse from an intimate partner during the last 12 months (ONS 2020). The recent Domestic Abuse Act (Home Office, 2021) broadens previous definitions of domestic abuse to include not just physical violence but also emotional abuse, coercive or controlling behaviours, and economic abuse. Importantly, as part of this definition, children are now explicitly recognised as victims if they see, hear, or otherwise experience the effects of abuse. Acknowledging children as victims of abuse without the requirement that they are directly 'physically' involved in an incident is a watershed moment. It reflects the mounting evidence and acknowledgement of the emotional and physical harm caused to children by domestic violence. Debate has previously centred on the extent to which child ear or eyewitnesses could be considered victims in their own right and afforded any specialist support. Consequently, these legislative changes reflect the more recent understanding that children can be affected at any age by non-physical abuse reflected by coercive control such as isolation, continual monitoring, financial abuse, and verbal and psychological abuse (Katz, 2016). Therefore, all schools will have some children growing up in a home context shaped by domestic violence (DV) and who meet the formal definition of being a victim of DV themselves (Lloyd, 2018).

Fry and Colleagues (2018) examined the associations between childhood violence and a range of educational outcomes, including (a) school dropout/graduation, (b) school absence, (c) academic achievement, and (d) other outcomes, including grade retention/remedial class. A broad range of violence categories was examined including physical violence; sexual violence; emotional violence; neglect; witnessing domestic violence; bullying; adolescent relationship violence, and community violence. Of the 43 studies included, only eight measured the association

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between witnessing interparental violence and school outcomes. The reviewed studies confirmed that exposure to DV was associated with a reduced likelihood of high school completion, an increased likelihood of being suspended and non-suspension-related absences, low reading level during adolescence, failing a course, repeating a grade, being expelled, and low qualification level.

Research shows considerable variation in the range of children's responses to DV and that some children manage to buck the trend completely (Bowen, 2015). Not all children who experience DV will do poorly at school or struggle with their work; for some, the school will provide a haven and a focus, and they will achieve highly due to throwing themselves into school life (Sterne & Poole, 2009). Consequently, this chapter has two aims. First, to examine how early exposure to DV influences the maturation of the brain and neuroendocrine systems and how these systems may influence a child's educational attainment through their influence on social, emotional, and cognitive development. Second, to examine factors that may buffer these effects and mitigate the impact of DV on children's educational attainment, with some emphasis on the role that school can play in facilitating this.

Impact of DV on infant development

Research examining the impact of DV on children has typically focused on children who are school-aged, whereas there is now sparse but growing evidence of the impact on younger children and infants, and research has cumulated which documents the negative impact of DV during the perinatal period on child outcomes. As previously acknowledged, DV reflects a pattern of behaviours over time rather than just a single incident. Some studies have suggested that the pregnancy and the 12-month postpartum period are times of increased risk for heterosexual women to experience DV. When experienced during the perinatal period, there is an increased likelihood that the infant will be low birthweight when born (Rahman et al., 2021), which has been found to impact cognitive development and educational outcomes.

When exposed to DV, infants and young children may be at even greater risk of adverse outcomes as their brain is still developing, and brain development during the preschool period is experience-dependent (Mueller & Tronick, 2020). Research indicates that exposure to adversity within the first 3–5 years can detrimentally influence brain maturation. The limbic system and the cerebral cortex, which are associated with cognitive and emotional functioning, develop through early childhood. Early experiences also shape the maturation of the neuroendocrine stress response and the hypothalamus–pituitary–adrenal (HPA) axis, and consequently, factors that influence caregiver–infant environments and experiences are likely to have a persistent impact into later childhood on socioemotional and cognitive development through their impact on brain and HPA development (Cook et al., 2017).

During infancy, the caregiver–child interaction is an important learning environment and a key developmental context. During this time, positive and negative

interactions shape brain maturation and consequently the social, emotional, and cognitive development (Schore, 2001). Two aspects of caregiver interactions are important influences on positive brain development (1) building a secure caregiver–infant relationship and (2) developing a stable foundation for the child's emotion regulation capacity. When a secure relationship between caregiver and infant is not developed because of disruptive caretaking routines, this can lead to an increased risk of developing behavioural and emotional problems. Where such relationships have been achieved, the child seeks out their caregiver in situations when they cannot yet regulate their own emotions, such as when scared or hurt. Secure caregiver–infant relationships are associated with higher cognitive skills, language, increased capacity to regulate arousal and emotions, earlier school readiness, and fewer behavioural problems. Research shows that the presence of a secure caregiver attachment buffers the infant's neurohormonal stress response, thereby protecting the brain against the negative impact of stress (Gunnar & Donzella, 2002).

The achievement of a stable caregiver–infant relationship also plays a role in the infant's ability to develop emotion regulation capabilities. The frontal lobe matures rapidly between six months and 18 months and is critical to the development of emotion regulation capability (Nelson & Bosquet, 2004). In this early maturation phase, the infant learns to cope with everyday stressors, and the caregiver is the primary source of external regulation. The maturation of emotion regulation capability is based upon interactive repair processes led by the caregiver. In these situations, the infant learns how negative emotional states can be transformed into positive states, when the caregiver matches their state to that of the infant and successfully repairs the negative emotion and transforms it into a positive emotion, which results in the sense of agency in self-regulation and leads the infant to build internal resilience in the face of negative emotions (Tronick & Beeghly, 2011). Learning to coregulate in this way therefore helps the infant to become more independent in the regulation of their own emotions, and the successful development of this capacity plays a vital role in the child's ability to learn how to share, make friends, and focus attention (Cook et al., 2017).

How may the consequences of early childhood DV influence educational attainment?

Cognitive outcomes

As we have seen, if a child has been a victim of DV from early infancy, there is an increased likelihood of longer-term challenges in emotion regulation, social competence, and attention. An influential twin study conducted by Koenen et al. (2003) examined the association between exposure to DV and IQ among 1,116 mono and dizygotic 5-year-old twin pairs. Domestic violence was uniquely associated with IQ suppression in a dose–response relationship. Children exposed to high levels of DV had IQs that were, on average, eight points lower than unexposed children. Adult DV accounted for 4% of the variation, on average, in child IQ, independent

of latent genetic influences. Research has further suggested a gene–environment interaction in which children with two copies of a risk FKBP5 haplotype who are exposed to DV are more likely to have a developmental trajectory characterised by high reactivity and emotional reactivity in toddlerhood, low executive function at school entry, ongoing emotional and behavioural problems, and low reading ability (Halldorsdottir et al., 2019). These studies again point to a biological basis of some of the relationships between exposure to DV and child outcomes.

Cognitive-contextual frameworks suggest that children's adjustment in the context of DV is contingent upon their interpretations or appraisals of the conflict. Children feel threatened if they believe that parental conflict will negatively affect their own, their parents', or their family's wellbeing. Emotion security theory (Davies & Cummings, 1994) proposes that exposure to DV undermines children's sense of safety and thereby dysregulates children. The security concerns children develop can interfere with their ability to cope and disrupt their ability to acquire age-appropriate skills in various domains. Preschool children may disengage psychologically or behaviourally when exposed to DV due to their poorer coping skills when separated from their caregiver. In addition, these children may tune out noise as a way of coping with DV, which, when exhibited at school, may make it more difficult for teachers to engage with them (Baker & Cunningham, 2009). Children's concerns about their safety have also been found to disrupt their attentional skills (Towe-Goodman et al., 2011), and attentional skills are a fundamental component of memory and learning.

Attentional control is one of three components of executive function, which describes the cognitive abilities involved in controlling and coordinating goal-directed behaviours. Children's executive functioning at school entry has been found to predict school success. For example, Neuenschwander et al. (2012), using data from 459 children recruited from kindergarten and mixed-grade classes, found that children's executive functioning (above and beyond the influence of their effortful control and fluid intelligence) was related to their learning-related behaviours as well as their reading, writing, and maths performance one year later. Gustafsson et al. (2015) found that even after controlling for several family and child-level covariates, when DV occurred early in children's lives, it was negatively associated with their executive functioning at school entry. This relationship was mediated by maternal sensitive parenting behaviours, such that higher levels of DV were associated with lower levels of sensitive parenting behaviours, which in turn, were positively associated with children's executive functioning. This study reinforces the interplay between environmental influences and children's cognitive development and provides insight into how environmental influences may moderate the association between DV and child outcomes.

Memory plays a crucial role in learning, and research shows that with increased age, children become more skilled in generating strategies for the storage or retrieval of information and more efficient in the use of these techniques in different contexts. Early basic mnemonic skills are important for children's later functioning and school success, and it has been argued that acquiring these skills before

entering kindergarten may be particularly relevant to children's later success. In their study of 5-year-old children, Gustafsson et al. (2015) found that exposure to DV at 30 months was associated with poorer performance on assessments of short-term, working, and deliberate memory at 5 years of age.

Given the evidence reviewed that testifies to the impact of traumatic stress on the cognitive development of children exposed to DV, it is perhaps unsurprising that studies have found that this group of children is also more likely to have lower reading and phonological awareness levels. Blackburn (2008) matched two groups of children on age (range 6–9 years), gender, non-verbal IQ, and socioeconomic status. One group had been exposed to DV and the other had not. Children's hearing was also tested to screen out hearing impairments. It was found that the children exposed to DV had scores that were significantly lower than those not exposed to DV, although they remained within normal limits. However, a significantly higher proportion of the children exposed to DV were identified as 'reading disabled' with difficulties identified at the phonological, word, and sentence level of reading. In a study of adolescents, Thompson and Whimper (2010) found a similar association, with having witnessed DV uniquely predicting low reading level (reading level below 6th grade at the age of 12).

Emotional and behavioural outcomes

According to the adjustment erosion hypothesis, problem behaviours are believed to undermine later educational attainment. However, the academic incompetence hypothesis suggests that it is poor academic performance that contributes to the development of problem behaviours. Currently, research supports more comprehensively the adjustment erosion hypothesis. According to emotional security theory (Davies et al., 2006), children's emotional and behavioural responses to conflict are efforts to re-establish security. Destructive conflict tactics within parental relationships (such as non-verbal hostility, withdrawal, defensiveness, threats, physical aggression) are associated with increased fear, anger, and sadness in children, increased efforts to minimise exposure to conflict, and greater emotional dysregulation. It is further hypothesised that destructive interparental conflict increases the risk of children's adjustment problems through their sensitisation to future conflict, which is suggested to lead to both internalising and externalising behavioural problems. Jouriles and McDonald (2015) found that coercive control in the context of physical DV was associated with mother and child reports of externalising and internalising behavioural problems after accounting for the frequency of physical interparental violence (IPV), psychological abuse, and mothers' education. This supports the role of the hostile, threatening, and controlling processes at the core of coercive control.

Shi and Ettekal (2021) examined the development of co-occurring internalising and externalising behavioural problems over time in children followed each year from first to twelfth grade and explored their associations with teacher–child relationship quality and educational outcomes. It was found that when children developed both internalising and externalising problems, this was associated with

a higher conflict relationship with teachers and poorer maths and English reading ability at the end of the twelfth grade, thereby supporting the adjustment erosion hypothesis.

The development of internalising or externalising behaviours in the context of childhood interparental violence is likely mediated by other socioemotional experiences. For example, it has been found that exposure to DV increases the likelihood of peer rejection, which in itself is associated with internalising problems and psychological distress and is one of the strongest predictors of children's school adjustment (Ladd et al., 2008). Furthermore, children who grow up with IPV are more likely to experience bullying, which in turn has been found to attenuate educational attainment (Torres et al., 2020).

In addition to the evidence highlighting the negative impact of DV on the cognitive, emotional, and behavioural development of children growing up with IPV, there is tentative evidence of spillover effects, which suggest that the behaviours of these children negatively impact the educational attainment of their peers with whom they are at school, by decreasing reading and maths test scores and increasing misbehaviour in the classroom (Carrell & Hoekstra, 2010).

In summary, DV during infancy can for some children set a cognitive developmental cascade in action that, through impacting the brain and stress systems, may increase the likelihood of cognitive, social, emotional, and behavioural deficits that may impact interaction on educational attainment and outcomes.

What factors may buffer the impact of DV on childhood attainment?

Although the dominant focus of research exploring the impact of DV on children has focused on characterising the adverse outcomes, meta-analyses identify that on average, 37% of children do not show any adverse effects (e.g., Kitzman et al., 2003). This is more likely for children whose parents did not require police intervention or who did not also experience child abuse when DV is experienced over greater time, and when DV is conceptualised more broadly (Vu et al., 2016). However, other factors have also been identified that mitigate this potentially negative effect and contribute to children's resilience or ability to achieve positive or successful outcomes despite experiencing DV. Despite evidence indicating the negative impact of DV on children's educational attainment, research examining resilience has focused on emotional and behavioural outcomes. However, as examined, these outcomes are also of relevance to children's overall academic success, and so these studies may highlight factors also of relevance to educational outcomes.

Fogarty et al. (2019) examined the findings of published studies which identified factors that promoted the emotional–behavioural resilience of children exposed to DV. The studies examined focused on children aged up to 12 years who had been exposed to DV, had assessed both protective factors and outcomes, and were published in English. In total, 14 studies met these criteria and represented a total sample of 9,512 children, most of whom were younger than 6 years. A range of

individual, family, and community-level factors were identified across these studies, and it is of note that none of these factors were located within or relevant to the school context.

Individual factors

Child temperament was found to protect against adverse outcomes, with resilient children described as having an easy temperament, less shy, less emotional, and more active. Cognitive ability was not found to be associated with resilience.

Family-based factors

Most studies examined either maternal mental health or indices of parenting quality. Five studies found support for maternal mental health being associated with resilience, that is, mothers not having clinically significant depressive or psychiatric symptoms. Parenting was assessed in three studies, and findings were inconsistent as to whether positive discipline or consistent parenting acted as a protective factor. Other family based factors examined included maternal warmth and sensitivity, emotion coaching (the degree of respect showed by parents for their child's emotional experience), mother–child attachment, and family cohesion, all of which were found to predict resilience against adverse emotional–behavioural outcomes.

In the only individual study to examine resilience within the context of school outcomes, David et al. (2015) found that when children have daily routines in the home and where clear expectations about behaviour are communicated, children exposed to DV are more likely to have higher school readiness scores, unless the levels of DV are high.

What role can school play in fostering resilience and supporting post-traumatic growth?

Few studies have specifically examined schools in relation to their protective or buffering effect on children who have grown up with IPV. In their meta-analysis exploring factors that contribute to children's resilience in the context of DV, Yule et al. (2019) found that school support (the extent to which students felt supported and valued by teachers and staff, as well as a sense of security at school) demonstrated significant bivariate associations with adaptive functioning in both cross-sectional and longitudinal studies.

Teacher–child relationship

Evidence highlights the important role that young people's relationships with their teachers can have in mitigating the effects of earlier traumatic experiences. Research shows that children and adolescents who have a high level of attachment to their schoolteachers are more likely to go to them for support, and if they

believe that their teachers care and respect them, they are more likely to develop connectedness to the school. This may be particularly important for children who have experienced DV, given the influence of those experiences on their attachment styles and relationship expectations which are likely to influence adults' perceptions as unreliable, untrustworthy, and potentially threatening. Indeed, findings suggest a correlation between mother–child relationship quality and teacher–child relationship quality (e.g., Ahnert et al., 2006).

When teacher–student relationships include high levels of support and low levels of conflict, students typically display lower levels of aggression. Conversely, relationships characterised by conflict and low levels of closeness and caring can inflame antisocial and aggressive behaviour and conduct problems (Obsuth et al., 2017). Moreover, the quality of the child–teacher relationship disrupts the association between insecure mother–child attachment and later child internalising or externalising behaviours which, as we have seen, are also associated with educational outcomes.

Trauma-informed schools

In the UK and elsewhere, there has been an increasing call for trauma-informed approaches to be implemented. Trauma-informed schools, loosely, are schools that can support children and teenagers who suffer with trauma or mental health difficulties and whose problematic behaviour acts as a barrier to learning (Trauma Informed Schools UK, 2021). There is currently no agreed-upon set of practices that defines a school as being trauma-informed, and there is a growing opinion that any such approach must involve all adults within a school, at all levels, and be implemented through all school practices. In the US, it has been suggested that a trauma-informed approach should rest on four principles:

> realise the widespread impact of trauma and understands potential paths for recovery; recognises the signs and symptoms of trauma in clients, families, staff, and others involved with the system; responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist retraumatisation.
>
> *(SAMHSA, 2014, p. 9)*

Avery et al. (2021) identified only four school-wide trauma-informed approaches documented in the published literature which broadly encompassed trauma-informed staff training, organisation-level changes, and practice change, and most models screened students to detect trauma. Although these recommendations are growing internationally, evidence regarding their effectiveness is only beginning to be collated. Cohen and Barron (2021) conducted a systematic narrative review of the extant literature published between 2010 and 2020 concerning trauma-informed high schools. They found that across the nine studies identified, most had adopted trauma-informed professional development as an intervention, with others implementing a trauma-informed curriculum, a trauma-informed alternative

to suspension, or adopting trauma-focused cognitive-behavioural therapy. Overall, most studies reported some positive outcomes after implementing the trauma-informed approach, although the study quality and design varied substantially. Outcomes included closing the gap on standardised test scores, decreased suspensions, increases in knowledge, disposition and staff behaviour, and recognition of the signs of trauma by staff. It is early days in terms of evaluating such approaches, but the findings suggest this is a positive approach to adopt.

Multi-agency partnerships

Multi-agency partnership working has been heralded as best practice in supporting adult victims of DV, and similarly, within child protection. The 'Keep children safe in education' guidance (Department for Education, 2021) asserts that all professionals within a school environment have a responsibility to identify children who may benefit from help. The 2017 report 'The multi-agency response to children living with domestic abuse' (Ofsted et al., 2017) calls for the health practitioner, social workers, and police to share child protection information more readily with schools in light of numerous serious case reviews which highlight flaws in information sharing. One initiative to emerge within this context is Operation Encompass. Within this model, when the police attend an incident of DV at which a child is present or known to be part of the family, the police notify the child's school by 9 a.m. the following morning so that the school can provide additional support to that child. A key adult at school (the Designated Safeguarding Lead or Deputy) is informed of the case and cascades information to teaching staff to allow immediate and ongoing support to be given to the child. The initiative is enabling police and schools to work in partnership to mitigate the impact of abuse and has the potential to be an exemplar of collaboration.

Conclusions

Ample evidence highlights the negative influence of exposure to domestic violence on children's developmental and educational attainment outcomes. However, it is also clear that such outcomes can be expected in only two out of three children who grow up in a violent or abusive home. Although a range of child and family factors have been identified as ameliorating this influence, fewer studies have examined the potential role of schools as protective environments. However, as children spend nearly 200 days in school each year, this context offers a range of potential buffers, from the relationships children develop with teachers to broader systemic multi-agency partnerships between schools and other agencies.

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7

THE HOME LEARNING ENVIRONMENT AS A MEANS TO OVERCOME ADVERSITIES IN EDUCATION

Simone Lehrl

Introduction

What makes a good family? This question is posed at the beginning of this chapter and arises particularly against the background of findings from major comparative school performance studies such as the Programme for International Student Assessment (PISA), which repeatedly showed that performance in mathematics, reading, and science at the age of 15 is significantly associated with the social background of young people (Müller & Ehmke, 2016; OECD, 2016). For instance in the group of functional illiterates, that is those who cannot read meaningfully (maximum competence level I in the PISA test), there are almost 25% of young people from families of unskilled and semi-skilled workers while only 10% belong to the upper service class (e.g., judges, professors) (Müller & Ehmke, 2016). Such social disparities in skills acquisition can be seen as a result of a cumulative process that begins long before school starts. For example, data from the longitudinal study 'Educational Processes, Competence Development and Selection Decisions in Preschool and School Age (BiKS)' in Germany, showed that there are already considerable differences in children's linguistic, pre-knowledge, and also non-verbal competences at the age of about three years (Weinert et al., 2010). By using data from the birth cohort (SC 1) of the National Education Panel Study (NEPS) in Germany, it could also be shown that even infants show different sensorimotor skills depending on their social background (Weinert et al., 2017). The findings of Hart and Risley (1995) point to a possible mechanism that could underlie such social disparities in competence development: children aged between nine months and two and a half years heard between 62,000 words and 215,000 words per week, varying to some extent on their family background. Accordingly, the children had very different vocabularies. Numerous other studies were able to show that the variability in linguistic input, frequency, and quality of parental activities with the

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child – aspects that constitute the home learning environment (HLE) – not only strongly depend on the social background of a family but is also related to the development of different areas of competence (see Lehrl et al., 2020, for an overview). Thus, among other variables, enriching the early year's HLE seems to be one important means to overcome adversities in education. Against this background, the aim of this chapter is to provide an overview of current research findings on the concept and the importance of HLE for children's competence development with a specific focus on adversities in education.

The concept of HLE

Only gradually did conceptualisations of HLE shift from more rigid structural aspects, such as social status or income, to more dynamic concepts that focused on process characteristics, such as frequency of reading aloud (Marjoribanks, 1979). Bronfenbrenner's (1986) ecosystemic theory in particular played a role in the change of conceptualisations of HLE from rather rigid to more dynamic, processual concepts. It emphasises the importance of the interaction of the individual with the social context (Bronfenbrenner & Morris, 2006). The sociocultural theories can be seen as a complement to this strand of theory (Rogoff, 1990; Vygotsky, 1978). They emphasise that children actively acquire higher cognitive skills by being supported by a more experienced person in their zone of proximal development (Vygotsky, 1978). According to this account, promotion of children is most effective when the stimulation is slightly above the child's current cognitive and achievement level. Accordingly, parental activities can be judged by the extent to which they shape interactions accordingly – this determines the stimulation content of an activity.

Theoretical assumptions about dimensions of HLE and their interrelationships describe them at the highest level as grouped into structures, processes, and beliefs/orientations (Missall et al., 2015; Sameroff, 1994; Votruba-Drzal, 2003), whereby the processes can be further divided into global and domain-specific processes (Lehrl et al., 2020). According to the model, global processes should rather prove significant for overarching areas of competence, such as general cognitive ability, while domain-specific processes should influence the development of the respective domain addressed by the process, for example, mathematics or language – justified in theories of domain-specific development (e.g., Wellman & Gelman, 1992). Further differentiations of domain-specific processes result from the consideration of the type of activity. In this regard, the 'Home Literacy Model' (or 'Home Numeracy Model') (Sénéchal & LeFevre, 2002; Skwarchuk et al., 2014) shows that a distinction between formal and informal aspects of stimulation is advisable, as they have specific significance for specific areas of competence. Formal literacy activities at home include those activities that directly refer to print, like teaching letters or reading (Sénéchal & LeFevre, 2002). Accordingly, formal numeracy activities include all activities that directly teach numbers and counting (Skwarchuk et al., 2014). Informal literacy and numeracy activities refer to experiences that

involve language, print, or mathematics indirectly through joint book reading or playing board games (Sénéchal & LeFevre, 2002; Skwarchuk et al., 2014).

Crosscutting these specifications are the considerations on the distinction between quantitative and qualitative aspects of HLE (Lehrl, 2020; Leseman, 1993). The central assumption here is that not only the frequency of certain activities is of importance for children's competence development but also the quality of the activities. This distinction in terms of content is usually coupled with different methodological approaches: while the frequency of activities is often recorded via surveys of parents, their quality is usually assessed within the framework of observations (e.g., Huttenlocher et al., 2010).

Empirical findings on the importance of HLE

Research on the Home Literacy Model shows that formal and informal aspects of HLE are relatively independent of each other and predict different domains of competence (Lehrl et al., 2012; Manolitsis et al., 2013; Sénéchal & LeFevre, 2002). While formal aspects of HLE tend to predict writing-related competencies such as letter knowledge, informal aspects of HLE, such as opportunities to read, are related to language skills, for example, receptive vocabulary (Lehrl et al., 2012).

When it comes to the quality of stimulation in the context of shared reading between parents and children, the focus is especially on conversations with the children that go beyond what is read in the text. Most findings suggest that as the level of abstraction of the language used in such conversations increases, so do the children's linguistic–cognitive competencies (van Kleeck, 2003).

Research findings on the 'Home Numeracy Model' make it clear that both formal and informal aspects of mathematical support are significant for children's mathematical abilities (Manolitsis et al., 2013; Skwarchuk et al., 2014; Zippert & Rittle-Johnson, 2020). Furthermore, it has been shown that parents also address mathematical content during shared reading by making statements about numbers, relations, and arithmetic operations – the so-called Math Talk (e.g., Ramani et al., 2015). This type of stimulation has also been shown to predict children's mathematical competencies (Lehrl et al., 2020). Following on from these findings, four current foci of HLE research are presented here, which address the long-term significance of HLE for different domains of child development and focus on the possibility of HLE enrichment through institutions.

Long-term domain-specific and cross-domain effects of HLE and the role of risk factors

The three studies presented in the following all refer to data from the BIKS-3–18 study. BIKS-3–18 started in 2005, with about 550 three-year-old children and their families. The surveys include annual, sometimes semi-annual interviews with parents, educators, and later also with children and teachers by means of interviews

and/or questionnaires, observations in the families, in day-care centres and schools as well as various play-based tests to assess the cognitive-linguistic, social-cognitive, socioemotional, and academic development of the children and their developmental conditions.

The recording of HLE in BiKS

In BiKS, both interviews and observations were used to map the different dimensions of the HLE. A five-dimensional factor structure was proven via confirmatory factor analyses at three measurement points when the children were three, four, and five years old (Lehrl, 2018). The dimensions include frequency of formal literacy stimulation (e.g., teaching the alphabet), frequency of formal numeracy stimulation (e.g., teaching numbers or counting), informal literacy (book exposure, e.g., frequency of shared book reading, available books), quality of verbal interaction during shared reading, and quality of verbal interaction during shared reading with mathematic content.

The dimensions capturing quality during shared book reading were collected in observations via the rating procedure 'Family Rating Scale' (FES) (Kuger et al., 2005; Lehrl, 2018). The FES comprises 11 items that are rated live by trained observers on a seven-point scale (1 = insufficient quality, 7 = excellent quality) during a semi-standardised picture book situation. The dimensions capturing frequency were administrated via standardised questionnaires for the parents.

Findings on long-term effects of HLE

The longitudinal study by Lehrl et al. (2020) examined the extent to which the dimensions of HLE described earlier, which were measured between the ages of three and five, are related in the long term to children's reading competence and mathematical competence at the age of 12–13 years. More frequent experiences with books and a comparatively better quality of interaction regarding mathematical content at the age of three were related to better mathematical competences at the age of 12, even after controlling for family background characteristics such as the mother's educational level or the family's socioeconomic status. These effects were mediated by language and mathematical competencies at preschool age. Reading at the age of 13, on the other hand, was indirectly predicted by formal written language activities, that is engagement with letters and reading through early letter knowledge. Experiences with books and the quality of interaction regarding mathematical content were found to be significant predictors of reading via early language skills. Furthermore, findings have shown that HLE at the age of 12–13 – consisting of experiences with books, frequency of cultural activities, availability of stimulating materials, frequency of out-of-home activities, and parents' perceived learning support from themselves – predicted reading literacy in addition to early HLE measures and early skills.

Domain and instructional type specificity of HLE effects

Moderate to high correlations were found between domains within instructional type (formal, informal) and between domains within the different quality dimensions (Lehrl et al., 2020). As could be assumed based on the 'Home Literacy/Numeracy Model', formal written language activities are associated with letter knowledge, and informal experiences with books predict language competence, which are then in turn positively related to later reading competence (see Lehrl, 2018). Cross-domain effects emerge regarding formal and informal literacy activities in relation to children's numerical skills. Reading aloud and engaging with books could act as a 'good things variable' (Whitehead, 2004) as they influence a very central area of child development: language development, which affects the development of several domains (Girard et al., 2016; Kleemans et al., 2011; Purpura et al., 2011).

Importance of the HLE for the development of social-emotional competencies

This is also supported by the findings of Rose et al. (2018), who also used BiKS data to investigate the importance of language development on the one hand and the role of linguistic stimulation by parents on the other for the development of social-emotional competences in children aged eight. The social-emotional competencies were surveyed at the age of three and eight years by the parents and educators or teachers using a 4-point scale (1 = do not agree at all, 4 = agree completely). The language competences were measured on the basis of receptive vocabulary and grammar comprehension (sentence comprehension).

It has been shown that good language stimulation – measured by the experiences with books and the language stimulation during the interaction situation (dimension 'General language offer' of the FES) – not only is positively related to the children's language competences but also favours the development of cooperative behaviour and emotional self-regulation and reduces aggressive behaviour (see Foster et al., 2005, for similar results). One reason for this could be that reading together has a social component, for example, feelings, rules, and norms can be talked about on the basis of the stories in the books, and the protagonists in children's books serve as positive role models and numerous non-verbal interactions also take place between the child and the interaction partner (Landry & Smith, 2007; Rose et al., 2018).

Importance of HLE considering risk situations

A further point concerns the question of the possible compensation of risk situations through the HLE. All characteristics in the home environment that can contribute to inhibiting child development can be seen as potential risk layers. The family stress model (Conger et al., 2002), which assumes that characteristics of economic, social, and spatial resources can cause stress that affects the activities

taking place in the family and thus (can) influence child development, plays a central role here. Potential sources of stress include poverty, single-parent families, a high number of siblings, unemployment, chronic illnesses in the family, stressful life events, and so on. Previous findings based on the BiKS study were able to show that HLE is able to mitigate the effects of risk factors with regard to mathematical development (Kluczniok, 2017).

Blaurock and Lehrl (2017) therefore focused on outcome measures of children aged 12/13 years that relate to measures of coping with life: grades in mathematics and German, behavioural problems (students' self-reports; strengths and difficulties questionnaire, Goodman, 1997; e.g., 'I often get angry and lose my temper.') and risk behaviours (e.g., skipping school, stealing in the last 12 months; Lösel et al., 2005). The authors were able to show that the risk index (comprising low maternal education, low SES, paternal unemployment, dual language learner, more than three siblings, single parent, physical or psychological disease in parent or child, stressful life events) is related to all three outcome characteristics: the higher the index, that is, the more risk factors apply, the worse the grades and the higher the risk taking and problem behaviour.

In addition, the findings showed that early HLE, as measured by the quality of interaction behaviour during the read-aloud situation (mean score across all 11 items of the FES scale), attenuated the effects of the risk index on grades and problem behaviour such that there were no longer any direct effects of the risk index for these two measures. However, this was not true for risk behaviour. The findings imply that early HLE can mitigate risky developmental trajectories in the long run. It is therefore more important what is actually done with children from early childhood onwards in terms of activities and interactions, in addition to what social, economic, and material resources are available.

Cooperation with families as a possible natural intervention

As has been shown, HLE proves to be significant for child development in the long term and can mitigate the influence of risky background characteristics. Therefore, it seems to be important to enrich HLE at an early stage, especially to break the link between social background and competence development. One approach is therefore the cooperation between day-care centres and families (e.g., Cohen et al., 2020). However, the empirical basis on the question of the effectiveness of aspects of cooperation with families is still small, especially in Germany.

According to the structure-process-orientation model, quality of early childhood education and care can also be described as a multidimensional construct (Tietze et al., 1998). In addition to the structure, orientation, and process characteristics, cooperation with families is discussed as a separate dimension in the quality model (Kluczniok & Roßbach, 2014). It is assumed that the characteristics of processes and cooperation with families are directly related to developments of the child or family (ibid.). It has been shown that especially those intervention programmes are effective that also strongly involve parents (Ramey & Ramey, 1998).

This could be due, among other things, to the fact that involving parents in intervention programmes also has a positive influence on the stimulation content of the learning environment at home.

Hindman and Morrison (2011), for example, studied children's vocabulary growth as a function of parental involvement. They showed that children had a higher vocabulary at the end of the preschool years if they were read to more often at home and if the parents more often volunteered in the group service in the day-care centre. This raises the question of the mechanism by which participation in the group influences children's language skills. The authors speculate that parents may learn beneficial practices in the group service in order to better support their child at home. Thus, working with families could be a key link between the learning environments of day-care and family by enabling enrichment of HLE.

Findings from the evaluation of the federal programme 'Schwerpunkt-Kitas Sprache & Integration [Core-preschools: language and inclusion]' point in the direction that cooperation with families is positively related to children's sentence comprehension and vocabulary development during a preschool year (Anders et al., 2016). In particular, children with a non-German family language seem to benefit from tips and hints from the professional when it comes to vocabulary growth. It remains unclear in these analyses how exactly the courses of linguistic development are represented over the entire day-care period and which mechanisms underlie these relationships.

On the basis of the same data, Lehrl et al. (2020) therefore investigated whether the HLE serves as a mediating factor in the described structure between cooperation with families and children's language development. The development of receptive vocabulary and sentence comprehension of children between the ages of 3 and 5 was also examined. For the recording of cooperation with families, on the one hand, the concrete cooperation with families with regard to language education was recorded, which includes information from the parents on the number of hints for the promotion of the child's language development by the specialist (e.g., 'tips on how to use everyday situations (e.g., getting dressed, shopping, etc.)'). On the other hand, the general cooperation with families was assessed through the implementation of the concept of cooperation with families in the entire day-care team, measured through the team's level of further training on the corresponding topic. As an indicator of the learning environment at home, the parents recorded the frequency of language-stimulating activities at home (including looking at books or reading aloud, rhymes and finger plays, role plays, and so on) on a seven-point scale (1 = never, 7 = daily). The findings made it clear that working with families in the form of giving tips and hints and in the form of a team's level of training on this topic has different effects on the development of receptive vocabulary and sentence comprehension. While receptive vocabulary development was neither directly nor indirectly related to either indicator of working with families, a team's level of training on the topic of working with families was directly related to sentence comprehension development and indirectly mediated through the HLE, so was giving tips and hints. Although giving hints and clues may result in a change in

HLE, this improvement is not related to further vocabulary growth in addition to the early effect of HLE on early vocabulary level. Sentence comprehension development, on the other hand, can be positively predicted indirectly by HLE through the giving of hints and clues. Similarly, Lehrl et al. (2012) showed that growth in understanding of grammatical structures in the first year of kindergarten can be positively predicted by HLE – measured by the extent of experiences with books. The extent to which collaboration with families is implemented in the team – measured by the team's level of training – also proves to be significant in predicting sentence comprehension. However, this is not mediated by the HLE. Basically, this shows that a lively training activity on working with families in the whole team is associated with better grammatical competences of the children, but which mechanisms underlie these connections should be further researched. Overall, it must be noted that the effects of the indicators of collaboration with families and the effects of the HLE for predicting language development measures were low in this study. Nevertheless, it could be shown that cooperation can be a small adjusting screw in the promotion of linguistic competences. Cooperation with families in the form of giving tips and hints can be a link between the learning environments of day-care and family, which supports the children's linguistic development. Future studies should focus more on the type and quality of these tips and hints.

Conclusions

Taken together, it is clear that the construct of HLE is complex, and families differ considerably in how often and with what quality they stimulate their children in different domains of competence. The differences between the domains do not seem to be as great as those between the types of instruction. The HLE proves to be significant for child development in early adolescence, especially via mediation processes on competence development in the kindergarten years. Not only linguistic, mathematical, and written language skills are positively influenced but also social-emotional skills and aspects of coping with life. In addition, it has been shown that the HLE plays an important mediating role in mitigating the effects of potential risk situations of preschool children. In conclusion, it can be said that the early year's HLE might function in itself as an adversity in education but might also be an important source in overcoming other adversities in education. Against this background, it is important to support families in creating a positive learning environment. The day-care centre seems to be particularly suitable for this. The presented findings thus underline the importance of early education not only in the family but also in the day-care centre, which can contribute to improving HLE and thus also the children's linguistic development by providing tips and hints for language promotion. However, there is a need for further research on the question of possibilities of support for families in order to be able to strengthen them in their educational function. To this end, the significance of various dimensions of cooperation with families for children's competence development should be given greater attention, and possibilities of using digital media in family education should be examined.

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8

OVERCOMING ADVERSITY FROM LARGE-SCALE CRISES AND DISASTERS

Carol A. Mutch

Introduction

Since the mid-1950s, writers have been examining the impact of childhood adversity on outcomes in later life (e.g., Felitti et al., 1998). Studies cite adverse experiences as physical, psychological, or sexual abuse and physical or emotional neglect. Children can also be impacted by parental or family factors, such as divorce, death, or abandonment, incarceration, mental illness, or substance abuse (Finkelhor et al., 2015). More recently, adverse childhood experiences were extended to include community and peer factors, such as racism, bullying, and violence. The literature also notes that the impact of adverse childhood experiences can be lessened through family and school-based interventions (Biglan et al., 2017).

Over several decades, we have come to understand more about the impact of natural disasters, conflict, and displacement on children's psychosocial adjustment, educational achievement, and health outcomes. The literature highlights that the trauma caused by such life-changing events is more severe on those who have pre-existing risk factors, such as mental health issues or lowered resilience from adverse prior experiences (e.g., Gibbs et al., 2013). Most children will exhibit some physical, psychosocial, or behavioural issues in response to traumatic events but with a return to a more stable environment, and learning coping strategies, they will recover, but a proportion of victims might go on to have serious long-term issues, such as anxiety, depression, or post-traumatic stress disorder (Prinstein et al., 1996).

Since 2020, the COVID-19 pandemic and subsequent events, such as social distancing, self-isolation, and home learning, are also impacting children's mental health, social competence and, in some cases, physical safety (e.g., Power et al., 2020). We are yet to understand the longer-term implications of the pandemic, but already research is providing evidence of the ways in which the pandemic has highlighted social, economic, and educational disparities (e.g., Mutch, 2021).

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This chapter argues that schools play an important role in providing the security, stability, and nurturing environment that contribute towards alleviating the multiple adverse experiences children might face as they journey towards adulthood. The author's particular interest is in large-scale crises and how schools can help to ease the long-term psychosocial impacts of such events. After outlining the context for the research, the relevant literature is summarised, the methodological approach outlined, and examples of the findings are shared. The findings are grouped under four themes: (a) schools as community hubs; (b) principals as crisis leaders; (c) teachers as trauma workers; and (d) children as active participants. The chapter concludes with a summary of the key ideas, using an explanatory conceptual framework, to discuss the role that schools play in alleviating childhood adversity due to large-scale crises and disasters.

Background

Over the past decade, the author has been researching the role of schools in disaster response and recovery. This research began in 2010, when the city of Christchurch in Canterbury, New Zealand, was struck by a series of powerful earthquakes. The author conducted research with five schools as they moved through their earthquake recovery journeys. As schools in disaster contexts had not previously been comprehensively researched, invitations soon followed to visit other disaster settings in the Asia-Pacific. Many of the themes from the Canterbury earthquake study resonated across geographic locations, disaster types, and cultural contexts. As the decade proceeded, Canterbury faced further trauma – another major earthquake in 2016, in the north of the region and, in 2019, a terror attack on Muslims at prayer.

In February 2020, New Zealand was introduced to the COVID-19 virus. What made this crisis different was that it was not concentrated in a single city or region but affected every person in the country and, indeed, the world. The government acted swiftly, and the country went into strict lockdown. Schools were closed and students began learning from home. Suddenly, what we had learned about the role of schools in disaster response and recovery gained heightened interest. How does the role of a principal change? How do teachers keep teaching the curriculum when students are too distressed to focus? How do schools help families whose regular lives are disrupted? How do they support already fragile communities? The purpose of this chapter is to consolidate the findings from this decade of research to highlight the ways in which schools help staff, students, families, and communities cope with their immediate challenges and thrive through adversity.

Literature

Disasters are characterised by the suddenness or lack of preparedness, the unexpectedness of the size of the event and ensuing damage, and the inability of existing systems to cope. There can be a lack of immediate access to food, water, shelter,

and medical aid and large-scale death or dislocation. The process of recovery is long and complex. Disasters can also have severe long-term social, economic, and psychological impacts on communities and nations (Mutch, 2014).

A literature review on the role of schools post-disaster highlighted that there was a large body of literature in the hard sciences on disasters but very little in the field of education (Mutch, 2014). The largest body of research focused on the role of schools in disaster risk reduction. Some small-scale accounts discussed the role of schools in disaster contexts but few focused on the roles of principals or teachers (e.g., Smawfield, 2013). This was surprising, given that getting schools functioning again post-disaster is a top priority of governments and local authorities. It provides educational continuity and is a key psychological factor in contributing to a return to normality. More recent literature advocates for the recognition of schools' significant roles in disaster preparation, response, *and* recovery (e.g., Mutch, 2018).

As schools are located in centres of population, large and small, a disaster affecting a community will impact local schools. Schools might be used as emergency shelters, relief hubs, communication centres, or a place to locate support agencies. More significantly than the physical support they provide, they offer a sense of safety and security. Whether people come to sleep in the school assembly hall, collect relief supplies, or register with agencies, schools are seen as places of safety and calm. If school buildings are damaged, teaching still continues in makeshift locations, tents, out in the open, or online (see Mutch, 2014).

The limited literature highlights how unprepared school leaders were for what they were about to face. While most education systems expect schools to have emergency plans, these are not necessarily at hand, relevant, or well-understood. Principals fall back on their instincts and into a command-and-control mode to begin the response process. Sometimes, instructions are issued from a central authority, but most often, principals focus on survival and rescue until they can take stock of the situation. The crisis leadership literature from other fields provides useful insights into the kinds of decisions that principals might make in these situations (see Mutch, 2015a).

When the study began, it was difficult to find studies of teachers' responses to disaster situations, yet if school was in session when a disaster hit, teachers would be first responders – rescuing, evacuating, and caring for students until help arrived. There were a few insights from teachers, for example, during Hurricane Katrina or the Japanese 2011 triple disaster, but it was difficult to find much that would have prepared teachers for the tasks that they would face (see Mutch, 2015b). The COVID-19 pandemic has highlighted that there is still more to be done in preparing teachers for such unexpected events.

Disasters can have serious long-term effects on children's physical and psychological wellbeing. The severity of reactions can depend on risk factors or prior experiences, such as previous trauma or mental illness or the level of exposure to the event, injuries, loss, or dislocation (Gibbs et al., 2013). Supporting children's psychological responses to trauma was one area that was well covered in the literature (e.g., Prinstein et al., 1996). An emerging area of research was around post-trauma programmes

to enable children to process the events they had faced, especially through arts-based activities (e.g., Cahill et al., 2010), yet literature on supporting teachers' wellbeing post-disaster was limited (see O'Toole & Friesen, 2016).

Methodology

The research approach was emergent, participatory, and qualitative (Denzin & Lincoln, 2011). Methods included semi-structured interviews with school leaders, teachers, parents, and children, and arts-based activities with children. Ethical clearance was given by the University of Auckland and included participants giving informed consent, and parental consent and children's assent when children were involved. Over 100 interviews were transcribed and triangulated with other data from arts-based methods, observations, school documents, media reports, and official statistics. In post-trauma contexts with vulnerable participants, acting ethically is especially important (Dickson-Swift et al., 2009). Time was taken to build relationships with schools through a sensitively staged approach. Once on site, the research was undertaken with a colleague using warm-up activities and a conversational tone to put participants at ease. Children were usually interviewed in small groups of peers or siblings. Through the interviews or activities, we kept an eye on participants' emotional responses to ensure they did not become re-traumatised. Support systems such as a school counsellor or trusted adult were always at hand.

Data were analysed through a constant comparative method (Denzin & Lincoln, 2011). Initial codes were extracted from the data for the strength of the idea, pattern of thought, insight, or explanation. When the data reached saturation point, where no new codes were found, we grouped codes into more abstract themes. This chapter includes the latest data from our COVID-19 studies. The participant quotations are chosen to exemplify codes and themes from the data.

Findings

Across all the research settings, including the COVID-19 study, it was clear how much schools contributed to community response and recovery and how principals and teachers went above and beyond their roles to support students, families, and the surrounding communities.

Schools as the hubs of their communities

Parental involvement in schools varies between educational jurisdictions. Here, a teacher talks about her school in New Zealand:

> It's a great community school. You have people here in and out all day, before school, after school – just huge involvement, not just from current day parents either. It's past pupils, past parents and members of their families and everything.

A principal talks about how his school's function changed when the 2010 Canterbury earthquake struck:

> We were set up as a Civil Defence base, so for the first week and a half there were families, from not only our community, but the other schools as well coming here to receive support. . . . There was an overnight area in our hall where people stayed so we were getting a good picture of the needs of our community.

Even when the physical school is destroyed, new forms of schooling can evolve, as in Nepal:

> We started a mobile school system. Because I saw that my students were frightened and sad. They had no food and nothing to do and their parents were busy with rescue work. I mobilise my teachers and we go to different places for one or two or three days. We let the children do drawing and painting and singing and dancing to make them happy. We feed them a small snack. We did more than 50 places.

And despite having their own homes and families to worry about, schools supported their communities, as in Vanuatu:

> Another challenge was supporting families. Their first priority was shelter, food and water. Many lost their homes and their jobs. To feed the children, people donated local food and the school paid for meat. The teachers would take the food home and prepare it or show the children how to cook it.

Once schools were reopened, they became the safe places, emotionally and physically, for children, as this teacher from New Zealand highlights from her COVID-19 lockdown experience:

> We just needed to open it up for them [students] to talk to each other. It was difficult for them as well . . . for many students, school is the safe place for them to come out of their families; all families have their own issues and problems.

A Canterbury teacher explains how schools became support hubs for their communities:

> We were a community. . . . It was also the support centre for all those parents out there who were mainly in a very damaged area. So, it brought them together, we had counsellors on site for them. We were the hub. We liked them to come and talk and get support.

And a few years later, when several classrooms at one of the Canterbury schools were destroyed by fire, the community reciprocated:

> We're devastated, absolutely devastated, for the children in there, the teachers and the community. . . . Our community is devastated, but we're a proud community here and we've got a lot of support from our families. We'll work through it and try our best to support the children when they come back.

Principals as crisis leaders

Principals most often felt unprepared for what they were about to face. In a fast-moving context, principals went from being educational leaders to crisis managers (Mutch, 2015a). If the disaster happened while children were in school, principals acted quickly. A Samoan principal shares her tragic story:

> The earthquake hit just after 7 in the morning . . . I started to run so I could get to school before anything happened. At the gate I saw the wave. Many children were already in the classrooms with their teachers. They saw me and started running towards me . . . I turned away from the school and started running up the hill and they started to follow me. Some were screaming. Some were crying. The tsunami caught the latecomers. It was very sad.

If the school is damaged, then in a fluid post-disaster context, principals often have to get the repair or rebuilding underway, as in Vanuatu:

> After the cyclone, I have to be a carpenter. I look at the classrooms and make a report. The Ministry came around to assess the damage. I ask parents to assist as I have no handyman. We still have things to be done. We have to spend school money on the roof.

Principals also took a lead in supporting their staff – finding out about their home situations and whether they were ready to return to school. A Canterbury teacher explains:

> We had a big debrief in the staff room. We had a chance to connect with the other staff to find out about all their different situations as some of the staff had lost homes and really suffered. The session was not just about commiserating, we were also celebrating that we were all still here.

Principals reconnected with students and their families, as in Nepal:

> Slowly, I started coming to school myself and visiting the parents. I invited them to inspect the school buildings. I made an awareness programme for them of what we would do if there was another disaster.

Eventually, principals resumed their educational focus but were always aware of the emotional toll on students, staff, and families but not always themselves. A Canterbury principal highlights the stress of trying to juggle multiple tasks:

> I've got colleagues who've been diagnosed with cancer, with stress-related illnesses. They go to the doctor, get medical attention, but still there has been a gradual decline in well-being.

Teachers as trauma workers

When children returned to school, teachers became trauma workers. They needed to recognise the signs of distress or trauma and, if it was not possible to provide the appropriate support, to refer children on for specialist intervention. If the disaster happened when school was in session, teachers became first responders, in some cases putting their own lives at risk (Mutch, 2015b).

> My thoughts then were never, 'We aren't going to get out'or that it would collapse, but my thoughts now when I look back is that the whole place could have fallen in . . . the lights went out, and the children were screaming. All I remember is the siren noise, and I went and grabbed a few of the Year 4 children . . . and I just huddled with them.

In Japan, this teacher shares what was expected once the students were released after the Tohoku earthquake:

> After the students went home after the earthquake, the teachers stayed to clean up the school. We divided up the tasks. There were cracks in the school and the roof looked as if it would fall in.

In many of the settings, school staff were also victims of the event, yet they came to school with a positive focus. This principal from Nepal discusses his teachers:

> My teachers co-operated a lot. They understand that for six months we could not provide the proper salary. Some of my teachers had a lot of problems – their house collapsed and they lost everything.

A Canterbury principal shares her admiration for her teachers:

> Teachers are great. I can't say enough about how much strength, how much integrity, how much they would go the extra mile to drop kids off, to look after kids in their classrooms after school, to buy them special treats . . . to find clothes for them.

A Canterbury parent similarly shares her admiration for the teachers at her child's school:

> All these teachers are quiet heroes. I know there are teachers here that have lost their homes and some of them are living in the same situation as we are and they come to work and they get on with it. They do their job as best they can and they never ever show their frustration to the kids.

A teacher in Vanuatu shares her thoughts:

> We have to be strong. We have to have patience. We give what we can give to the best of our ability to help children so that they feel there is still someone there for them.

Teachers had to balance getting back into familiar routines with caring for children's psychosocial needs, as this Canterbury teacher outlines:

> As teachers, we didn't really know how to deal with children after a natural disaster, especially after they had had a month off school. So we were worried about how the children were going to be and how much teaching we could do.

Children as active participants

Children can be extremely vulnerable in a post-disaster context, and it is important to protect them. They can face physical injury, death, loss of home and family, psychological trauma, and dislocation (Mutch & Latai, 2019). Here are the translated words of a Samoan student:

> We saw our entire village depleted. People's homes were uprooted and demolished. Cars were smashed and thrown around. People's personal belongings were scattered everywhere. There were piles of dead bodies everywhere.

Many children exhibit signs of distress or unusual behaviour in the early aftermath. They might experience clinginess, bedwetting, or anxiety but with support most will recover over time. This Canterbury teacher recalls:

> The staff got given a list of possible short and long term symptoms or effects of trauma that children can have after a natural disaster. When children were acting out we weren't to automatically assume that they were being naughty. We could consider that their behaviour could be a long term effect of the earthquake.

By using a range of safe post-trauma emotional processing practices, such as arts-based activities, storying, or guided discussions, children can begin to make sense of what has happened. A Samoan art teacher explains how her programme helped her community:

> After several months, it was noted that the responses of the children, teachers and parents started to focus on the future. . . . Sorrow and grief were important as they provided for the beginnings of hope, rebuilding and moving forward. The colours of the children's paintings revealed lighter tones and the dark expressions started fading away.

As well as feeling safe and protected, the United Nations Convention on the Rights of the Child (United Nations Office of the Commissioner for Human Rights, 2021) expects that children will be actively involved in decisions that relate to them. Here, a Canterbury primary student stands up for his rights when his school is closed in a post-earthquake merger:

> My younger son had even written a letter to the Queen. He was not going to go just to John Key [Prime Minister] who he blamed for the whole merger. He was going to the top. He thought, well the Queen is in charge of the countries of the Commonwealth, so he wrote to her to ask if she could help.

Engaging children in projects that took children out of themselves and focused on helping others proved beneficial in the short and long term. A Canterbury principal reflects on how a community-based arts project helped his students and the community come together:

> It was healing for them and healing for us. For the children to see other people from the community, and parents, people from the bank . . . it broke down barriers. After the earthquakes, people wanted to help and good things can come out of adversity. That was one of the positive things about our community, that people looked beyond themselves and the children got to see this.

In our recent study of young people during COVID-19, we found that rather than feeling disempowered, many used lockdowns to educate themselves and engage actively with current issues, such as racism (Mutch & Estellés, 2021). A young person explains:

> I've always been passionate about it [activism], but then this year with Covid, because we've had so many setbacks, rather than letting that get to me, it's kind of fuelled me to keep going with everything.

Discussion

What studies across six different countries and multiple disaster types have shown is that schools are integral to supporting children, their families, and communities when they face adversity from large-scale disasters or crises. Bronfenbrenner's socio-ecological model (1992) offers a way to illustrate the findings from the research.

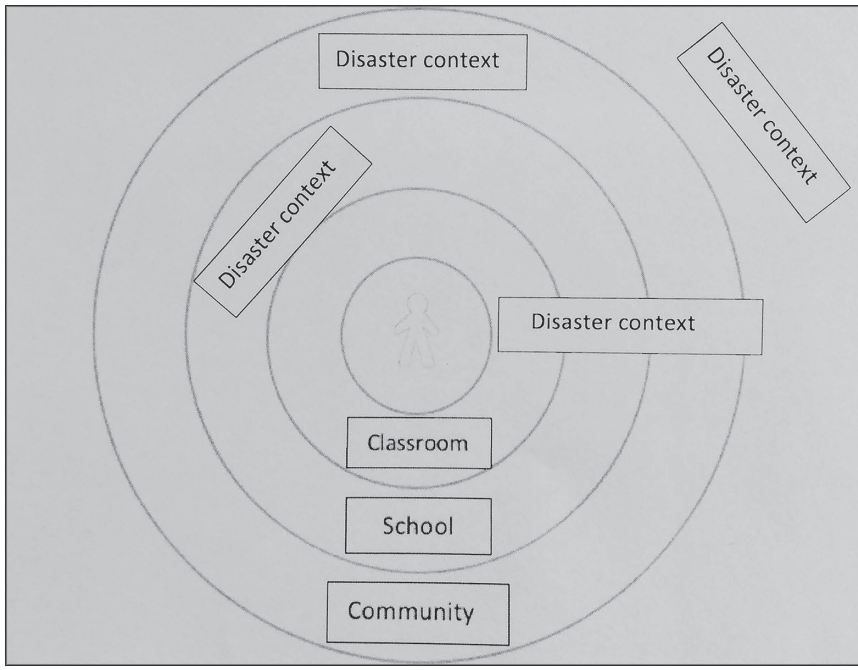

FIGURE 8.1 The layers of nested school interactions in a post-disaster setting

Long Description: Drawing on Urie Bronfenbrenner's socio-ecological model in which the child is nested in a set of concentric circles to display the systems that impact on a child's development, this diagram also uses a series of four concentric circles with the child in the centre. The circles highlight that schools can play a support role for children in disaster contexts, from teacher and peer support in a classroom setting, school-based support provisions or external support services facilitated by the school. The diagram also indicates that a child could experience trauma from an event within the classroom or school, or beyond the school or community but that schools still engage in forms of psychosocial support.

Bronfenbrenner places the child at the heart of a set of socio-ecological systems, as in a series of concentric circles. In this chapter's interpretation of the model, the child sits in the classroom environment, consisting of the child's peers and their teacher(s). Surrounding them is the school ethos, as set by the school principal and leadership team, who play a mediating role between the interlinked ecosystem of the children, teachers, and school and their relationship with the outer circle, consisting of the school's families and wider community. This conceptual model helps illustrate how schools are well placed to exert a positive influence over the immediate systems that surround the children in their care in a disaster context and also to facilitate a range of support systems for the families and communities that children interact with outside of school hours. Using this model as a guide, the themes from the key findings are explained, from the inner circle outwards.

Circle 1: children facing adversity

This research confirms much of the adverse childhood experiences (ACE) and child trauma literature, in that children can face short- and long-term adverse effects from large-scale disasters and crises. They might experience physical, emotional, social, and psychological trauma – individually and collectively – and their health and educational outcomes might suffer. For many children, the major effects will recede over time, especially if supported with strategies that build their coping and resilience skills or provide safe opportunities for emotional processing. For a proportion of children, especially those who are more at risk due to prior adverse events or mental health issues, the journey to recovery needs professional intervention beyond the scope of the school. What this research found, that adds to our understanding of children facing adverse events, particularly after large-scale disasters, is that given the right strategies and opportunities, they can actively participate in decision-making that aids their own recovery and that of their communities. This is an area that warrants further investigation and theorising.

Circle 2: teachers and the classroom environment

If a disaster or crisis happens during school time, teachers become first responders. When schools reopen, they become trauma workers, actively supporting children's psychosocial wellbeing while trying to provide educational continuity, often under difficult circumstances. While many school systems have school nurses, counsellors, or social workers, it is still the front-line classroom teacher who deals with children – observing their symptoms and managing their behaviours – on a daily basis. In a large-scale disaster or crisis context, counselling and other psychological support systems are often stretched beyond capacity. The teachers in my different studies felt ill-prepared and poorly supported, especially over the long term and once emergency support systems were withdrawn. Yet, teachers put their own circumstances aside to provide the best care and education they could for their students. Their role as front-line trauma workers needs more recognition, preparation in pre-service and in-service training programmes, and ongoing support when a disaster happens – and more available services to refer children on to.

Circle 3: school leadership and school ethos

Principals in my study also felt ill-prepared, even if they had faced an emergency before or had evacuation plans in place. They did say that some planning was better than none, but it was not fail-safe. They needed to be constantly prepared for the unexpected. Principals did not mention ever receiving training in crisis leadership, either in their principal preparation programmes or through professional development. Based on this research (Mutch, 2015a), a programme in crisis leadership has been developed based around three crisis attributes – dispositional, relational, and contextual. If the programme proves successful, it might fill a gap in this significant

area of principal preparation. What the research also highlights is that when a school has a trust-based ethos and agreed set of values, it is easier to develop and implement a coherent but flexible crisis response and recovery plan.

Circle 4: the school as a community hub and crisis recovery centre

A factor missing from the disaster literature, yet a significant finding, was the school as the hub of the community throughout the disaster cycle. This idea figures more prominently in the community development literature where different models of schools as a social hub have been developed. There is a need to recognise the roles that schools play in large-scale disasters and crises. If schools are resourced to build stronger links with their communities, this will enhance community stability in ordinary times, enable them to respond quickly in times of crisis, and sustain their communities through the long journey of recovery.

Conclusions

Drawing on a decade of researching the role of schools in disaster contexts, this chapter has argued that schools play an integral but often unrecognised role in supporting children, families, and communities to recover from traumatic experiences. When attempting to alleviate adverse childhood experiences arising from, or exacerbated by, large-scale disasters and crises, it is advisable to pay attention to the socio-ecological context of the child, in particular, to how schools, school leaders, and teachers contribute to children's safety, security, wellbeing, and resilience. It is also important to recognise and resource the mediating role that schools play in supporting and sustaining families and communities through disaster response and recovery, as ultimately it enhances children's ability to thrive despite the odds.

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9

OVERCOMING BULLYING IN EDUCATION

Cirenia Quintana-Orts, Conor Mc Guckin, Rosario Del Rey, and Joaquín A. Mora-Merchán

Bullying in schools: a problem for everyone in the school community – not just the victims

Bullying continues to be a widespread problem in schools around the world. However, we have reached a mature point whereby schools freely admit that bullying happens and that it represents a clear adversity to the enjoyment and educational success that we aspire to for our pupils. The task now focuses on understanding which pupils are at higher risk of being involved and how best to work to reduce the incidence and impact of bullying. Indeed, we now recognise the myriad forms of bullying – from the traditional face-to-face bullying to the much newer cyberbullying and other types of bullying targeted against particular individuals because of a real or perceived "group identity" (e.g., disablist bullying against a pupil who has, or is perceived to have, a special educational need/disability; alterophobia against a pupil who might, for example, be identified as a follower of a particular subculture, e.g., "goth"). Thus, we now recognise that bullying is a problem for everyone in the school community – not just for the victims (e.g., Divecha & Brackett, 2020; Gaffney et al., 2019).

Bullying is generally defined as aggressive, intentional, and repeated behaviour over time, directed by an aggressor or a group of aggressors towards a victim or group of victims, and which is characterised by a power imbalance between the bully(ies) and the victim(s) that makes it difficult for the victim(s) to defend themselves (Gaffney et al., 2019). Importantly, the notion of a power imbalance is not restricted to physical power. With variations between studies regarding the number of pupils involved in such behaviours, a recent meta-analysis indicated that bullying problems involve as many as 36% of pupils as victims and 35% as aggressors (Modecki et al., 2014), with the 11–14 age group being the most prevalent. Due to these levels of involvement and the adverse consequences that bullying behaviours

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have on those involved, the issue of school bullying is considered to be a real public health problem (Nazir, 2018). In relation to statistics regarding involvement in bully/victim problems, it is important to note that not all pupils are continuously involved (Mora-Merchán et al., 2021).

Importantly, bullying problems in schools do not only affect the victims and their aggressors (i.e. the bully or bullies). The studies developed by Christina Salmivalli have highlighted the need to also consider other participants in bullying situations so that we can more fully understand the dynamics of victimisation and its complexity (e.g., Salmivalli, 2014). An important group of pupils are those who can be categorised as "bystanders". Salmivalli's work has identified that these "bystanders" (e.g., perhaps the rest of the classroom group) are key to understanding (i) the support received by aggressors and victims during bullying episodes and (ii) their role in the maintenance and solution to the problem. The conceptualisation of bullying as a group problem, resulting from these studies, puts even more emphasis on the role that the school should develop in dealing with this problem. It is not, therefore, a problem that affects only a few pupils who require individualised attention, but it is a group problem, where we must change the dynamics of the group to facilitate a better response to those who suffer problems associated with victimisation and exclusion. To appeal to these bystanders, there has been the call to "be an upstander not a bystander" (Hart Barnett et al., 2019).

Bullying is often difficult to identify for adults, as it includes not only physical (e.g., kicking, hitting, damaging the victim's property) and verbal attacks (e.g., insults, threats) but also relational/social types of aggression (e.g., social exclusion, persuading others not to play with or talk to someone, spreading denigrating rumours) (Smith, 2019). Additionally, with the massive use of communication technology and social networks, bullying perpetration has expanded through electronic devices and has become what is generally known as cyberbullying. Cyberbullying shares most of the features of what we all understand bullying to be but includes some unique characteristics. These differences include, for example, higher possibilities for anonymity of the perpetrator, a wider audience for the attacks, and little or lack of respite for the victim who can suffer the perpetration 24 hours per day, seven days a week (Ding et al., 2020; Zych et al., 2019). Importantly, pupils who are being bullied in various ways experience even worse consequences (Turner et al., 2017).

Bullying can cause short-, medium-, and long-term health and wellbeing effects. Its negative consequences are experienced not only by the victims but also by the rest of the participants in the wider group (e.g., perpetrators and bystanders). Among the most commonly reported mental health problems, it is worth mentioning that these problems are related to emotional states (e.g., depressive symptomatology, anxiety, low self-esteem), behaviour (e.g., self-harm, suicidal thoughts and actions, alcohol usage), social (e.g., isolation), and psycho-physiological (e.g., sleeping problems) issues (Gaffney et al., 2019). In addition to health and psychosocial problems, there are also important detrimental consequences related to educational performance and outcomes. For instance victims are more prone to obtain poorer

educational outcomes such as school absenteeism, difficulties concentrating in class, lower engagement and participation, and poorer performance in subjects (Fry et al., 2018). Victims can develop negative attitudes towards school and develop a fear of standing out, which can lead to poor performance and lower academic attainment. As a result, teachers often identify these pupils as unmotivated learners. However, victims are not the only ones that are affected by bullying. Perpetrators (i.e. the bully) or bully/victims (i.e. sometimes perpetrating victimising behaviours, and sometimes being the recipient of such behaviours) also experience negative impacts on their educational attainment (Smith, 2019). Whereas bully/victims are usually more disaffected and less motivated at school, bullies are more likely to get poorer grades. Nonetheless, sometimes bullies can be the pupils with the best grades – being also good at ingratiating themselves with teachers and other adults at schools – making it more difficult to identify their bullying behaviours. It is important to note that these mental health problems do not affect only victims and perpetrators, but bystanders are also more likely to report problems such as anxiety and depressive symptoms (Midgett & Doumas, 2019).

Bullying does not only impact pupils but also impacts the school climate and other pupils who are indirectly involved. Ultimately, this has a negative impact on the quality of the school climate and on the pupil's development that cannot be overlooked. In this regard, teachers, families, and school staff play a vital role in promoting positive school and classroom climates. Indeed, research has demonstrated that caring and supportive learning environments – where pupils perceive that there are high levels of peer support and school discipline and safety – are related to lower levels of bullying (Konishi et al., 2017). Teachers are highly important key agents in relation to the quality of coexistence in schools through their management of interpersonal relationships (Divecha & Brackett, 2020). Taken together, this demonstrates the educational adversities that pupils – directly and indirectly involved in this phenomenon – have to overcome in order to develop a successful school life.

How and when can pupils get vulnerable? Key risk and protective factors

Involvement in bullying and cyberbullying is facilitated (or hindered) by the presence of individual and group variables that act as either risk or protective factors. Based on Bronfenbrenner's (1979, 1989) bio-ecological model, some recent systematic and meta-analytic reviews have shown that individual, family, peer, or school factors are significantly related to profiles of bullying perpetration and victimisation (Ding et al., 2020; Zych et al., 2019).

Nonetheless, before reviewing Bronfenbrenner's approach, it is important to acknowledge that, although there is not a specific profile to becoming a victim, there are some pupils who are more at risk of bullying adversities than others. For instance some studies from across the world find different vulnerabilities regarding sex differences – with boys being more involved in general types of bullying and

more likely to experience physical bullying and with girls being more likely to experience relational bullying and cyberbullying (Walters, 2020). Adversity is also experienced in relation to gender identity or sexual orientation, affecting those pupils who are, for example, lesbian, gay, bisexual, transgender, or queer or questioning (i.e. from one of the LGBTQ+ communities) (Elipe et al., 2018). In the latter case, homophobia is the "attitude" rather than the discriminatory behaviour that underlies homophobic bullying.

Pupils who have a special educational need/disability (SEN/D) are also in a situation of particular vulnerability. In this case, this type of bullying is commonly referred to as disablist bullying (Purdy & Mc Guckin, 2015). Finally, other children and young people may experience bullying if they are from minority "identity based" groups – for example, from the Roma community (Kisfalusi et al., 2020) or part of an alternative subculture (Minton, 2014).

Considering that there are some groups at higher risk of involvement and subsequent personal and educational adversity, it is imperative that teachers and school staff are aware of the different forms of bullying and be particularly attentive to the need to identify and address bullying behaviours in relation to underlying individual differences, as well as the stigma that may exist and the subsequent discriminatory behaviour.

Role of individual protective factors

The most important individual factors that are related to a reduced probability of being victimised are being prosocial, having a high level of self-esteem, having a good sense of self-concept, being socially competent and able to problem solve, be able to defend yourself, have a high level of emotional management, and having a low frequency of technology use (Zych et al., 2019). Similarly, high levels of self-esteem, high emotional management, social competence, problem-solving, high empathy, and low frequency of technology use are found to be related to low rates of aggression. Additionally, some personality traits (e.g., high openness, low extraversion, high agreeableness, and high conscientiousness) are factors related to low levels of perpetration. Interestingly, high academic achievement has been found to be a predictor of lower levels of bullying. This has led to some authors suggesting that one of the ways to reduce bullying may be related to the provision of academic support for low-performing students.

Role of family

In the family context, a more positive home environment is related to reduced experiences of bullying and cyberbullying perpetration and victimisation. Factors that are related to lower victimisation include information for parents/guardians, parental interaction, mediation in technology use, parental supervision and monitoring, authoritative parenting, parental involvement, support, communication, and warmth (Martínez et al., 2019). In relation to aggression, exposure to

family violence and conflicts, as well as authoritarian, coercive, and an overly controlled parenting style, are related to higher levels of aggression outside of the family, including bullying (Nocentini et al., 2019). In fact, a hostile family environment could lead to the perception that violence is an acceptable method of resolving conflicts, as a result of social learning processes (Nocentini et al., 2019).

Role of schools

While it is important to consider individual and family factors regarding the prevention of bullying, it is also important to pay attention to the educational context where the pupils spend a large part of their day. When pupils perceive that their school is not well supervised, unsafe, with unsupportive and unfair or unclear school rules, and do not feel well connected with the school, bullying is more likely to occur (Konishi et al., 2017). By contrast, a positive school climate is related to lower rates of both perpetration and victimisation. Therefore, schools have an essential role to play when we consider what is effective in terms of anti-bullying policies, providing avenues that also seek the involvement of teachers and peers as protective factors. Among peer-related variables, high peer status, positive peer influence, as well as peer support are found to be protective factors in relation to both perpetration and victimisation (Zych et al., 2019). Specifically, fostering positive and supportive relationships and classroom activities (e.g., cooperative group work, assertiveness training) are related to a more supportive and encouraging environment. Teachers, as those who directly implement school policies, have an important role to play and in the awareness of, attention to, communication about bullying incidents (Smith, 2019). Crucially, teachers' attitude and knowledge about the different forms of bullying and the optimal procedures to detect and follow-up on incidents are key factors in bullying prevention.

Overcoming bullying: what has been done to help and what should we do?

Considering the importance of addressing risk factors and enhancing the protective factors mentioned earlier to reduce bullying incidents, education is one of the most important keys (Gaffney et al., 2021). Taking Bronfenbrenner's bio-ecological model as a reference (Mc Guckin & Minton, 2014), and considering important aspects of recent meta-analyses, this section includes synthesised information in relation to intervention components that should be considered and addressed from evidence-based practices against both bullying and cyberbullying.

Personal level

Drawing on a pupil's individual needs, the educational context should include initiatives focusing on those who engage in bullying behaviour, as well as the victims and witnesses of bullying. At the micro-level, there are several personal factors that

have been shown to reduce bullying and cyberbullying, for example, empathy, active listening, self-esteem, coping strategies, and socioemotional competences (e.g., Zych et al., 2019). The most promising initiatives involve whole-classroom and/or whole-school approaches that could include classroom activities, as well as curricular strategies such as group work, e-safety films, or literature, among others (see more Thompson et al., 2018).

One of the well-established evidence-based practices to help reduce bullying involves social and emotional learning (SEL) skills, including self-awareness, self-management, responsible decision-making, social awareness, and relationship management (Divecha & Brackett, 2020). SEL programmes balance the development of personal, emotional, and interpersonal social skills, enhance school engagement and climate, and decrease harmful behaviours. This can lead to the formation of positive interpersonal relationships and more effective educational outcomes and experiences. One example is the work of Collaborative for Academic, Social, and Emotional Learning (CASEL, 2015) in the US.

Family level

The family can play a central role in reducing involvement in bullying incidents. The central role that the family can play is to provide a secure and supportive environment in which their child can tell them about bullying incidents. It is essential for family members to be attentive to the signs of involvement in bullying, bearing in mind that their child might not always be the victim, as they may also be involved as a bully or as a bystander. Recent research has demonstrated that working with families is crucial to increasing the involvement of parents in school activities, helping them to exercise monitoring, increasing their parenting skills and parent-child communication about bullying, as well as strengthen the perception of self-efficacy in having effective strategies and in managing these bullying problems (Chen et al., 2020; Nocentini et al., 2019). An example of a useful programme that seeks to prevent bullying by enhancing parent–children communication and by building awareness and self-efficacy of both parents and children is the Friendly Schools Friendly Families (FSFF) (Lester et al., 2017). The programme includes a brief three-hour family training session, along with pupils' sessions where activities are presented in the classroom curriculum and followed up on at home by the pupils and their parents.

There are also some differences regarding the usefulness of different family strategies for preventing and dealing with both traditional bullying and cyberbullying. For instance, specifically for cyberbullying, it is suggested that parental monitoring of online activity is really effective when it is directed towards specific behaviours and is based on the information disseminated by children and young people in these applications (e.g., behaviours regarding daily comments on everything that happens on social platforms or leaving profiles open) (Martín-Criado et al., 2021). For cyberbullying, it is essential for adults to develop their knowledge of social networks and the necessary skills for navigating these, thus removing feelings of

guilt and enhancing their self-efficacy with virtual environments. Considering that the use of interactive tools is an important competence in the school curriculum, parenting programmes should include this as an important component.

School-based approaches

Robust and bottom-up developed anti-bullying policies in schools are a useful start to the identification and reduction of bullying and cyberbullying. Whilst often mandated for in legislation, schools should see these policies as the least amount that should be focused on in their school approach. Good policies should cover the definition of bullying and how school climate can be improved but should also consider the diversity of bullying that can be experienced by the pupils (e.g., traditional, cyber, homophobic, disablist). An important issue is whether involvement in bullying should be punished. Punitive methods and sanctions may temporarily prevent bullying behaviours, but this approach is not likely to change attitudes and behavioural patterns. In fact, research indicates that the result can be quite the opposite, in that punishment might provoke negative emotions and resentment (Smith, 2019). The alternative approach is to adopt a "restorative" approach (Weber & Vereenooghe, 2020), which presents a constructive way of responding to conflicts or discipline and behavioural problems, with a central premise of "doing things with people, rather than to them or for them". To be effective, restorative practices should be implemented using a whole-school approach and should integrate reactive and proactive practices, so that, for instance, teachers can provide high levels of support and supervision.

In addition to anti-bullying policies, both peers and teachers play highly important roles in the prevention of bullying. Thus, it is important to invest in the interpersonal relationships and processes that arise among peers and teacher–pupil connectedness during school hours (e.g., Gaffney et al., 2021; Smith, 2019). Positive relationships that are characterised by support and care are highly related to a school climate that is low in aggression and victimisation. For some pupils, it can be easier to talk to their peers than to adults. Many schools who are successful in their efforts to reduce bullying facilitate some type of a peer-support system, such as student assistant, peer tutoring, mentoring, mediation, befriending, or buddying. A highly successful example of a peer-support system can be found in Italy, where the NoTrap! (*Noncadiamointrappola* in Italian) programme is implemented to deal with both traditional bullying and cyberbullying (Palladino et al., 2016). The NoTrap! approach seeks to activate positive group dynamics (e.g., cooperative work with other classmates) where pupils become the main actors working in the face-to-face context (in the classroom) and in the online community (via a website).

In addition to the support that peers can offer, teachers need to have the knowledge and skills required to develop effective and supportive teacher–pupil relationships. The NoTrap! and ConRed Andalucía (Del Rey et al., 2016) programmes contain sessions that can help to extend teachers' knowledge of both traditional

bullying and cyberbullying and support them in developing their skills to supervise group activities for their pupils (i.e. NoTrap!) or to lead the training sessions (ConRed). In both successful programmes, peer educators lead activities to work with other classmates on issues related to empathy and problem-solving, as well as on the points of view of victims and bystanders to address bullying and cyberbullying processes.

Other influential factors in the prevention of bullying are related to the teaching style and methodology adopted by the teacher. For example, a recent review of the approaches adopted by physical education teachers suggests that how the teacher develops their classes can have an impact on the satisfaction (or frustration) of their pupils and on the prevention or encouragement of bullying situations (Jiménez-Barbero et al., 2020). In addition, some important international reviews of bullying prevention (e.g., Gaffney et al., 2021) recommend focused activities that include whole classroom or small group discussions and activities where bullying experiences, attitudes, and behaviours can be discussed within the peer group. Issues related to the playground and supervision have been continually identified as important factors in any attempts to reduce bullying (e.g., teacher presence in "hot-spot" areas). Also, consensus across the international literature highlights the importance of communication and collaboration between the family and the school and positive approaches to discipline and restorative practices (Divecha & Brackett, 2020; Gaffney et al., 2019; Zych et al., 2019).

Government and policies

At the macro level in Bronfenbrenner's bio-ecological approach, the commitment and support of the government to the healthy social and emotional development of pupils is crucial. For this to happen, it is important that policymakers and administrations consult the wealth of research and successful initiatives that have demonstrated high fidelity in practice. Policy and practice advisors play an important role in communicating what has been done in the area and, more importantly, how practices have been evaluated and controlled; avoiding practices that may be inappropriately based on the interests of sectoral groups (e.g., teachers' groups, political parties).

Economic support is also a relevant factor in reducing bullying. There is evidence from different countries where support from government institutions demonstrates that anti-bullying initiatives work when integrated into policies. For example, the ConRed Andalucía programme in Spain has been implemented in more than 200 school centres (grades 5–8), and the "KiVa" programme has been implemented in 2,260 registered schools (grades 1–9) in Finland. For the ConRed implementation, the Andalusia government fully supports school staff by supporting the programme economically and instrumentally – e.g., provision of tools and platforms for the training, recognising teachers' training hours. In the case of the KiVa programme, the Finnish government exchanged the schools' obligation to design their own action plans for the development and evaluation of the KiVa programme within the Finnish school system through a contract with the Salmivalli research group.

A critical factor that requires economic support is teacher education and training. Considering that bullying prevention is best viewed as a "whole school" task that requires the active participation of teachers, specific training of pre- and in-service teachers needs investment and support. As noted in the Viennese Social Competence Model (ViSC; Atria & Spiel, 2003, 2007), to reduce the likelihood of aggressive behaviour in their classroom, teachers need to create a structured, encouraging, and friendly environment where pupils can feel part of the wider group, can focus on common successes, and can accept differences (Gradinger et al., 2015; Minton, 2014). Thus, for this type of work, teachers should be trained not only in how to recognise and tackle all forms of bullying, but also in how to implement preventive measures at the classroom level to develop socioemotional competencies, resulting in increased positive emotions and job satisfaction, better and more supportive relationships, and better classroom management (Divecha & Brackett, 2020; Gradinger et al., 2015).

Conclusions

Bullying is one of the adversities in education that affects not only the pupils involved but also the wider school community. It is important to remember that schools are not "homogeneous" and that we should be sensitive to the individual variability that exists among the pupils that we work with (e.g., pupils who have a SEN/D, pupils who are targeted because of a real or imagined identity-related issue, be of migrant status). In this chapter, we have argued that successful approaches to bullying prevention should be evidence-based and be developed from a bio-ecological perspective. Such an approach considers everyone involved in bullying situations (i.e. the bully(ies), the victim(s), the bully/victim(s), and the bystander(s)), as well as those in the wider "whole community" ecology of the pupils (e.g., parents, teachers, government). This chapter prompts us to remember that bullying is a personal and educational adversity that happens in even the best schools. Our review and analyses of the important factors that are found to be related to bullying serve to remind us that we all have a role to play in preventing and reducing the risk of bullying.

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10

HELPING THOSE WHO DON'T FIT

Impacts, causes, and solutions for students who don't feel like they belong at school

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Introduction

Chris stared at his tasteless sandwich, trying to fight the tears in his eyes as he watched the other kids around the schoolyard. Once again, he was all alone. Still, at least that was better than having to escape from Dewey and his gang. Each day he counts the minutes until he can escape the school walls. Then again, that only means going home to more chaos. He would have to feed his siblings, try to care for his mother, and hope that his stepfather would not stop at the local pub after work. The thought haunted him: What was so wrong with him? Why did he not belong?

Human beings, as relational creatures, have a core need to relate with others, feel a sense of acceptance and respect from others, and feel like we have a place (Allen et al., 2021b; Baumeister & Leary 1995; Ryan & Deci, 2000). For young people, schools are critical places that either fulfil or undermine this need. In this chapter, we first consider what school belonging is and why it matters. Second, we consider factors that can threaten a sense of belonging. Finally, we consider strategies for enhancing school belonging.

Unpacking school belonging

Baumeister and Leary's (1995) belongingness hypothesis centres on the idea that relationships are central to healthy development. The hypothesis proposes that human beings have a universal need to belong; that is a pervasive desire to form and maintain interpersonal relationships that are positive, significant, and lasting (Baumeister and Leary, 1995). Much of human behaviour, emotion, and thought is due to this fundamental and pervasive need to belong (Allen et al., 2021a).

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School belonging refers to the perception that one fits in and belongs with others at their educational institution, including the extent to which one affiliates with and identifies oneself as a valued member of the school community (Cortina et al., 2017). It has most commonly been defined as the extent to which individuals feel they are "personally accepted, respected, included, and supported by others – especially teachers and other adults in the school social environment" (Goodenow & Grady, 1993, pp. 60–61). From this perpsective, school belonging entails three key elements: relationships within the school environment, the individual's perceptions and feelings about those relationships, and feelings towards the school (García-Moya et al., 2019). Within the literature, the term school belonging has been used interchangeably with terms such as school bonding, attachment, engagement, connectedness, and community (Allen & Bowles, 2012; Cortina et al., 2017; García-Moya et al., 2019).

Why belonging matters

Across the literature, a sense of school belonging has multiple benefits. First, it is associated with better academic and psychosocial outcomes in adolescents (Chiu et al., 2016). Neel and Fuligni (2013) found that students who reported experiencing a high level of school belonging continued to appreciate and enjoy school even when struggling academically, hence suggesting that interventions that increase school belonging may assist to reduce school dropout rates, even if it does not impact academic performance.

Second, adolescence (12–18 years) has been identified as a crucial period for the development of attachment and bonding to peers and others, with peer relationships influencing adolescents' sense of self, behaviour, and wellbeing (Gorrese & Ruggieri, 2013; Oldehinkel et al., 2007). Extensive research has also demonstrated associations between school belonging and mental health outcomes including reduced psychological distress and greater psychological wellbeing (Jose et al., 2012; Shochet et al., 2011; Thompson et al., 2019).

Third, a sense of belonging may be protective during the transition from primary to secondary school, helping to prevent depression and loneliness and promoting school engagement and academic achievement (Benner et al., 2017). This implies that focusing on helping students develop a sense of belonging during transitional periods may be crucial to maintaining the health and wellbeing of older students.

Finally, school belonging may have benefits beyond the time in the school environment itself. Steiner et al. (2019) found that school belonging in adolescence had a protective effect on mental health outcomes in adulthood, including reduced emotional distress across a 14-year period. Although there is only limited longitudinal research investigating the associations between school belonging in adolescence and mental health outcomes in adulthood over multiple timepoints, existing studies (e.g., Shochet et al., 2011; Tian et al., 2016; Parker et al., 2022) repeatedly demonstrate the benefits of school belonging in setting young people on positive developmental trajectories.

Barriers to belonging

Considering the benefits of belonging, it is crucial to identify reasons for and ways to address declines in school belonging (OECD, 2017a). Core barriers of belonging include characteristics of the students themselves, interpersonal aspects, cultural considerations, contextual factors, and complexities arising from rapid technological advancements.

Individual characteristics

Across childhood and adolescence, one's defining characteristics – including temperament, personality, identity, beliefs, values, and capabilities – emerge, are shaped, questioned, and become more defined. Regardless of how these characteristics arise, studies suggest that some of them are more conducive to a sense of belonging than others. For instance, self-efficacy, self-esteem, optimism, hope, and sociability correlate with a stronger sense of belonging, whereas neuroticism, hostility, aggressiveness, depression, and anxiety increase risks of not belonging (cf. Allen et al., 2018). Unfortunately, lack of belonging can further reinforce and define these negative characteristics, such that those who would benefit the most from strong social relationships often struggle to form and maintain healthy relationships (Allen et al., 2022a). However, since characteristics such as emotional regulation, social awareness, self-awareness, empathy, and responsibility are malleable and can be developed through various social-emotional learning programmes and curricula, it is critical to create learning environments that directly target and support the personal development of individual characteristics that support belonging.

Interpersonal aspects

Although school belonging is subjectively experienced by the individual, it does not occur in a vacuum – the subjective sense of belonging is interrelated with, affected by, and effects aspects surrounding the young person, including people and environments (Allen & Kern, 2017; Allen et al., 2021b; Kern et al., 2020). A meta-analysis of 51 studies across over 67,000 students found that school belonging is more likely when a student has a good relationship with one or more teachers, supportive parents, and strong peer relationships, with the teacher–student relationship having the greatest influence (Allen et al., 2018). Strong relationships are more likely when students perceive that their teachers promote autonomy support and involvement, care for them personally, and are fair and friendly in how they relate to students in the class. The findings are consistent with other studies pointing to the importance of non-familial adult relationships in the lives of adolescents (García-Moya, 2020; Raposa et al., 2019).

Contextual factors

The quality and impact of interpersonal relationships are further affected and intertwined with various contextual factors, such as the classroom experience

and school environment. The classroom represents much of students' school experience (Meece & Eccles, 2010). The classroom climate is significantly shaped by the quality of interpersonal relationships (Gottfredson et al., 2005; Meece & Eccles, 2010); classroom cohesion, flexibility, communication, and the extent to which wellbeing is intentionally prioritised (Allison et al., 2020); and the policies and environment of the school (García-Moya, 2020; Wang & Degol, 2016). Structural aspects of the school, such as the lack of basic resources and visually portraying a lack of value (e.g., the presence of graffiti and rubbish), correlate with higher levels of stress, greater behavioural issues, and a lower sense of belonging (e.g., Battistich et al., 1995; Waters et al., 2010). Demographic aspects including class size and school type also impact upon belonging (McNeely et al., 2002). Conversely, studies suggest that involvement in community activities supports an increased sense of belongingness and a commitment to learning in students (e.g., Finn, 1989; Finn & Powers, 2002).

Outside the school environment, school belonging is impacted by the child's prior and current home and community environments. Factors such as trauma, lack of access to basic needs (e.g., healthy food, adequate shelter, safety), and coming from a culturally and linguistically diverse background or marginalised group increase risk of a lack of belonging (e.g., Allen et al., 2022c; Parker et al., 2022), with childhood trauma one of the greatest contributing factors. Trauma might occur from single impactful events, such as a bushfire, losing a loved one, or the divorce of one's parents, or from ongoing traumas, including abuse, family violence, and neglect (Brunzell & Norrish, 2021). The latter tends to have much more devastating consequences (Brunzell et al., 2015) and often arises from intergenerational experiences. Such students often have complex needs, various social and emotional struggles, and behave in ways that frustrate and push teachers and peers away (e.g., acting out, withdrawing) (Brunzell & Norrish, 2021), further undermining a sense of belonging.

Cultural considerations

While numerous studies point to the importance of relationships with teachers, peers, and families within the school and home environments, much of this evidence arises from studies conducted in developed Western societies such as the US, the UK, and Australia. The extent to which different individual and interpersonal aspects impact upon a sense of belonging may interact with the values and norms of one's culture. For instance, Chiu et al. (2016) found that students who reside in egalitarian countries (such as the US and Australia) were more likely to report better relationships with their teachers and a higher sense of school belonging than students living in more hierarchical countries (such as China and Japan).

Still, the causal direction of such associations is unclear. For instance, both Chiu et al. (2016) and Cortina et al. (2017) reported the rapport between teachers and students as the main predictor of belonging across cultures, but they also found that individualism/collectivism was not a significant predictor, thus implying the

influence of other confounding factors. Similarly, how power distance and teacher support contribute to country-level differences in school belonging remains unexplored with more recent datasets. Moreover, while measures such as the *Psychological Sense of School Membership* scale (Goodenow, 1993) have been used in several cross-cultural studies, the extent to which they are invariant across cultures – not only statistically but also in terms of respondents' cognitive understanding of the items – remains unknown (Abubakar et al., 2016). Across studies, it is generally assumed that belonging is valuable, desirable, and beneficial, with variation across cultures arising from how individuals and groups from the diverse cultures around the world define, understand, need, and benefit from a sense of belonging (Abubakar et al., 2016; Allen et al., 2022b, 2022c), but this assumptions remains empirically opaque.

Intersections with technology

Intersecting with the aforementioned aspects are the rapid technological advancements that have occurred over the past several decades. We live in a digital age that is evolving faster than we can psychologically adapt to it (Kern et al., 2020), and for many young people worldwide, technology (e.g., computers, gaming, smartphones, social media) permeates most areas of life. Yet how it impacts the cognitive development and capacity of young people is largely unknown. As such, considerations of school belonging need to consider both the benefits and the risks that arise from technology.

Many adolescents spend a considerable amount of time connected to technology. Arundell et al. (2019) found that adolescents reported spending an average of 4.4 hours per day, whereas Sanders et al. (2016) suggested a daily average closer to nine hours. Limited research has considered how the amount of screen time impacts belonging in general or school belonging, in particular. Studies generally suggest that longer screen time increases risks for negative outcomes. For instance, Muñoz-Miralles et al. (2016) found that excessive use of devices was associated with the consumption of drugs, poor academic performance, and poor family relationships among Spanish students, while the PISA 2015 data suggested that students with more than six hours of screen time reported greater loneliness (OECD, 2017b). Similarly, among Canadian adolescents, Trinh et al. (2015) found that greater screen time related to decreased school connectedness, with Katapally et al. (2018) supporting similar conclusions. Although the causal nature of these associations is unclear, Trinh et al. (2015) found evidence that disconnected youth may seek connection through technology, even though it provides a pseudo-connection (Hari, 2019). Furthermore, the impact may even depend upon the type of technology under consideration as Fitzpatrick et al. (2019) found that watching television/movies had less impact on school belonging than gaming and internet browsing. It is more about how students are engaging in technology and for what purpose when it comes to school belonging rather than the technology itself (McCahey et al., 2021).

Supporting school belonging

Considering the importance of school belonging, both in terms of contributing to other positive outcomes and potentially as a protective factor against a variety of negative outcomes, how can school belonging be supported? Specific strategies and approaches that may be helpful across different year levels are beyond our scope (cf. Allen & Kern, 2017; 2019); instead, we discuss several elements to consider in designing and delivering potential interventions, curricula, and approaches to support and enhance school belonging.

Student voice

The importance of student voice has long been recognised across the literature (e.g., Cook-Sather, 2006). Applied to school belonging, this implies the importance of collaborating with students to understand what belonging means to them, exploring strategies that they may believe are helpful, and empowering students to voice their needs, successes, and challenges. A limited number of qualitative studies explore the lived experiences of young people (e.g., Due et al., 2016), which seem promising for best supporting belonging from students' perspectives.

Attributions and perceptions

Subjective perceptions influence students' sense of school belonging and its core contributing factors (e.g., students' perceptions about teachers, peers, and the school environment). For example, for two students who receive the same grade on an assignment, one may think, "that's disappointing. At least I got some feedback I can use to do better next time", whereas the other may think "I spent ages on that assignment; either I am dumb, or she is marking me unfairly because she doesn't like me". The latter, a typical example of negative attributions arising from cognitive errors, results in maladaptive perceptions which, in turn, can act as a barrier to school belonging.

In this context, emphasising student voice allows such perceptions (both accurate and inaccurate) to be identified so that appropriate interventions can be designed. In particular, interventions that focus on encouraging students to be more flexible in their thinking by interpreting negative events differently have been reported as being effective for addressing students' doubts about school belonging and academic ability (e.g., Harackiewicz & Priniski, 2018; Murphy et al., 2020). For instance in a large-scale experiment, 7,501 students provided with a brief two-hour online intervention upon their transition to the ninth grade had a more adaptive attribution style and had a lower tendency to attribute poor academic performance to internal, stable, or global factors (e.g., "I am not smart"), four weeks after the intervention (Yeager et al., 2016). This approach sought to induce students into perceiving academic difficulties as challenges rather than their personal inabilities, thereby motivating their learning process. Still, interventions targeted at students' perceptions

must still occur alongside objectively fair, effective, and consistent teaching and disciplinary practices (García-Moya, 2020; Van Bergen et al., 2020).

Mutual responsibility

Recommendations emerging from classroom justice research (Chory, 2007; Paulsel & Chory-Assad, 2005) and informed by the personal belief in a just world (PBJW) theory (Dalbert, 1999) have placed much of the onus for enhancing the teacher–student relationship, and hence school belonging, on teachers, thereby neglecting the responsibility that the students themselves have, especially since positive teacher–student relationships are co-constructed by both students and teachers (Čiuladienė & Račelytė, 2016; Goldman & Cropanzano, 2015). Indeed, students actively influence the nature and quality of the relationship in the way they perceive, interpret, and respond to teachers' behaviour. Thus, by acknowledging that teachers alone are not responsible for problematic teacher–student relationships, teachers will more likely feel supported, understood, and appreciated. This can further be important since problematic relationships with students are among the multitude of problems contributing to teacher stress (García-Carmona et al., 2019).

Thinking systemically

School belonging occurs within a dynamic, social, complex context (Allen et al., 2021b; Cemalcilar, 2010; McNeely et al., 2002). As such, even as interventions might target individual skills of the students and/or teachers, fully supporting the complexity of school belonging requires a systems-informed perspective (Kern et al., 2020). Supporting this perspective is the rainbow model of social belonging (Allen & Kern, 2019), which emphasises the importance of focusing on multiple interconnected areas: (1) the student's unique character, beliefs, perceptions, and identity; (2) primary social group, including students' family, peers, teachers, and community groups; (3) the school climate and physical environment, including the culture, norms, and policies of the school and the physical spaces that hinder or support connection and inclusion; (4) the local village, including the local community and various people and groups that might create connection; (5) environs, including the safety, connection, and environmental aspects of the local community; (6) broader cultural factors, including local and national policies, cultural and ethnic identity, connection to social institutions, and economical aspects; and (7) the ecosystem, referring to the natural environment. The extent to which each of these matters for different students and contexts is unknown, but they do provide pathways to both intervention and future research.

Conclusions

A sense of school belonging is vital for young people. We are relational beings, with the connection to others critical to most other positive developmental outcomes. Numerous factors hinder and/or support belonging. Still, school belonging is

subjectively experienced. One-size-fits-all interventions inadequately capture the complexity of young people's needs and experiences, with experiences of adversity interacting with and accentuating other factors to further impact upon the potential benefits and risks of different interventions. Thus, identifying the best approaches to support young people will remain an important area of focus for the future. Even as there are many competing demands within schools, prioritising strategies to support belonging remains critical. Society is increasingly disconnected, but fostering belonging within schools provides a pathway towards supporting the holistic development and wellbeing of current and future generations.

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11

OVERCOMING ADVERSITY FOR DISABLED STUDENTS IN HIGHER EDUCATION IN INDONESIA

Sujarwanto and Kieron Sheehy

Introduction and context

In the last 30 years there has been a global movement to improve the academic lives of students with disabilities (Komardjaja, 2005), through the creation of inclusive education systems (Budiyanto, 2011; Lindsay, 2007). This movement was inspired by the Universal Declaration of Human Rights (Lindahl, 2006), and many countries have subsequently become signatories to policies and agreements, such as the Convention on Rights of People with Disabilities (Stein et al., 2007), which states that 'Parties shall ensure an inclusive education system *at all levels*' (Article 24) (Department of Economic and Social Affairs, 2011). As might be expected, what inclusive education means in practice has been interpreted and constructed differently around the world (Budiyanto, 2011; Rix et al., 2013). In higher education, specifically, the goal is for disabled students to access the same educational experiences as, and learn with, their peers. This chapter will focus first on the main barriers faced by disabled Indonesian students and then discuss how one university in Indonesia, Universitas Negeri Surabaya (UNESA), has begun to address the many adversities faced by disabled students. Since many of these adversities are cultural and social in origin, it is important to understand the Indonesian context before moving on to examine the endeavours made to empower disabled students to have a successful and happy experience within inclusive higher education provision.

Indonesia

Indonesia's national motto is *Bhinneka Tunggal Ika* ('Unity in Diversity'). This seems entirely appropriate given that it is the world's most ethnically diverse nation, with a population of approximately 273.5 million citizens distributed across more than 17,524 islands (Commons, 2022) (Data Commons, 2022; Direktorat Pembinaan

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Sekolloah, 2008) and more than 300 ethnic groups speaking more than 583 local languages and dialects in addition to the national, official language, Bahasa Indonesia (Ministry of National Education, 2007). Therefore, the notion of developing an inclusive educational system has a particular resonance for the nation but also creates significant challenges (Sheehy & Budiyanto, 2014). Indonesia has committed to this ideal, affirming that inclusive education should be provided at all levels of the system.

Higher education and disability in Indonesia

Indonesia's higher education system is diverse and dispersed, regulated by both public and private bodies and also general and specifically religious educational ministries (OECD & ADB, 2015). A defining feature of the system is the considerable amount of private educational provision. For example, in 2015, there were 51 public universities compared to 529 private universities, (both of which charge tuition fees), with all having a legal requirement to provide education, research, and community service (OECD & ADB, 2015). It is important to note, however, that public universities are more expensive to attend than private universities, which may explain some of the disparity in numbers. There has been a steady growth in the number of students attending university in Indonesia, rising from 3.6% of the population in 2000, to ten times this (36.3%) by 2018 (World Bank, 2019; cited in Fadhil & Sabic-El-Rayess, 2021). However, this national increase in student numbers has not incorporated a similar increase in the number of disabled students attending universities.

Barriers to inclusion

Indonesia has a high rate of educational exclusion for disabled people with 57% of those identified as disabled attending any form of school, compared to 98% of people without a disability label (UNESCO, 2018). However, many disabled children are unregistered at birth and remain invisible in national statistics (Budiyanto et al., 2020a). This disparity is exacerbated at university level, with only a handful of Indonesian (approximately five) universities, including UNESA, supporting disabled students (Dzulfikar, 2019). As such, the Indonesian government's vision of 'education for all at all levels of education' (Si, 2017) does not appear to be happening. There are several factors that influence this situation some of which will now be considered.

Disabled students are likely to be poorer and receive relatively less funding

One major barrier to accessing a university education is the poverty of disabled students as a group. There is a link between disability and poverty in Indonesia (Bella & Dartanto, 2018), with disabled students and their families having a greatly

increased likelihood of living in poverty, in addition to experiencing higher costs for participating in society (e.g., through care, transport, and medical costs) (Larasati et al., 2019). A circularity exists, with the majority of disabled people living below the poverty threshold and the conditions of poverty creating and exacerbating disability (Gorard, 2006).

This can be exacerbated by an unequal distribution of educational funding. Higher education receives relatively less funding than other education sectors, with the total education budget being allocated mostly to primary (75%) and secondary education (15%) (Armstrong & Chapman, 2011). The current funding largely supports those who are already doing well in society and can afford to pay tuition and associated costs. It has been estimated that 60% of funding benefits the wealthiest 20% of the population (Fadhil, 2021). Despite government policies to address the situation, the enrolment of disadvantaged students remains low in public universities (Fadhil & Sabic-El-Rayess, 2021). An average Indonesian family would need to commit one-third of their annual income to support a child attending university (OECD & ADB, 2015). The impact of this is inaccessibility for, or dropout by, disadvantaged students, with only 2.5% of the poorest 20% of groups in society attending a higher education institution (MOEC, 2013). Despite the directorate general for higher education's long-established goal of much great equity in access (Fadhil & Sabic-El-Rayess, 2021), the conclusion is that in a period of rapid expansion, participation rates have stagnated (Armstrong & Chapman, 2011).

Disabled students are more likely to drop out of school and so not reach entry-level requirements

In order to attend university, it is necessary to begin and complete schooling and obtain the appropriate entry qualifications. This journey is much harder for disabled students, who have a significantly increased risk of dropping out or not attending (Afkar et al., 2020), and this likelihood increases as they get older (Afkar et al., 2020; UNESCO Institute for Statistics, 2009). This trend also exists for students without disabilities, who have a completion rate of 62.2%. However, it is significantly greater for disabled students of whom only 26% are likely to complete their secondary schooling (Afkar et al., 2020).

Disabled students are likely to face stigmatisation

Intertwined with issues of poverty and educational attainment is the subject of the widespread stigmatisation of disabled people and their families, and indeed their teachers (Sheehy & Budiyanto, 2014). There is no direct translation of 'stigmatisation' in Bahasa Indonesia (Lusli et al., 2015). However, its meaning as a negative label is well understood in Indonesia (Budiyanto et al., 2017). Stigmatisation is a negative way of thinking about particular people, which can lead to active or passive discrimination towards that group in society. Stigma can be created in relation to a physical difference, characteristic behaviour, or membership of a particular

group of people and can underpin situations and actions in which people are isolated and 'disqualified from full social acceptance' (Fitzpatrick, 2008, p. 24). In Indonesia, some individuals are stigmatised based on a belief that disability is a curse from God (Ajisuksmo, 2017) or due to beliefs about taboo or karma (Budiyanto et al., 2020b). These pernicious negative attitudes, combined with a lack of knowledge about disability, contribute significantly to the lack of access and opportunity that exists for disabled students within higher education. For example, Komardjaja (2005) found that people with learning difficulties were 'invisible' and segregated from society in Indonesia. Perhaps, more significantly, Budiyanto and colleagues demonstrated that teachers could even be stigmatised through association with young disabled people (Budiyanto et al., 2017). Such stigmatisation of people with disabilities is not unique to Indonesia, however, reflecting a 'deep rooted prejudice' about disability worldwide (Rohwerder, 2018).

Stigma affects personal relationships

A crucial issue for disabled students is the relationship that they have with their lecturers and faculty staff (Moriña & Perera, 2020) in relation to enabling or challenging students' ability to study successfully. Lecturers with a positive attitude are more likely to be willing to make adjustments to improve disabled students' chances for successful study (Aguirre et al., 2020; Gorard, 2006). Conversely, negative attitudes are associated with a reluctance to make teaching materials, activities, and assessment accessible (Aguirre et al., 2020). These European research findings are mirrored in the Indonesian research of Kurniawati and Novita (2018), who found considerable differences in lecturers' attitudes between institutions and between subject areas, detailing that many lecturers believed that disabled students should attend separate, segregated universities: that is they did not belong in their university. Furthermore, a number of lecturers suggested that making accommodations and modifications in their pedagogy for disabled students was not fair because they would not do this for the other (non-disabled) students. Whilst it must be stated that other lecturers held more positive beliefs, it is easy to see the impact that negative beliefs of some (more commonly held in science departments) could have on a student's study experiences. These findings support previous qualitative research which has detailed the impact on disabled students of overhearing their lecturers talking about how difficult it is to teach them and their reluctance to do so (Ajisuksmo, 2017).

The influence of stigmatisation can also impact on relationships with other students, with shunning (Ajisuksmo, 2017) or active bullying occurring. A high-profile example of the latter occurred when in 2017, a video appeared online showing students at Gunadarma University targeting a disabled student through physical interactions and verbal intimidations. Although this incident was framed as a shocking exception, it does fit with the high frequency of bullying reported elsewhere in the Indonesian education system (Fataruba, 2015; No Bullying.com, 2015).

The impact of stigmatisation is therefore profound and interviews with disabled students reveal its pervasive nature. For example, one university student reported:

> I have been treated badly since I first registered . . . I got this treatment not only from students, but also from the staff who provided services. In my opinion, many staff at the university do not quite understand how to treat a person with a disability. Often I have to wait in line for a long time to arrange payments or if I have to ask something from the academic department, even though all the officers see that I only have one leg and have to use crutches.
> *(Yulianto, 2020, p. 167)*

Discrimination by universities

Researchers have considered the barriers that disabled students encounter within the university system (Aguirre et al., 2020; Hendry et al., 2021). In Indonesia, this includes widespread discrimination against disabled students being admitted into universities (Ajisuksmo, 2017). In 2014, investigative reporting by *The Jakarta Post* identified 40 universities whose eligibility requirements excluded students with visual and/or communication impairments (Ajisuksmo, 2017). Another way in which universities continue to discriminate against disabled individuals is through entry selection examinations which are difficult to access (Yulianto, 2020). For instance there are over 4,500 higher education institutions across the nation, and currently only a handful of universities explicitly support an accessible enrolment of disabled students (Dzulfikar, 2019).

Breaking down the barriers

Examples of positive inclusive practices are now emerging, which might act as a template for universities across the nation (Afrianty & Soldatic, 2016); in particular the creation of disability services in some institutions. The Universitas Negeri Surabaya (The State University of Surabaya): UNESA is one of these, and in 2013, developed the Pusat Studi dan Layanan Disabilitas (PSLD) or Disability Study and Service Center.

UNESA and the PSLD

UNESA, East Java, has approximately 39,000 students across seven undergraduate faculties and the graduate school. UNESA's commitment to inclusion was evident as a consortium member of the project 'Ensuring Access and Quality Education' for students with disabilities in Indonesian universities (INDOEDUCA4ALL, 2017) led by the University of Alicante, Spain, in conjunction with the PSLD. As part of an agreed *disability strategic plan*, the activities and functions of the support centre were developed to encompass the training of lecturers, students, and support

staff. The initial training modules were developed and adapted for the Indonesian context based on work by Asningtias (2019), and included:

- Understanding inclusive education;
- Inclusive education in practice, including the use of assistive technologies;
- Practical implementation of legal obligation within higher education institutions;
- Best practices for a student support service;
- Post-education: labour market integration and opportunities; and
- Disability and gender equality.

Research evidence suggests that this form of training can have many benefits, including improving of attitudes and commitment towards disability and improved pedagogies (Aguirre et al., 2020). Longer-term research will be needed to understand the extent to which these positive impacts have occurred at UNESA, but this implementation is an encouraging start to developing an inclusive campus that allows disabled students to succeed at UNESA and also improves their life prospects after graduation. As detailed, one of the major adversities faced by disabled students is economic hardship, and perhaps unsurprisingly, people with disabilities in Indonesia have low rates of access to employment (Prasetyo, 2014). Therefore, part of the strategic plan is focused on the creation of work placements, to help establish positive links between employers and UNESA's disabled students. PSLD provides an annual workshop on career planning, inviting representatives from local companies and non-governmental organisations to help prepare students with disabilities to get a job. In a 2020 survey of ten alumni of the education department, the majority (8/10) were working within the private education sector and two as state school teachers. Although this is a small sample, it demonstrates the positive impact that PSLD activities can have. As a starting point for encouraging future applications, and also challenging misconceptions about disabled students' potential for university study, PSLD has begun outreach activities to local high schools (Supena et al., 2017).

The PSLD strategic plan also included making changes within the university physical infrastructure, with regard to campus accessibility and embedding assistive technologies in delivery of education, in response to the identification that many university campuses are inaccessible and present extensive physical barriers to access, such as unramped entrances, rough and uneven surfaces, a lack of parking spaces, narrow doors, inaccessible toilets, and a lack of accessible campus signage and information (Baju & Kurnia, 2019). PLSD has also worked with university management to influence future building design and more immediate modifications. Asningtias (2019) highlights that even small changes such as a wheelchair ramp or accessible toilets can have a profound impact on students' experiences, and also 'speak loud of the institutional commitment towards inclusive campus' (p. 295). In a context where disability is stigmatised and disabled people can be

rendered invisible, these visible markers become particularly important to demonstrate the university's values for the academic community and beyond.

The likelihood of this type of provision developing across the nation has increased, as legislation has been introduced (Larasati et al., 2019) affirming the rights of disabled people to have access to inclusive higher education and which is explicit that all universities will need to create Disability Service Units (akin to PSLD), otherwise they will face consequences such as potentially being closed (Si, 2017). The impact of this law and the possibilities of these sanctions being imposed on universities, however, remain to be seen (Yulianto, 2020).

Signalong Indonesia at PSLD

Many of the PSLD's activities involve a volunteer community of the university staff and students, providing the benefit of being able to influence practices and attitudes across different faculties. These volunteers, from various departments, support disabled university students in accessing learning, solving challenges, and engaging in university life, as appropriate. Evidence-based reviews of what works in inclusive classrooms highlight the centrality of communicative pedagogies (Budiyanto et al., 2017; Jauhari, 2017). One aspect of PSLD, which is unique, is its use of *Signalong Indonesia*; a keyword signing initiative developed by UNESA and the Open University, United Kingdom, as part of the Inclusive Indonesian Classrooms project (Budiyanto & Sheehy, 2017). Unlike sign language as used by some D/deaf individuals, Signalong Indonesia follows the word order of spoken Bahasa Indonesia and highlights only the keyword(s) in each sentence, intending to accompany and support communication in Bahasa Indonesia, rather than being a language in its own right. This is a deceptively simple sign-supported communication approach which has been shown to have a significant positive impact on the learning and communication abilities of children and adults (Grove & Launonen, 2019).

PSLD began to explore how Signalong Indonesia might be used within universities for staff and students, with the main aim being to support students with social and communication difficulties but also to create a more inclusive culture within the university generally. This led to the development of new Signalong Indonesia sign vocabulary that was relevant to, and helpful within, a university environment; for example, keyword signs that could support various research activities. Between 2017 and 2019, 280 UNESA lecturers, 120 members of the D/deaf community, and 430 volunteers were trained to use Signalong Indonesia through the PSLD programme. Used in this way, Signalong Indonesia significantly supported UNESA's mission to become an accessible university for a diverse student group.

Students' experiences at UNESA

It is important that PSLD seeks feedback and direction from the disabled students with whom it works. No system is perfect but by identifying pedagogical practices to improve, identifying barriers that need to be removed, PSLD hopes to help

TABLE 11.1 Student demographic information

No	*Gender*	*Disability Category*	*Faculty*
1	F	Physical impairment	Language and art
2	F	Physical impairment	Language and art
3	M	Blind/visual impairment	Education
4	M	Blind/visual impairment	Master's programme
5	M	Blind/visual impairment	Education
6	M	Deaf/hearing impairment	Education
7	M	Deaf/hearing impairment	Engineering
8	M	Blind/visual impairment	Master's programme
9	F	Blind/visual impairment	Economics
10	F	Physical impairment	Math and science
11	M	Physical impairment	Education
12	M	Blind/visual impairment	Education

UNESA to grow into a genuinely inclusive campus. Valuing student voice in this way is not only used to develop pedagogies and environments, but it also informs understanding of how we can create more inclusive ways of working together. In the Indonesian context, this signals our values and commitment to challenging stigma, discrimination, and exclusion within the academic community.

As an example of this, a sample of 12 disabled students were interviewed about their academic experiences, focused around four general areas: the admission process, lectures and teaching, facilities and infrastructure, and support services. This gives insight into where PSLD and its volunteers should focus their efforts and the degree of change that is still required across the university to ensure that it is as fully inclusive as possible.

The students came from a variety of faculties at both undergraduate and postgraduate levels. Table 11.1 indicates gender and faculty and how their disability is categorised within the university administrative system.

The feedback received was as follows.

The admission process

The students identified three different entry routes to UNESA. The first of these is through the National Selection to Enter State Universities (SNMPTN) which occurs throughout Indonesia, and can involve a written examination or an alternative non-written option that draws upon portfolios or school assessment. Second, there is as a route run by the SPMB (standar pelayanan minimum) Nusantara Association, which administers entrance tests and also incorporates entrance scholarship for disadvantaged students. The Joint Selection to Enter State Universities exam [SBMPTN] is the final option. It is a written exam, and for some subjects (e.g., sports science) there is a physical skills test. All the aforementioned students were supported by PSLD mentors: while most students reported being happy with their

mentoring support, some identified that their mentors lacked knowledge and skills when accessing the university's online registration system.

Lectures and teaching

Seven students told us that this part of their studies was working well. These positive experiences were attributed to two things: lecturers adjusting their presentations and materials to make them accessible and good mentoring support during the teaching sessions by PSLD volunteers. Students who were dissatisfied (three) pointed to professors and lecturers who did not seem to consider the needs of any disabled student and so chose not to make adjustments or ask the students about what would be helpful. Although students were supported by PSLD volunteers during teaching, this support occurred within the teaching session only and so did not influence the preparation of any materials. Interestingly, only two students said that they required special learning resources, with the others saying they could get by following the 'standard' lecture. However, all the blind students said that some adjustment and resources would be helpful to them (e.g., magnifiers, electronic format materials), which suggests that 'getting by' is unlikely to be an option.

Facilities and infrastructure

The main difficulty mentioned here considered navigating around campus. All those with physical impairments reported difficulties; for example, with a lack of suitable accessibility for wheelchair users and barriers between buildings that were too narrow to allow wheelchair passage. Some students highlighted a lack of braille information around the campus for the identification of particular buildings or for navigation. The buildings themselves were generally considered accessible with a noticeable exception being the library and those with stepped entrances and internal stairs. Although students' responses here varied related to the faculty they were in, only one student felt that the campus infrastructure was fully accessible for them.

Support services

All UNESA students have access to both administrative and student services. In addition, disabled students have access to PSLD. Only one student reported that PSLD mentoring was poor, relating to his needs as a deaf student; the others felt it met their needs well. Regarding the administrative and general student support services, there was a roughly even split between those who were satisfied and dissatisfied. This dissatisfaction was related to the buildings that house these services being inaccessible for some and a lack of personnel with awareness of disability issues.

The impact of gender and intersectionality has been highlighted by other researchers in relation to disability and Indonesian society (Ochwat & Marszałek-kawa, 2020). However, no gender-related differences emerged from our interviews. Feedback from students is helpful in indicating two areas where PSLD has been

ineffective in promoting change. UNESA has appropriately 850 lecturers, and only a minority have attended PSLD training sessions. Given this fact, combined with the mixture of attitudes to disability that exist in Indonesian academia, it is perhaps not unexpected that some lecturers are not modifying the pedagogy for their disabled students. PSLD needs to work with senior cross faculty management to increase training uptake in order to create more inclusive curricula. Also, they should focus on researching the effect of their PSLD training on lecturer pedagogy, as reflected in the experiences of UNESA's disabled students, to ensure that their methods effect positive changes, which include changes in attitudes and beliefs about disability.

The other main issue to note is the physical barriers to access that exist in some buildings. Resolving this requires financial commitment from senior university management, who are charged with increasing the university's financial standing and academic and social reputation. These personnel are often at a distance from the on-the-ground work of the PSLD, and so there is risk that they will remain untouched by it.

Conclusions

The Indonesian context is one where disabled students are stigmatised, and social, structural, and physical barriers impede their access to higher education. In seeking to address these adversities, UNESA initiated and then extended the work of its PSLD. Feedback for PSLD-supported students indicates areas where change has been problematic and more work is needed: lecturer attitudes and pedagogy and physical barriers on campus. These key issues have been identified with other Indonesian universities (Sitepu et al., 2020). However, UNESA has an approach which is beginning to address these and other issues. In several respects this work is innovative. It supports disabled students through the admission process and within their everyday teaching sessions. It seeks to train lecturers and fellow students in disability issues and to develop new pedagogies such as Signalong Indonesia. This world-leading innovation offers a model for other Indonesian universities to follow in working towards a more inclusive future. UNESA has over 65 disabled graduates, which is a small but important number, and with the help of PSLD, has put in place processes to attract and support many more in the coming years, including to support them thereafter into employment. The challenge for PSLD, and future support centres, will be how to sustain the vision of an inclusive university that demonstrates the benefit for all students and staff (and thereby funders) from a well-designed accessible campus and promotes its successful graduates as advocates in challenging the pervasive social stigmatisation of disability.

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12

WIDENING PARTICIPATION IN HIGHER EDUCATION

John Butcher

Introduction

In a book dedicated to exploring adversities in education, it is important to consider higher education (HE) as a distinctive and separate case study. HE operates alongside compulsory education, which to some extent it shapes, and adult education, which, in the UK, it has gradually undermined. With participation growing in many countries, HE increasingly exists in its own ecosystem. However, the recent trend towards higher participation has not necessarily widened the diversity of learners. Barriers to fair access and participation still impact profoundly on the lives of a diverse range of citizens around the world, as can be seen in equity issues in relation to HE identified in Australia (Sellar, 2011), South Africa (Mabokela & Miambo, 2017), and the US (Astin & Astin, 2015).

Perhaps, the crucial adversity issue is that potential and existing HE learners from disadvantaged backgrounds are often from groups already struggling to overcome systemic inequalities in other areas of their lives. They do not face a 'level-playing field' in relation to accessing, or succeeding in, HE. The United Nations (2014) notes that historically, HE has often been inaccessible to groups such as women, ethnic and racial minorities, the disabled, and the poor. The International Covenant on Economic, Social, and Cultural Rights calls for accessible HE, underlying the Sustainable Development Goals (SDGs), which recognise that access to HE is vital to lifelong learning, and that HE must be globally accessible to all. Its third target is *by 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university*.

Access to and successful participation in HE for all who could benefit may be thought a crucial aspiration for societies confronting 'wicked' contemporary challenges, including the impact of climate change and life-threatening epidemics. Of course, even an optimist with the rosiest-tinted spectacles would be unlikely to

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assert that widening HE participation on its own could address such problems. But a fairer HE system and a more diverse student body might contribute to mitigating inequalities rather than, as at present, compounding gaps between the most advantaged and the most disadvantaged.

An astute and powerful summary statement on the potential impact of HE comes from the same United Nations (2014) source: *higher education enables individuals to expand their knowledge and skills, clearly express their thoughts both orally and in writing, grasp abstract concepts and theories, and increase their understanding of the world and their community. It has also been shown to improve an individual's quality of life.*

The presentation of such a positive, holistic, and aspirational rationale for HE seems persuasive in underpinning the need to tackle adversity. But, despite the growth in UK numbers, individuals with specific characteristics may still be excluded from accessing HE, underachieve within it, or face inequitable progression outcomes.

The UK participation problem has historic origins. A century of evolutionary change, from an avowedly elite HE system in the late nineteenth to an allegedly mass system in the late twentieth century, ushered in a flurry of twenty-first-century interventions under the freshly minted slogan of 'widening participation' (Dearing, 1997). Regrettably, with the 2012 introduction, in England, of a loan system to cover the cost of tripled tuition fees, the price of expanded participation has been passed on to students.

In this chapter, I will suggest how issues of participation might be understood. I will then draw out examples from the UK, contextualised with international perspectives, to show how individuals currently face adversities in accessing the transformative potential of HE and participating successfully in it. I will suggest how the adversities described might be, and are being, addressed, and recommend three principles on which the HE sector might act.

How to understand adversities in HE

A useful theoretical lens through which to understand the impact of adversity in relation to widening participation to HE is provided by Gorard et al. (2006). They identified a three-part framework (situational, institutional, dispositional) to conceptualise the barriers associated with efforts to widen participation in HE. This resonates with the kind of obstacles faced by groups I will discuss later.

In this framework, situational barriers are the practical obstacles facing individuals to which universities too often turn a blind eye. They are thus 'invisible' adversities for individuals already struggling with unequal access to resources. For example, potential students (or their parents) can be debt averse – fearing the perceived cost of HE as a risky investment and needing support to better understand affordability. Lack of disposable income affects access to extra-curricular activities, placements, or attendance at open days. Successful applicants who need to work to support the cost of HE are often time poor (their study easily being disrupted by life events) so need flexibility in relation to the commitment required for full-time

or even part-time study. They may endure stress from the commuting distance to travel to attend classes in non-residential universities.

Institutional barriers are defined as obstacles placed by universities themselves. They reflect the rigidities inherent in systems which remain largely premised on young students attending university full-time. Institutions need to be far more sensitive to the diversity of potential students by incorporating flexible timetabling and assessment deadlines to help retain struggling students or offering clearer information, advice and guidance aimed at tentative learners confused by progression pathways. Institutions can choose to address inadequate creche facilities, the evening/weekend closure of a library or restaurant facilities in the evenings. More can be done to develop studentship skills and build confidence via bridging modules, access courses or level 0 foundation programmes. Even the most vulnerable and disadvantaged learners can be reached through effective preparatory programmes co-designed with community stakeholders to enable participation (Johnson, 2018).

By contrast, dispositional barriers refer to those deep-rooted psychological obstacles which inhibit learners from disadvantaged backgrounds. For example, many learners, especially those returning to education can experience a disorienting culture shock. Students may carry a negative previous experience of poor learning and be vulnerable, lacking the personal confidence to cope and thrive in HE. Overcoming such psychological adversities takes time and often needs trust to be developed with a skilled personal tutor. Such exposed students can easily be knocked back by a disappointing grade and need to believe the institution wants them there. For example, learners who missed out on going to university at 18 can experience 'imposter syndrome', feeling a 'fish out of water' who should not be there, and some constantly expect to be 'found-out'. Universities need to acknowledge this barrier.

Adversities faced by individuals from less-advantaged backgrounds can be amplified by a complex intersection of these situational, institutional, and dispositional barriers. For example, the cost of HE can be perceived as a barrier to accessibility, and if university support systems appear difficult to navigate any additional adversity (personal circumstance) can undermine resilience and lead to withdrawal.

What adversities are preventing fair access?

Policy confusion

It is difficult to identify a clear strategy for widening participation in the UK, as not only are there significant policy differences between England and the three Celtic nations, but there is little consensus at national government level as to what HE is for. Three contradictory ambitions confuse attempts to widen participation:

- Is HE considered a key engine of social mobility – a tool for speeding up the journey towards a more equitable society, requiring interventions to mitigate adversities faced by individuals? Policies enacted in relation to financial

support for learners in Wales and regional partnerships in Scotland suggest this can be a key strategy driver (Donnelly & Evans, 2019).

- Is HE positioned as a site for increasing marketisation and competition – the imposition of neoliberal values behind the empty mantra of 'choice', embedding adversity into the system? Policies enacted in England, in the last decade, suggest this has been a key strategic driver – the tripling of tuition fees resourcing university expansion but too often ignoring the most 'left-behind' students (Danvers & Hinton-Smith, 2021).
- Is HE considered primarily as a fundamental driver for a successful twenty-first-century-economy – a panacea for addressing skills shortages in an increasingly digital world? Policies currently under consideration in England, via the White Paper (DfE, 2021), suggest a future strategic direction but one that (through for example, re-balancing towards the local) could constrain inclusive access to HE.

In England, the Office for Students (2019) is charged with ensuring that *all students from all backgrounds, with the ability and desire to undertake higher education, are supported to access, succeed in and progress from higher education*.

However, positive messaging about the benefits of widening participation to HE can easily be lost in complex national policy spaces, leading to ambivalence about the role of widening participation in relation to social mobility or what is increasingly referred to as the 'levelling up' agenda (Cunningham & Samson, 2021). Despite the New Labour ambition for 50% participation in HE in the UK within ten years (The Guardian, 1999), and despite claims that applications to full-time HE are growing (UCAS, 2020), learners from disadvantaged backgrounds continue to face adversity, as the decimation of numbers studying part-time attests (Butcher, 2020).

In addition, while a worthy rhetoric has emerged recently in recognition of the potential of lifelong learning to widen the participation of adults, there remains a policy/practice dissonance – the system operates in a disincentivised vacuum in which the HE market is skewed towards the recruitment of full-time school leavers. Despite exhortations, access and participation plans still fail to target the participation of adults, leaving older individuals to juggle complex personal and working lives alongside studying.

Barriers to access

Potential HE learners in the UK are confronted by impermeable and heavily policed barriers to access, key to which are the qualifications obtained by school leavers. Currently, much HE in the UK, is predicated on attracting 'well-qualified' 18-year-olds. The research-intensive universities tend to drive this by their focus on selection. Most potential students apply based on grades in three A Levels in 'academic' subjects (in Scotland, for historic reasons, equivalent 'Highers' are taken).

A Levels have, since their inception, been framed as the 'gold standard', providing the fundamental curriculum offer in school sixth forms and sixth form colleges. However, they offer a significant obstacle to the development of a more inclusive HE system. The precise nature of this adversity, as Sperlinger et al. (2018) suggest, is that the current HE system seems designed from the premise that all students will have been the kind of 13-year-olds who knew what they wanted to do with their lives and enjoyed good health when sitting for their examinations in the 'right' subjects. GCSE choices are often made as early as Year 9 and can be limited by a range of situational factors, such as:

- quality of teaching;
- school performance in public examinations and differential provision of opportunities; and
- unequal parental support (and parental knowledge of the educational system).

Adversity has been baked into a dysfunctional system in England, where a damaging academic/vocational divide prematurely sorts young people into 'sheep and goats', erecting a powerful division between learners wanting a clear academic route into HE and those engaged by more practical/experiential learning who may wish to access HE later. Even higher barriers are erected for those who need to raise their basic level of qualifications.

Adversity is thus embedded as a direct result of a skewed post-compulsory education system, in which status and funding favour academic study and HE. In this bipartite system, further education is reduced to guiding school leavers through a complex set of 'alternative' vocational/BTEC qualifications and supporting students through what one college principal described to me as the 'torture' of GCSE resits. Recent calls for 'localism' miss the point that FE/HE links tend to focus on specific vocational routes and not all subjects are available, especially in so-called HE cold-spots. In addition, those who struggle with A levels lack any sort of safety net to support them into HE at a later point.

In efforts to mitigate adversities in access, universities have committed millions to school-based WP outreach for the last 20 years. Attempts to raise aspiration may involve visits by enthusiastic student ambassadors to targeted schools while attainment-raising interventions can be targeted at groups of pupils at borderline GCSE grades or via the provision of targeted one-to-one online mentoring from undergraduates to pupils applying for a specific discipline. Locally, strategic institutional progression partnerships may be initiated, but such outreach rarely reaches FE or adult learners, precisely the groups needing to understand flexible pathways into HE. Qualification pathways represent a fundamental adversity for individuals and an expensive challenge for the sector.

Who is affected by the access problem?

Inequitable access to HE for certain groups is persistently identified as an issue by the Office for Students in England, and the Commissioner for Fair Access in

Scotland. Participation in HE offers a very challenging picture of adversity. For example, state school pupils from Chinese backgrounds consistently have the highest entry rate (71.7% in 2020) into HE, whereas white state school pupils (32.6% in 2020) consistently have the lowest entry rate (Gov.uk, 2021). The risk remains that potential students from disadvantaged backgrounds are less likely to apply to HE and less likely to be accepted by the most prestigious institutions (for example, the proportion of pupils from black Caribbean backgrounds accepted into high-tariff institutions is significantly lower than white pupils). Data suggests four demographic factors can act as obstacles to fair access.

Economic disadvantage

Students from the poorest backgrounds are more likely to live in low HE participation areas, to have low or alternative prior entry qualifications, and to apply from schools supporting fewer applicants for university. If the first-in-family, they may lack the social and cultural capital needed to navigate complex application pathways. They are also more likely to be from families who are concerned about the perceived high cost of HE.

The introduction of high fees in England, initially jeopardised widening participation (WP) targets. Now, many full-time 18-year-old applicants have been socialised into being inured to the risk of debt with which they will graduate. But older learners do face adversities which can lead to exclusion. Individuals with financial dependants are far more likely to face a 'Hobson's choice' (in which an apparent free choice is offered by policymakers when, in actuality, the only alternative to part-time study is not studying at all), as well as confronting concerns about the inadequacy of maintenance support. HE is thus regarded as a risky investment by potential students who have to juggle precarious employment alongside competing personal responsibilities. Students from the poorest backgrounds continue to be disenfranchised from fair access to HE and equitable student success. Situational barriers persist, although schemes involving bursaries and fee waivers have been tried to lessen the impact of economic deprivation but with unclear impact (Kaye, 2020).

Participation and awarding gaps: is HE failing to address race and ethnicity issues?

Students from black and some Asian and minority ethnic backgrounds find it more difficult to access HE (Boliver, 2016). It is noteworthy that in some areas, students from black and minority ethnic backgrounds (potentially learners who do not thrive academically at the 'right' age) appear more likely to be studying BTEC qualifications (Smith et al., 2017) – an unintended consequence of which is to limit access to the most selective universities. Media coverage of participation issues involving race and ethnicity reflect the complexity of adversity. On the one hand, boys from white working-class areas are reported performing least well at school

(only 8.9% white boys on free school meals enter HE) (Hillman & Robinson, 2016); on the other hand, there is annual clamour around the disproportionately tiny offers to black students from Oxford and Cambridge Colleges (Lammy, 2017).

My own institution, The Open University (OU), which has retained its 'open to all' mission, offers an intriguing case study in relation to the adversities experienced by students from black and ethnic minority backgrounds. Although the OU has no entry criteria, we are aware that black students, and those from minority ethnic backgrounds, do not perceive the OU as particularly open to them and are certainly notable by their absence from certain subject areas. I have also reviewed 'alternative' providers in urban areas in which a predominantly black teaching staff appeared to attract a majority black student demographic (as in the US, see Hale, 2006). This suggests inequitable access on the grounds of ethnicity might be a far more nuanced adversity and that more research would be welcome on the extent to which lack of 'fit' between an individual and a university might be a barrier to participation, as well as qualification attained.

Students of colour (especially those of black Caribbean and African backgrounds) still face institutional adversities in accessing the most prestigious universities in the UK, and even if they do 'get-in' are likely to receive lower awards (Stevenson et al., 2019). Such adversities are the result of institutional barriers and as with effective international interventions reported in the US and South Africa, successful approaches have included whole institution change programmes (McDuff et al., 2018) and black mentoring schemes (Haywood & Darko, 2021). The largest gaps in terms of HE participation are often revealed in data on indigenous students (for example, for Australia, see Gore et al., 2017) and in the UK Roma/travellers (OfS, 2020). Such learners face deeply embedded situational inequalities, and long-term community engagement must be a priority alongside HE-focused solutions.

Disability hampering access

As a contrasting example, the OU has sustained a strong record in enabling students with a disability to access HE. About 31% of OU students declare a disability (including, increasingly, students with mental health difficulties). As a distance education university, the OU has developed innovative technology-based solutions to enable potential learners facing the severest physical challenges to participate in HE and succeed. The pioneering use of assistive technology has addressed the adversities faced by thousands of disabled students and meant disability need not be an insurmountable barrier to access.

However, it is noteworthy that in recent years the OU has, like the rest of the sector, seen a dramatic rise in students applying with a mental health declaration. This reflects a broader societal issue. Mental health impacts on performance, so is a student lifecycle issue, as much as an access one and requires counselling and other professional support. Students with disabilities may feel vulnerable and need additional support and this additional cost has been exacerbated during COVID lockdowns.

Disabled learners still face societal barriers in gaining access to HE, given the reliance on A level grades as selection criteria. These adversities can then be compounded by institutional barriers if, during the student lifecycle, appropriate mitigations are not in place. However, universities have been more committed, for longer, to embedding systems to support disabled learners – perhaps because legislation requires adjustments to be put in place, and disability is a prominent protected characteristic in equality and diversity strategies.

Age amplifies adversity

Mature students (defined as over 21 by HESA) and those who can only study part-time (usually adults working while learning) face significant obstacles in accessing HE. Age compounds disadvantage, as multiple adversities interact. Adults coming later to HE may be, disproportionately, living in areas of economic deprivation and low HE participation; studying alongside a disability or chronic health problem; or applying with low or alternative prior entry qualifications. Mature learners can face an even more adverse situation as they may lack confidence, having been out of education for years. Dispositional barriers thus intersect with situational barriers.

While there is a proud history of adult learners successfully progressing from Access to HE Diploma courses in FE, and of adults entering undergraduate study via preparatory foundation programmes, adult learners remain hard to reach. Rather than in school poring over UCAS websites, mature learners are in communities, in workplaces, juggling studies with working and caring for others. Unlike 18-year-olds taking a relatively linear educational route, even if adults can be enticed into HE, their learner journeys can be ad hoc, indirectly random, and disjointedly stop-start. This uniqueness makes it difficult for policymakers, used to prioritising activities open to quasi-scientific evaluation. Greater patience is needed with interventions aimed at older learners and they are rarely informed by awareness of intersectional adversities. Relative poverty interacts and overlaps with other obstacles, especially for mature students who face dispositional barriers alongside being time-poor and disproportionately vulnerable to life crises. Ironically, those older learners who do succeed in accessing HE often perform well, despite the systemic adversities facing them.

How do the adversities impact on learners across the student lifecycle and what can be done?

Even if students from disadvantaged backgrounds overcome obstacles in relation to accessing HE, serious adversities continue to present themselves across the student lifecycle. For example, attrition is significantly higher in students from the range of backgrounds outlined earlier, as the most vulnerable learners are more likely to withdraw from their studies if things go wrong. Such learners are also less likely to voluntarily seek support or to have peer or family networks to sustain them through a difficult period. At the OU, some students from disadvantaged backgrounds are

more likely to passively withdraw (effectively, to disengage) rather than tell the university. Some of my students have admitted worrying about letting their tutor down or fearing being told off if they initiated a conversation about their adversities. This is often about confidence and a misplaced perception by mature learners of 'not being good enough', carried with them from school.

In addition, students from disadvantaged backgrounds receive lower module or end-of-year grades than their more advantaged peers. Dispiritingly, this gap stubbornly persists into a shameful awarding gap between the most advantaged and the most disadvantaged students in terms of final qualifications. This underperformance appears to be especially true for black students and those from some Asian and ethnic minority backgrounds, who are less likely to achieve first class honours or upper seconds in their degrees, differentials which cannot be explained by prior qualifications (Richardson, 2015). Such differentials need to be understood with a considerable degree of granularity. For example, 80.9% of white students are awarded a 'good' degree, as are 76.6% of Chinese students but only 57% of students from black African backgrounds (Gov.uk, 2021). Much attention has been devoted to the impact of this adversity in recent years, with the Office for Students (OfS), the key sector regulator, pushing institutions to initiate strategies to close awarding gaps and set targets to do so in their access and participation plans.

Examples of impactful intervention to address such performance gaps include strategic, institution-wide adoption of more inclusive approaches to learning and teaching. Being proactively open to student engagement, encouraging peer learning, and crucially ensuring greater assessment literacy amongst all students may help close gaps. This is about the institution adapting its practices to be more learner-centred rather than requiring students to bend to inflexible assessment systems. Attrition and performance may also be improved by current sector activity devoted to decolonising the curriculum, aimed at making content, reading lists, case studies, and assessment tasks more relevant to a diverse student body. The US is ahead of the UK in this. As potential solutions, both recognise the absence of equitabilities and avoid pathologising the student from disadvantaged background in a deficit model.

There is also emerging evidence that unequal outcomes continue even after students graduate. These hindrances to successful progression include disproportionate access to further (postgraduate) opportunities, especially funded PhD places. Access to graduate careers also continues to be unequal, especially in the arts/cultural industries where internships are still dictated by 'who you know' and unpaid opportunities require substantial financial support. Mentoring and improved information, advice and guidance may address some inequitable PG and career outcomes, but unequal progression outcomes remain under-researched and demonstrate how adversity can be embedded throughout learning journeys of disadvantaged students.

It might be worth questioning why, by default, HE must take place on a university campus, which in itself can present an inaccessible adversity. In the spirit of community education, barriers could be removed by taking the learning to

where the most disadvantaged students are, in remote coastal or rural areas, or out-of-town housing estates ill-served by public transport. A blended approach, with digital learning (which the COVID lockdown has demonstrated is accessible and if done imaginatively, effective,) could widen participation.

Key principles

Three key principles can be identified to help widen participation in HE.

First is the need to overcome deficit-thinking in relation to adversity. For too long universities have relied upon a plethora of bolt-on study skills provision, reactive disabled student support and blunderbuss bursary provision, as well as hand-wringing around the need for greater ethnic diversity. This is gradually being replaced with a tentative recognition that embedding more inclusive approaches to learning, teaching, assessment, and student support are necessary. The sector has gradually become aware of the need to avoid 'fixing' underperforming students and blaming them for their shortcomings. This acknowledges it is no longer acceptable to require students to bend to meet inflexible institutional systems.

Second is the need for universities to listen to the individual stories of their most disadvantaged students and learn how they have overcome adversity. In my experience of leading a university access programme and ensuring the institutional access and participation plan delivers, data appears much easier to analyse via a lens of individual characteristics. However, it is dangerously seductive to consider quantitative data on a dashboard as offering the sole true insight into access, participation, or awarding gap issues. Voices of individual students are powerful and listening to them is one of the most inclusive approaches an institution can commit to. Participation must be improved with students as partners, not patronisingly done to them.

Third is the pressing need for credible evidence of what works in mitigating adversity. Until recently, sustainable replicable models of what works have been rare. Often, WP interventions have been small-scale and institutionally bounded, implemented by enthusiasts but with impact insufficiently evaluated and tainted by the inevitable bias of attempting to prove the efficacy of something they themselves have introduced. This adds to the complexity of institutions and policymakers intervening in any sort of targeted way. OfS have sought to initiate a more robust approach to the evaluation of WP initiatives through a sector hub *Transforming Access and Student Outcomes in Higher Education* (TASO) and universities need to improve the reporting of their evaluative scholarship, particularly related to intersectional adversities. Credible evaluation of the impact of WP interventions may be needed before adversities can be addressed at scale.

Conclusions

The adversities faced by disadvantaged individuals in the UK align closely with the aspirations expressed in the UN sustainable development goal cited earlier. To mitigate these stubbornly persistent and predictable adversities, institutions need to

be far more flexible with assessment structures and far more transparent about the hardship support that is available. Enhancing positive role modelling throughout institutions by providing opportunities to recognise 'people who look and sound like me' can help sustain learners through adversities. The one exception is that the gender gap, in relation to access and success, has largely been removed (and in many cases reversed). This has been due to a combination of bottom-up activities like Women into Science and Engineering (WISE) raising aspirations for girls to study in the sciences, relative attainment at school, the meritocratic opening-up of employment in the professions, and broader societal and legalistic changes prompted by feminism. Of course, we know all too well from media coverage that in many parts of the world, women continue to face appalling adversities in accessing any education.

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13

CHILDHOOD STRESS IN EDUCATION

Meena Hariharan, Sandra Roshni Monteiro, Meera Padhy and Usha Chivukula

Childhood stress in education

The right to education is one of the fundamental rights of children as stated by the UN Commission on Human Rights (UNICEF, 1989), elevating its need for acknowledgement as a globally significant experience. The primary goal of education is to support overall development of the individual in which a child's early learning experience plays a foundational role. It is normal that education, just like any other system, is laced with stress perceived by its recipients. Stress in the educational sector is most often understood as a failure to cope with the demands of the educational system because of either external factors or internal incapacities. In young children, such stress can be manifested through crying, depression, headaches, poorer concentration and increased irritability and outbursts of anger (Jewett, 1997). More than an optimal amount of stress disrupts natural growth and development in the critical stages of childhood (Hariharan, 2020). It may be inferred that stress during childhood adversely affects the very objectives of education.

Contrary to popular belief, childhood itself is not a stress-free stage (Hariharan et al., 2014). This is a stage when children go through a fast pace of maturation involving robust physical growth and development, preparing ground for cognitive functioning, a stern base for emotional stability simultaneously developing adequate social competence and moral values. Such development is nurtured when the demands from the environment are stimulating and adequately challenging so that the motivation to explore further is sustained. This is termed as positive stress (Middlebrooks & Audage, 2008). Though sometimes it seems unfavourable to the child, it is temporary in nature. For example, promotions to a new class, participation in a quiz, meeting new peers, etc., are types of stress that provide opportunities to development and can be dealt with relative ease when facilitated by caring adults (Pakarinen et al., 2010). When persistent demands from the environment exceed the abilities of the

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child, they alter the educational experience to 'pressure' instead of 'pleasure'. This is denoted as 'toxic stress' (Middlebrooks & Audage, 2008). The chapter hence aims to identify the issues of the educational system that generate toxic stress for children. Further, it is deemed necessary to explore the suitability of an alternative system of education that can help minimize stress and increase security and satisfaction.

Childhood education: the goals and the reality

In order to assess the adversities in education, a global assimilation of the diversities in the educational systems needs to be considered. Global educational systems have been condensed to examination scores with attainment of degrees and higher scores serving as the determining factor in success. This race to success has been found to induce a fear of failure or underperformance directly related to negative association with examinations. This phenomenon has been tested and found applicable cross-culturally (Bodas & Ollendick, 2005). In this context, it is essential to examine tried-and-tested methods of learning that have been fruitful in the past and thus may prove to be inspirational in remodelling the current education system.

It is imperative to be cognizant of the true meaning and purpose of childhood education which is to provide holistic development and prepare children for life's challenges. The model of ancient Indian education is exemplary of this paradigm. The students used to get initiated into education in *Gurukulas* for 10–12 years. This was a system where education was imparted to the student who lived with the teacher's family (Ghonge et al., 2021). The vigorous training was under the secure guidance of the teacher and the care and nurturance of *Gurumata/Guru Patni* (the teacher's wife known as the 'Mother'). While fostering values, etiquette, and inner strength, the *shishyas* (student disciples) were also prepared for coping with the realities in conjunction with physical development. The teachers would assess the potential of each student and groom each of them as per their motivation and ability with room for individual variation. Barring certain drawbacks of the *Gurukula* system such as lack of variety in learning, it certainly helped in minimizing stress and fostered holistic learning (Selvamani, 2019; Sengupta, 2021). Education that syncs with the cultural demands and practices are easy to relate to life. Such content transmitted to children through methods that optimize the natural sensory motor functions makes learning a fun process, thereby reducing the scope for stress. Aurobindo, a great philosopher and an Indian educationist advocated that the child should learn in a free environment that boosts sense training and that the learning should relate to life (Sheik, 2020). Similarly, the Indian philosopher and educationist Jiddu Krishna Murti argued for education that promotes experiential learning, sensitivity to nature, fearlessness, culture of no-competition, and qualitative or formative assessment in a stimulating environment (Anand, 2020). Thus, what the two Indian philosophers/educationists conceptualised education is, as the one that promotes relaxation rather than stress in the learning process, encouraging innovative thinking than mere assimilation of knowledge. The outcome of such Indian learning models is evident in examples of the eminent scholars (e.g.,

Aryabhata, Panini, Katyayana, Patanjali, Maitreyi, Viswambhara, Apala, Gargi, and Lopamudra) and universities of those times (e.g., Nalanda, Takshashila, Valabhi, Vikramshila, Odantapuri and Jagaddala), visited by scholars from around the world. This typology sufficiently demonstrates the right to education, development, security, and spontaneity true to the classical Indian tradition that claimed *Sa Vidya Ya Vimuktaye* (that which liberates us is education) (*Vishnu Purana 1.19.41*).

Contrastingly, this whole objective of Indian education seems to have undergone a complete revision. As per the need of the time in the early eighteenth century (Fischer-Tiné et al., 2004) during the colonial rule, Indian education was converted into training people for clerical and secretarial services rather than training them to be scholars of innovation, invention, and exploration. Figure 13.1 explains the pillars of philosophy and principles of education in ancient

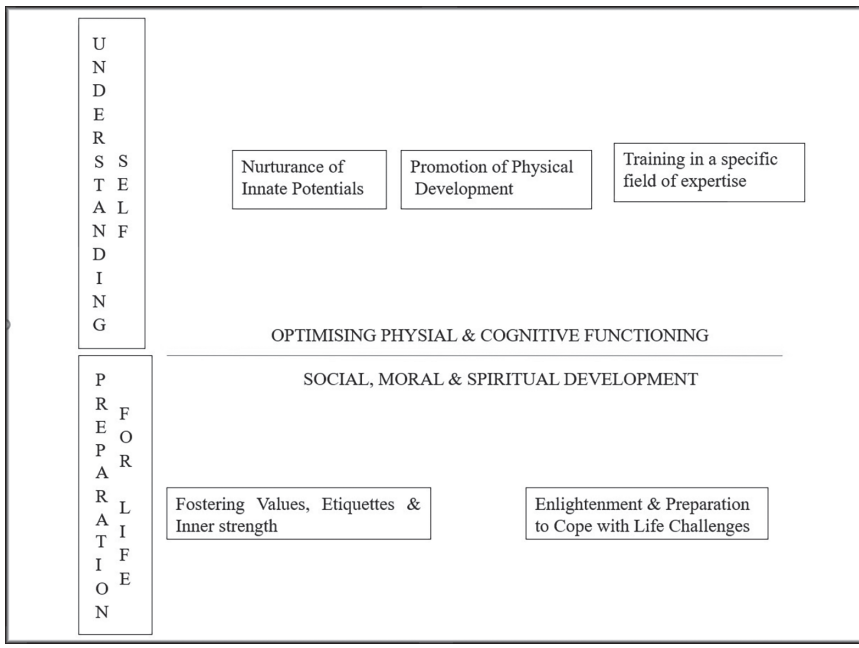

FIGURE 13.1 Ancient Indian education for liberation and enlightenment

Long Description: The two fundamental goals of ancient Indian education are shown in two parts of a box horizontally divided. The upper portion describes the first goal, that is understanding of self, depicted as a vertical box covering the upper part of the box in the extreme left. Three horizontal boxes placed next to each other in the central part of the top portion of the box depict the means by which understanding of self is attained. They are (1) nurturance of inner potentials, (2) promotion of physical development, and (3) training in a specific field of expertise. The line below these three boxes summarises the outcome of these three means with a statement, 'Optimising the physical and cognitive functioning'. The lower part of the box describes the second goal – preparation for life – which is presented as a small vertical box on the extreme left. The two means of attaining this goal are depicted in two horizontal boxes placed next to each other at the centre. They are labelled as (1) fostering values, etiquettes, and inner strength and (2) enlightenment and preparation to cope with life challenges. The outcome of these two methods are summarised above the two boxes as 'social, moral and spiritual development'.

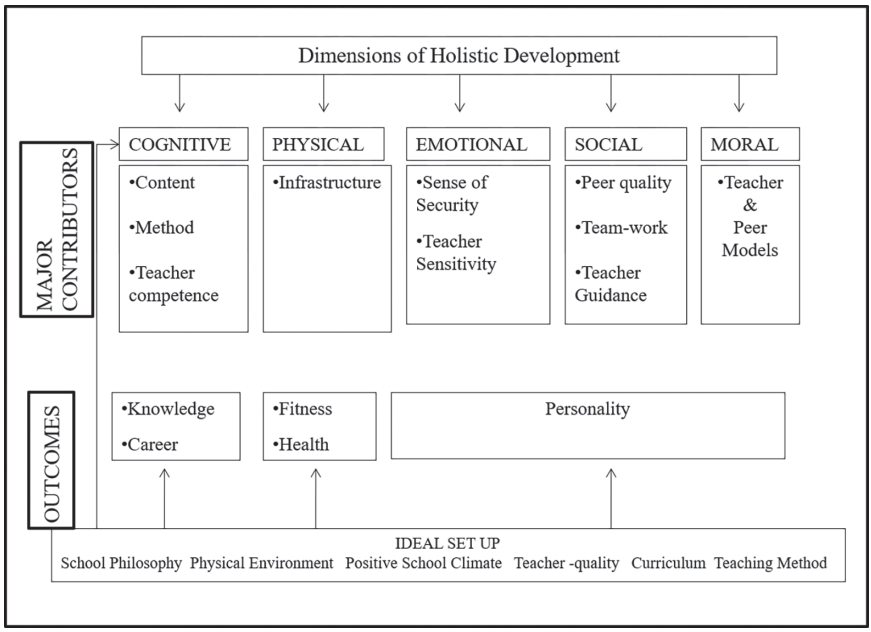

FIGURE 13.2 Modern education, the ideal and reality

Long Description: The ideal of holistic development is presented as a horizontal box. Five arrows from this indicate various dimensions as cognitive, physical, emotional, social, and moral aspects of development. A box flowing out of cognitive development indicates to the three major contributors to it, viz. content, method, and teacher competence. The box flowing out of physical development dimension points to the major contributor i.e. infrastructure. The box flowing out of emotional development points to the major contributors i.e. sense of security and teacher sensitivity. The box flowing out of social development indicates the contributors for it, viz. peer quality, team-work, and teacher guidance. The box flowing out of moral development dimension indicates teacher and peer models as major contributors. The ideal set-up for this is indicated in the lower part of the figure. The upward arrow starting from school philosophy points to the knowledge and career. The upward arrow from physical environment points to fitness and health. The upward arrow pointing from positive school climate, teacher quality, curriculum, and teaching method point to personality. This indicates the ideal overall design of a school in modern education. However, the reality is shown where the arrow from the ideal set-up moves up to reach just one box out of the five dimensions of the holistic development, that is cognitive dimension. Thus, the entire focus of modern education is found to end up emphasising cognitive development in children.

India while Figure 13.2 contrasts the ambitions of modern education. As shown in Figure 13.2, childhood education is now concentrated only upon cognitive proliferation. Sole emphasis on knowledge acquisition and career orientation has left the children to face tough competition with no training or guidance in emotional management, social skills, and value orientation: a major cause of stress for children in modern-day education (Birla, 2015; Dubey& Nimje, 2015).

Educational stress: sources

Stress in education has a wide range and it is imperative to explore the markers to be able to rectify them. Sagar and Singh (2017) have provided a condensed classification of academic-related stress as the stress due to teachers, exams, peers, parental and social expectations, time management and infrastructure, and self-inflicted factors.

With this milieu, the authors of this chapter (in a project yet to be published) derived broad classifications of educational stress perceived by Indian children from Grade 1 to Grade 12 following thematic analysis. The method and findings on sources of stress for children for different stages of education are discussed here. The children were asked to describe the three most stressful experiences of their lives which were categorized into themes. Collectively, themes were ordained into super themes and subthemes. Factors related to educational stress were found to be dominant among other themes. Accounts of a total of 2,024 school-going children in India were stratified into three groups: primary school children ($N = 664$) (age between 5 years and 10 years), secondary school children ($N = 529$) (age between 11 years and 13 years), and high school children ($N = 831$) (ages between 14 and 18). Out of many other super themes, *academic-related stress* was a dominant super theme with quite a few subthemes such as experiences of incomplete classroom work, excessive homework, specific fear of numeracy, fear of difficulty to understand subjects, fear of failure in examinations, fear of examination results. Other super themes and their subthemes were: *stress-related to parents' involvement in academics* such as parental expectations of performance in examinations or academic tasks and parent meeting teachers; *teacher-related stress* such as fear of punishment from teacher in the form of beating, scolding, or teaching style; *interpersonal stress at school* such as isolation by peers, bullying, fights or arguments with peers, hostility, and separation from their friends; and *intrapersonal stress at school* such as feelings of competition with peer group, overly ambitious expectations from self, and waking up early to go to school. Sources of stress classified as per the developmental age groups of children are discussed here.

Sources of stress for primary school children

Children at primary level reported that talking to strangers and concentrating in class were stressful to them. Primary school children find the transition from home to school difficult. Long hours of separation from family, making new friends, and familiarising with teachers constitute adaptation to the environment called school. This is associated with feelings of insecurity and triggers separation anxiety. The second source of stress relates to concentrating in class. The primary grade children are between 5 and 10 years of age. As per Piaget's theory, they are in a stage of transition from pre-operation to concrete-operations. The transition is from imaginative cognition, animism and irreversibility to concrete thinking, inductive logic, and reversibility

to later part of primary grades when children manipulate their thoughts into object representation (McLeod, 2018). Concentrating on lessons not supported by practical demonstration does not match this developmental stage. It is relevant to mention here that experiential learning at primary level is not mandatory in primary grades in India.

Sources of stress for secondary and high school children

Few sources of stress were common to secondary and high school children such as going to school itself, heavy load of school bags, arriving late to school, lack of leisure time, balancing different activities, and worrying about their career. Children in secondary and higher grades are introduced to a wide range of subjects taught independently. This educational model weighs heavy on cognitive content and bulk of books, resulting in heavy school bags and minimal leisure. The negative attitude built towards information overload and continuous assessment of numerous subjects culminates into school avoidance aided with impending additional stress of disciplinary action by the school (Kearney, 2007). Such an environment dampens the unique learning styles and interests of the child and concurrently shrinks their self-efficacy (Arslan, 2017).

The subthemes that evolved from the reports of secondary school children had statements related to situations where they have to face adjustment problems with peers, jump between responsibilities, and encounter difficulties in grasping the content delivered in classrooms due to communication barrier. The contents of the subthemes by high school children testified that balancing various tasks, being compared to others, being complained and gossiped about, being misunderstood, making mistakes, and being forced to participate in a disliked task were very stressful to them.

Incidentally, the stages of education across the globe are so designed that the child faces the maximum demands in terms of academic performance and career choice during the transition from high school (Verma et al., 2002). This phase coincides with the ambiguity and challenges of physical and physiological changes and concomitant socioemotional shifts. The adolescent faces overwhelming demands on academic performance from within and from the outside world (Jones & Hattie, 1991). This critical phase of education calls for a career choice. This is viewed as threatening and stressful by the adolescents due to perceived inadequacy of personal and social resources (Safta, 2015).

Another main source of stress for majority of children in school is the teacher considered the authority figure. An understanding teacher with a passion for teaching is a source of pleasure while an unapproachable teacher who takes up teaching for a job could be a stress inducer (Huan et al., 2012). Further to this, favouritism towards high achievers, labelling and branding of underachievers, and punishments for failures by the unempathetic adult world aggravate the stress for children (Meissel et al., 2017). This impacts not only the children who are underachievers or failures but also their peer group who remain mute spectators to this treatment due to the vicarious effect (Longobardi et al., 2016).

One of the major challenges that plagues all stages of education is the policy of uniformity in prescribed curriculum and teaching method. This gives rise to two distinct sources of stress, namely odious comparisons and unsuitable curriculum. Ignoring the reality of inherent individual differences, adults often inadvertently compare between siblings or the child with their high achieving peers in school provoking conflict and hostility imminently leading to more stress (Van Leeuwen, 2019). More often than not, classroom teaching is pitched for the majority of averages thus missing out on the two extremes called slow learners and brilliant students in class. For example, subjected to the teachings pitched for the average in the class, slow learners may find it difficult to follow the pace of instructions and brilliant students may go through boredom (Hariharan et al., 2014). Both experience stress. Hence, the prescribed curriculum should match the cognitive developmental stage of the children leaving sufficient scope for the teacher to adopt methods to simplify the content for slow learners and pose challenges for the gifted.

The aforementioned section provides a holistic analysis of the factors or sources of stress faced by children that delineate their own characteristics but also derive evidence of the curriculum, method, and role of parents and teachers. These categories will prove to be very useful to build objectives for an intervention aimed to increase academic wellbeing in children.

Impact of educational stress

Impact on neurophysiological functions

The impact of childhood stress in general has both short-term and long-term implications, disrupting the structural and functional dimensions of the brain. It is no different when the stress is due to education.

The medico-physiological model of stress is explained by Hariharan (2020). According to this model, on encountering stress, hypothalamus stimulates the adrenal glands located in the kidneys to release adrenaline, noradrenaline, and cortisol. The cortisol in the blood casts a negative impact on the dendritic branching of the neurons, and this happens particularly in the region of the hippocampus. Hippocampus is linked with long-term memory through decoding and transfer of the information by creating associations. When cortisol levels get elevated in the body as a result of constant exposure to stress, the transformation of information in the hippocampus gets disrupted. Due to these structural changes in the hippocampus the child is vulnerable to suffer disruptions in long-term memory. Similarly, the prefrontal cortex also undergoes architectural changes due to continuous release of cortisol into the blood. Prefrontal cortex is the locus of higher order cognitive functioning and the seat of 'working memory'. It consists of glucocorticoid receptors just like the hippocampus. Prolonged exposure to stress causes structural alterations to the prefrontal cortex leading to disturbances in mood state, behavioural responses, and the functioning of working memory. This reflects in the child's difficulty in verbal memory and recall.

Cortisol secretion does yet another damage. It intrudes into the immune system (Hariharan, 2020). Children exposed to stress are found to have high cortisol level (Carlsson et al., 2014) indicative of an immunocompromised state. This leaves the children vulnerable to infections and viruses causing illness and absence from school. In a study by Sahin et al. (2016) illness was found to be the topmost individual cause of school absenteeism. Irregular attendance further disrupts the progress in learning (Thornton et al., 2013).

Children inevitably get trapped in a vicious circle of stress and failure. Initially, the stress is induced by education (e.g., unsuitable curriculum, rigid system, punitive teacher, unfriendly peers, or demanding parents), gets chronic and impacts the structural changes in the brain leading to problems in cognitive functioning, academic performance, and achievement, thereby contributing to failure and underperformance. This again feeds into educational stress. This is depicted in Figure 13.3.

Impact on development and performance

According to the principle of classical conditioning (Pavlov, 1906), any negative consequence that follows a task tends to attribute negative attitude towards the task itself. Excessive emphasis on learning the three R's (Reading, W'riting, A'rithmetic) during the early childhood is likely to be counterproductive (Ravid et al., 2009). Children who have not yet fully developed dexterity in their fingers may find writing assignments extremely encumbering and hence may develop an unfavourable attitude towards writing even in later stages inducing the Garcia effect (an aversion to the stimulus after a distasteful experience). This phenomenon was also studied by Feder and Majnemer (2007), who reported that failure in handwriting competence negatively affected 10–30% of school-aged students impacting academic success and self-esteem. The unappealing compulsion during early childhood manifests as defensive behaviour, aggressive outbursts, frequent ill health, faking ill health, reluctance to go to school, playing truant, social withdrawal, sleep abnormalities, enuresis, general apathy, crying bouts, etc. (Jeon et al., 2019; Rucinski et al., 2018; Zhou et al., 2021). Furthermore, depression and anxiety (Pascoe et al.,2020), suicidal ideation (Banks & Smyth, 2015), decreased motivation (Lee et al., 2020) have been noted as consequences of academic burnout.

Stress specifically has been found to precede and follow examinations. The Organisation for Economic Co-operation and Development (OECD) found in a survey of 72 countries involving 5,40,000 students aged15–16 years that about 66% of the students reported feeling stressed about obtaining low scores in tests; and 59% reported perceived difficulty in taking an examination. Despite being well prepared, 55% of the students too reported stress related to exams. About 37% of the students claimed that they experienced anxiety while studying. Academic stress may also be understood as anticipation of failure in exams. A strong relationship between high academic stress and consequent low academic performance has

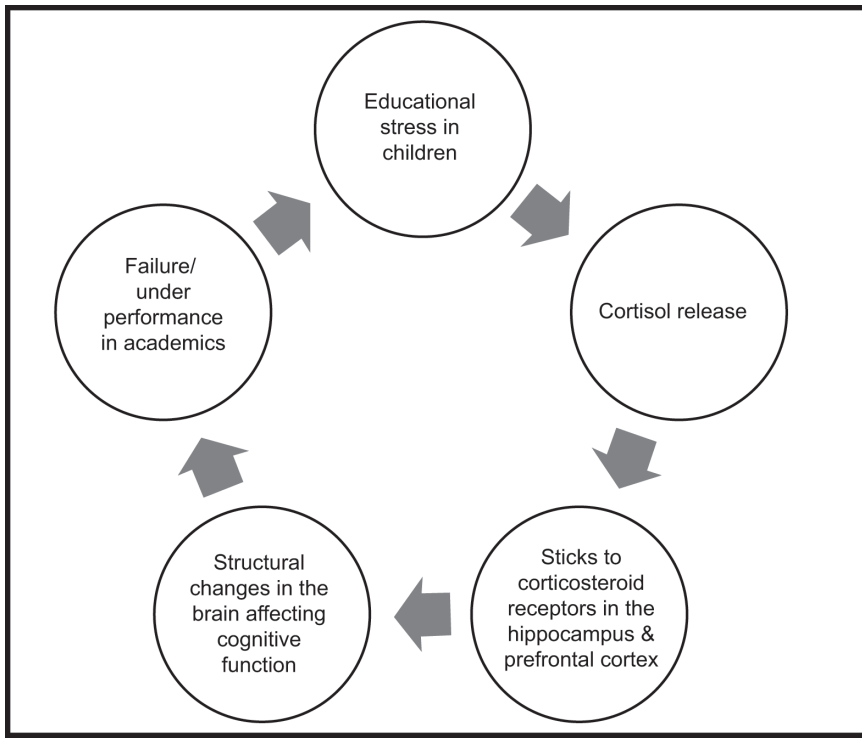

FIGURE 13.3 Perpetuation of stress in children's education

Long Description: The vicious circle of perpetuation of educational stress in children is depicted by five circles ordered in a star-like form where every circle is connected to the next one through an arrow. Educational stress in children is shown in a circle. This circle is connected to the next circle described as 'cortisol release'. This circle is connected through an arrow to the next circle that is described as 'sticks to corticosteroid receptors in the hippocampus and prefrontal cortex'. This circle is connected through an arrow to the next circle described as 'structural changes in brain affecting the cognitive function'. This circle is connected to the fifth circle that is described as 'failure/underperformance in academics'. This fifth circle is connected through an arrow to the first circle that is described as 'Educational stress in children'. Thus, the vicious circle is completed showing that the educational stress in children tends to perpetuate itself.

been established in research studies (Kumar & Jejurkar, 2005; Khan et al., 2013). The academic pressure especially related to exams may become so high that some children not equipped to handle it get initiated into faulty coping strategies like experimenting with health risk behaviour such as smoking, alcohol and substance abuse (Cox et al, 2007). Though it relieves them of the stress temporarily, it may get them addicted and affect them with long-term adversities. In fact, the most frequently cited reason for suicidal mortality among adolescents has been academic pressure (Reddy et al., 2018).

Impact on health

Academic stress is known to restrict physical activity (Stults-Kolehmainen & Sinha, 2014), disallowing the ventilation of pent-up frustrations and eventually inviting a plethora of health problems aiding the onset of non-communicable diseases. Research has established that exposure to continuous stress results in primary hypertension. Research findings reveal that 23% of school-going Indian children between the age group of 5 and 15 years are found to have hypertension (Narang et al., 2018), and about 10.9% and 4.6% of adolescents have pre-hypertension and/or hypertension along with obesity (Kumar et al., 2017). Obesity and hypertension are associated morbidities, placing a high risk for cardiovascular diseases in adulthood. Other than genetic and congenital reasons, lack of physical exercise and stress are found to be contributing factors for obesity (Chen et al., 2020). There is an urgent need to pay attention to this factor and undertake corrective measures at the earliest.

Education should have a liberating quality rather than acting as a constraint to earn good academic grades. It is pertinent for the researchers and policymakers to find a remedy to reinvent the objectives of education and make necessary corrections in the derailed system.

Distress-free education: lessons for future

The way to make teaching learning a pleasant process is by trying to minimise toxic stress through radical changes in the policies of education. The focus of change should bring in flexibility in the choice of subjects for the students, fun-filled hands-on experience that help skill development. Flexibility will open the scope for choosing the subjects of one's interest, thus replacing the undue academic demands with intrinsic motivation for learning and performance (Pacharn et al., 2013). Learning should ideally be intercepted with leisure activities that are not just beneficial for improving health, personality, academic performance, and preventing problematic behaviours but also act as a buffer against negative life events (Padhy et al., 2019).

The National Education Policy 2020 of the Government of India is one such effort to bring in the awaited corrective measures in education to reduce stress as much as possible, making it a meaningful system to prepare children for life. The policy brought in several changes in the structure, curriculum, medium of instruction, teacher training modules, and preparation for career woven into the system. Of these changes, the following are aimed at minimising the stress in education.

1 Enhancement of experiential learning at school level;
2 Shift in the emphasis of learning from rote method to original thinking that helps in promotion of critical thinking;
3 Discontinuation of teaching in English medium to use of mother tongue (India being a multilingual country) in teaching till class V;

4 A paradigm shift in the orientation of education from overemphasis on theoretical content to applied aspects. This is done through introduction of vocational courses at secondary and high school levels;
5 Reduction in the number of examinations which was found to be stress inducing.

Drastic reduction in curriculum burden and number of examinations (in classes 2, 5, and 8) extricates the child from pressure resulting from demand for performance. Further, the introduction of flexibility in choice of curriculum in combination with provision for internship and involvement of experts from the community opens pleasurable experience of learning that has application value.

Conclusions

The goal of education is holistic development of the individual – considered to be one of the pillars of national development. The curriculum design, physical and social environment, teacher and parental aspirations contribute significantly to child's involvement in education. Cut-throat competition at every level leading to overambitious targets set by the factors mentioned earlier constitute the major adversities and results in education-related childhood stress that defeats the very purpose of education. Implementing the policy reforms in their right spirit will create a scope for converting the adversities to advantage. The enormous energy of the stakeholders and stockholders hitherto invested in information overload and inter-institutional and interpersonal competitions can be diverted to innovative changes in the curriculum and teaching methods to suit the child's stage of development. This will certainly emancipate the child from 'distress' to 'eustress' and help realise the ancient Indian philosophy of *Sa Vidya ya Vimukthaye* (*Education that Liberates*).

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14

THE SENCO'S ROLE IN OVERCOMING SCHOOL ADVERSITY FOR CHILDREN WITH SPECIAL EDUCATIONAL NEEDS

Graeme J. Dobson

Introduction

Various international accords call for the inclusion of all children within society and education including those with special educational needs (SEN) (e.g., UNESCO, 1994). Despite this international consensus, there are many different national approaches to understanding SEN and operationalising provision. Indeed, this issue is even the case in locales where there are close political ties such as Europe (Jørgensen et al., 2021). In England, the inclusion of children with SEN has developed iteratively over time following the seminal Warnock report in 1978. This led to a system whereby children with SEN are on the whole educated alongside their peers in mainstream schools (Shaw, 2017). Despite the 43-year gap between the Warnock report and the present, there is still a lot of debate about what this provision should look like. This debate includes continuing discussions on a range of adversities faced by these children. These include the imbalance of groups processed into SEN (Black, 2019), over identification (Ofsted, 2010), parental dissatisfaction (Cullen & Lindsay, 2019; Lamb, 2009), whether inclusion is about rights or outcomes (Lindsay, 2007), and why many disadvantaged groups seem to be labelled as having SEN (Shaw et al., 2016). In the middle of this debate is a role which is present in every state-funded mainstream school in England – the Special Educational Needs Coordinator (SENCO) who, since 1994, is expected to operationalise provision in school settings. This chapter considers how schools can use ecological approaches to analyse how their SENCO is being utilised as an internal mechanism of support (Poon-McBrayer, 2012) to develop policy and provision for children with SEN to overcome many of the adversities that this group of learners face.

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The SENCO – a role developed over time as a reaction to policy

The role of the SENCO was first envisaged by Warnock, who called for radical changes to the way children with SEN were educated in England. The committee called for children of all needs to be given the right to be educated together in 'ordinary schools' (Warnock, 1978). In order to facilitate this, it was suggested that school staff, particularly teachers, needed training to support and educate children with SEN in their classroom settings. Additional support for teachers and children was envisaged to come from other sources including specialist teachers working within the school and support from other specialists working within local authorities and other agencies, that is educational psychologists. Despite this call, it was not until 1994 that the specialist teacher now called the SENCO was formally introduced into schools as part of a new guidance document – the Special Educational Needs Code of Practice (Department for Education, 1994). However, even then, the SENCO role was not fully defined, and it was not until much later that there was the stipulation that SENCOs were formally trained and working as a qualified teacher within the school (Dobson, 2019). In the most recent iteration of the Code of Practice (Department for Education & Department of Health, 2015, pp. 108–109), it is recommended that SENCOs should have a strategic role across the school. They should also be given sufficient time to fulfil the functions of the role. There are then a list of recommendations about what they may be required to do. These are varied and incorporate a wide range of administrative and leadership tasks including overseeing school-based SEN policy, record keeping, and liaising with a range of external agencies. SENCOs are also expected to work alongside colleagues to improve systems and advise on approaches to improve SEN support and ensure statutory compliance with the provisions outlined in the Equality Act 2010. Thus, it is now envisaged within Teacher Standards (Department for Education, 2011) that class or subject teachers are able to differentiate appropriately and adapt their teaching to support the needs of all children including those with SEN or disabilities. However, the teacher may also be supported by SENCOs and others in this endeavour. In turn, SENCOs should also be able to draw from legislation, that is the Children and Families Act 2014 and other sources, that is the Code of Practice (Department for Education & Department of Health, 2015) to make and influence strategic change at the level of the school to develop practice, procedure, and create an inclusive culture within the setting.

The ecology of inclusive education

In order to better understand how SENCOs operate to support children with SEN, it is useful to consider them as part of a system with the child at the centre. Here, Anderson et al. (2014) provide a model to help structure this analysis. Based on the work of Bronfenbrenner (1979, 2005), their ecology of inclusive education provides a framework to understand how inclusive education systems can provide an ecology of support around the child.

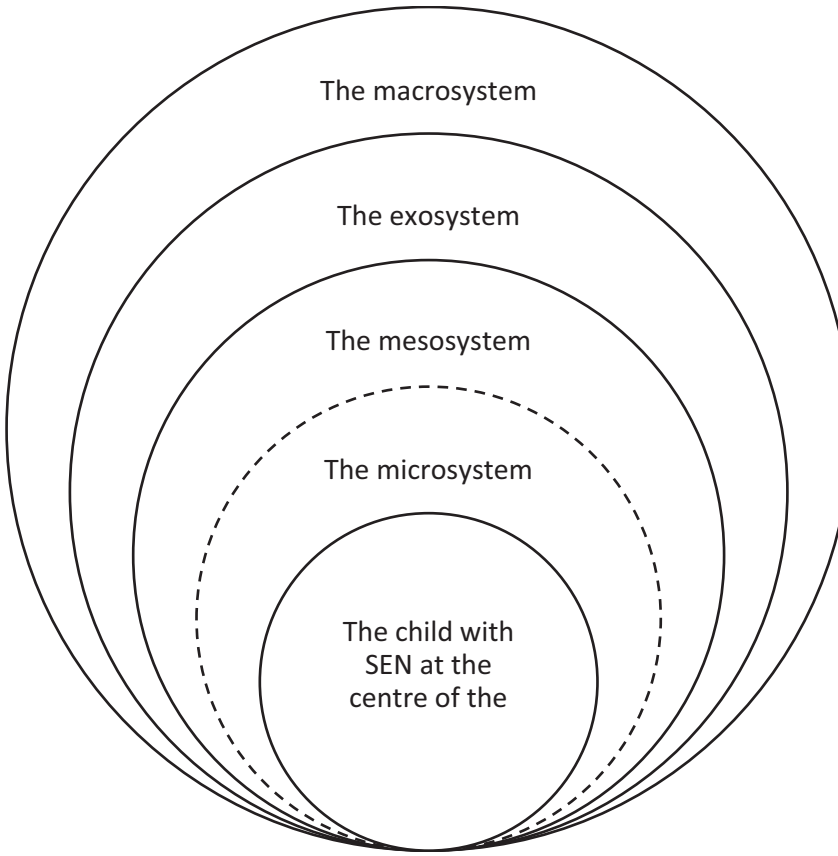

FIGURE 14.1 The ecology of inclusive education

Source: adapted from Anderson et al., (2014).

Long Description: A stacked Venn diagram of four distinct circles, each growing in size and representing a separate ecological system. All but one of these are drawn with solid lines. At the centre of the diagram is an additional circle representing the child at the heart of the ecology. The first and nearest circle surrounding the child is the microsystem, the second is the mesosystem which is marked with a broken line as it is a combination of microsystems. The third circle represents the exosystem whilst the fourth, outer circle represents the macrosystem.

The ecological system is conceptualised as a series of different subsystems (see Figure 14.1). Some of these are proximal to the child, others are progressively more distal. The most proximal system to the child is the microsystem. This system consists of the child's direct experiences within the school setting. These are diverse and include experiences within the classroom, school, and playground. They also include interactions with school staff including their teachers. The next system is slightly different as it is not a discreet system. Rather, the mesosystem acknowledges that people and objects within the microsystem are not isolated from

one another and may interact. The exosystem envelops both of these and is more distal to the child. Here there are structures where events occur that influence the child at the centre of the system but do not directly interact with them. These may include school leadership structures, the culture of the school, and the allocation of resources. The macrosystem is increasingly distal to the child. It consists of influences that are outside of the school but impact upon the school and the child at the centre of the system. These can be best understood as the national and international frameworks and legislation that guide and direct the school. In turn, these often drive school agendas at the level of the exosystem. A final system differs from the previous systems. The chronosystem acknowledges that the learner at the centre of the system may transition through different school stages over time.

The adaptation of the work of Bronfenbrenner (1979, 2005) offered by Anderson et al. (2014) has also proved useful in understanding how different actors work across the ecological system to support the child at the centre. McLinden and McCracken (2016) used the framework to perform an evaluation of the role of specialist teachers of the visually impaired in Ireland. Their findings suggest that specialist teachers work throughout all of the different systems within the ecology that surrounds the child. For example, in the microsystem they may work directly with the child to teach Braille skills; in the exosystem they may provide guidance to school leaders to make adjustments to the curriculum or commission appropriate resources; in the macrosystem, they may advise on government policy and relevant statutory frameworks. In turn, the system is driven by national policy and legislation that frame the different approaches within the micro and exosystems.

Understanding the role of the SENCO within the framework of the ecology of inclusive education

The position of the SENCO and their role in improving outcomes for children with SEN can also be understood ecologically. The most recent Code of Practice (Department for Education & Department of Health, 2015, p. 108) provides 11 suggested functions that the role may include. A small number of these functions can be conceptualised as being within the micro/mesosystems of the ecology of inclusive education described earlier. These include liaising with parents or advising teachers on the graduated approach to supporting children with SEN. Other suggested functions are situated in the exosystem of the ecology of inclusive education. For example, SENCOs may be asked to oversee policy within the school or advise on budgetary and resource matters. They may also be asked to advise on legislation such as the 2010 Equality Act situated in the macrosystem.

This approach to analysis provides utility in understanding how the SENCO may operate across the different systems to support the child at the centre to overcome any adversities faced within their education. However, there are also some difficulties with this approach as the SENCO role is not operationalised homogeneously across all schools and settings. Statute and regulations state that a maintained school must appoint a SENCO and that they must be trained and working

as a teacher at the school; however, this is where consistency ends as schools are able to define the role in the way they see fit. Thus, in different settings SENCOs may be fulfilling some, all, or none of the suggested duties outlined in the Code of Practice (Department for Education & Department of Health, 2015). In addition, numerous barriers are often surreptitiously erected within school systems that may prevent many SENCOs from fulfilling the role within the different ecological systems that surround the child. For instance, many SENCOs may be provided with little time to fulfil their role. Indeed, where time is provided, this is often filled with purely administrative or bureaucratic tasks.

This creates two interesting layers of adversity. On the one hand, the ecology surrounding the child with SEN at the heart of the system is weakened through the lack of SENCO input in the child's microsystem and exosystem. On the other hand, SENCOs who are the people responsible for strengthening this ecology have a range of organisational and procedural difficulties to navigate or overcome that prevents them from being active within these systems.

The SENCO working within the child's microsystem

The issues described earlier are highlighted in recent work commissioned by Ofsted (2021a, 2021b). In January 2021, there were just over 1.4 million children and young people identified with SEN in England (Department for Education, 2020b). In turn, all of these children and young people are at the heart of their own ecologies of inclusive education. Ofsted (2021a) suggests that many children with SEN have to overcome a range of adversities as they have their needs missed, underachieve, and have an inability to access the curriculum. Despite these findings, in another report, Ofsted (2021b) describes SENCOs as an essential feature in schools who mediate, support, and develop provision at the level of the classroom. Examples of this good practice include working with teachers, external agencies, and parents. Ofsted (2021b) also describes specific instances of SENCOs improving provision within the child's microsystem by working with early years staff, identifying needs, and helping to design provision. Indeed, recently appointed SENCOs describe attractions of the role which include being able to engage in tasks like those that Ofsted suggests help to strengthen provision (Dobson & Douglas, 2020b). However, Ofsted (2021b) describes SENCOs being unable to fulfil this role due to a range of barriers. These barriers included time allocated to the role, access to professional development, and bureaucratic delays. Indeed, it was also telling that a number of SENCOs in Ofsted's research also held full-time class teacher positions and lacked any time at all, a picture found in other large-scale national surveys conducted over time (e.g., Curran et al., 2018; Pearson, 2008).

The SENCO working within the child's exosystem

Access to time for SENCOs and their professional development are decisions that are made at the level of the school. In their model, Anderson et al. (2014) describe

this as being within the child's exosystem. The decisions made here are by those who have control over resources such as school leadership teams. Due to legislation, it is the choice of this body to either strengthen or weaken the SENCO role within the school. They are also able to give opportunities (or not) to the SENCO to undertake some of the functions described by Ofsted (2021a, 2021b) as being effective. In addition, it is at this level where decisions are made on whether the SENCO is defined as a management or leadership role within the school. Griffiths and Dubsky (2012) provide a useful metaphor of 'gardeners or landscapers' to describe these two different types of roles. Gardener SENCOs are concerned with management and may be associated with administrative tasks such as processing paperwork. Landscaper SENCOs are leaders who work at a whole school level and may develop practice and lead strategic change. Within the ecology of inclusive education, it is the 'landscaper' SENCOs who are able to make more positive changes within the child's exosystem. A Freedom of Information request revealed that in 2017, 61.8% of SENCOs in English schools were not on the leadership contract and instead were classified as class teachers (Dobson, 2019). Contractually, this meant that they had no responsibility for making strategic decisions within the school setting (Department for Education, 2020a). This suggests that two-thirds of SENCOs are gardeners not landscapers. This has implications for the child at the centre of the system. Many SENCOs will have limited opportunity to directly change or influence decisions being made within the child's exosystem, thus weakening the ecology at this level.

SENCOs using the macrosystem to the child's advantage

The macrosystem of the ecology of inclusive education consists of a number of legislative structures that help to shape the way SENCOs and others operate within the child's exosystem and microsystem. These legislative structures include statute law such as the 2014 Children and Families Act and the 2010 Equality Act. In turn, these inform a range of statutory instruments and guidance documents such as the Code of Practice (Department for Education & Department of Health, 2015). This legislation and guidance is influenced by a range of factors including international accords (e.g., UNESCO, 1994), parental dissatisfaction (Lamb, 2009), and the political ideology of the government at the time (Lehane, 2017). This architecture of legislation and regulation serves to provide the framework in which schools and SENCOs operate. It is also providing the regulatory framework that help to shape what happens within the exosystem of the school and the microsystem of the classroom. Dobson and Douglas (2020b) argue that when SENCOs develop their interest in the role, they often describe their reasons couched in the language of policy. In turn, this leads to issues of whether SENCOs are being sufficiently critical of policy to consider better alternatives. However, Curran (2019) argues that policy and legislation can help SENCOs overcome difficulties that they may face in school settings because of their status in the school or their exclusion from the leadership team. As children with SEN

are subject to a range of statutory procedures and protections, SENCOs can use these to affect change. This change may be related to procedure in the school or practice in the classroom. Thus, by using macrosystemic policy and legislation, SENCOs can directly impact upon the decisions being made within the child's exosystem and practice in the child's microsystem. Curran (2019) describes this process as SENCOs being able to influence change using both direct and indirect means thus allowing them to influence change regardless of their leadership status within the school.

How schools can optimise the use of their SENCO to affect change for children with SEN

Since 1994, a plethora of research has been conducted on the role of the SENCO. Findings provide a mixed picture of schools using SENCOs in different ways and not always to the best effect. All SENCOs must now achieve the National Award for Special Educational Needs Coordinator (NASENCO) within three years of appointment (Brown & Doveston, 2014). This postgraduate certificate has been designed with a range of outcomes to enable these professionals to develop systems across school settings to support children with SEN (National College for Teaching and Leadership, 2014). This professional, accredited training has the potential to develop SENCOs who are knowledgeable and able to use their knowledge and understanding of the different systems within the ecology of inclusion to affect change for the child at the centre.

The role that the SENCO will play in the child's microsystem

Schools need to be clear about what they want their SENCOs to do and the roles that they need to fulfil. Utilising an ecological framework to undertake this task holds much utility. The purpose of this task is not to replicate current practice. Rather it is to consider an idealised role for the SENCO to utilise their training and skills to support individual children at the centre of their individual ecologies of inclusive education. Using this framework can enable schools to consider what role the SENCO needs to play in supporting children within the microsystems of their classroom and other direct school experiences. This may be working alongside the child to perform assessment and observations. It could also be working alongside the teacher to support them with strategies that may be used to support the child within their classroom. In England, it is a requirement that all teachers should adapt their teaching approaches to respond to a wide range of children and young people with different needs (Department for Education, 2011). Successful schools are characterised by ensuring that teachers are able to apply this standard within their classroom (Ofsted, 2021a). Consequently, the SENCO must be able to add value to what the teacher is doing. This will require the SENCO to have excellent knowledge of different areas of SEN. This in turn requires a range of effective continuing professional development to keep their skills up to date.

In order to operationalise this proposition, there are a range of practical and pragmatic considerations. There will also be the requirement for the SENCO to be provided with the time to perform their task. This is a complex issue. For instance schools allocate different amounts of time to their SENCOs or being a SENCO is part of a portfolio of other complex tasks (Clarke & Done, 2021). In other schools, the numbers of children on the SEN register would make it unreasonable for a single SENCO to undertake this type of individual work (Curran & Boddison, 2021). Dealing with these issues is at the level of the individual school; however, it is important to stress that if SENCOs are not providing support for and adding value to the work of teachers in the microsystem of the child's classroom, then it is important for schools to recognise who is.

The role that the SENCO will play in the child's exosystem

Schools also need to be cognizant of how SENCOs can impact upon the child at the centre of the system by working at the level of the school – the child's exosystem. Much research has focused on the status of SENCOs within schools systems (e.g., Curran & Boddison, 2021; Pulsford, 2019; Tissot, 2013). Many SENCOs are not school leaders and so have limited influence to affect change or direct resources to strengthen the child's exosystem (Dobson, 2019; Tissot, 2013). For instance the SENCO role may be a strategic role that develops inclusive practice across the school. In order to do this, they will need status to affect change and access to resources including time to fulfil these changes. However, many SENCOs are provided with neither time nor status (Curran et al., 2018; Dobson, 2019). Indeed, even if these dual adversities are resolved, the impact of the SENCO within the child's exosystem can be weakened by a range of other factors. For example, Curran et al. (2018) highlight SENCO retention issues for schools, with only one-third of SENCOs planning to be in the role in five years. They also report the stress experienced by SENCOs which affects their wellbeing and long-term ability to cope with the role and be effective within the school system.

These important factors have the potential to limit the influence of a key member of staff who is the only member of the school team who is required to undertake specialist, postgraduate training in their area of specialism. This has the potential to limit or weaken the exosystem within the child's ecology of education. Again, schools need to be mindful of this and consider how they can strengthen SENCO influence at this level and retain these key members of staff.

The role that the SENCO will play in the child's macrosystem

There is a wide range of legislation that schools draw upon to operationalise their provision for children with SEN. Indeed, the learning outcomes for the NASENCO award (National College for Teaching and Leadership, 2014) require SENCOs to be able to demonstrate their understanding of a complex legal framework of different types of legislation and guidance. These policy documents have

direct influence on what occurs within the child's exosystem and microsystem. As Curran (2019) suggests, those SENCOs who have little influence within the level of the child's exosystem use policy and legislation to develop inclusive practice within the school. One of the difficulties with this approach is that it is dependent upon the SENCO operationalising this. Another difficulty is the lack of strategic oversight that this method suggests. Instead, schools need to consider how they use their SENCO with their knowledge and skills to ensure not only compliance with legislation but also how they use different legislative frameworks to enhance the school's strategic response to the development of inclusive practice.

Align school and SENCO expectations

A recent study by Dobson and Douglas (2020a) has found that most SENCOs are interested in the role for four main factors which seem to closely align with the systems and recommendations described earlier. The four factors are further grouped as outward- and inward-facing factors. Outward-facing factors are reasons the SENCOs provide to develop and use skills for the sake of others. Inward-facing factors also benefit others but are beneficial for the SENCO as well. SENCOs are interested in performing the role for two outward-facing factors. The first of these is 'inclusion'. Here, SENCOs wish to develop inclusion within their schools settings and develop an ecology of inclusive practice around the child often drawing from policy within the child's macrosystem to do so. The second factor is 'high quality provision'. SENCOs wish to develop high-quality provision for children with SEN by working strategically across the school within the child's exosystem and by working with teachers and other members of staff in the child's microsystem to develop improved educational experiences. The first inward-facing factor is more personal to the SENCO, 'Educational and professional development'. SENCOs are keen to engage in further training and development to develop their own knowledge and improve their capacity to perform the role and enhance the work of others. The second inward-facing factor is to have some form of leadership voice and status. Thus, there is the recognition that in order to facilitate change, they need both knowledge and status. These findings suggest that SENCOs are interested in the role because they wish to work across the ecology of inclusive education that surrounds the child and can work within different systems to strengthen school provision. It is important that schools recognise these desires and design the SENCO role to take advantage of these drivers to mediate practice within the child's ecology.

Conclusions

SENCOs are key actors within English schools. They have the potential to operate effectively within the different systems of the ecology of inclusive education, which holds the child with SEN at its centre (Anderson et al., 2014). However, the role is complex, overwhelming, and is prone to workforce attrition (Curran &

Boddison, 2021; Curran et al., 2018). This is despite many SENCOs demonstrating a willingness to work within the child's systems to develop inclusion and provision (Dobson & Douglas, 2020a). Understanding how the SENCO role operates within these proximal and distal systems that form this ecology provides schools and policymakers alike with a useful theoretical framework. This framework can be used to reflect on how the role can be optimised and strengthened to support children with SEN who lie at the centre to overcome the many adversities faced during their school lives.

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15

A CROSS-CULTURAL PERSPECTIVE OF CHILDREN'S MENTAL HEALTH IN SCHOOL

An exacerbated issue during the COVID-19 pandemic

Keri Ka-Yee Wong

Children's mental wellbeing and education

Mental health, which includes both mental *ill*-health and mental *well*being, is defined as the behavioural, socioemotional, and psychological symptoms that we all experience (Centers for Disease Control and Prevention, 2021). In classrooms, children who have poor mental health find it challenging to regulate their moods, thoughts, and behaviour, which in turn can impact how they think, feel, act, and learn. There is now good evidence that mental health begins in infancy and can have long-term impacts on later life (Kim-Cohen et al., 2006; Wong, Francesconi, et al., 2021). While the majority of students generally have good mental health throughout development, one in seven students aged 10–19 years experiences a mental health disorder (WHO, 2021). These students may also experience poor social development (Evans et al., 2000), academic attainment (Murray et al., 2012), and longer-term impacts such as dropping out of school, self-harming, poor relationships with others (Cefai & Camilleri, 2015; Gariépy et al., 2021), and mental disorders well into adulthood (see review Fryers & Brugha, 2013). Given these statistics, it comes as no surprise that many teachers are bound to face students who need mental health support during their school years. Thus, prioritising good mental health and wellbeing in childhood through early detection and promoting school support can maximise children's life chances and outcomes.

Supporting mentally healthy learners and designing healthy classrooms are not new initiatives for schools, institutions, and governments. Adolescent mental health has been a global priority recognised by the World Health Organization (2021) with mental health initiatives focusing on improving children's learning through teacher instruction, curriculum design, student engagement, and promoting healthy learning environments and learners. Of particular focus are depression and suicide – the leading causes of illness amongst adolescents and the third leading

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cause of death for 15–19-year-olds, respectively. For the same age group, mental health conditions account for 16% of the global burden of disease, costing global economies $US16 trillion by 2030, with no single country currently investing enough to tackle this issue (Patel et al., 2018). Instead, the reality has been substantial funding cuts in community mental health support by governments over the years, which are further exacerbated by the global coronavirus 2019 pandemic (COVID-19), thus the mental health crisis for young people has been brought into even sharper focus, bringing brand new challenges for societies in the years to come (Patel, 2020).

As Plato (1968) said in Book IV of *The Republic*, 'The direction in which education starts a man will determine his future in life'. As children and young people spend a significant portion of their early years in schools, a healthy classroom environment is vital for children's learning and development. According to a survey of 38 OECD countries (OECD, 2014), the average hours spent in classrooms for a primary student is 794 hours a year, which comes to roughly 113 days a year. Hours spent in classrooms are largely unchanged between 2000 and 2009 but do vary across countries (hours): China (408), Poland (423), England (574), Australia (606), Belgium (637), USA (644), and Chile (787). Conversely, spending more time in classrooms do not equate to better attainment. There is more to designing effective school environments for learning, as key 'actors' in the school, the teachers, and the peers, also play a role in promoting children's attainment and development including a wide range of socioemotional skills and mental wellbeing. Thus, maximising the potential for each of these factors can promote children's mental wellbeing in schools and increase their potential for learning.

This chapter examines the promotion of mentally healthy children in classrooms, drawing on evidence and policies from different countries. Taking a global perspective in reviewing the literature is important in understanding today's diverse classroom and in recognising good practices globally that maximise children's life outcomes to achieve a truly inclusive space for learning. This chapter focuses primarily on twenty-first-century perspective of children's health – a perspective built on the influential child psychological studies of the nineteenth and twentieth centuries, including the many laboratory studies of how infants learn and interact with others and naturalistic experiments of children's mental wellbeing and attainment to longitudinal studies that tease apart nature and nurture effects (Rutter, 1998). Today's researchers take a lifespan approach and recognise the social, biological, and developmental factors that may influence children's mental health outcomes (Wong et al., 2018). The premise of this chapter is that schools are well placed to provide young people with the safe space to learn, develop, and grow into healthy individuals. We ask and address several questions: What are the challenges to supporting a mentally healthy classroom? How has the COVID-19 pandemic impacted on children's mental health and classrooms? What has been done and what needs to be done next?

What are the challenges to supporting a mentally healthy classroom and school?

Striving for a mentally healthy classroom has many challenges. Inherent to helping students improve their attainment, teachers must be aware of any learning difficulties and/or health issues. For example, understanding children and young people's mental health development can inform educational curriculum and design (Núñez Díaz, 2020), school mental health support, and at a broader societal level, prevent students from embarking on a career in violence and crime (Wong, 2020; Wong & Raine, 2018, 2019). According to the World Health Organization (2021), 50% of all adult mental health disorders start by the age of 14 years. Most of these disorders are undetected and untreated yet can impact young people's development and attainment (Slominski et al., 2011; Wickersham et al., 2021). While it has been well established that mental health issues have roots in childhood, there are arguably three gaps in our knowledge on how a mentally healthy classroom can be achieved.

A first gap is our limited ability to measure mental health concepts in young children. Until recently, it was thought that young children do not worry or experience anxiety and depression, so there was little interest in assessing these concepts. Hence, most existing instruments to date are for 8-year-olds and up, with almost nothing reliable and valid apart from a few parent-report questionnaires for younger children, and the research on the developmental aspects of childhood mental health has been largely ignored. So, while the majority of children are 'mentally well', it is now recognised that a small subgroup of children do express symptoms of mental ill-health when surveyed (Wong et al., 2014; Wong, Wang, et al., 2021). And as accumulating evidence identifying pre-natal risk factors (e.g., inflammation), genetic risk factors (Barkhuizen et al., 2020; Flouri et al., 2019; Havers et al., 2019), and environmental risk factors are being identified to predict mental illnesses in adulthood, the question is then: Should we be assessing these symptoms earlier on in development? Which developmental period matters the most (Wong, Francesconi, et al., 2021)? In the last two decades, the field has begun to bridge this gap by developing more child-appropriate mental health tools for younger ages. Yet with such practice it raises issues of ethics and stigma caused by labelling children with certain disorders (see discussion later on in this chapter).

A second gap is the lack of cross-cultural studies of mental health in low-income and developing countries. This is driven primarily by the scarce culturally appropriate assessment tools for mental health or psychometrically robust testing of Western-developed scales. Most research on children's mental health comes from Western, educated, industrialised, rich and democratic (WEIRD) countries, and so more cross-cultural comparative studies in non-WEIRD countries are needed to help us better understand how to maximise children's life outcomes globally. To this point, the World Bank has conducted studies to address this gap. In one national representative survey of five countries (Indonesia, Bosnia and Herzegovina, Mexico, India, and Tongo), researchers found that poor mental health was associated

with participants who were older, female, widowed, reported poor physical health, and lived with others (Das et al., 2008). Interestingly, there was no relationship between mental health and poverty of education, but that financial and sudden shocks of illness and crisis can have greater impact on mental health than do levels of poverty – a point we will revisit in the pandemic section of this chapter.

A third gap is the heterogeneity in the provision of mental health support in schools. Teachers are already under extreme pressure to provide adequate academic support for many students at a time, and additional time and funding for further training are often limited. Whilst teachers have been shown to be effective at recognising mental ill-health symptoms in students – for example, UK teachers are encouraged to complete the Mental Health First Aid program – about 20% of teachers across schools report specific gaps in their knowledge about mental health, particularly towards children with special education needs (SEN) (Wall et al., 2019). And although teachers have been identified as playing a key role in student's mental wellbeing in policy documents (Department of Health, 2004), the burden of children's mental health should not fall solely on teachers. At the global level, many schools have adopted a variety of arrangements including working with third-party mental health service providers (e.g., Place2Be), integrating mental health knowledge into school curriculum (e.g., personal, social, health, and economics classes), having in-school counsellors/social workers, Child and Adolescent Mental Health Support (CAMHS) teams (UK), nurses/special needs educators assuming the role, and in some countries (e.g., Australia, the US, Hong Kong, Singapore), teacher's referral mechanisms to external psychiatrists and psychologists. But which methods are most effective?

Currently, a 'three-tiered' approach is the most widely accepted and effective approach in identifying school's mental health needs in both low- and high-income countries (see Fazel et al., 2014a; Fazel et al., 2014b, for reviews). This includes administering assessments to a specific group (Step 1), followed by school mental health professionals processing/interpreting the data to identify students who meet a cut-off score (Step 2), and interviewing/assessing students who meet the cut-off (Step 3). Although these three steps are clear and seemingly practical, the reality is much more challenging and linear in application.

Typically, a school safeguarding lead would complete a student referral which would take on average 56 days for a child to access help – this is upward from the UK government goal of 30 days (Crenna-Jennings & Hutchinson, 2020). At the point of waiting, approximately 26% of referrals are rejected (2018–2019 statistics) – 133,000 children and young people – because children's conditions are not suitable for treatment or do not meet treatment criteria, according to the UK Education Policy Institute annual report mentioned earlier. Take the UK for example, although the current tools used to screen/assess children's mental health (e.g., the Strengths and Difficulties Questionnaire) are valid standardised measures, there is an unstandardised process for an acceptable cut-off score for students to be seen across school districts (e.g., as reflected also by different referral rates around England, and based on district resources). This process alone, though a seemingly good one, can amount to huge burdens and stress for schoolteachers, parents, and social workers alike who simply

do not have the skills to mediate the situation nor the capacity to monitor the child to ensure they remain healthy (i.e. do not self-harm in the process). In a survey conducted by We Need to Talk of 2,000 patients, amongst individuals facing incredibly long wait times one in six had attempted suicide and four in ten had self-harmed (BBC, 2014), and according to a separate Royal College of Psychiatrist press release (Savanta ComRes, 2020), two-fifths of patients waiting for mental health treatment are forced to use the hospital Accident and Emergency units instead. As such, it is simply too little too late to help only those who reach a cut-off score, and more school-based preventive measures need to be in place.

How has the COVID-19 pandemic impacted on children's mental health and classrooms?

Evidently, the mental health issues and challenges presented thus far have come into even sharper focus when the coronavirus (COVID-19) global pandemic hit. In the UK alone, over 77 studies and counting have looked at the impact of COVID-19 on children and young people from different subgroups (see the list by Royal College of Paediatrics and Child Health, 2021). In one large UK study of parent-reported child mental health (N=9,161), researchers documented real fluctuations in behavioural, emotional, and attentional difficulties over the course of the lockdown year (Skripkauskaite et al., 2021). Symptoms peaked at the height of UK lockdown restrictions and school closures, which mirrors adult studies of mental health symptoms in the UK and Greece (Carollo et al., 2021a, 2021b). Young children (4–10 years) were particularly hard-hit compared to adolescents (11–16 years), not to say that young adults were not also impacted (Sideropoulos et al., 2021). As expected, although most children's mental health improved as lockdown restrictions were lifted, on average, children and young people with special education needs/neurodevelopmental disorders and families on low incomes during the pandemic showed sustained high levels of symptoms (Skripkauskaite et al., 2021). Comparable findings were reported in a German cross-sectional study conducted during the most restrictive lockdown period (April 2020). Children aged 3–6 years reported even higher levels of conduct problems and hyperactivity compared with 7–10-year-olds, but older children reported more emotional symptoms (Christner et al., 2021).

While a key limitation to these studies is the lack of baseline measures of children's mental health, longitudinal studies worldwide have addressed this gap. For example, in a nationally representative England survey, researchers found increased levels of mental health issues, particularly depressive symptoms rose from 10.7% (2017) to 16% (July 2020) in 5–16-year-olds, with young women (27.2%) continuing to be the leading group of individuals reporting the highest levels of mental health issues (Newlove-Delgado et al., 2021). More than 25% of children (5–16 years) and young people (7–22 years) reported poor sleep; one in ten children (5.4%) and young people (13.85%) reported 'often' or 'always' feeling lonely. Many more young people wanted to access healthcare services but could not due to

long wait times. Though not always doom and gloom, in the same sample, 54.2% of 11–16-year-olds with probable mental health problems reported that lockdown made their lives worse, while 27.2% said it made their lives better. In a separate study still, the mental health of those already struggling in October 2019 reported improvements in levels of anxiety, increase in wellbeing, and no change in depression (Widnall et al., 2020). Improvements were also seen during the pandemic for children who have had low school, peer, and family connectedness pre-pandemic in October 2019. These mixed findings caution the temporal fluctuations of mental health symptoms and the heterogeneity of individual experiences.

On balance, when examining subgroups of the population, the pandemic seems to have disproportionately affected some subgroups of children more than others globally. Specifically, children with pre-existing conditions like attention deficit hyperactivity disorder, autism spectrum disorder (UK; Skripkauskaite et al., 2021), 12–24-year-olds living with Type-1 diabetes reported moderate stress in 50% of cases (India; Agarwal et al., 2020), 4–18-year olds with chronic lung disease and their parents with high coronavirus anxiety (Canada; Hawke et al., 2021), and young people with pre-existing psychiatric diagnosis were six times more likely to report clinical-levels of depressive symptoms and 4–5 times more likely to report clinical levels of anxiety and post-traumatic stress during the pandemic (USA; Liu et al., 2020) compared to the control group. It is clear that we are all in the same storm but not in the same boat. These findings further highlight the discrepancies in mental health changes and inequalities in recovery for those with pre-existing socioeconomic and health inequalities as evidenced elsewhere (Wong et al., 2022).

In the UCL-Penn Global COVID study (Wong & Raine, 2020), a three-time point study of the impact of pandemic on adult's (18+ years) mental health, we examined the mental health of families with at least one underaged child (<18 years) across time 1 (17 April–14 July 2020) and time 2 (17 October 2020–31 January 2021). We found that parents with young children (4–8 years) had the highest levels of depression across both waves compared to parents with older children (9–12 years and 13–17 years), these parents were also significantly younger than other parents (M_{age} = 39.37 years) (Portnoy et al., 2021). Child externalising problems at time 1 predicted parental stress levels and parental depressive symptoms at time 2, controlling for covariates (e.g., child age, parent age, gender). These findings suggest that both children's and parent's mental health reciprocally interact with each other and should not be considered in isolation. Thus, children's problem behaviours likely influenced parents' stress and depression and vice versa during the pandemic, suggesting that mental health interventions for parents with young children may help during times of disaster.

What has been done, and what needs to be done next?

In light of the pre-/post-pandemic literature on children's mental health, it is clear that widespread heterogeneity in individual mental health experiences, school-level practices, and country-level policies make promoting good mental wellbeing for

children challenging. However, taking a three-tiered systems-approach in schools, where clear mental health support is available at every stage of children's development is important. These mental health provisions should start very early on in development as they can influence children's early attainment, social and coping skills, and later physical and mental health in adulthood, not to mention the costs saved by society in access to lengthy health services, dropout rates, and crime. Three priority areas are highlighted here.

1 **Preventive mental health provision in schools to support all.** School is a hub for learning but is also frequently children's first point of contact to accessing professional mental health support (e.g., teacher referrals, teachers are successful at identifying mental health symptoms). While teachers should not be expected and further burdened to provide professional mental health support, teacher's ability to screen for and monitor changes in children and young people's moods/behaviours is valuable. The field is evidencing a shift towards more mental health assessments in early childhood, though this move has also been met with criticism and ethical concerns, for example, at-risk children far exceed availability of and access to mental health services (Levitt et al., 2007), stigma associated with mental health labels. For example, China's recent policy in 2021 includes investment in compulsory mental health education in all public/private schools, inclusion of a counsellor in every school, and assessment of depressive symptoms in university-goers (Ni, 2021). Though gathering mental health data en masse may be a strong preventive intervention strategy not welcomed by all due to privacy issues, if done with transparency, it may be an effective prevention strategy. As cultural barriers/stigma towards mental disorders are still prevalent (Krendl & Pescosolido, 2020) and spotlighted by the pandemic, there is now a cultural shift in viewing mental health symptoms along a 'dimension of severity', and rather than focusing just on the negative symptoms (illness), there is a push for developing and promoting positive mental wellbeing strategies that benefit *all* children, whether or not they meet the cut-offs for referral or access to services. Particularly effective are programmes that target the individual child (e.g., SEAL teaches children emotional regulation strategies, school-wide anti-bullying programmes), and having adequate funding for school support (Hurry et al., 2021).
2 **Promotion of school-wide mental wellbeing and awareness**. Specifically in schools, education about mental health (e.g., UK PSHE classes, US Health Education Class) and regular 'health' assessments that encompass both physical and mental health conditions are recommended. Schools are safe educational spaces where difficult conversations around mental health issues can be had, myths debunked, and stigma normalised. These recommendations can be achieved only through additional government funding for external support and additional school-based resources for teachers, students, and parents involving, for example, better partnerships between external counsellors/clinicians, schools, and researchers.

3 **Facilitation of more research–educator partnership through co-production.** With the goal of maximising children's life outcomes globally, there is still so much to learn on the topic of children and young people's mental health in schools. The final recommendation would be to close the research-to-practice gap through co-produced knowledge exchange projects/initiatives and co-created solutions between students, clinical practitioners, schools, parents, and researchers. Co-produced research involving key stakeholders takes the form of consortiums and young people's panels and projects funded by charities (e.g., *MQ*, *Mind*) and research council priorities (e.g., ESRC, Nuffield, BERA). Thus, better and more researcher–practitioner partnerships will only benefit the same cause.

Conclusions

Supporting and developing healthy learners and classrooms is an ongoing challenge without which the goal of maximising children's life outcomes cannot be achieved. Against this backdrop of evidence, and exacerbated by the global COVID-19 pandemic, it is clear that we are at the cusp of a sea change. Whether it is equipping schools with better resources, raising awareness around mental health in society, or closing the research-to-practice gap between practitioners and researchers through co-production, it is clear that to better serve our young people's learning, health, and futures, we must work together at every level.

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16

OVERCOMING SCHOOL ADVERSITY FOR LGBT+ STUDENTS

Adam Jowett

Introduction

Young people may experience significant adversity in educational settings as a result of their sexual orientation, gender identity, or gender expression. While most research has focused specifically on lesbian, gay, bisexual, and, to a lesser extent, transgender students, the acronym LGBT+ will be used throughout this chapter. The '+' is used here to indicate that many of the issues identified in this chapter may also apply to a range of other groups including those with other gender and sexual identities (e.g., queer, pansexual, asexual, non-binary); those who are questioning their gender identity or sexual orientation; those who have differences in sex development (sometimes referred to as intersex); and those whose gender expression may be perceived by others to be non-conforming to gender stereotypes. This chapter will consider some of the adversities that LGBT+ youth may experience at school, what impact these challenges have for their academic achievement and psychological wellbeing, and the potential interventions that educators can adopt to make school a safer and more inclusive environment for LGBT+ students.

Sexual orientation and gender identity development

Sexual orientation and gender identity development occur over the lifespan; however, critical developmental stages often occur during one's school years. Much research has found that LGBT+ people retrospectively report feeling 'different' from their peers and display gender non-conforming behaviour from early childhood and develop an awareness of their sexual orientation or gender identity during adolescence (Forssell, 2017). Puberty is a difficult stage in any adolescent's identity development, but it can be even more challenging for those questioning their gender identity or sexual orientation. In many countries, the social environment

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for LGBT+ youth has changed rapidly, mainly for the better. As a result, LGBT+ youth are 'coming out' earlier than previous generations and increasingly during their high school years (Forssell, 2017). However, the social context for coming out will be more supportive for some than for others, and many will conceal their feelings and identities from peers, family, and friends for fear of negative reactions and consequences. Anticipation of rejection may be particularly profound for LGBT+ youth growing up in certain cultural and/or religious communities.

The education system has an important role to play in providing LGBT+ youth with education, advice, and support through this challenging period. A supportive educational environment has the potential to serve as an important protective factor, helping buffer against social stressors such as victimisation, bullying, and family rejection. However, the school environment can also be experienced as a hostile environment for many LGBT+ youth.

LGBT+ bullying and victimisation in schools

It is well documented that LGBT+ youth are at risk of being bullied and victimised at school on the basis of their sexual orientation, gender identity, or gender expression. In the US, GLSEN's (Gay, Lesbian and Straight Education Network) biennial National School Climate Surveys have shown a decline in some forms of harassment experienced by LGBT+ young people over time; however, rates of LGBT+ victimisation remain high. In 2019, 68.7% of LGBT+ students reported having experienced verbal harassment (name-calling or threats) due to their sexual orientation, 56.9% due to their gender expression, and 53.7% due to their gender identity at school (Kosciw et al., 2019). Meanwhile, in the UK, surveys by the LGBT charity Stonewall have found that homophobic and biphobic bullying declined between 2007 and 2017, but still remains prevalent with 45% of LGBT+ students, including 64% of trans students, reporting having been bullied for being LGBT+ in British schools (Bradlow et al., 2017). Similarly, a study in Ireland found over 50% of young LGBT people reported experiencing homophobic bullying at school (Minton et al., 2008). Although relatively little data has been collected on anti-LGBT+ bullying in schools internationally, available evidence suggests homophobic bullying in schools is a problem in almost every region of the world (e.g., UNESCO, 2012).

A hostile school climate and the victimisation of LGBT+ people at school can take many forms including anti-LGBT+ remarks (e.g., 'that's so gay'), harassment (e.g., insults, rumours, threats either verbally or on social media), and physical or sexual assault. Anti-LGBT+ bullying may be based on the actual or perceived sexual orientation or gender identity of the victim. While anyone can be a victim of homo/bi/transphobic bullying (including straight and cisgender students), those who do not conform to gender stereotypes or are perceived as gender non-conforming by their peers (e.g., on the basis of their mannerisms, interests, or gender expression) are most likely to be victimised (Toomey & Russell, 2013). For instance one US-based study found that sexual minority high school students

reported higher levels of violence, sexual assault, in-person bullying, and online bullying compared to their heterosexual counterparts (Kann et al., 2016). Rates of victimisation may vary by school type; for instance Kosciw et al., (2019) found that LGBT+ students attending religious schools reported higher levels of victimisation than those attending non-religious schools.

Although much is known about hostile school climates for LGBT+ youth, studies rarely distinguish between the experiences of trans youth and those of cisgender lesbian, gay, or bisexual youth (Day et al., 2019). LGB students may also be bullied on the basis of their gender expression, however, the experiences of trans and gender-diverse students may be distinct. For instance research suggests that trans youth report experiencing particularly hostile school climates and feel more unsafe at school than cisgender sexual minority youth (McGuire et al., 2010).

Contributors to an institutionally hostile climate

In addition to negative attitudes and harassing behaviours of school peers, there are a wide range of institutional factors that can contribute to school being perceived as a hostile environment by LGBT+ students. These include educational policies that are discriminatory, a failure of staff to intervene when witnessing anti-LGBT+ remarks, and non-inclusive curriculums.

It is important to acknowledge that the absence of interpersonal hostility towards LGBT+ people is not the same as providing an inclusive and safe environment. Education can also be institutionally biased *towards* gender and sexual norms, for example, sex and relationship education that focuses exclusively on, or idealises, heterosexual relationships or school policies that do not consider the possibility of a student being trans. These forms of institutional bias towards the norm (referred to as 'heterosexism' and 'cisgenderism') can operate as a 'hidden curriculum' that indirectly sends a message about what young people should aspire to in future. Research suggests that many teachers take a reactive rather than a proactive approach to LGBT+ issues whereby they are discussed only when raised by students themselves (Harris et al., 2021). Educational silence about LGBT+ identities can make LGBT+ students feel invisible and can implicitly send a message to such students that they do not belong.

Institutional stigmatisation of LGBT+ people takes place within broader social, political, and religious contexts. For instance in the UK, the erasure of LGBT+ people from the curriculum was historically shaped by Section 28 of the Local Government Act (1988–2003) that prohibited public bodies from 'promoting' homosexuality or promoting the acceptability of homosexuality. This led state schools to largely avoid any classroom discussion of sexual orientation and created a climate in which teachers feared proactively challenging homophobia in schools. Even after its repeal, the legacy of Section 28 continues to be felt within the UK education system (Lee, 2019). For example, in 2013, a decade after the repeal of Section 28, the British Humanist Association (2013) identified over 40 schools whose sex and relationship policies replicated the language of Section 28 or

were unhelpfully vague on the issue. Similarly, there are a small number of US states that still have laws prohibiting the 'promotion' of homosexuality in schools (sometimes referred to as 'no promo homo' or 'don't say gay' laws). Research by GLSEN (2018) found that LGBT+ youth attending school in states with 'no promo homo' laws faced more hostile school climates, reported less access to LGBT+ inclusive curricular resources, and felt less supported by their educators. When accounting for states' political leanings, differences in reported anti-LGBT+ behaviours no longer remained; however, regardless of political leanings LGBT+ students in 'no promo homo' states were less likely to have supportive school resources, and teachers in those states were less likely to educate about LGBT+ topics.

Some sections of society continue to argue that anything relating to LGBT+ people is inappropriate for children by default and educators who deliver an inclusive curriculum can risk facing an organised backlash by anti-LGBT+ campaign groups. For example, in 2019, a primary (elementary/junior) school in Birmingham (UK) became the focus of prolonged and high-profile protests because its teachers explained to children that some people have 'two mummies or two daddies'. Anti-LGBT+ campaigners grossly misrepresented what was being taught and claimed that the school was pushing a 'paedophile agenda' (Parveen, 2019). After the protests became intimidating and distressing for staff and students, a high court judge granted an injunction preventing protestors from gathering at the school gates. This case demonstrates why even well-intentioned educators may have trepidation about LGBT+ inclusion and highlights the importance of strong school leadership.

Institutional policies or practices that enforce gender norms, limit gender expression or restrict access to gendered facilities may uniquely impact transgender and nonbinary students (McBride, 2021). For instance Kosciw et al. (2019) found that 58.1% of transgender students in the US reported being prevented from using the toilet/bathroom that aligned with their gender identity and were more likely to avoid toilet/bathrooms at school if the school had policies that were not inclusive of transgender students. Some school policies in this area may be shaped by broader legislation. For example, the US Public Facilities Privacy and Security Act (commonly known as House Bill 2), passed in North Carolina in 2016, compelled schools to restrict the use of sex-segregated bathrooms to those with the corresponding sex listed on their birth certificate. In addition, Kosciw et al. (2019) found that 44.5% of transgender students reported being prevented from using their chosen name or pronouns at school and 20.5% of transgender (rising to 24.1% of non-binary) students were prevented from wearing certain items of clothing based on their gender. School policies that segregate students by sex (e.g., in sports participation) may also pose distinct challenges for transgender and nonbinary students.

Institutional discrimination may also vary by school type. For instance Kosciw et al. (2019) found that students in religious schools were the most likely to report experiencing anti-LGBT+ discriminatory school policies and practices and were less likely to report having access to LGBT+-related school resources or support.

LGBT+ students in rural schools were also less likely to report having access to such resources or support compared to students in urban or suburban schools.

Psychological wellbeing and educational outcomes for LGBT+ students

There is a corresponding body of evidence that has found hostile school climates to be associated with poorer academic attainment and psychological wellbeing for LGBT+ students. For instance anti-LGBT+ victimisation has consistently been found to be associated with school truancy and compromised academic success (e.g., Poteat et al., 2014). Similarly, Kosciw et al. (2019) found that students who experienced higher levels of victimisation based on their LGBT+ identity were more likely to have missed school in the last month, received lower grades than those who were less often harassed, and were approximately twice as likely to report that they did not intend to pursue further education. Over 70% also reported missing extracurricular activities because they felt unsafe or uncomfortable doing so.

In regard to psychological wellbeing, a number of studies have found associations between anti-LGBT+ victimisation at school and suicidality (e.g., Barnett et al., 2019). Furthermore, Barnett et al. (2019) found that anti-LGBT+ victimisation was more strongly associated with suicide attempts than other forms of peer victimisation, suggesting that this type of victimisation is particularly harmful. In addition, Kosciw et al. (2019) found that LGBT+ students who experienced higher levels of victimisation based on their sexual orientation or gender identity reported lower levels of self-esteem, lower levels of school belonging, and higher levels of depression. There is also evidence that the negative consequences of anti-LGBT+ victimisation at school last into adulthood, with several studies finding that LGBT+-related school victimisation was strongly linked to young adult psychosocial adjustment and mental health, including elevated levels of depression and suicidal ideation (Toomey et al., 2013).

While negative outcomes of bullying and victimisation are well documented, recent work has begun to consider pathways to post-traumatic growth (i.e. positive psychological changes stemming from trauma) in LGBT+ people following adolescent experiences of being bullied. Research suggests that for sexual minority adults, such positive outcomes appear to be associated with greater openness about their sexual orientation ('outness') and higher perceived social support (e.g., Ratcliff et al., 2020). Those who are supported to some degree by friends, family members, or teachers appear to fare better than those who receive little, if any, support at school and conceal their identities (Rivers & Cowie, 2006).

This body of evidence is consistent with the minority stress model (Meyer, 2015), which suggests that health disparities between LGBT+ people and the general population can be explained in terms of additional social stressors that stigmatised minority groups' experience. The model distinguishes between distal processes which relate to external conditions (e.g., victimisation, ostracism, and rejection) and proximal stressors which relate to internal processes (e.g., internalised stigma,

anticipated rejection, feelings of not belonging, identity concealment). The model proposes that minority stress, in addition to general stressors that can affect all individuals, can be a significant contributor to psychological distress and mental health problems. However, the model also suggests that the impact of minority stress may be mitigated by factors such as coping resources and the availability of social support. Although individual-level coping resources are important, Meyer (2015) warns against public policy focusing on an individual's *response* to stress rather than the environmental stressors themselves and advocates for a 'community resilience' approach that emphasises the creation of supportive social environments.

Interventions for promoting LGBT+ wellbeing and resilience in education

In response to the well-documented adversities that LGBT+ youth face in educational settings, research has begun to examine interventions for reducing anti-LGBT+ bullying and making schools a more supportive environment. Interventions examined within the existing literature include school policies that explicitly prohibit homo/bi/transphobic bullying, training school staff on LGBT+ issues, inclusive curriculums, and the provision of social support for LGBT+ students.

Sociopolitical-level interventions

Much of the existing literature has focused on school-level interventions; however, Lewis and Kern (2018) emphasise the importance of macro-level legal and education policy considerations for enhancing a school leader's ability to promote LGBT+ inclusion. Equality legislation and inclusive government policies and guidance can be used by school leaders as tools to advocate for taking an LGBT+ inclusive approach and can empower educators to adopt an inclusive curriculum (Mitchell et al., 2014). For example, the UK's Equality Act (2010) places a public sector duty on state educators to tackle discrimination, and the UK Department for Education's (DfE, 2019) statutory guidance on relationship, sex and health education states that LGBT content should be 'fully integrated' into the curriculum. Meanwhile, the Scottish government (2021) has produced guidance for schools on how to support transgender young people. While there is empirical evidence that anti-LGBT+ curriculum laws can constrain LGBT+ inclusion in schools (GLSEN, 2018) and that anti-LGBT+ laws in general have a negative impact on LGBT+ wellbeing (e.g., Hatzenbuehler et al., 2019), further research is needed to examine the impact of inclusive government policies on school practices and student outcomes.

LGBT+-inclusive school policies

School policies play an important role in sending a message that the school is a supportive environment for LGBT+ students. LGBT+ inclusive policies can take

different forms and together can make up an LGBT+ inclusion policy or part of a broader equality, diversity, and inclusion policy, which specifies the ways in which the school will create an LGBT+ inclusive environment. A systematic review of the effectiveness of policy interventions found there is consistent evidence that students in schools with comprehensive anti-bullying policies that included explicit protections based on sexual orientation and gender identity reported lower rates of anti-LGBT+ bullying and higher rates of educator intervention when such bullying occurs (Hall, 2017). Such policies may operate indirectly by promoting a school culture where homo/bi/transphobia will not be tolerated. Alternatively, it may be that schools with such policies simply have more liberal values, where victimisation may be less likely to occur in any case.

School uniform or dress code policies that are gender neutral have been found in qualitative studies to contribute to positive experiences of schooling for transgender and gender-diverse students (Evans & Rawlings, 2019). Policies that allow students to use the toilet/bathroom that aligns with their gender identity and/or the provision of single occupancy 'all gender' toilets/bathrooms and changing facilities can make schools more inclusive of transgender and non-binary students (Bartholomaeus & Riggs, 2017) as well as benefitting any student who feels unsafe in communal facilities or desires greater privacy.

Staff training

While policies are important in developing an inclusive school culture, staff training may help to ensure that such policies are implemented. Research has consistently found that staff who are knowledgeable about LGBT+ issues, who report greater self-efficacy in responding to anti-LGBT+ behaviours, and/or have received relevant training are more likely to intervene when they witness anti-LGBT+ bullying or remarks (Mitchell et al., 2014). In addition to essential training for all (teaching and support) staff, 'staff champions' with specialist training can also act as a useful resource and source of advice for other staff members (Mitchell et al., 2014).

LGBT+-inclusive curricula

Making the curriculum more inclusive to acknowledge LGBT+ people is another strategy to making the school climate more supportive for LGBT+ students. An inclusive curriculum may offer LGBT+ students a sense of validation and counter potential misinformation and negative stereotypes they may encounter from other sources. Studies have found LGBT+-inclusive curriculums to be associated with higher perceptions of school safety and lower levels of bullying (Snapp et al., 2015). In addition, Kosciw et al. (2019) found that students who reported receiving an LGBT+-inclusive curriculum were less likely to have missed school in the past month, performed better academically, and were more likely to plan on pursuing further education.

While it is particularly important that sex and relationship education is LGBT+ inclusive (DfE, 2019), it is considered good practice for LGBT+ people to be represented elsewhere in the curriculum in an age-appropriate way (Chappell et al., 2018). Particular thought may need to be given to religious and physical education as these are areas that can be experienced negatively by LGBT+ students. For example, it is possible to explain orthodox religious teachings on issues such as sex and marriage whilst also acknowledging diversity of religious opinion, including more liberal religious teachings. When directly teaching about homo/bi/transphobia in religious and culturally diverse schools, it may be helpful to draw parallels with racism and intolerance towards different religious groups (Mitchell et al., 2014). Meanwhile, to ensure that physical education is more inclusive of gender-diverse students, schools can tackle gender-based stereotypes about sports and exercise and offer mixed-gender activities (e.g., circuit training and athletics), consider if activities can be delivered in a non-segregated way, or allow all students to participate in sports that align with their interests irrespective of gender (Bartholomaeus & Riggs, 2017).

Providing sources of support for LGBT+ students and their families

Another area of research has focused on how peer support groups, clubs, or societies can improve LGBT+ wellbeing. As mentioned earlier, the minority stress model recognises peer support as an important buffer against the social stressors that LGBT+ people face (Meyer & Frost, 2013). Much research in North America has focused on safe spaces and student-led support in the form of 'Gay-Straight Alliances' – also known as 'Genders and Sexualities Alliances – (GSAs) that are intended to provide LGBT+ youth a network of peer support from other LGBT+ students as well as wider support from cisgender and heterosexual allies.

A large number of studies have found that GSAs are associated with higher perceptions of school safety, lower levels of bullying, lower levels of absenteeism, higher academic achievement, and lower rates of suicidality and depression (see Baams & Russell, 2021, for an overview). Similarly, Kosciw et al. (2019) found that students who had a GSA in their school reported a greater number of supportive school staff, more accepting peers, and reported feeling a greater belonging to their school community. Many studies on GSAs have been cross-sectional and such associations may not be causal (GSAs may be more likely to exist in schools with a different culture and demographic make-up for example); however, one prospective study found students reported stronger perceived safety one year after a GSA was established in their school (Ioverno et al., 2016). In the UK, there has tended to be more of an emphasis on independent LGBT+ youth groups that take place outside of the school setting, however, UK-based LGBT+ youth charities such as The Proud Trust and Just Like Us are starting to work with schools to set up LGBT+ Groups in School Alliances ('GSAs') or 'pride groups'. Irrespective of whether LGBT+ youth groups are delivered at school or in community settings,

research has consistently found social support to be a protective factor for LGBT+ youth (McDonald, 2018).

In addition to peers, staff members can also be important sources of support. For instance LGBT+ 'staff champions' can act as a first port of call for students who need advice, are victims of anti-LGBT+ bullying, or want to talk about LGBT+ issues. In some cases, school-based health professionals (e.g., school counsellors, psychologists, or nurses) may take on this role. School staff may also support parents and carers of LGBT+ students, for example, through signposting them to organisations that support families of LGBT+ people.

Conclusions

This chapter has highlighted the ways in which school can be experienced as a hostile environment for LGBT+ youth as well as providing an overview of interventions to support LGBT+ youth and promote their wellbeing. While there is empirical support for the types of interventions described here, studies have often examined them individually rather than in combination with one another. Taking a whole school approach that implements interventions at multiple levels is likely to be of value and Day et al. (2019) found that those schools that adopted more LGBT+-focused policies and practices were associated with more beneficial outcomes than schools who adopted fewer initiatives. They argue that regardless of the type of intervention, schools that adopt a greater number of LGBT+-focused initiatives may reflect a general index of the school's commitment to a positive climate for LGBT+ students and that this may be a critical protective factor. Similarly, Sadowski (2016) argues that anti-bullying policies, GSAs, or other LGBT+-focused initiatives should not be seen as ends in themselves but "merely as the foundations for schools that are supportive, inclusive and affirming of all LGBTQ students" (p. 14). As such, whole-school change that is committed to LGBT+ inclusion and considers the needs of LGBT+ students, staff, and parents is key.

Much of this chapter has focused on the adversities that LGBT+ young people may face and initiatives to help address such adversities. However, it is important to recognise that many LGBT+ young people successfully cope with adversity, thrive at school, and are educationally successful. Indeed, communicating this message to young people and having LGBT+ adult role models who are living healthy, successful, and productive lives (such as out LGBT+ teachers) can be an important source of hope and resilience for LGBT+ youth (Sadowski et al., 2009). Similarly, while the focus of this chapter has been on LGBT+ youth, inclusive education can have a positive impact on LGBT+ teachers and parents (Wright & Smith, 2015) and as such contributes more widely to community resilience. As central institutions within the community, schools have the potential not only to help LGBT+ students overcome adversity but to positively contribute to a more safe and inclusive society for LGBT+ people.

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ELIMINATING HATE IN COLLEGES/ SCHOOLS OF EDUCATION TO BUILD MULTICULTURAL COMMUNITIES

Festus E. Obiakor

Introduction

On 25 May 2020, in Minneapolis, Minnesota, a black man, George Floyd was killed by a white policeman while three other policemen watched. This resulted in "Black Lives Matter" protests all over the US and the world to highlight the dangers of racial profiling, brutality, shooting, and killing by police. These police actions are not based on love or human valuing – they are all manifestations of hateful and hurtful actions toward "others," especially those who come from culturally and linguistically diverse (CLD) and vulnerable backgrounds all over the world. Looking back, the sad scenario of the policeman's kneeling on George Floyd's neck or his eventual death is symptomatic of problems encountered by Blacks and "others" in educational, economic, political, and social systems of the US and beyond. For example, in many colleges and universities and their Colleges/Schools of Education (C/SOE), individuals from CLD and vulnerable populations are hatefully, hurtfully, and systemically disenfranchised and disadvantaged (Bell, 1992; Harvey, 1999; Lomotey, 1997; Obiakor & Gordon, 2003; Obiakor et al., 2010; Obiakor & Hui-Michael, 2019; Obiakor & Martinez, 2016). As a Nigerian-born African American male who consistently deals with "immigrant otherness" in the American society (Arthur, 2000; Obiakor & Grant, 2005), I have experienced hate and hurt in C/SOE. The question is: what measurably positive can be done about it? In this chapter, I answer this question by using personal narrative to expose my hateful experiences in C/SOE and focus on how hate can be eliminated to build harmonious multicultural communities that can benefit all stakeholders.

Hate as an endemic problem

> Hate is a mundane, everyday phenomenon typically embraced and practiced by ordinary people for ordinary reasons. Research in social psychology suggests that it really doesn't take much to make bigotry operational. Normal individuals who

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> are placed in situations with specific role requirements by credible authority figures tend, with frightening determination, to play the roles to which they have been assigned. Of course, individuals also have some control over their culture; they don't passively have to conform to it, although, unfortunately, many of them do just that.
> (Levin, 2002, p. 78)

Based on Levin's (2002) premise, hate seems to be a part of human existence and can happen insidiously as a person engages another person. As it appears, we have learned to live with hate even as we pretend that it does not exist or rationalize its existence. One thing is clear: it is a divisive act that disregards human valuing (Frankl, 1984; Levin, 2002). For example, we see hate in families, schools, workplaces, communities, states, nations, and our world; and, it has been extremely disruptive, disastrous, and deadly to our lives, institutions, and organizations (Levin, 2002; Obiakor et al., 1997).

Despite multidimensional rationalizations, hate is a deliberate mismeasure of human beings (Gould, 1981); and it demonstrates some blindness on human difference (James, 1958; Levin, 2002). In addition, it is a sadistic offense that has far-reaching hurtful consequences to our humanity. Levin (2002) succinctly posited that:

> When a sadistic offense is committed because a victim is different, there seems to be much reason to suggest that the motivation contains important elements of hate. Sadism is essentially designed to give a perpetrator a sense of power, control, and dominance, but at the expense of a set of victims.
> *(p. 30)*

A logical extension is that hate magnifies the fundamental issues of human inequity, hostility, stereotyping, racism, prejudice, nativism, religious dogmatism, nationalism, xenophobia, brutality, violence, killing, and other forms of close-minded negative actions. Additionally, hate annihilates our unity-of-purpose and destroys our collaborative, consultative, and cooperative spirits. Though hate results from human actions, it is frequently based on meritless endemic or systemic presumptions that are not anchored in reality (Bell, 1992; Levin, 2002; Obiakor, 2018, 2020, 2021).

One can reasonably conclude that hate is an endemic problem that happens in non-free environments where voices are silenced, and people are made to feel invisible (Ellison, 1952). It is a power play that empowers the victimizer and devalues the victimized, vulnerable, disenfranchised, and disadvantaged. Apparently, there is no reasonable rationalization with preventive powers over hate's destructive consequences and effects on afflicted individuals (Bell, 1992; Levin, 2002; Obiakor, 2018, 2020, 2021).

Using personal narrative

As indicated, hate has different forms and it is prone to misinterpretations and misconceptions, especially in democratic environments where people are supposedly free. This makes hate difficult to accurately quantify or qualify – as a result,

reasonable people can overestimate or underestimate it. Even the most hateful person can rationalize his/her reasons to hate and base his/her behaviors on perceived intellectual or personality differences (Levin, 2002). It is rare to see a person who is proud to be called a "hater" or "racist" because of the shameful risks associated with hating. People consistently deny their hateful and racist tendencies and actions, even when they are caught. This is why critical voices and research studies on hate are rarely appearing in educational literature. The truth is that anyone can hate, despite the level of education and wealth; and hate happens in education just like in other aspects of human life! To expose my hateful experiences as a Nigerian-born African American man in C/SOE, I use personal narrative. Though my experiences may be unique and may even have generalizability problems, I experienced hurtful and devastating hate. And I continue to feel the impacts today!

In more ways than one, a personal narrative generates multiple voices and stories that are rarely heard. Gardos (2005) noted that a "personal narrative is a form of autobiographical story telling that gives shape to life experience" (p. 225). Earlier, Maguire (1998) lamented that we have lost our "core vitality – our feeling of having direct contact with the lives we lead, of relating meaningfully with others, and of being individuals in our own right, with our own clear identities" (p. xiii). While a personal narrative is neither a linear story nor a chronology, Heidelberger and Uecker (2009) reiterated that "scholarly personal narrative is a constructivist research methodology that recognizes the researcher's personal experience as a valid objective study" (p. 1). In the same dimension, Neyhart and Karper (2009) urged us to value works that use first-person language even when these works are not done by senior and credible scholars.

Finally, I agree that personal narratives have subjectivity issues; but I also agree that they are strong voices that demonstrate a post-modern approach to knowledge construction. As a result, one can draw conclusions that can lead to broader studies that can also be replicated. This means that mainstream scholars, educators, and related professionals should dedicatedly listen and learn from unique voices like mine and construct new knowledge and new vision for C/SOE and colleges and universities that they are affiliated with. In the end, this new knowledge can stimulate new creative actions. As Bronoski (1966) concluded more than three decades ago,

> When we pursue knowledge for action we learn (among other things) a special respect for a man's [woman's] work. And, when we look into another man [woman] for knowledge of ourselves, we learn a more intimate respect for him [her] as a man [woman]. Our pride in man [woman] and nature together, in the nature of man [woman], grows by this junction into a single sense: the sense of human dignity.
>
> *(p. 115)*

Hate in C/SOE

Based on Levin's (2002) premise, hate happens in minor or major human interactions. It is no surprise that hate is visible in colleges and universities and in C/SOE where people interact as humans. The reality is that when it happens, those who

come from vulnerable backgrounds all over the world suffer its impacts the most since they are not the powerful majority. For example, in C/SOE similar adversities are suffered by people from CLD and vulnerable backgrounds (Bell, 1992; Brown, 2007; Harvey, 1999; Obiakor & Gordon, 2003; Obiakor et al., 2010; Obiakor & Hui-Michael, 2019; Obiakor & Martinez, 2016). While C/SOE are viewed by some as liberal bastions, their ideas and actions do not reflect progressive liberalism. They are very conservative in their structures and find it difficult to shift their powers and paradigms (e.g., the hiring, continuation, tenure, and promotion policies are inconsistent and sometimes based on how individuals are viewed or liked). I saw and experienced these inconsistencies as a student, faculty, program coordinator, and department chair/head. Yes, most C/SOE and their respective departments pride themselves on initiating and building quality educational programs with well-written visions, missions, values, goals, and objectives; however, they are consistently slow at responding to transforming themselves (Obiakor & Rotatori, 2014). Though people in C/SOE are highly educated professionals, I have experienced their politics of hate; and I have witnessed them assassinate ideas and damage whatever they think is different from their presumed norms.

Clearly, human beings are human beings, wherever they live or work. C/SOE may have structural differences with mainstream communities; but they educate, prepare, and employ students and adults who are also community members. As a result, we cannot divorce what happens in C/SOE from what happens in our communities. As someone who has experienced hate in C/SOE, I can say that people who come from CLD and vulnerable backgrounds encounter victimizations that are results of racism, hatred, xenophobia, exclusion, white supremacy, linguistic bigotry (e.g., accent), religious dogmatism, prejudicial assumptions, to mention a few (Beachum & Obiakor, 2018; Obiakor, 2018, 2020, 2021; Obiakor & Beachum, 2005). Outside the window dressing, these institutions harbor traditional values that silence new voices, make people from CLD and vulnerable populations invisible, and engage in hateful actions.

On the basis of my experiences, many C/SOE in the US continue to indicate their willingness to tackle diversity and race-related issues. But, in reality, when quantified, they have failed on these issues, thereby stifling innovations. As noted, while these institutions are excellent in academic and intellectual preparations, they are overwhelmed with visible "Whiteness" that invokes fear. For example, as thoroughly prepared as I was, I felt enveloped by "Whiteness" as a student, faculty, program coordinator, and department leader. My "otherness" as an immigrant created some stressful loneliness since I rarely saw myself in these institutional environments. However, I was able to dig deeper into my spirituality to dislodge my fears – I did not want my fear to strip me of my human dignity. Chafin (1981) rightly unveiled that:

> Fear is the emotional reaction usually caused by the presence or possibility of danger, evil, harm, or great misfortune, whether real or imagined. It is an emotion that is with us constantly at every stage of life, and if uncontrolled, can strip us of our sense of well-being and happiness.
>
> *(p. 110)*

Studying at C/SOE

As a Nigerian-born African American student, I experienced the kind of hate that could have discouraged even the most determined person. Some of these hateful experiences may be rationalized as institutional policy or prejudice; however, they were intentional and preconceived to dissuade, intimidate, and exclude an "other" person like me. Here are a few examples that show different levels of hate in C/SOE (e.g., political, structural, interpersonal, pedagogic, and colonially minded):

- As a Nigerian-born African American student, to get admitted into my Master's degree program in Special Education, I had to take the Test of English as a Foreign Language (TOEFL) even though English language is the lingua franca of Nigeria. I later found out that people from Europe who were less proficient in English were exempted from taking the test. I did not know why I took the test because I was the Senior English Master at Oba Girls Secondary School, Oba, Anambra State and Iheme Memorial Secondary School, Arondizuogu, Imo State in Nigeria, a former British colony. Why do we continue to require these tests that are not good predictor variables about people's intelligence and survival?
- As a graduate student, though I was a clean and sharp dresser, my White peers found it difficult to involve me in group works or even sit next to me in class. I had the psychological burden of being treated as an "other" in the class and the professor did nothing to manipulate the learning environment! When my classmates found out that I was very brilliant and doing better than them in class, they all wanted to hang out with me and sit next to me. Why did my classmates initially misperceive me and my intelligence?
- When I tried to ask questions in class, some of my White professors found it offensive. As a result, I stopped asking questions. This forced me to study harder to maintain A grades. The wonderful contributions that I could have made were lost because I was silenced and made to feel invisible. Why did my classmates not value my voice?
- Some of my White professors hesitated to give me the A grade that I earned. You can actually see the pain on their faces. For example, one professor gave me a B+ grade and said, "Nobody has ever made an A grade in this course"; and I responded, "There is always a first time for everything." I literally saw tears in his eyes – I really felt sad for him. Why did the professor feel so bad to give me the grade that I earned?

Working as a professor in C/SOE

Many students, faculty, staff, administrators, and leaders from CLD backgrounds have been hatefully and professionally destroyed in the US by colleges and universities and their SOE (Bell, 1992; Brown, 2007; Harvey, 1999; Lomotey, 1997; Obiakor & Gordon, 2003; Obiakor et al., 2010; Obiakor & Hui-Michael, 2019).

As a Nigerian-born African American man, I never doubted my capability or resiliency as a professor; yet my trepidation was inevitable – not because I doubted my determination and skill sets but because of the overwhelming "Whiteness" surrounding me. Before long, I saw myself as a role model and a voice for the voiceless. I was frequently the first African American faculty or the first Black male faculty in my department or college/school. Despite my quandaries, I excelled in my job as a professor because I created opportunities to grow, mature, and become well-known as a teacher, scholar, and professional. And I continue to wonder why I experienced unconscionable adversities such as hatred, racism, xenophobia, linguistic bigotry, unrealistic expectations, and prejudicial presumptions (Obiakor, 2018, 2020, 2021). The following are a few examples.

- On one unforgettable occasion, I came to my office and saw a picture of a man hanging from a tree. That was scary to me; but one White male colleague thought that it was funny and jokingly reminded me, "This is the South." Why did this colleague remind me that this was the South?
- I went to use the bathroom and a White male colleague of another department in a premier urban Research 1 University came in. All of a sudden, he said: "Can I use the bathroom?" I responded: "Sure!" I waited outside to know why he asked me that question and he responded: "When you all clean the bathroom, you do not like to be disturbed." This White male colleague was a retired superintendent and permanent adjunct professor in the COE while I was a full professor in the COE. Why did he ask me the question?
- As an immigrant Black professor, I discovered that my student evaluations never reflected instructional feedbacks. These evaluations were always about my accent and unrelated issues (e.g., the jokes that I told and my discussions about caring and cultural sensitivity/responsiveness). Why does my accent matter?
- During the semester, I observed that one White male student was nonchalant and rude during class discussions, and I decided to meet with him to find out how I could help. He told that he did not listen to anybody who had different values from him. As an example, he noted: "You are a Muslim from Nigeria and I am a Catholic from America." In my response, I told him that I am a Catholic with priests and nuns in my family. And he boldly responded: "It doesn't matter! You are different." Why did my religion and country of origin matter?

Serving as a leader at C/SOE

Based on my experiences as a student, faculty, administrator, and leader in C/SOE, there appears to be a dearth of foreign-born African Americans in leadership structures. The reasons for their lack of presence are unclear; but, this lack of presence is disgraceful and shameful, especially when one reads the mission and vision of C/SOE in the US. Simply, the lack of presence of foreign-born African American leaders shows a very serious lack of leadership vision in colleges and universities.

I served as a leader in several C/SOE; and serving on leadership roles was remarkably rewarding to me as a human being who happens to be a Nigerian-born African American man. Sadly, as a leader, I was the first Black full professor, program director, program coordinator, or Department head/chair in the C/SOE and university. In all cases, I experienced dehumanizing hate. Consider a few examples:

- I interviewed for deanship and visited more than 50 campuses as one of the top candidates and never landed one of the deanship positions. In this regard, I was unsuccessful in destroying the ruthless and dangerous glass ceiling in C/SOE. In my personal research and contacts, I found the reasons for my lack of employment to include (a) publishing too much, (b) being arrogant, (c) being too proper in my dressing, (d) having accent, (e) not fitting in, (f) having moved a lot, (g) laughing a lot, (h) being too serious, (i) being too qualified and too much, and (j) being well known. These weak reasons are based on hateful assumptions that prevented me from achieving one of my life's professional goals. And these experiences have had socio-emotional, psychological, economic, and financial impacts on me and my family. I continue to ask myself: why are C/SOE hesitant to hire foreign-born African Americans?
- As a department head/chair, I advanced my departments and got through national recognitions and accreditations. However, some of the senior faculty engaged in intimidating power plays against me. Many White professors agitated for raises even when they did less departmental works. Consistently, White power and privilege were on display. Why were non-supportive consistent power plays in the C/SOE?
- Discourses on equity generated tremendous oppositions. One faculty member once told me that "since we hired you we began talking about equity." One could sense visible animus and hate during faculty meetings.
- As a department leader, I found that many White faculty members discouraged and hated discussions on recruitment, retention, graduation, tenure, and promotion when they focused on CLD students, faculty, staff, and leaders. Why should equity be problematic in C/SOE?
- As a leader who is also known nationally and internationally, I introduced international collaborations to my departmental colleagues. They like contacts from Europe but hated contacts from other regions of the world; yet global education and intercultural connections are visible C/SOE mission and vision statements. I continue to ask myself: why are there discriminations on global contacts?

Building multicultural communities in C/SOE

To build multicultural communities in C/SOE, we must shift paradigms on how we respond to hate. Since hate is an endemic problem that creates systemic disruptions, how C/SOE respond to it exposes institutional willingness to grow. In other words, we must be multidimensional on how we deal with hate and its

consequences. And we must go beyond acknowledging that hate happens or that "racism is an integral, permanent, and indestructible component of this society" (Bell, 1992, ix). This means that we must (a) understand all the instruments or adversities of hate, (b) live and lead with a human touch, and (c) value the intricacies of our sacred existence in a world so beautiful, but sometimes scary (Lenehan, 1997; Obiakor, 2018, 2020, 2021; Obiakor et al., 2007). Additionally, we must believe in change not for the sake of change, but because hate is an extremely corrosive poison that destroys change.

Clearly, educators, scholars, professionals, and leaders must make frantic efforts to eliminate hate and build harmonious communities. It is critical that C/SOE develop initiatives to buttress knowledge about historical contents and contexts, emotional intelligence, and racial/cultural valuing for all stakeholders. Further, all stakeholders must be involved in campus-wide "hearty" and fearless conversations that primarily focus on hate, race, discrimination, and bigotry. In the end, institutional commitments must broadly and specifically target the following strategic actionable areas:

- **Creating emotional intelligence initiatives:** It is important that emotional intelligence programs are instituted in C/SOE to counterbalance hate, a sign of emotional ineptness. Such programs will infuse human valuing and problem-solving skills that are devoid of prejudicial judgments (Goleman, 1995; Long, 1997; Palmer, 2000). The hope is to reduce disasters like campus shooting.
- **Developing spiritual enhancement initiatives:** It is spiritually wrong to hate. When we search our souls, we feel motivated to think about our conscious and unconscious biases in C/SOE. In fact, some portions of the Bible, Koran, Talmud, and others could be used as teaching tools in nonreligious manners. Spirituality can be fostered without infringing on religiosity (Chittister, 1999; Obiakor, 2001, 2021; Palmer, 2000).
- **Institutionalizing fluffy words/actions initiatives:** Fluffy words/actions should be highlighted at institutional levels to build kind communities. It is necessary that educators, scholars, and professionals in C/SOE master the use of kind, soulful, warm, inspiring, respectful, and good-natured words (e.g., "good job," "thanks," "well-done," "way to go," "impressive," and "fantastic"). C/SOE can do receptions and give award certificates to honor people who have done exemplary activities. We should fairly honor people to make sure that everyone feels welcomed in the work unit, department, or division (Long, 1997; Obiakor et al., 2007; Palmer, 2000).
- **Instituting measurable multicultural initiatives:** It is critical that we go beyond safe spaces. We must connect the safety dots on campus since everything has everything to do with everything. For example, many CLD parents (e.g., African American parents) may be worried and afraid of police harassments, brutalities, and killings, especially as their children leave home for college. C/SOE must design measurable multicultural programs that focus on social justice and civil rights. Institutional environments must encourage

healthy work situations and uplifting discourses. By engaging in these initiatives, persons, voices, stories, and differences are non-fraudulently valued (Obiakor & Smith, 2012). Simply, creating nonpunitive multicultural environments can uplift conscientious communities, and vice versa.

Conclusions

In this chapter, I use personal narrative to expose my hateful experiences in C/SOE and focus on ways to enhance harmonious multicultural communities. Based on my experiences, C/SOE environments are still dominated by "Whiteness" and "White power." In such environments, "others" who come from CLD and vulnerable backgrounds feel measurably and sadistically devalued. In C/SOE, based on my experiences, those with assumed power bully and dehumanize fellow humans. My experiences also tell me that though hate has far-reaching negative effects, it is a learned behavior that can be unlearned. As a result, C/SOE must dig deeper to reverse traditional thinking, behaviors, techniques, and policies. Additionally, they need changes and shifts in power and paradigm in reversing retrogressive beliefs and programs (Chittister, 1999). It is imperative that C/SOE proactively hire innovative thinkers and leaders with human touch, and measurably recruit, retain, graduate, and promote CLD students, faculty, staff, administrators, and leaders.

Finally, our old ways of thinking and doing have failed us in C/SOE when it comes to hate; but we can learn a lot from our failures and mistakes. As indicated, to eliminate hate on school and college campuses, we must incorporate "fluffy" words, ideas, and actions into our personal dispositions, human interactions, pedagogical powers, and institutional values. And, the C/SOE must build collaborative, consultative, and cooperative goal-directed initiatives to reduce the violence of hate. In the conclusive words of Levin (2002),

> The violence of hate is unlikely when diverse people have developed a tradition of friendship, cooperation, and mutual respect, when the members of one group are not seen as a threat or a challenge to the opportunities enjoyed by another, and when the individuals in the group are widely regarded as making an important contribution to the well-being of society.
>
> *(p. 97)*

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18

INDIGENOUS (ABORIGINAL, FIRST NATIONS) STUDENTS OVERCOMING ACADEMIC ADVERSITY

The roles of educational resilience, motivation and engagement, and teacher–student relationships

Andrew J. Martin, Lauren Tynan, Rebecca J. Collie, Michelle Bishop and Kevin Lowe

Many of the barriers facing Indigenous, Aboriginal, and First Nations students (terms we recognize are colonial constructs but use them in line with predominant nomenclature) are historical, structural, social and, with reference to the practices of schooling, foundationally epistemic. Past government policies of exclusion and assimilation continue to impact Indigenous students and their families (Bishop & Durksen, 2020; Ranzijn et al., 2009). These historical barriers are also perpetuated in the structure of schooling where Western knowledge, curriculum, and pedagogy styles are prioritized (Brown, 2019; Harrison et al., 2019; Martin, 2006) alongside a deficit view of Indigenous students' achievement (Bodkin-Andrews & Carlson, 2016; Fforde et al., 2013; Patrick & Moodie, 2016). Indigenous students face disproportionately higher rates of racism which can also lead to increased absenteeism and retention levels throughout schooling (Bodkin-Andrews et al., 2013). Hence, on many measures, Indigenous students achieve at significantly lower levels than non-Indigenous students (e.g., Trudgett, 2013). This is the case in Australia (the focus of this chapter) and in other parts of the world (e.g., United Nations Economic and Social Council, 2013).

Indigenous students thus experience significant academic adversity. The present discussion examines this academic adversity and some key psychoeducational factors that may assist Indigenous students to navigate adversity to better support their educational development. Three such factors are explored: educational resilience, motivation and engagement, and teacher–student relationships – each having been previously identified as implicated in how students can resolve educational disadvantage and adversity (Martin, 2003, 2006; Martin et al., 2013a, 2013b; Martin & Marsh, 2008, 2009).

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Thus, this chapter focuses on how to navigate academic adversity from a psychoeducational disciplinary perspective. The psychoeducational research and ideas presented here are perspectives aimed at complementing Indigenous-led education initiatives and the vital work involved in teachers engaging in critical (cultural) self-reflection to build an understanding of their own axiology and ontology that impacts their interactions with Indigenous students (Bishop & Durksen, 2020). It is acknowledged that this disciplinary perspective is inevitably grounded in colonizing concepts of 'helping' Indigenous people (Norman-Hill, 2019), Eurocentric epistemologies (Bodkin-Andrews & Carlson, 2016), a context of structural racism (within schooling and society more broadly), and a Western model of education that was brought to countries like Australia through colonization (Bishop & Vass, 2020; Bodkin-Andrews et al., 2013). What we propose here is an effort toward initiating thinking about educational resilience, motivation and engagement, and teacher–student relationship factors as relevant to Indigenous students so that Indigenous-led educational initiatives can consider the appropriateness and potential for adapting these factors to the Indigenous education space.

Academic adversity

While it is the case that important educational progress has been made by Indigenous students, unfortunately, students continue to face significant academic adversity, exacerbated by disproportionate rates of racism in schools and structural inequity (Andersen & Walter, 2010; Vass, 2016). This adversity, so starkly identified in the systemwide review into Aboriginal education in schools (NSW AECG and NSW DET, 2004), has a cascading effect, with Indigenous students experiencing ongoing lower academic achievement across key indicators for reading, numeracy, and scientific literacy (Australian Curriculum, Assessment and Reporting Authority, 2017; Martin, 2016; Martin et al., 2013b). Here we first address some major adversities and then outline encouraging progress that demonstrates what is possible when major academic and structural barriers are addressed.

By Grade 5, when students are approaching a key elementary-to-secondary school transition, there are significantly more Indigenous students than non-Indigenous students who are at or below minimum reading and/or numeracy standards (Education Council, 2015). By Grade 9, about 30% of Indigenous students (compared to approximately 5–10% of non-Indigenous Grade 9 students) are at or below the minimum reading and/or numeracy standards (Department of Prime Minister and Cabinet, 2018), though questions have been raised about the cultural appropriateness of such national standardized tests (Lingard et al., 2012). Moving further along the educational experience, whilst Indigenous students' Year 12 attainment has increased from 47% in 2006 to 65% in 2016, the transition from secondary to higher education includes many barriers for Indigenous students who comprise only 1.7% of the domestic higher education student population (Department of Prime Minister and Cabinet, 2018).

There are challenges on other educational fronts. For example, relative to non-Indigenous students, Indigenous students have higher absenteeism, higher levels of school exclusion (suspensions), lower retention rates, and poorer post-school education enrolment rates (e.g., Department of Prime Minister and Cabinet, 2018; Lester, 2016; Martin, 2006; Martin et al., 2013a, 2013b). However, absenteeism and low retention rates may be a student's agentic response to racism and a sense that school is not a safe place to be (Bodkin-Andrews et al., 2013) – a sense that has substantial basis in fact by way of colonization, assimilation, the White Australia policy, and the Stolen Generations (Norman-Hill, 2019). Indeed, there is a long history of systemic educational alienation largely beginning with and emanating from mission and residential schools which set up a 'legacy of continuing policies of child removals through the stages of separation, assimilation, integration, and "self-determination"' (Norman-Hill, 2019, p. 67). Bishop (2021) argues that often Indigenous students bear the burden of responsibility to work/try harder without a critical look at the system of mass, compulsory schooling. We humbly acknowledge in this chapter that our efforts to focus on psychoeducational factors to assist Indigenous students navigate academic adversity may have potential to contribute to the pressure placed on Indigenous students to respond to systemic discrimination through individual effort. This is not our intention. Rather, we seek to offer these Eurocentric perspectives for Indigenous-led education initiatives to deem as appropriate for Indigenous students and to adapt as relevant.

It is important to recognize some educational progress has been made. Thus, even though there are discrepancies on many indicators if measured against non-Indigenous students (and must therefore continue to be the focus of educational practice and policy), improvements among Indigenous students have been noted. These include increased enrolments in preschool and school; improvements in school completion; some narrowing of literacy and numeracy gaps; gains in grade progression and retention; improvement in vocational and training enrolments; and gains in undergraduate degree enrolments (Australian Bureau of Statistics, 2016; Department of Prime Minister and Cabinet, 2018). Of course, these indicators of Indigenous scholastic success are still framed and valued in terms of the structures of the colonial education system. And, at the same time, it is not uncommon for others to see Indigenous academic failure to be located within Indigenous peoples themselves (Norman-Hill, 2019). Indeed, when examining Indigenous students' educational resilience, motivation and engagement, and teacher–student relationships, particularly when comparing to an elusively homogenous group of 'non-Indigenous' students, it is critical to guard against deficit inferences when there are such major systemic and structural barriers in their lives that most other students do not experience (Morgan, 2018).

Educational resilience

Educational resilience refers to students' ability to successfully navigate and overcome academic adversity. Educational resilience comprises academic buoyancy which involves successfully navigating low-level 'everyday' setbacks in the ordinary

course of academic life (Martin & Marsh, 2009). Educational resilience also comprises academic resilience which refers to successfully navigating major (chronic or acute) academic adversity (Martin, 2013). Examples of academic buoyancy include successfully dealing with study stress, multiple deadlines, a poor result, negative feedback from the teacher, and so on. These are seen as 'everyday' low-level academic adversities that all students experience in the course of school life. Examples of academic resilience include successfully navigating chronic underachievement, learning difficulty/disability, low socioeconomic status, poor mental and/or physical health, and so on (Martin, 2013; Martin & Marsh, 2009). Both academic buoyancy and academic resilience (under the umbrella of educational resilience) have potential to assist Indigenous students to respond successfully to academic adversity.

Educational resilience has been found to impact students' academic and non-academic outcomes. For example, Martin and Marsh (2006) found that academic buoyancy is a predictor of student self-esteem, class participation, and school enjoyment. Their subsequent research found that academic buoyancy predicts positive academic intentions, homework and task completion, and is negatively associated with absenteeism (Martin & Marsh, 2008). Moreover, because Indigenous students experience major systemic and structural barriers (Morgan, 2018) that have deep roots in a history of colonization, assimilation, the White Australia policy, the Stolen Generations, and schooling practices based on removal and integration (Norman-Hill, 2019), we suggest that academic resilience may be especially important for navigating these barriers. Therefore, promoting Indigenous students' educational resilience is one part of a multipronged response to tackling academic adversity; there are major structural, institutional, and societal factors that are beyond the Indigenous student's control and are the responsibility of others to address (e.g., Brown, 2019; Fforde et al., 2013; Norman-Hill, 2019; Patrick & Moodie, 2016; Ranzijn et al., 2009).

Martin and Marsh (2006; see also Martin et al., 2010) have identified factors to enhance educational resilience. They proposed the 5Cs of academic buoyancy that may be targeted in intervention efforts: confidence (self-efficacy), coordination (planning), commitment (persistence), composure (low anxiety), and control (low uncertain control). Encouragingly, intervention research has shown that these factors can be boosted (Martin, 2005, 2008). In a subsequent investigation Martin and Marsh (2008) also identified the importance of nurturing positive interpersonal relationships to build educational resilience, discussed in detail later. There is now a need for Indigenous-led research to explore to what extent and how these factors may be appropriately and meaningfully adapted for Indigenous students.

Motivation and engagement

Alongside educational resilience, researchers have emphasized the need to better understand the role of motivation and engagement in Indigenous students' academic development. In the academic domain, motivation and engagement refer to students' inclination, energy, drive, and actions to strive and achieve at school

(Martin, 2007, 2009; Martin, Ginns, et al., 2021). Motivation and engagement are well-established factors implicated in Indigenous students' academic life. For example, self-efficacy (or self-concept; Craven et al., 2005) has been identified as important for Indigenous students' educational outcomes (Purdie et al., 2000). Research shows that recognition of Aboriginal Cultural Knowledge in the classroom can also promote Indigenous students' valuing of education (Donovan, 2015).

Aronson et al. (2002) suggested that problematic motivational beliefs among ethnic minority students (in their work, African American students) may be associated with 'stereotype threat'. This refers to the burden on students when they face stereotypes that frame them as inferior due to, for example, their race or ethnicity (Aronson et al., 2002). Martin, Ginns, et al. (2021) speculated that this may also apply to Indigenous students who have a history of negative stereotypes, negative expectations, and educational disadvantage. Indeed, Dandy et al. (2015) demonstrated stereotype threat is in fact experienced by Indigenous students in Australia. These stereotypes are particularly potent for Indigenous students because they are not only based on negative beliefs held about them (now internalized) but also reflected in literal truth by way of actual behaviors and practices toward them that are fundamentally diminishing (Bodkin-Andrews & Carlson, 2016; Moodie et al., 2019).

The motivation and engagement of Indigenous students has also been the focus of large-scale correlational research. Martin, Ginns, et al. (2013a) found that Indigenous and non-Indigenous students were broadly similar in mean levels of positive motivation and engagement (e.g., valuing, mastery orientation, task management, persistence, planning). Notably, however, Indigenous students scored significantly higher on negative dimensions of motivation and engagement (e.g., anxiety, failure avoidance, low control, disengagement, self-handicapping). Indeed, higher scores on these negative motivation factors (such as a low sense of control) may also translate to lower academic aspirations, which have been identified as one factor in Indigenous students' difficulties in navigating through and beyond school (Mission Australia, 2016), as well as inappropriate funneling into non-academic tracks when the student is in fact academically capable (Lowe et al., 2014). Martin, Ginns, et al. (2013a) concluded that there seemed to be a motivational readiness among Indigenous students to engage positively with academic life but in the presence of problematic patterns of motivation and engagement (alongside well-known systemic and institutional barriers; Lowe et al., 2019; Ranzijn et al., 2009), this readiness may be impeded. It was also illuminating to note that the 'negative' effects for Indigenous students tended to decline after controlling for socioeconomic indicators. This suggests that at least some of the problematic motivation is a function of lower socioeconomic status (that is also a result of a history of exclusion, segregation, and forced disconnection from culture; Ranzijn et al., 2009).

Martin, Ginns, et al. (2021) extended that research by implementing a multilevel design (student- and school-level analyses). They found significantly lower mean levels of motivation and engagement among Indigenous students (like their 2013a study) – and on some factors, greater school-to-school variation in motivation and

engagement for Indigenous students (relative to non-Indigenous students). This latter finding suggested that some schools seem to do a better job of motivating and engaging Indigenous students. Importantly, after controlling for gender, age, socio-economic status, and prior achievement, the differences between Indigenous and non-Indigenous students were markedly reduced (replicating their 2013a finding). Interestingly, results also demonstrated that Indigenous students' positive motivation and engagement predicted academic outcomes to a significantly greater extent than their negative motivation and engagement predicted these outcomes.

These findings have educational practice implications aimed at supporting Indigenous students' academic motivation and engagement. The findings suggest it is important to target Indigenous students' low control, failure avoidance, self-handicapping, and disengagement (the negative motivation factors) so that their positive levels of adaptive motivation (self-efficacy, valuing, mastery orientation, persistence, etc.) can shine through. For low control, students are encouraged to see the connection between effort (controllable) and academic outcomes (Martin, 2007, 2009). At the community level, policy efforts to build students' control may involve greater emphasis on Indigenous community input on relevant components of curriculum and resource selection (Bishop et al., 2021; Lowe et al., 2019) and the application of high-quality relational teaching and learning practices (Burgess et al., 2019). With regard to failure avoidance, self-handicapping and disengagement, it is important to tackle students' fear of failure (Covington, 2000) – identified over many years as a problematic feature of Indigenous students' motivation (Groome & Hamilton, 1995; Martin, 2006). This can be achieved by supporting students to understand that the identification of 'mistakes' and 'poor assessment performance' is aimed at providing diagnostic information to guide their future learning (Covington, 2000; Martin & Marsh, 2003) and is not an assessment of their educational inabilities or reflective of their worth as a person (Harris et al., 2018; Martin, 2006). There is also a need to address system-level deficit discourses about Indigenous students (that comprise low expectations and failure expectations among Indigenous students) (see Dandy et al., 2015).

Teacher–student relationships

Interpersonal relationships are important for building and sustaining students' academic and non-academic outcomes (Martin et al., 2009). Relationships with teachers, parents/caregivers, and peers are three highly influential interpersonal connections in students' academic lives (Martin & Collie, 2016). Interestingly, of the three, teacher–student relationships have been found to have the strongest link to students' academic motivation and engagement (Martin et al., 2007) – but there is a need for research to explore the comparative effects of Indigenous students' relationships with Aboriginal Education Officers (or similar) in the school, their local community, and country.

Positive teacher–student relationships act as a buffer against stress and become an influential source of daily emotional support and assistance with academic tasks

(Martin & Collie, 2016); quality teacher–student relationships can in part offset the well-established decline in student motivation that occurs from beginning to end of each school year and is particularly prevalent after the transition from elementary to secondary school (Martin & Collie, 2016; Mahatma et al., 2012); and, teacher–student support is associated with academic buoyancy and motivational resilience (Martin & Marsh, 2008; Pitzer & Skinner, 2017, respectively).

Although the bulk of this research has been conducted amongst non-Indigenous students, research conducted amongst Indigenous students has suggested much the same (see, for example, Donovan, 2015; Groome & Hamilton, 1995; Martin, 2003) – reinforcing the important role that positive teacher–student relationships play in Indigenous students' academic lives, including their responses to academic adversity. This being the case, it is particularly concerning that many Indigenous students experience difficulties and problematic interactions with their teacher (Bishop & Durksen, 2020). Vass (2012) explains that an absence of positive and supportive teacher–student relationships acts as a barrier for successful educational transitions for Indigenous students. Additionally, it is now increasingly understood that teachers who can relationally engage in explicating local Indigenous knowledges within the classroom are more likely to have a positive impact on Indigenous students' learning (Burgess et al., 2019). This suggests the potential educational validity of Indigenous-led educational initiatives that pay respect to Indigenous knowledges and challenge the privileging of Eurocentric knowledge and colonial education structures.

Some researchers have suggested that teacher–student relationships are one part of a broader relational framework when it comes to enhancing Indigenous students' outcomes (Lowe, 2017). It has been suggested that there are three levels of relationships relevant to educational outcomes for Indigenous students (Munns et al., 2008; see also Martin, 2003, 2006; Martin & Dowson, 2009). The first is the relationship with school. This involves a daily active connection with the school and is facilitated by positive connections with the Indigenous community, authentically embedding Indigenous perspectives in the curriculum and explicitly placing the educational, health, and social interests of Indigenous students as a priority. The second is the teacher–student relationship. This involves teachers getting to know students, building and sustaining trust within the classroom, and enhancing teachers' cultural knowledge of students with whom they need to positively connect. The third is the pedagogical relationship. This involves connecting with students through the practice of teaching itself. It comprises effective instructional strategies, challenging and interesting work, and positive expectations for students.

Other relational practices highlight the importance of teachers having good knowledge of learning theory and learners (including their prior experiences and home environment), the teacher organizing the classroom and lesson activities to facilitate student learning, teachers suspending personal judgment (including stereotypes and deficit perspectives), and fostering learning environments where a variety of views, both historical and epistemic, are explored and respected (e.g., Burgess et al., 2019; Lowe et al., 2021). Of course, much of this is simply regarded

as good teaching (from a predominantly Eurocentric education perspective). It is important to now understand the extent to which each of these practices resonates with Indigenous students and what they value and believe best benefits them. Indeed, Rigney (2020, p. 582) argues for teachers to 'redesign their pedagogical practice to realize the Aboriginal child as competent knowledge producer for change,' while Bishop and Durksen (2020) implore teachers to engage in critical (cultural) self-reflection to build an understanding of their own axiology and ontology. In doing so, Indigenous students are better placed to navigate academic adversity through school – and beyond.

Conclusions

Indigenous students are among the most disadvantaged students in Australia. They experience significant academic adversity that must be addressed in order for them to achieve to potential. The present chapter addressed three factors that hold promise for assisting Indigenous students in the face of academic adversity: educational resilience, motivation and engagement, and teacher–student relationships. The chapter also identified positive practical approaches to building these three factors into Indigenous students' academic lives. Without question, there are many other factors implicated in Indigenous students' academic development – at school, community, and national levels. Our psychoeducational contribution is thus one part of a multidimensional effort toward enhancing educational access and equity for our First Nations children and young people.

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OVERCOMING ADVERSITY FOR MARGINALISED ADOLESCENT GIRLS IN ZIMBABWE

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Context and risk factors for girls' education globally

We are experiencing one of the largest education crises the world has ever seen, negatively impacting the education of students worldwide. At the height of the first wave of the COVID-19 pandemic, globally 214 million students from 23 countries missed at least three-quarters of lesson time, with 168 million students from 14 countries missing all their lesson time (UNICEF, 2021, p. 2). International, national, and local actors worked unremittingly to ensure that children and young people could access learning, but a lack of resources and infrastructure for educators and children led to nearly one-third (463 million) of learners being unable to access remote learning (UNICEF, 2020a).

Preceding the pandemic, 258 million children and adolescents were not enrolled in formal education (UNESCO, 2019a). Only 63% of children in sub-Saharan Africa completed primary education, the majority of those unable to attend being girls (UNESCO, 2019b). As approaches are adapted to mitigate the impact of the pandemic on the world's most marginalised children, there is a fear that the pandemic will remove any gains made towards the UN Millennium Development Goals (2000) and the UN Sustainable Development Goals by 2030 (United Nations Department of Economic and Social Affairs Sustainable Development, n.d.). For the past decade, the top ten bilateral donors for education contributed 85% of education international aid funding. In July 2020, the International Monetary Fund (IMF) anticipated that education aid budgets could fall by US$2 billion by 2022 (UNESCO, 2020a). Current analysis suggests that 150 million children now live in multidimensional poverty, a 15% increase on pre-pandemic levels (UNICEF, 2020b).

The UN estimates that nearly 11 million primary and secondary school learners worldwide, 5.2 million of whom are girls, may be unable to return to education

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following COVID-19 school closures (UNESCO, 2020b). The situation for girls in sub-Saharan Africa within this context is critical. Girls face specific and additional adversity; they are at increased risk of sexual exploitation, child labour, forced marriage, gender-based violence and trafficking, along with unequal domestic and family chore burdens (Plan International, 2021a). Outside school, girls also struggle to access social care and health infrastructures essential to preventing child and teenage pregnancy (World Vision, 2020). As an independent development and humanitarian organisation, Plan International's core focus is to support vulnerable and excluded children, particularly girls, to access the education they need to succeed in life. While the organisation's focus on gender equity leads to models of teaching and learning primarily for girls, it recognises the positive role that social norm change interventions have on tackling boys' negative masculine 'gender norms' (Marcus, 2018). Negative norms can drive boys' disengagement from school, seeing them leave to engage in child labour, gang violence, and recruitment to armed groups. The pandemic has radically exacerbated vulnerabilities for all children.

With this in mind, this chapter re-examines the needs of the girls and young women on the *Supporting Adolescent Girls' Education* (SAGE) programme and how it has responded to the increased vulnerabilities, to ensure girls are safe and supported to learn. It draws on the direct experiences of SAGE participants to ensure the programme continues to adapt and support them to negotiate the intersectional (Crenshaw, 1991), gendered, socioeconomic, racial, educational, and health barriers they already face.

Context and risk factors for marginalised girls and their lives in Zimbabwe

One of the greatest challenges in targeting support is the lack of updated statistics on marginalised children, particularly those who are out of school that militates against having properly informed interventions. Previous studies and interventions (e.g., Manjengwa, 2015; MoPSE, 2019) noted a significant number of out-of-school girls with diverse profiles. However, the major underlying factor is that many of these out-of-school girls have multiple vulnerability factors which converge, thereby making girls who are out of school susceptible to abuse and violence and, for those who are able to attend school intermittently, at risk of dropping out. Underpinning these factors are negative gender and social norms which are unsupportive in ensuring that out-of-school girls are visible and able to access the opportunities that may be available in their local communities (Plan International, 2016).

Although it is acknowledged that all marginalised out-of-school children (including boys) are systematically relegated to the peripheries of the multifaceted socioeconomic development opportunities (Chigodora, 2017), it is argued that there are specific subgroup categories of girls who are more disadvantaged (Plan International UK, 2017b). Some of these subgroups include girls with disabilities, girls who have never been to school, and girls from some apostolic religious

groups. The SAGE baseline report (Plan International, 2019) noted some of the challenges faced by these specific subgroups, including a lack of voice at household level to air their opinions, low knowledge levels on gender and sexual reproductive health rights (SRHR), and increased risk of gender-based violence (GBV). All these factors require deliberate bespoke mobilisation strategies to ensure girls experiencing these challenges are both *surfaced* in their communities and *supported* to pursue with their education journey.

'I was married off when I was 14 years old and in Grade 7. I really did not see anything wrong in it as it was quite normal to be a bride that early', quips Charity (*not her real name*) from the Eastern part of Zimbabwe, where child marriage is rife in some Apostolic church communities. Petty, aged 17, added, 'I never entertained the thought of going to school as it was far and I did not mingle well with other children because of my situation (disability)'.

Whilst stories like these, collected by Plan International (2021b) as part of the programme's routine monitoring and shared with permission of the young women, may appear unimaginable in the twenty-first century, they represent the everyday reality of some young adolescent girls in the marginalised communities of Zimbabwe. These are the typical girls who are always at the margins of accessing support from developmental programmes unless deliberate efforts are made to identify and provide them with the support that will enable them to access education, opportunities, and to see a different pathway to challenge the social norms. Charity's experience highlights the lived experience of many girls – they expect to be married early, to have a family, and for education, and the expanded aspirations education can facilitate, to be something that other girls experience (Buckler et al., 2021).

A case study: Supporting Adolescent Girls' Education

One response to these challenges is the girl-focused SAGE (Supporting Adolescent Girls' Education) Accelerated Learning and Teaching (ATL) programme, which provides adolescent girls and young women (aged 10–19) with the opportunity to return to learning. The programme was designed to support those who have never been to school (for various cultural and economic reasons) or those who started school but could not continue or those who are young mothers and/or girls who have disabilities or are from apostolic communities. The success of girls and young women on the SAGE programme is measured by individual learning outcomes and successful transition into a number of exit pathways including a return to formal education, joining a skills training course, and/or entry into employment or entrepreneurship.

Designing a programme that meets the wide-ranging needs of girls requires expertise from across the non-governmental organisation (NGO) and education sectors. Consequently, SAGE evolved and is led by Plan International and involves a consortium of partners, The Open University, the Christian Blind Mission, the Apostolic Women's Empowerment Trust, Econet, and the Ministry of Primary and

Secondary Education, Zimbabwe (MoPSE). SAGE is a UK aid-funded programme through the Foreign, Commonwealth and Development Office's (FCDO) Girls' Education Challenge initiative (note that the views in this chapter represent those of the research team and co-authors and are not necessarily those of the FCDO).

SAGE's gender-responsive learning materials are designed to support girls achieve Grade 2/3 outcomes by the end of the first year and Grade 5 by the end of the second year. The six SAGE modules are studied over two years' learning divided into two-weekly sessions (one hour of literacy/learning English and one hour of numeracy). The starting point for each session is the expectation that every girl can do well in a subject and that making mistakes and resilience are part of a healthy learning process (Dweck, 2007). Girls and young women are encouraged to continue their learning at home through activities in an individual Learner Self-Study Workbook. These home activities consolidate an aspect of learning, are fun and accessible, are easy to explain to family/community members, and can be shared with the young women's own children. An additional two hours of learning are delivered through Plan International's *Champions of Change* programme known as Champions of Girls Education (CoGE) in Zimbabwe. CoGE is the life-skills component of the programme led by facilitators close in age to the girls/young women, and it aims to mobilise girls, boys, and communities to challenge the social norms and values that may hinder girls' access to education.

SAGE learning takes place within safe, girl-friendly learning hubs located in community spaces, which might be a school building, a church, or an Early Childhood Development setting. A learning hub team consists of community educators (CEs) – many of whom are qualified teachers, retired or waiting for deployment – a learning assistant to support young mothers and girls with disabilities, and an in-school buddy (a designated member of school staff from the attached school), and the CoGE facilitators. Communities have played a pivotal role in identifying out-of-school girls, proactively recruiting them via targeted sensitisation community meetings and door-to-door-mobilisation. In addition, members are part of Hub Development Committees and have donated/volunteered learning spaces and participated in the rehabilitation of the learning centres through painting and decorating, building disabled toilets and ramps, and maintaining the hubs to provide the safe learning spaces for girls.

At the very start of the learning design process, the ATL programme team argued for the recognition that, even though the girls and young women may not have been to school or had dropped out, it did not mean they were not literate or numerate. What they were lacking were formal experiences of literacy and numeracy. Therefore, of most importance was ensuring that SAGE's learning activities took account of these prior experiences and that girls and young women would recognise themselves and their aspirations in the learning materials. The team were very aware of the potential for girls and young women being anxious about returning to or entering learning due to prior negative school experiences. Therefore, the emphasis through the materials and the regular hub team development sessions is to present purposeful learning activities embedded in gender-responsive pedagogy

underpinned by respectful relationships. The programme also champions the position that home language is first teacher, as such the learning content is framed as numeracy, literacy, and learning English. The unit stories are translated across three of the 16 main languages spoken in Zimbabwe (Shona, Ndebele, and Kalanga) and both numeracy and literacy activities can be taught in home language. In addition, whilst the learning materials are written in English, CEs can translate materials into the local language, use English, translanguage, and/or use vernacular to develop girls' oracy skills.

Girls attending SAGE sessions need to see the relevance of learning to their own lives. As such, a key feature of the learning materials is 'unit stories' with each story making visible occupations which help girls to see potential futures or training possibilities. Whilst traditional occupations are included, for example, working in a clothing cooperative, being a hairdresser or healthcare worker, the stories also introduce a broader range of occupations that challenge gender stereotypes; for example, being a taxi driver, a game ranger, a business owner, or a mobile phone repairer. The more we learned about girls' lives, interests, and aspirations, the more the learning materials were adapted. For example, the inclusion of the bank teller, the poultry farmer, and the game ranger were ideas from three girls who are part of the SAGE longitudinal research project (Buckler et al., 2021).

The advent of COVID-19, and associated restrictions as a result of multiple lockdowns, led to pedagogical challenges and required finding new ways of reaching girls so they could continue learning. Whilst national response initiatives focused on online and radio learning, for girls and young women in the SAGE programme, their only access to distance/remote learning was via telephone calls. Learnings from the Ebola crisis (2014–2016) identified that the longer girls stayed out of learning programmes, the less likely they were to identify as 'students', instead seeing themselves as mothers, wives, or market traders (Plan International UK, 2017a). To mitigate against this, SAGE implemented weekly telephone learning conversations between girls and CEs to foster ongoing relationships. Initial data indicated that over 50% of girls and young women could be reached in this way, but, in practice, for example, because phones were shared or controlled by another member of the household, only one in four girls could be reached. Existing learning materials were therefore repurposed to enable door-to-door and small group teaching, as soon as COVID-19 restrictions allowed, which enabled more than three in four girls to be supported to practise and advance their learning.

Of most importance to the delivery of the programme is understanding the impact that learning has on the girls. Two pieces of testimony highlight this. For one girl she can now check her change in the market, whilst another young woman continues to be encouraged by her husband to attend SAGE because now her English has improved, she can trade at the market across the border in Mozambique, transforming her status in her husband's household. Not only what girls are learning, but how they are learning is impacting on their lives, with girls now valuing collaboration and teamwork, with testimony of girls coming together for collective planting to maximise the growing season and 'being stronger together'.

Parameters of adversity

There is a tendency for girls' adversities to be oversimplified as issues which can be resolved by simply expanding already-established solutions that might have 'worked' in other places (Khola-Moolji, 2016); for example, building schools or training and recruiting more teachers. While these are not unimportant, the emphasis on the removal of structural barriers can shift the blame of non-attendance into the field of 'culture' and tradition. The lives of out-of-school girls and their families are 'othered' and they are seen to be the problem, rather than the problem being the incompatibility of these structures and systems with the realities of people's lives (see Dyer, 2013; Oyinloye, 2021; Williams et al., 2015). Another problematic framing of adversity in relation to out-of-school girls' lives is the escalation of the link between girls' education and global adversity. The DFID (2018) Strategic Vision Report on Girls' Education, 'Her Potential: Our Future' positions school as the place to resolve some of the bigger societal challenges (gross domestic product, trade, political stability, and even climate change), many of which may not be directly experienced by or feel relevant to girls. In addition, whether or not attending formal schooling resolves any adverse situations girls are *currently* experiencing is conveniently glossed over.

In addition to the SAGE learning programme, a longitudinal storytelling research study was designed to capture and represent a more nuanced perspective on the lives and educational adversities experienced by the out-of-school girls and young women. Since the start of the programme, this strand of the research has worked with 11 girls aged 15–19 over three years (2019–2022) with the intention of moving the narrative usually associated with out-of-schools adolescent girls beyond the 'headline' aspects of poverty, discrimination, and adversity. We are not disputing that these are challenges for many girls, but as we demonstrate in Buckler et al. (2021), these headline aspects have remained constant for more than two decades and depict the complexity and contemporary nature of out-of-school girls' lives as static and fixed in time and across spaces which span the globe. The literature can sometimes suggest a simplistic relationship between educational adversities and dropout. As a counternarrative to these prevailing discourses, the SAGE research, as shared through the first-hand narratives shared by these young women and presented here, aims to showcase things that researchers and practitioners know much less about: the everyday experiences of adolescent girls and moments and events that can underpin or mitigate adverse situations.

The two stories shared in this chapter were created during a five-day residential workshop with the 11 young women involved in the research project and are shared here with their consent. Having created individual digital stories with audio narration by the young women in their home language(s) (see Buckler et al., 2021, for detailed information), the words were translated into English to provide subtitles for a wider audience. It should be noted that some aspects of their stories make for challenging reading but as a research team we have made a commitment to honour the stories the girls wanted to tell.

Light Pink's story

When I was growing up, I wished to have my own beautiful, big house and a nice car. But that was not possible because my father and mother separated. I was born a premature child. When I was still in hospital with my mother, my brother died. His death caused the separation of my father and mother. They would blame each other for my brother's death. So, I was born under a shadow, and my life as a young girl was full of darkness. When they separated, I did not know where I and my other siblings would live.

The darkness lifted after my mother took us to go and live with our grandfather who loved me so much and bought me everything I needed. We went to school, ate good food, had shoes, and nice clothes. We lived in a big house and had everything we needed for school, without any lack. I remember one day when my grandfather and grandmother bought me new clothes and shoes. I was so excited because I loved the clothes.

When I completed Grade 7, I went to live with my mother, I was 14 years old. I continued to Form 1 but it became difficult for my mother to pay school fees. I was happy to live with my mother, as this was the first time I lived with her. I had thought that my life would be good and that I would complete Form 4. Life was good while in Form 1. But in Form 2, first term, my mother did not get money to pay for my school fees. That is when I stopped going to school and thought of getting married.

I got married and had a child. When I got married, I had thought that my husband would take me back to school. This did not happen. I also thought that since he was working, he would make my life better. This did not happen.

I advise other girls of my age that sometimes waiting and seeking other opportunities – don't rush to marriage. Other ways may be helpful for a better tomorrow, one day you will still get married, but to the one you love.

The research was also interested in understanding the influence adolescent girls themselves have over these experiences and events – where they see opportunities for agency and decision-making in relation to their experiences and where, how, and whether education is relevant to these decisions. The first observation that we make in Buckler et al. (2021) is that for these 11 young women in the research, adversity is not a static state: its parameters are constantly shifting. While dropout tends to be framed as an end point in the literature (Sabates et al., 2010), many of the young women had attended multiple schools in different locations at different periods in their lives. In their stories and in the other data-generating activities at the week-long workshop (see Chamberlain et al., 2021), many young women described periods in their lives that were not marked by adversity and where access to formal schooling was feasible and encouraged. However, these phases tended to last only a few years before a family crisis led to a drop in household income, and school attendance was one of the first things to be cut. While for most of the young women this decision was made by their guardians, others were part of, or leading, these discussions and took responsibility for the decision to pause their education.

Green's story

It started out a normal day. As always, my mother and I went to sell fruit at the market. Back then, we used to get everything that we needed. Our father was there but he did not care about us. My mother did though, and we got all that we needed. Money was there, and we went to school. We had books, uniforms, and we lacked nothing. We had enough food because my mother was there for us and life was good.

So, on this day, which started out normal, we went to the market as usual, but my mother was knocked down by a car while she was selling. She died by the road, but after she was knocked down, she said to me '[daughter], look after the children when I am gone'. This was a heavy burden upon me. Her words remained in my mind and this troubled me a lot. I thought about how I would provide for my siblings. We moved in with my elderly grandmother and I tried hard to care for everyone but it was hard by myself.

I had the idea of moving in with my stepmother and father. But my stepmother was very abusive and did not like us. As I went to school, my siblings remained home with our father and stepmother and they would be abused and they were not given food. So even in class I was not able to concentrate as I thought of my siblings at home. I wondered about what our stepmother was doing to them in my absence.

I decided to leave school and thought getting married would be better. But once I got married, I realized I had added another burden to myself. I gave birth to my child, and things became even more difficult. I now had to care for my husband, provide for my child, and look after my siblings as I had promised my mother.

I had avoided the market, but I decided I needed to return to the spot where I used to sell with my mother. So, now I sell at the market so that I can make a living.

Life is difficult because I have many people dependent on me, even my husband does nothing, and I do everything for him. But there are also bright days when I can think of better things ahead. Other girls should learn that rushing into marriage is not good. It is better to deal with your own challenges, it may get better with time. When you rush into marriage, the burden becomes bigger.

One thing the storytelling approach used in the research facilitates is a disruption of the 'othering' that can take place when the development sector makes plans for the lives and futures of out-of-school girls based on the static parameters of adversity that are depicted in much of the literature. Therefore, one level of analysis for the stories as data was based on gathering reflections on the stories at screening event for educators and practitioners working in the field of international education. Reflecting on Green's story (earlier), in parallel with her own family history in the UK, one participant noted (and shared here with permission):

[mine] is a deep family story which has shaped my values and understanding of inequalities in society. It is an invisible story behind me and my family, just like the girl sitting in the marketplace where her mother used to sit.

A second, related, observation from the data is that formal schooling was often seen by the young women as the promise to a better future in a fairly abstract way: they talked about school leading to high-level professions such as law and banking, which in turn would facilitate aspirations like owning houses and cars of their own. However, there were no examples shared of people from the local communities who had been able to fulfil similar ambitions through school. As further discussed in Buckler et al. (2021), school often offers 'instrumental promise' to the girls by offering hope around the end of adversity, but in reality (with the exception of one young woman who was able to briefly attend a private boarding school) the young women's experiences of school was that it does little to mitigate adversity – or even shift the parameters of it – on a day-to-day level. In fact, for some attending school exacerbated adversities at home: school is therefore a signifier of, rather than a facilitator of, stability.

Responding to adversity

For many funded-programmes, progress or attainment is measured through success, or otherwise, on the Early Grade Reading Assessments and Mathematics Assessments (EGRA/MA). One way to overcome adversity is to reframe these tools that have been historically used in order to overcome the narrative around girls needing to prove they can meet predetermined and often non-contextualised goals. Assessments like EGRA and EGMA were originally designed to capture young children's early learning, but they are limiting and continue to act as a significant barrier to knowledge about what adolescent girls are able to do and achieve, despite this being their primary purpose. For example, a 15-year-old girl with a disability who has never been to school before may find making friends, being accepted in a group, and singing as significant learning experiences. Capturing these small steps of learning has been just one way of ensuring that adolescent girls' experiences and what they value are at the heart of the SAGE programme.

Conclusion

As argued earlier in this chapter, adversity is not a static state: its parameters are constantly shifting. What this understanding has meant for SAGE is the ongoing adaptation of the programme, the creation and implementation of proactive approaches and interventions, and ensuring that the participation of adolescent girls in the context of their diverse communities drives this. Through the research and the programme strands of SAGE, we aim to align with Miles et al. (2012) and Kauffman (1994), who argue for moving away from a simplistic framing of educational inclusion and adversity that positions a particular group of people (in this case, adolescent girls) as either experiencing adversity or not, as either inside or outside the system, and towards thinking more open-mindedly and creatively about what it means for that particular group to have reliable access to education, what it means to be a learner, and what it means to learn.

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OPEN SCHOOLING TO EMPOWER BRAZILIAN TEACHERS

Emancipatory fun in education for a sustainable innovation ecosystem

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Introduction

One of the main challenges for education around the world is to support the large number of less well-represented actors and territories towards a more scientific-literate society for sustainable development locally and globally. This challenge became even more difficult for countries affected by adversities aggravated by the COVID-19 pandemic. One key strategy is "Innovation Ecosystem", promoted by the European Union (2021–2024), that aims to support countries across the globe to create a sustainable world. This approach uses education to connect existing strengths at local, regional, national, and international levels as a means to promote green, digital, and social innovations for sustainable growth aligned with societal needs (EC, 2021). We argue that educators can play a key role in enhancing innovative ecosystems by empowering youth to take an active role through responsible research and innovation (RRI) and global citizenship education (GCED).

RRI refers to a transparent and interactive process for promoting science with and for society. It has six characteristics: open access, gender equality, science education, public engagement, ethics, and governance (EC, 2017; Owen, 2014; Von Schomberg, 2013). Innovation ecosystems under the lenses of RRI involve participatory learning approaches with five societal representatives: educational communities (schools and universities), research centres, industry, civil society organisations, and the public policy sector. It therefore has the potential for significant impact on innovation ecosystems. One way to enhance participatory education for responsible citizenship is through open schooling (EC, 2015). This aims to foster scientific literacy (an individual's scientific knowledge and use of this knowledge in daily practices helping youth develop competencies that they will need to solve real socio-scientific issues supported by experts and their communities) through the

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cooperation between students, teachers, professionals, and local communities (EC, 2018), helping youth develop competencies that they will need to solve real socio-scientific issues supported by experts and their communities.

GCED is UNESCO's response through education to global challenges including human rights violations, inequality, and poverty, which threaten peace, democracy, and sustainability. It uses education to empower learners of all ages to become active promoters of inclusive, secure, and sustainable societies collaboratively (UNESCO, 2018). Innovation ecosystems underpinned by GCED can foster values, attitudes, and behaviours that support creativity and commitment to peace, human rights, and sustainable development.

This chapter is part of a study conducted within the CONNECT Project (a European Union-funded project with the Global South – developing countries located in the southern region of the globe) which focuses on inclusive open schooling with engaging and future-oriented science. This project aims to create more opportunities into the school curriculum for students to interact with scientists, talk about science with their families, and enjoy taking science action for sustainability. The chapter investigates, for the first time, the intersection between open schooling, GCDE, and RRI (see Figure 20.1). It uses the lenses of less well-representative actors and territories to identify the key components of sustainability

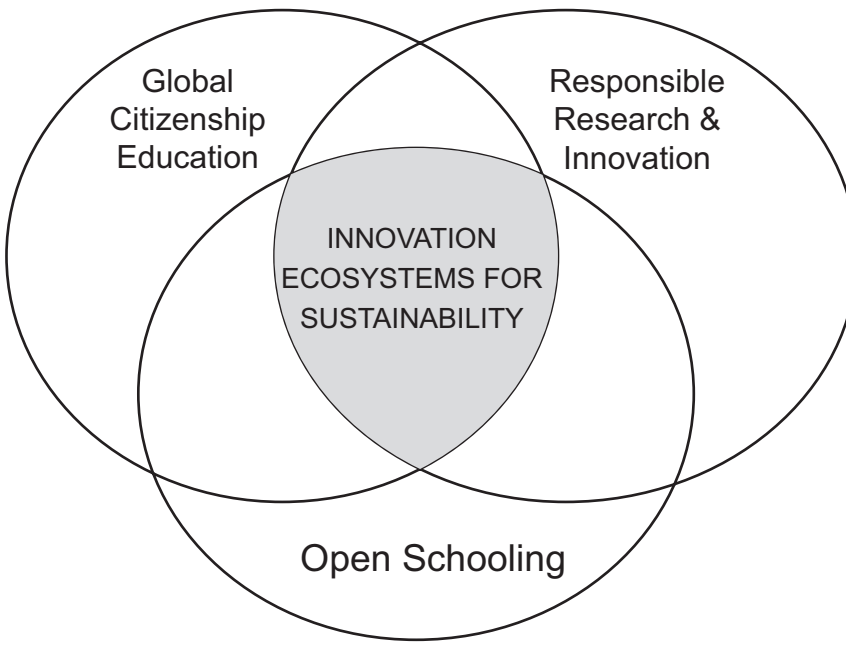

FIGURE 20.1 Innovation ecosystems for sustainability

Long Description: This model shows the connections of global citizenship education, responsible research and innovation and open schooling to highlight the common intersection of these three components resulting in the innovation ecosystems for sustainability.

within the innovation ecosystem. It investigates these key elements for educators as they implement open schooling in the Brazilian semi-arid region in a context of adversity imposed by a pandemic. The research also identifies drivers and challenges to open schooling in this context based on the innovation ecosystems theory/concept.

Principles of open schooling for innovation ecosystems

Open schooling is a novel concept to promote education. It is underpinned by RRI for young people learning to identify issues and solutions by interacting with researchers and local communities. In this way, it seeks to enhance the alignment of research and innovation with societal needs and facilitate the next generation of responsible citizens and innovative professionals, through twenty-first-century knowledge, skills, attitudes, and values. It utilises partnerships between education, research, economics, and policies that guide students to have positive effects on the environment, economy, and society.

Open schooling is a participatory approach to help schools engage students to develop real-world issues projects with multi-partners – teachers, researchers, families, professionals, and policymakers. This creates an opportunity for students to apply knowledge in real-world contexts and identify social and scientific issues that affect communities and the globe. It uses collaborative participatory science to consider four areas of GCED: human rights education, peace education, education for sustainable development, and education for global understanding. Students are empowered to become active members of more scientifically literate societies, who are able to make evidence-based decisions and research-informed practices by applying critical and creative thinking and reflexive and collaborative actions. Open schooling is aligned to the concept of "development education" (Khoo & McCloskey, 2015) and empowerment education whose theoretical principles lie in the pedagogy of Paulo Freire (1972). These principles highlight education as a socially transformative process to empower individuals and society. This transformative process, to enhance innovative ecosystems with open schooling, is based on empowering individuals, communities, and societies to "read" social and political issues of the world to "write" practical solutions based on science for a desirable future for all with emancipatory fun (Okada & Sheehy, 2020). In Emancipatory Education, the word emancipatory represents much more than its literal meaning, that is "*giving people social or political freedom and rights*" (Cambridge Dictionary, 2021). Viewed through Freire's theoretical lens, developed in the Pedagogy of Oppression (1972), emancipatory means empowering people with "consciousness for praxis". This is the capability to read, interpret, and understand social and political issues to write, intervene, and act responsibly to transform oppression into "freedom and rights".

Inclusive Open Schooling, under the lenses of GCED and RRI, is supported by a community-centred pedagogy that draws on fun participatory-action research methods. This helps multi-partners to open up opportunities for less well-representative students to become protagonists.

Critical engagement is essential to this process. As Andreotti (2006, p. 40) states, "understanding global issues often requires learners to examine a complex web of cultural and material processes and contexts on local and global levels". This understanding is facilitated by an enjoyable process that enables the "development of skills of critical engagement and reflexivity: the analysis and critique of the relationships among perspectives, language, power, social groups and social practices by the learners" (ibid., p. 49). By contrast, soft global education, lacking critical engagement, is more likely to tell learners what to think or do, perpetuate myths, and reproduce civilising "power relations" with the Global South; part of the pedagogy of the oppressed (Freire, 1972). Indeed, many school curricula are focused on content without context (Braund & Reiss, 2006). Consequently, students are prepared for exams without connections to their lives and future. In contrast, open schooling provides an opportunity for meaningful learning with real-life issues. Emancipatory fun (Okada & Sheehy, 2020) elicits the motivation for students to develop an ethos of curiosity, solidarity, critique, and shared responsibility with initiative and confidence. This aligns with the GCDE UNESCO's aims to:

- encourage learners to analyse real-life issues critically and to identify possible solutions creatively and innovatively;
- support learners to revisit assumptions, world views, and power relations in mainstream discourses and consider people/groups that are systematically underrepresented/marginalised;
- focus on engagement in individual and collective action to bring about desired changes; and
- involve multiple stakeholders, including those outside the learning environment, in the community and in wider society.

(UNESCO, 2014, p. 16)

The majority of research literature about open schooling is focused on Europe, where most of the initiatives have occurred to date. This study is original in exploring Brazilian teachers' views regarding three aspects of open schooling:

(Q1) Meaning (what are the most important problems to initiate open schooling projects? What are the best ways for students to interact with scientists?)
(Q2) Implementation needs (what are the most important skills? What are the technological resources, pedagogical strategies, and materials used during the pandemic?)
(Q3) Issues (what are the drivers and challenges during COVID-19?)

Exploring an innovation ecosystem in Brazil

Brazil was one of the countries most affected by the COVID-19 pandemic between 2020 and 2022. This has exposed the country to increased health, social and economic adversities, making it the second country in the world in terms of absolute

deaths related to the pandemic (The World Bank, 2021). Besides these adversities, Brazil also faces many challenges concerning educational and environmental issues. According to OECD (2021), over 34% of youth leave school before completing secondary education and only 18% of adults in Brazil have attained tertiary education. This occurs in a society that has the highest number of intentional homicides in the world (The World Bank, 2021). Moreover, in 2020, its Amazon rainforest and Pantanal, the world's largest tropical wetlands, suffered the worst fires in a decade (Reuters, 2021). Conversely, Brazil is one of the richest countries in the world in terms of natural resources and became one of the five major emerging economies (Brazil, Russia, India, China, and South Africa) that experienced rapid economic growth in the period of 2003–2013. However, the current recession has plunged an additional 6.3 million people into poverty. Large-scale defunding in public education by the current government has impacted on education's role as a catalyst for lifting people out of poverty, consequently reducing social mobility and increasing poverty in Brazil (Monroy, 2019).

This case study focuses on Ceará, a state in the north-east of Brazil. Ceará has been investing in public education and continuous teacher education and, despite significant socioeconomic contrasts and adversities, is one of the states in Brazil with the highest position in the Basic Education Development Index (IDEB, 2019). There were 731 teaching units in Ceará in 2020, which included 277 full-time schools, 122 vocational education schools, and 155 full-time (more than 5 class hours) regular high schools. In 2020, Ceará's schools had a pass rate of 98.9 for basic education and 97 for high school.

The consensus conference

This study was approved by ethical committees in Europe and Brazil. It adopted the consensus conference method created within the CONNECT project for learners to experience open schooling through the cooperation between citizens, researchers, consultants, and policymakers to discuss real-life issues (Nerhaus & Bedsted, 2021). This deliberative and participatory democratic method to enhance fun participatory learning (Figure 20.2) was informed by the CARE KNOW DO framework (Okada & Sherborne, 2018). This approach targets three components of student scientific literacy – motivation, values (care), knowledge (know), skills and attitude (do) – for preparing students to engage with issues around emerging technologies and societal needs. This framework was designed to inform and help teachers plan how learning concepts can be set within their social context.

The consensus web conference was live-streamed on 11 November 2020, with sign-language translation on Cearás's Education Secretary's YouTube channel as part of their course "Intervention Projects and Digital Competences for teachers". The controversial issue (how to make education more inclusive during COVID-19) brought the opportunity to reflect on new educational strategies using an open schooling approach to explore its components, challenges, and barriers to support a

Framework	CARE		KNOW		DO
Actors-participants	1 consultant 1 researcher 1 policymaker 1 teacher 2 students		1129 teachers-respondents 716 teachers-attendees 369 teachers-collaborators 7771 teachers in professional-development		2 authors-actors 3 external authors 10 representative-actors
Steps	Framing	Questions	Knowledge	Deliberation	Recommendation
Procedures	Set the Agenda, tasks and guide	Identify questions and issues	Research Survey Panel Analysis	Discussion Cocreation consensus	Blog post OER Scientific article
Instruments	Oral, textual and sign-language dialogue		Survey-responses analysis Slides of speakers RRI, GCED Reports		Impact analytics Recommendations New Resources
Technology	Google meet		Qualtrics Google Meet MindMeister		YouTube Moodle CONNECT website
Emancipatory FUN – actions	Discuss real-life issues, select current practices, opine on new experiences		Reflect in and on action Propose Interventions, Identify challenge-driver		Commit to self/co-transform Practices & policies
Emancipatory FUN – expected outcomes	Develop group identity curiosity/creativity joy/fun		Support social bonding critical awareness joy/fun		Connect/transform search/discovery joy/fun
Data generated together	Transcript from google meet used to refine questionnaire		Qualitative data to expand indicators and quantitative data to sequence them		Policy brief

FIGURE 20.2 Framework Consensus Web Conference Method of CONNECT Open Schooling for CEARÁ

Long Description: This refers to the Consensus Web Conference Method of CONNECT Open Schooling with eight categories: actors, steps, procedures, instruments, technology, emancipator and fun actions, emancipatory FUN – expected outcomes and data generated together. These categories are used to provide details of three stages: CARE, KNOW, DO. Its aim is to provide a method to support the study about open schooling in Ceará Brazil.

sustainable innovation ecosystem. Emancipatory fun principles were used to design the consensus web conference through three stages.

1 An online meeting focused on the consensus web conference plan led by a multi-actor panel: a policymaker who acted as the moderator, an educational-entrepreneur, two secondary students, a secondary teacher, an educational researcher who acted as a consultant and suggested the agenda, practices, principles, perspectives, and initial questions. The expected outcome was developing group identity with creative practices to engage a large group of educators with curiosity, awareness, and joy/fun.
2 A consensus web conference was led by the panel and engaged 1,129 educators who reflected and discussed the components, challenges, and drivers for

open schooling based on the panel's examples. The event was designed to support social bonding with collective awareness mediated by the panel's real-life issues/interventions during COVID-19 with joy/fun.

3 A co-production of a blog post in the format of OER (open educational resource) and a scientific article. These productions, including a policy brief, were designed to connect and transform practices, search/discovery of findings, connect and transform practices by enhancing capacity building and knowledge exchange with joy/fun.

Qualitative and quantitative data were generated through a semi-structured questionnaire. This collected participants' views related to their global and local challenges, needs, priorities, partnerships, and resources, as well as views about values, principles, and activities of open schooling and their participation in the consensus web conference. The questionnaire was answered by 1,129 participants: 716 of them were answered by participants who attended the web conference synchronously and provided qualitative data in the chat. More than 7,700 participants accessed the consensus conference asynchronously. The conference audio transcript and chat data were extracted to identify and analyse drivers and barriers to open schooling. Preliminary results from the questionnaire and key issues raised by participants in the chat were discussed in the web conference with the panel and participants.

The participants

The participants were 1,129 participant educators from various state schools in 184 different municipalities, which represents the whole state of Ceará. The sample comprised 63.98% females and 35.84% males. Most participants worked as teachers (87.21%). Others stated working as coordinators (7.60%), as headteachers or managers (2.50%) or were students (0.18%). Twenty-one participants reported having a different occupation (1.88%).

Most participants worked in secondary education: 18.76% in first year, 9.52% in second year, and 33.21% in third year. Moreover, 429 participants (38.51%) worked in different educational fields, such as primary education, all years of secondary education, adult education, higher education (undergraduate and graduate courses), technical education, school management, or administration work. It is worth mentioning that due to teachers' low salaries in Brazil, many teachers have to work in more than one school or have a second occupation in order to increase their incomes.

The majority of participants worked at state schools, including diverse types of schools, target groups, and educational systems, such as indigenous, quilombola (Afro-Brazilian residents of quilombos – settlements first established by escaped slaves in Brazil), rural, technical, remote, youth-adults, professional, state, and federal. Participants reported being interested in intervention projects in different areas, such as human sciences (33.01%), science (20.96%), and exact sciences

(17.93%). About 27% declared being interested in other areas and 0.80% stated not knowing. Among other areas cited, the greatest interest was in languages and technology.

Key components of innovation ecosystems

Based on the consensus web conference and the semi-structured questionnaire, insights were gained into the three research questions.

(Q1) The meaning of open schooling

The most important problems in Brazil that could attract students from various regions and countries to research with scientists were climate change and sustainable economies, followed by drought, fire, environmental destruction, risks, environment protection, hunger, food production, biological and infectious plagues, species extinction, sanitation, water reuse, horticulture, and fish-farming. Other issues include social inequalities, gender and race prejudice, education precariousness and appreciation, violence and abuse, employability, sustainable development, health, and use of digital technologies. The best ways for students to interact with scientists were considered to be online debates between scientists and young people, collaborative data collection projects with students and scientists, online events with scientists and prizes to young people, video interviews organised by young people and scientists, and scientific production evaluated by scientists.

(Q2) Implementation needs (skills, resources, and pedagogy)

The most important skills during the pandemic were identified as knowing how to use research to make choices and decisions, using school content to identify community problems, developing solutions with experts at the school, and interacting with students from other states and countries to discuss local and global issues. Most participants used diverse digital contents as their main means for teaching and learning, such as videos and audio files on mobile devices, educational TV or radio programmes, and videoconferencing tools and instant messaging platforms, including WhatsApp, Google Meet, and Google Classroom. Some educators also mentioned using printed materials due to the difficulty to access digital devices and internet connection. The most commonly used virtual environment for teaching and learning during the pandemic was Google Meet, as it was recommended by the Secretary of Education in Ceará. Other tools used by educators were WhatsApp, YouTube, and Facebook.

The pedagogical strategy that participants missed the most (during the pandemic) was face-to-face teacher–student interaction to solve doubts, group projects to develop skills, interaction with specialists to develop competencies, materials to acquire knowledge, and current activities for increasing students' interests in future careers. Key teaching and learning needs for lessons during the pandemic were related to support, interaction, motivation, skills, and wellbeing. Other factors such

as time management, creating enough time for continuous professional development, equity of access to virtual environments, and technological tools, among others, were also mentioned. The materials used by most educators were described as engaging materials whose aim was to enhance skills and challenges and collaborative materials that enable sharing and commenting. There were also "informative" materials to prompt reflection and self-assessment and research materials to identify and solve problems.

(Q3) Issues (challenges and drivers)

Thematic analysis was used to analyse participants' conference discourses in the YouTube chat tool. Their discussion supported by "in and on action-reflection" (Schön, 2009) enabled us to identify the main challenges to, and drivers of, the pandemic to open schooling in the context of Ceará. The four challenges mentioned by participants were (1) equality and diversity issues; (2) digital exclusion; (3) lack of educational support; and (4) scientific illiteracy. Participants' voices were added to the description to illustrate each challenge.

The first barrier, "Equality and diversity issues", included two components "Human survival needs" in the semi-arid, such as lack of water, and "Prejudice with violence". Participants' views on these issues can be noted in:

> *People don't have water, which is a human right (Teacher);*
> *LGBT people being murdered, violence against women, child abuse, racism (Educational researcher)*

The second challenge, "Digital exclusion", included different types of exclusion, such as students' lack or limited access to technology (either digital devices or internet connection). This challenge can be noted in the following extracts:

> *"We have been delivering printed activities at the homes of students" (Teacher);*
> *"Most students can't attend synchronous classes" due to "lack of internet connection" (Teacher);*
> *"I consider it vital to discuss the lack of resources and equipment for students" (Teacher);*
> *"There's a digital divide. This reality is limiting."*
> *(Educational Researcher)*

The third barrier, "Lack of educational support", included two types: "Students' lack of support from families at home" and "Students' lack of support from teachers". This can be noted in:

> *"What can we do to reach the students who don't have technologies nor family support"? (Teacher);*

"How can we guarantee that students are learning when we deliver printed activities without (our) teacher support?" (Teacher).

The fourth barrier, "Scientific illiteracy", was considered as relevant as the other challenges but not as visible/explicit as them. Four reasons were identified:

1 "Devaluation of sciences by policymakers", perceived in

"*What's the role of Human Sciences in this delicate political-ideological scenario?" (Teacher).*

"with budget cuts in Humanities" (Educational researcher).

2 "Science depreciation with increased educational and social inequalities" as cited:

"We're in a country in which science is undervalued, in an unequal system" (Student).

3 "Lack of capabilities and critical conscientisation", as complemented:

"People don't know how to use technologies to their own benefit or to the benefit of others" (Teacher).

4 "Threat of mass illiteracy", as added:

"Functional illiteracy is a big problem for students when they get to university" (Policymaker).

On the other hand, participants also identified four drivers that could diminish the aforementioned barriers, which are: (D1) developing projects with partnerships for sustainability; (D2) new approaches to empowering students; (D3) cooperation with all societal actors; and (D4) open schooling.

For the first driver, "Developing projects with partnerships for sustainability"; teachers, students and policymakers indicated that "*Educational projects for sustainability are important for education*". A reason is that it creates "Courage to share issues and scientific partnership to intervene effectively". Teachers and educational researchers stated: "*we need courage to share the problems*".

The second driver, "New approaches to empowering students", includes four categories:

1 "Solidarity, support and solution": participants commented that during the pandemic

"solidarity gestures were microchip distribution, recycling smartphones, cyclists for text distribution" (Teacher).

2 "Resilience, transformation, and new digital solutions: Students mentioned an offline solution with mobile-phones, for example,

> *"We revised Maths and Natural Sciences with the use of podcasts" (Student).*

3 "Governance, competence-based learning, learn-to-learn": participants highlighted

> *"We should discuss how to develop competences and abilities" (Teacher).*

4 "Interactive Students as protagonists": participants added

> *"Protagonist students build knowledge through partnerships" (Teacher).*

The third driver, "Cooperation of all societal actors", includes "RRI Partnerships teachers". Participants highlighted that

> *"Partnerships are needed among teachers, students, researchers, managers, and consultants" (Teacher).*

In addition, "Pedagogical and Technological Strategies" are necessary, as complemented:

> *"The Ceará state governor has launched a program to support students to buy microchips." (Policymaker).*

For the fourth driver, "Open Schooling" to promote students' scientific thinking with scientists and communities, students, teachers, and researchers, three factors were highlighted:

1 "Social science is as relevant as natural science", that means

> *"Social science is vital for critical/creative thinking useful in natural science sociology and philosophy, these are key to teach students to see with human soul" (Teacher);*

2 "Students protagonists creating opportunities to reduce inequalities and expand scientific literacy", participants complemented

> *"Congratulations students protagonists with commitment to reduce inequalities" (Teacher);*

3 "Scientific capital to help students to go beyond" participants suggested

> *"Science capital will greatly help the student" (Teacher).*

Implications for the innovation ecosystem for sustainability

This study has identified key components of innovation ecosystems for sustainability supported by RRI, GCED, and open schooling. Figure 20.3 presents the model with these components to help educators plan, implement, and enhance transformative education.

The model provides teachers with key components to initiate open schooling so that they can implement pedagogical practices considering global challenges, local needs, barriers, and drivers to empower students. For policymakers in education responsible for teachers' education programmes, the model provides theoretical and empirical principles of GCED and RRI to support the development of new pedagogical practices. For educational researchers, the model offers the consensus method with data generation instruments, theoretical frameworks, and analytical tools to inform actors aiming at research-based interventions. For students, the model can help understand the components of the innovation ecosystem to support their critical reflections, discussions, co-creation of learning resources, and projects of co-entrepreneurship for sustainability. The model can assist other participants

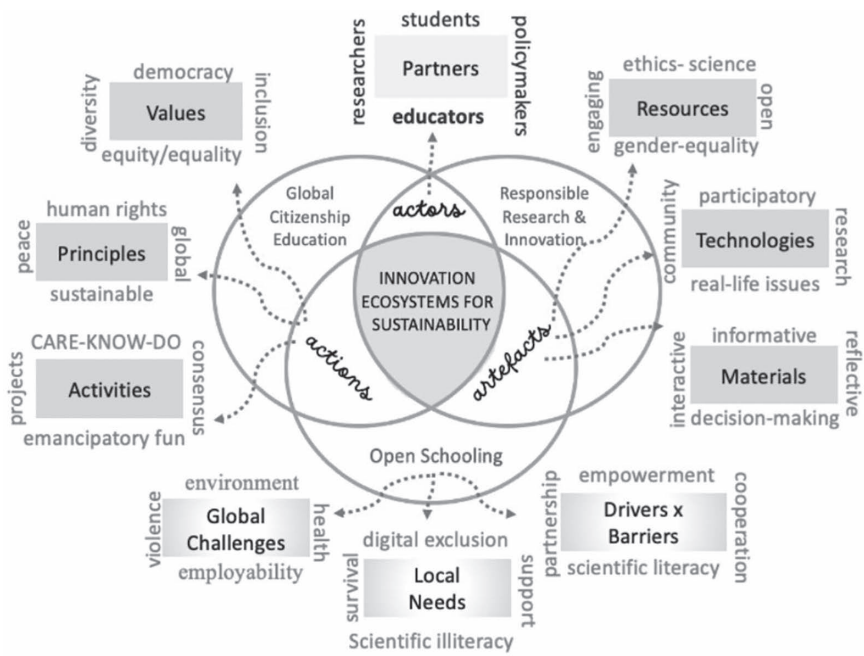

FIGURE 20.3 Innovation ecosystem for sustainability model

Long Description: Innovation ecosystem for sustainability model. It presents four categories: actors, artefacts, actions, and open schooling. It contains ten components: partners, resources, technologies, materials, challenges, needs and drivers and barriers, activities, principles and values. Its objective is to show the elements of innovation ecosystem.

in the awareness of their roles to support new open schooling initiatives among schools in different municipalities. This method can be used to co-create new models in other regions and in other contexts of adversity beyond COVID-19. Further studies will be necessary to investigate how the model can enhance partnerships and practices.

An important aspect for understanding innovation ecosystems for sustainability is understanding the dynamic and cyclical relationships between three main components: actors, actions, artefacts, which occur within a context/society; as well as the factors (adversities) that threaten them and require transformation/evolution. According to Vygotsky (1978), artefacts can transform the way we experience the construction of knowledge through language in the social context and act on internal psychological processes, changing our behaviour and improving attitudes through consciousness. According to Freire (1969), conscientisation with joy occurs in the process of achieving results and also experiencing the search with teaching–learning. The consensus web conference helped actors identify the joy in the "emancipatory fun" that emerged from their speeches indicating engagement and satisfaction with "courage", "solidarity", "students' protagonism" present in "learning with the eyes of the soul", with "persistence and dedication" and "partnerships" supported by artefacts that made this study possible.

Conclusions

Inspired by the dynamics of natural/biological ecosystems, where species compete with limited resources and look for replacement when some of them become scarce, Granstrand and Holgersson (2020) also reinforced the concept of evolution of species for better understanding the component relations in innovation ecosystems. Additionally, Engeström (1987) emphasises the importance of contradictions in understanding how an activity system works and evolves, as it helps identify external threats to transform the external environment conditions. The innovation ecosystem described here considered contradictions and adversities based on the diverse subjects' living and learning conditions, viewpoints, interests, and positions in and beyond their ecosystem. Therefore, it is important to focus on global challenges, local needs, and priorities pointed out by participants of the innovation ecosystem under study. These issues may be overcome through actions that combine values, principles, and activities supported by artefacts that include resources, technologies, and materials. Consequently, innovation ecosystems based on RRI and GCED with open schooling may contribute to greater students' and teachers' agency for democracy, diversity, equality/equity, and inclusion, which are critical aspects to transform an unequal society such as Brazil.

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21

THE ACADEMIC AND CULTURAL DEMANDS-RESOURCES (ACD-R) FRAMEWORK

Supporting the academic development of culturally and ethnically diverse students

Andrew J. Martin and Rebecca J. Collie

Culturally and ethnically diverse students

Increasingly, education systems around the world are striving to improve how they educate culturally and ethnically diverse student cohorts, from early to post-school education. In this chapter – that focuses on immigrant and First Nations (Indigenous, Aboriginal) students – 'ethnic/cultural diversity' connotes a 'move beyond reducing race to superficial social categorizations, instead teasing out the racialized experiences (e.g., the cumulative weight of microaggressions), sociocultural elements (e.g., racial identity), nuanced social values (e.g., communalism), and socio-political histories (e.g., immigration policy and status)' (Matthews & López, 2020, p. 1). In the past decade, Europe has faced the challenge of integrating substantial numbers of newly arrived migrants and refugees (herein referred to as 'immigrants') into its education systems (Eurostat, 2020). In Australia, at least one-quarter of school students have English as a second language or dialect (Australian Curriculum, Assessment and Reporting Authority, 2022). In addition, 798,400 (3.3% of the Australian population) identified as First Nations in the four-yearly 2016 census (Australian Bureau of Statistics, 2019) and projected in that census to grow to 864,200 by 2020 (Australian Bureau of Statistics, 2019).

The importance of providing equitable and high-quality education for culturally/ethnically diverse students is well recognized. If these students fall behind academically, they are at progressive risk of not attaining the necessary skills important for successful functioning in life, including in post-school education, training, and the workplace (OECD, 2006). There is a need for research that can identify factors that redress the academic barriers facing culturally/ethnically diverse students and at the same time optimize their academic development (OECD, 2006; Rangvid, 2007). With a focus on immigrant and First Nations students as two cases in point, the present chapter introduces a framework – the Academic and Cultural Demands-Resources

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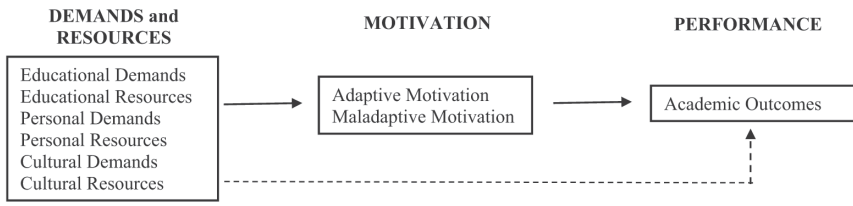

FIGURE 21.1 ACD-R framework

Note: The primary hypothesized process is one in which demands/resources lead to motivation that in turn leads to performance; however, there is also a potential direct link between demands/resources and performance.

Long Description: ACD-R framework reflecting the educational, personal, and cultural demands and resources implicated in students' academic development, from early years to post-school education. The demands/resources lead to motivation that in turn leads to performance (with a potential direct link between demands/resources and performance).

(ACD-R) framework (see Figure 21.1) – that provides a foundation for addressing a comprehensive range of factors implicated in culturally/ethnically diverse students' academic experiences and outcomes (including how they navigate academic adversity). We believe this is a particularly important approach because it emphatically recognizes the contextual demands and resources that are responsible for these students' academic development and so seeks to redress dominant narratives that, for example, unfairly locate academic adversity and 'failure' within these students themselves (see Martin et al., this volume; Norman-Hill, 2019).

Academic adversity among culturally and ethnically diverse students

Although there are notable exceptions for some immigrant groups and there is variability within any immigrant group (OECD, 2006), a predominant pattern of data shows that immigrant students are more likely to achieve at lower levels, leave school early, miss out on post-school education opportunities, and experience higher rates of unemployment (Cutmore et al., 2018; Flisi et al., 2016). Immigrant students are also more likely to experience socio-educational disadvantages, such as family poverty, low levels of parent education and occupational attainment, and educational resources (OECD, 2017). There can also be structurally based gender disparities as a function of culture/ethnicity – such as access to educational opportunity for girls in some contexts (see Chamberlain et al., this volume). These ongoing educational challenges are barriers to immigrant students' upward social mobility and health and wellbeing outcomes (Crul et al., 2017).

With regard to First Nations students, by many measures there is significant academic adversity. On average, these students achieve at lower levels than non-First Nations students (De Bortoli & Thomson, 2010; Trudgett, 2013). Academic

disadvantage experienced by First Nations students is typically exacerbated by a history of government and educational policies that result in exclusion, assimilation, or segregation, and also disconnection from culture imposed through constraints on cultural traditions and language (Fordham & Schwab, 2007; Ranzijn et al., 2009). First Nations students face high rates of racism that has consequences such as absenteeism and lower retention (Bodkin-Andrews et al., 2013). Presumably, in part as a result of these challenges, Martin et al. (2021b) found that First Nations students were more likely to reflect problematic patterns of motivation (e.g., failure avoidance, anxiety, uncertain control, self-handicapping, and disengagement) – but they also found that there could be significant variability in these effects among First Nations students, raising the important point that there is substantial variability within First Nations (and immigrant) student groups. Notably, also, alongside First Nations students' adversities, there have been gains made on other fronts, such as rising enrolments in preschool and school; progress in school completion; some reduction of numeracy and literacy gaps; and gains in vocational, training, and undergraduate university enrolments (Australian Bureau of Statistics, 2016; Department of Prime Minister and Cabinet, 2018).

A conceptual framework for understanding culturally and ethnically diverse students' academic development

Most research investigating the academic outcomes (including academic adversity) of students from diverse cultural/ethnic backgrounds has been atheoretical, piecemeal, or too narrowly focused (for review, see Cutmore et al., 2018; Martin, 2006; Martin et al., 2021b). Without a guiding and encompassing theoretical lens, policy and practice responses risk being ad hoc, ambit, and trial-and-error – hampering efforts to support culturally/ethnically diverse students to successfully navigate academic adversity. In the past 30 years, there have been some important theoretical contributions, but they have conducted relatively 'deep dives' into a particular aspect of minority students' academic development such as their motivational development (Graham, 1994; Graham & Hudley, 2005) or focused more on general child/adolescent development than educational development (e.g., García Coll et al., 1996). This chapter introduces an encompassing educational lens – the ACD-R framework. A key feature of the ACD-R framework is that it formally and explicitly accounts for the educational, personal, and cultural demands and resources that can (a) exacerbate or reduce the academic adversity experienced by culturally/ethnically diverse students, as well as (b) hinder or promote positive academic outcomes among these students. Here, we detail the development of the ACD-R framework (building on the foundational job demands-resources theory; Bakker & Demerouti, 2017; Schaufeli & Bakker, 2004) and describe how the ACD-R framework can be applied to understand and investigate culturally/ethnically diverse students' academic development (including their responses to academic adversity) – culminating in a posited process model shown in Figure 21.1.

Job demands-resources theory and its application to students' academic development

The ACD-R framework that we propose draws on job demands-resources (JD-R) theory (Bakker & Demerouti, 2017; Schaufeli & Bakker, 2004). JD-R theory emerged from research seeking to improve workplace experiences and outcomes of employees. JD-R theory posits there are various contextual factors in employees' work and job roles that help or hinder their performance and outcomes (Schaufeli & Bakker, 2004). Job demands are aspects of work that entail psychological and/or physical exertion (navigating a heavy workload, meeting accumulating deadlines, etc.) and that are linked to psychological and/or physical costs (strain, burnout, etc.). Job resources are work aspects that help employees attain work-related goals and growth (support from colleagues etc.), and lead to positive outcomes (motivation, positive workplace performance, etc.). Alongside job demands and resources are personal demands and resources that impact employees' work-related outcomes. Personal demands are modifiable, personal attributes that exacerbate the stress response especially by way of elevated perceptions of task demand; like job demands, they are associated with negative outcomes like strain and burnout. Personal resources are modifiable personal attributes that can support employees' workplace functioning; like job resources, they are associated with positive outcomes. JD-R theory specifies that demands elicit a health impairment process while resources elicit an adaptive motivational process. Over and above the 'main' effects of demands and resources, JD-R also suggests that 'buffering' and 'boosting' effects are possible (Bakker & Demerouti, 2017). Thus, there are factors that buffer the adverse effects of job demands or boost the adaptive effects of job resources. For example, Granziera et al. (2022) showed that teachers' adaptability (a personal resource) reduced the negative impact of role conflict (a job demand) on their emotional exhaustion (buffering effect). Collie (2021) found that helpful feedback at work was more strongly associated with teachers' work commitment when they faced high levels of disruptive student behaviour (boosting effect).

JD-R has recently been expanded to account for the demands and resources in school and university/college that impact students' academic development. Just as JD-R is typically focused on workplace factors and processes, many of the same factors and processes are evident in the academic context (Martin et al., 2021a, 2022). This being so, job demands in the academic setting comprise aspects of learning that require psychological and/or physical exertion (educational demands: managing a heavy study load, meeting accumulating due dates, etc.), and are associated with psychological and/or physical costs (academic strain etc.). Likewise, job resources in the academic setting comprise aspects of learning that help students attain academic goals and growth (educational resources: instructional support, positive teacher–student relationship etc.), and are associated with educational benefits (adaptive motivation etc.). Following JD-R theory, there are also personal demands and personal resources that impact students' academic development (e.g., Martin et al., 2021a). Thus, there are personal attributes that reflect barriers to one's

academic development (personal demands: difficulties with self-regulation, literacy, numeracy, etc.) and also personal attributes reflecting a potential to positively influence one's academic pathway (personal resources: adaptability, academic buoyancy, etc.). Like job demands and resources, personal demands and resources are (respectively) associated with negative and positive experiences and outcomes at school or university/college (Martin et al., 2021a, 2022). At the same time, we draw on the 'dual process approach', such that associations between resources and adaptive outcomes are anticipated to be positive and quite robust, and those between demands and adaptive outcomes are expected to be negative and weaker in strength. The reverse is expected between resources and maladaptive outcomes (weaker and negative) in comparison to those associations between demands and maladaptive outcomes (stronger and positive) (Collie, in press).

There are also buffering and boosting effects in the academic setting – like in the workplace setting. For example, there may be some personal attributes (e.g., academic buoyancy) that reduce (buffer) the negative effects of educational demands (e.g., poor teacher–student relationship) on strain; or, some educational demands (e.g., many assignment deadlines) that may boost the positive effects of personal resources (e.g., adaptability) on adaptive motivation. In sum, JD-R theory can be applied to learning and instruction in the educational context (Martin et al., 2021a). Indeed, this application of JD-R to students' academic development was recently validated by Martin et al. (2021a), who found that online learning demands and resources as well as a personal resource (adaptability) were significantly associated with higher levels of online learning motivation and with gains in later achievement.

The ACD-R framework

We propose that the robust body of JD-R theory and evidence can be harnessed to develop a powerful lens through which to investigate and understand culturally/ethnically diverse students' academic experiences and outcomes. As noted, we refer to this as the ACD-R framework. The ACD-R framework draws on the JD-R model in the workplace (Bakker & Demerouti, 2017; Schaufeli & Bakker, 2004) and also its recent application to the academic context (Martin et al., 2021a, 2022). Thus, as already described, in the ACD-R framework *educational demands* comprise aspects of learning that require psychological and/or physical exertion (managing a heavy study load, meeting accumulating due dates, etc.) and are associated with psychoeducational costs. *Educational resources* comprise aspects of learning that help students attain academic goals and growth (instructional support, positive teacher–student relationship, etc.) and are associated with positive educational outcomes. Also as described earlier, there are personal capacities reflecting *personal demands* that impede academic development (difficulties with self-regulation, literacy, numeracy, etc.) and *personal resources* (adaptability, academic buoyancy, etc.) reflecting one's potential to positively influence their academic pathway (Martin et al., 2021a, 2022). We consider these educational and personal demands and resources as relevant to adaptive (e.g., mastery, valuing)

and maladaptive motivation (e.g., strain), and in turn, academic performance (e.g., retention, achievement).

Notably, we contend these educational and personal demands and resources are applicable to all students' academic development. To the extent this is the case, these educational and personal demands and resources represent a subset of the ACD-R: what we might call the Academic Demands-Resources (AD-R) framework (that does not explicitly take cultural demands and resources into account).

Importantly, for culturally/ethnically diverse students, we propose a critical expansion on the AD-R framework to encompass cultural demands and resources – giving rise to the ACD-R framework. A key feature of the ACD-R framework is that it formally accounts for the cultural demands and resources that can influence the academic life course of students from culturally and ethnically diverse backgrounds. *Cultural demands* are challenges in culturally/ethnically diverse students' lives that require psychological and/or physical exertion to navigate (e.g., language proficiency, stereotypes) and that are linked with psychoeducational costs (e.g., maladaptive motivation). *Cultural resources* are ethno-cultural strengths or assets (e.g., cultural identity/pride, cultural connection) that help culturally/ethnically diverse students attain desired education-related goals and growth and are linked to positive psychoeducational outcomes.

Taken together, the ACD-R framework represents the means by which culturally/ethnically diverse students' (a) educational, personal, and cultural demands and resources impact (b) adaptive and maladaptive motivational experiences, that in turn impact (c) academic performance (e.g., retention, achievement). Consistent with JD-R theory, the demands are hypothesized to elicit a health impairment process (e.g., strain, burnout), while resources elicit an adaptive motivational process. Figure 21.1 depicts the basic model. Below, we provide further details about the different types of demands and resources, along with the motivation and performance components of the framework.

Educational and personal demands and resources

We suggest that the bulk of psychoeducational research has, in one way or another, well attended to the educational and personal demands and resources. Given this, we will not elaborate on them here but refer the reader to relevant major theory and research (e.g., see Bandura, 2001; Barkley, 2015; Covington, 2000; Eccles & Wigfield, 2020; Elliot, 2005; Pintrich, 2003; Ryan & Deci, 2010) that provide the rationale for inclusion in our framework. On this basis, the following factors can be considered indicative of educational demands:

- Low teacher expectations
- Limited access to learning infrastructure (e.g., computing, internet)
- Limited learning support staffing/resources
- Autonomy- and competence-hindering teaching
- Heavy study load

Likewise, the following can be considered indicative of educational resources:

- Quality instruction
- Teacher–student relationships
- Positive learning climate
- Autonomy- and competence-supportive teaching
- School/university and classroom resources

The following would reflect indicative personal demands:

- Literacy and/or numeracy difficulties
- Self-dysregulation
- Attention/concentration difficulties
- Poor physical/mental health
- Perfectionism

And, the following would be considered indicative of personal resources:

- Self-esteem
- Academic buoyancy
- Growth orientation
- Social and emotional competence
- Adaptability
- Psychological need (competence, autonomy, relatedness) satisfaction

Cultural demands

As noted earlier, cultural demands are challenges in culturally/ethnically diverse students' lives that require psychological and/or physical exertion to navigate. Research has demonstrated numerous such factors that are salient in these students' lives (though, the extent to which this is the case can vary within and between cultural/ethnic groups; Martin et al., 2021a; OECD, 2006). Here, we briefly identify and explain an indicative selection to provide a sense of what can be relevant in this part of the ACD-R framework:

- Language proficiency: Achievement gaps for culturally/ethnically diverse students can result from language difficulties (OECD, 2006). Language difficulties at home also impact parents' capacity to help their child with their education.
- Culturally relevant socioeconomic status (SES): In many international studies, SES is a factor consistently predicting culturally/ethnically diverse students' weaker academic performance (OECD, 2006).
- First- and second-generation status: Martin et al. (2012) identified that first- and second-generation immigrant students differ in academic development. Due to their relative recency of arrival, first-generation students are likely to

face more barriers such as learning a new language, adjusting to a new culture, and negotiating an unfamiliar education system and curriculum.

- Racism and micro-aggressions: Culturally/ethnically diverse students experience high rates of racism (Bodkin-Andrews et al., 2013), hate (see Obiakor, this volume), and micro-aggressions (Matthews & López, 2020) that have adverse effects on their academic experience.
- Alienation and disconnection: Munns (1998) reported that First Nations students can experience difficulties maintaining a positive academic self-concept and positive academic identity because of alienation experienced at school. There may also be disconnection from key 'normative' parameters of traditional colonial schooling, as well as challenges navigating the hidden curriculum of schooling that is typically familiar to students in the 'dominant' or 'mainstream' culture but not to other students (e.g., immigrants, First Nations) because they are new to the education system or are (or have been) educationally excluded or marginalized.
- History of failure dynamics: Owing to a history of racism and alienation within the education system, it is not uncommon for culturally/ethnically diverse students to have a prevalent experience of failure and fear (Graham, 1994; Graham & Hudley, 2005). In Munns's (1998) major review of First Nations students' engagement, 'the classroom appeared to be the site of their greatest danger' (p. 179).
- Stereotypes: Stereotype threat (Aronson et al., 2002) has been linked to the limiting expectations others hold for culturally/ethnically diverse students (Dandy et al., 2015).
- Deficit discourses: Following from this, there are also system-level deficit discourses about culturally/ethnically diverse students that comprise implicit and explicit indications of low expectations held about them (Dandy et al., 2015).
- Removal (including, 'stolen generations'): For First Nations students there is often a long history of systemic educational exclusion emanating from mission and residential schools which set up a 'legacy of continuing policies of child removals through the stages of separation, assimilation, integration, and 'self-determination'' (Norman-Hill, 2019, p. 67).

Cultural resources

Cultural resources are aspects of culturally/ethnically diverse students' lives that help them attain desired education-related goals and growth and are linked with positive psychoeducational outcomes (again, the extent to which this is the case can vary within and between cultural/ethnic groups; Martin et al., 2021a; OECD, 2006). Here we briefly identify and explain an indicative selection of cultural resources to provide a sense of what can be relevant in this part of the framework:

- Connection to language/ethnic group, tribe, clan, or country: Culturally/ethnically diverse students' connections to education are facilitated by their

positive connections with their cultural/ethnic community (Lowe, 2017; see Okada et al., this volume). For some students (e.g., First Nations), connection to country has particularly deep spiritual, cultural, social, and personal meaning that is central to their identity (Australian Institute of Aboriginal and Torres Strait Islander Studies, 2022).

- Cultural identity/pride: It has been suggested that when students' cultural identity and community are affirmed and supported by their school/university, there is significant scope to enhance their academic outcomes (Lowe, 2017; Martin, 2006; see Okada et al., this volume).
- Cultural safety at school: This is reflected in an environment free of racism, alienation, and isolation and also an academically safe environment where poor performance or academic difficulty do not reflect poorly on self-worth. Munns identified that 'avoiding shame continually influenced the classroom responses of the Koori [First Nations] students' (Munns, 1998, p. 181). The classroom was seen as unsafe and this led to the development of 'survival' strategies such as looking busy, avoiding, or quitting (Munns, 1998; see also Obiakor, this volume).
- Cultural/ethnic community and leader contributions: Students' connection to education can be enhanced through placing greater emphasis on local (community-based) decision-making, including community/leader input into relevant components of curriculum, pedagogy, resource selection, and practice (Malin & Maidment, 2003).
- Cultural/ethnic training and experience: Professional development (in-servicing) is an important means of providing cultural training and experience relevant to the local community (Martin, 2006). In addition, Bishop and Durksen (2020) urged educators to engage in critical (cultural) self-reflection to build an understanding of their own axiology and ontology and how it impacted students' academic lives.
- Proportional staff representation: An appropriate representation of culturally/ethnically diverse staff that reflect the student diversity in the school/university can encourage pride in students' identity and mitigate a sense of alienation from education (Britton, 2000).
- Ethnic/cultural support staff/officers: Martin et al. (this volume) identified a need for research to explore the role of First Nations Education Officers (or similar) in better connecting First Nations students to education.
- Quality implementation of culturally/ethnically diverse perspectives in curriculum: Research shows that recognition of First Nations cultural knowledge in the classroom can promote these students' valuing of education (Donovan, 2015).
- Educator knowledge of local cultural/ethnic community: Martin et al. (this volume) identified the importance of teacher–student relationships among culturally/ethnically diverse students and a major part of this relies on enhancing educators' cultural knowledge of students and the local communities with whom educators need to positively connect (see also Okada et al., this volume).

Buffering and boosting effects

Drawing on JD-R theory and research, we can also consider cultural demands and resources in terms of buffering and boosting effects. Thus, there may be some resources that reduce (buffer) the negative effects of demands. For example, cultural pride or a positive cultural identity (cultural resources) may help buffer the adverse academic impacts of a poor teacher–student relationship (an educational demand) – though, a poor teacher–student relationship must be directly addressed by the school/university as well. Alternatively, an educational resource in the form of high-quality and supportive instruction may buffer the adverse effects of a cultural demand such as racism – though, racism must be robustly addressed by the school/university as well. In addition, a cultural resource in the form of connection to country/clan or the involvement of cultural mentors/leaders may play a boosting role for adaptive motivation in the face of a heavy study load (educational demand). These culturally oriented buffering and boosting effects remain to be empirically verified, but we speculate that they have significant explanatory potential based on prior research demonstrating buffering and boosting effects among educational and personal demands and resources (Granziera et al., 2022; Martin et al., 2021a).

Impact of demands and resources on motivation and performance

Although the demands and resources in JD-R theory tend to receive most of the substantive attention, there are two other components that complete the hypothesized process and that also feature in the ACD-R framework: motivation and performance. Specifically, the nature of individuals' demands and resources impacts their motivation, which in turn impacts important outcomes such as performance (Collie et al., 2020). According to Collie et al. (2020; see also Collie & Martin, 2016; Martin et al., 2021a), the resources in individuals' lives foster adaptive motivation (e.g., mastery and efficacy experiences – though, efficacy has also been placed as a personal resource) and reduce maladaptive motivational experiences (e.g., anxiety, strain, burnout). In turn, JD-R theory proposes that motivation impacts key performance outcomes (e.g., retention, achievement) – with these performance outcomes positioned as the final part of the process (though, the process is cyclical over time; Collie et al., 2020). Extrapolating to learning and instruction processes under a JD-R framework, Martin et al. (2021a) identified academic achievement as one performance outcome and showed that demands, resources, and motivation in school students' academic lives impacted their later achievement scores. In subsequent research among university students, Martin et al. (2022) found similar links to academic engagement and disengagement as performance outcomes (but we recognize that, depending on the specific engagement construct, JD-R theory and research can also place engagement in the motivational part of the process). Taken together, the ACD-R framework adopts this understanding from JD-R theory

and considers adaptive and maladaptive motivation as central process factors and performance as the outcome, as shown in Figure 21.1.

Conclusion

The ACD-R framework can be a basis for whole-school/university, pedagogical, community-based, and student strategies to enhance the academic experiences and outcomes of diverse students – and to reduce the adversity they are known to experience. Indeed, if we define 'culture' and 'cultural' more broadly (e.g., in sociocultural terms), there may also be scope for the ACD-R framework to be applied to other groups of diverse students (e.g., LGBTQI+ students, neuro-diverse students) – with each group experiencing cultural demands and resources that are distinct to their academic development. Having posited the ACD-R framework and the various factors subsumed under each of its key components, the stage is set for researchers and practitioners to operationalize the hypothesized process with a view to better supporting the educational outcomes of students from diverse cultural and ethnic backgrounds.

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22

A MULTIDIMENSIONAL PERSPECTIVE ON ADVERSITY

From peace to understanding

Kieron Sheehy, and Andrew J. Holliman

One of the most significant things that emerges from this book is that understanding adversity cannot be reduced to a simplistic framing of an individual and an event. There is a need for a multidimensional perspective, and the chapter authors illustrate and illuminate this need across different contexts, cultures, and topics. One illustration of this is the Academic and Cultural Demands-Resources (ACD-R) framework proposed by Andrew J. Martin and Rebecca J. Collie (Chapter 21) that seeks to map educational, personal, cultural, and resource influences. Adversity is framed, and in many ways constructed, by a complex network of individual, societal, and environmental factors. It is for this reason that many of the chapters adopt an ecosystemic perspective on the nature of adversity. A consequence of this view is that one can intervene to address adversity at many different levels in order to increase the likelihood of positive change occurring. This ecosystemic perspective allows the positing of insightful and sometimes surprising juxtapositions that go beyond everyday thinking about the experience of adversity. For example, Rachel R. Romeo and Joanna A. Christodoulou's (Chapter 1) discussion of neuroscience in understanding and addressing adversity in education makes explicit links to the influence of socioeconomic status, a social and political issue. Elsewhere, Alexandra Okada and colleagues (Chapter 20) demonstrate work that links tackling local and personal adversities through education that reflects addressing global challenges. In the ecosystemic model, influences can travel from the global to the local and vice versa.

Peace

In seeking a way to encapsulate in some way the nature of this complexity, a song title came to mind, which created the title of this closing chapter. It is perhaps not surprising that it did. As this chapter is being written a war has begun in Europe, in

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which the lives of many children and young people are being upturned, displaced, or ended, in the chaos. This experience is shared by children and young people across the world. There has been an unprecedented number of refugees across the globe during the last decade, with millions being displaced (Hirad et al., 2022). They are exposed to adversity in their homelands and then encounter additional stressors when resettling (Hirad et al., 2022).

Within an ecosystemic perspective, at the highest 'level', the concept of peace in and between nations needs to be acknowledged. Where peace does not exist, profound adversities arise throughout the multiple ecosystemic dimensions represented in this book. Research on the impact of war on children's wellbeing has grown in recent decades and the effects of this adversity have become more understood. The experience of refugees highlights the intersectionality of the experiences of adversity, as children and their families move from areas of conflict to resettle in new countries (Yohani, 2010). Educational community brokers can play a vital role in helping children settle into new schools and cultures and help identify and address gaps in education which may be hidden yet remain a significant burden for older children (Yohani, 2010). Protective factors that might act to ameliorate to some extent the consequences of these adverse experiences have been identified and this serves to highlight the valuable role that education can play (Werner, 2012). Alongside a strong attachment with their primary caregiver is the social support of teachers and school peers who understand their situation backgrounds. Although longitudinal research is needed, evidence suggests that school-based interventions and the development of positive social networks are effective (Werner, 2012). Carol A. Mutch (Chapter 8) examines the positive role that educators can have in overcoming adversity from large-scale disasters and crises. It is shown how educational communities can work together in managing crises and dealing with trauma, in ways that position children as active, central, participants. Schools are seen to be integral to supporting children, their families, and communities when they are impacted by large-scale disasters. Given the intersectional nature of adversity, the issues and approaches described by chapter authors will have relevance in suggesting ways forward at particular points in time.

Love

In many of the chapters, the importance of relationships is mentioned. This might be seen most obviously where Cirenia Quintana-Orts and colleagues (Chapter 9) examine how to overcome bullying in schools. However, it is also seen in numerous examples in other chapters in which responding to the othering of individuals and groups is a key issue and where relationships are routes to addressing adversity. In seeking a word that is the opposite of hateful or damaging relationships, perhaps 'love' might be used, as it captures the need to consider the emotional aspects of adversity and overcoming it. For example, Festus E. Obiakor (Chapter 17) gives a passionate first-hand account of his experiences of hate within an education system and the need to develop friendship, cooperation, and mutual respect. This

serves to illustrate an important issue for a potential model of adversity. His personal experiences are framed by historical and political forces that began before he was born and yet can be discerned within the current system he experiences and are observed in some of the interpersonal interactions he reports. Similarly, we have seen socio-historical influences across numerous examples in the book where a particular status is ascribed to a person's gender, sexuality, physical or sensory impairment, class, or ethnic group. Understanding adversity goes beyond the 'here and now'. However, adversity is experienced in the present and is often expressed, and addressed, through personal relationships.

Understanding

To understand an individual's experience of adversity, we need an understanding of their thoughts and how they might change. Adversity is not static in nature. This can be seen, for example, in the chapter by Andrew J. Holliman and colleagues (Chapter 5) on *Adaptability and Educational Transitions*, which foregrounds the interaction of a young person's developmental changes with a new social and cognitive environment and the demands placed upon them to think and behave in new ways. If we are to understand the experiences of others, then it is essential to hear what they say. This idea is supported across the chapters and the importance of '*voice*' is mentioned repeatedly. Voice is more than merely listening to those whose adverse situations or experiences we wish to address. This can represent ways in which weight is given to the views and experiences of groups that have previously been marginalized, to reform educational practices. As John Butcher (Chapter 12) writes: 'Voices of individual students are powerful and listening to them is one of the most inclusive approaches an institution can commit to'. This is illustrated again by Sujarwanto and Kieron Sheehy (Chapter 11) in a context where disabled Indonesian students are typically stigmatized and excluded. It shows how voices can be promoted and used to develop new services.

The idea of developing positive student–teacher relationships emerges in several contexts as a means to overcome adversity, such as in addressing the challenges faced by Indigenous Aboriginal First Nations students (Andrew J. Martin and colleagues, Chapter 18). These partnerships can be collaborative, which includes students working as co-researchers to produce positive changes, and powerful examples of this are given within the book. In order to achieve a voice in the system, new methods of working can be developed as shown in the use of storytelling as a research method (see Liz Chamberlain and colleagues, Chapter 19). This shows how a new approach can disrupt traditional practice and give a centrality to the voice of marginalized adolescent girls. Elsewhere, we see how empowering young people to work in partnership with their communities can be used to address environmental challenges (Alexandra Okada and colleagues, Chapter 20). In the context of large-scale disasters, Carol A. Mutch (Chapter 8) shows how strategies that help children to actively participate in decision-making benefit their communities and also support their own recovery from adverse experiences.

Concluding thoughts

The book reveals that the experience of adversity is not evenly distributed. The status of groups and individuals within society, at particular points in time, appears consistently as a significant factor in the experience of adversity and the impact that it has within a society. The importance of an ecosystemic perspective of adversity has emerged. Consequently, a collective response is required to address issues at different levels of the system. Despite this complexity, across the chapters, we have seen the positive impacts that arise from educators seeking to address adversity in its many guises, and the importance of education in helping people strive towards a better life, in often challenging and threatening circumstances. We might not achieve peace, love and understanding; however, the chapter authors present examples, from across the world, of theories and opportunities that can be drawn upon for those wishing to overcome adversity in education. This feels like a step in the right direction.

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