A Horizon-Scanning Report on the Changing Demographic and Pedagogical Profiles of Current and Emerging University Students and the Responses of the Global Higher Education to the Generational Challenges

A report by Professor Peter Bryant. Commissioned by the N-TUTORR National Digital Leadership Network

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Author biography

Peter Bryant is a Professor of Business Education and Associate Dean (Education) at the University of Sydney Business School, Australia. He is an award-winning academic with international expertise in designing and delivering successful strategic educational change in both business and social sciences institutions in Australia and the UK. He has thirty years of teaching and research experience in both the UK and Australia at both vocational and higher education levels, in the areas of higher education strategy, educational innovation, online learning and creative industries management.

Abstract

This report critically examines how the demographic and socio-economic composition of the current and near-future post-compulsory student community intersect with technological, pedagogical, and governance challenges in higher education. Informed by the intersecting epistemic, policy, strategic and financial crises created by technology-led disruptions such as generative AI and organisational and marketisation complexity, the report will provide exemplars and experiential insights into the structures and approaches higher education institutions will need to enable to create and sustain alignment with the pedagogical, graduate employability and technological needs of the generations of potential undergraduate and postgraduate students.

Introduction to the National Digital Leadership Network Report Series

The National Digital Leadership Network (NDLN) is a collaborative initiative designed to support digital transformation across Ireland's Technological Higher Education sector. Established under the N-TUTORR programme with funding provided through the EU's NextGenerationEU initiative, the network was officially launched in November 2024 to provide a national platform for digital leadership and complementary knowledge exchange and strategic collaboration. While the N-TUTORR programme has now concluded, our network continues its work under the guidance of a steering board composed of sector leaders and external experts.

Digital leadership in higher education extends far beyond technical expertise or the adoption of certain tools and platforms: it's about vision, strategy, and culture change. Effective digital leaders ensure that digital strategies and developments align with institutional and national priorities, not only enhancing teaching, learning, research, and administration functions but also upholding academic values, promoting equity, and driving business innovation. In this context, the NDLN fosters collaboration among higher education leaders, policymakers, and practitioners, providing opportunities to share insights, explore emerging challenges, and develop shared solutions.

As part of its work, the NDLN has commissioned a series of horizon-scanning reports authored by leading national and international scholars and practitioners. These reports explore key trends at the intersection of digital innovation, traditional leadership and strategic planning, providing actionable insights to support higher education institutions in aligning these trends and related opportunities with institutional and national priorities. Covering topics such as the evolving role of generative AI in academia, data-driven decision-making, academic integrity, new models of learning and teaching and new ways to plan for financial sustainability, this report series offers timely advice and direction for higher education leaders navigating the interrelated complexities of the digital and post-digital age.

We extend our gratitude to the N-TUTORR programme for its financial support, and to N-TUTORR Co-ordinator Dr Sharon Flynn for her direction and continued support of the network. Thank you also to members of our national steering board and to our external contributors, in particular Professor Lawrie Phipps.

A big personal thank you in addition to my colleagues in the Department of Technology Enhanced Learning (TEL) at MTU -- especially Darragh Coakley and Marta

Guerra -- whose work has been vital to the preparation and publication of these reports. We are also very grateful to Dr. Catherine Cronin, our chief editor, and, of course, to all our authors whose insights, expertise, and dedication form the heart and foundation of this series.

We invite you to engage with these reports and join us in shaping the future of digital leadership in higher education.

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Executive Summary

This report examines how generational characteristics and behaviours of Millennials, Generation Z, and those yet to participate in higher education, Generation Alpha, are reshaping higher education institutions (HEIs) and their strategic, pedagogical, and student experience decisions over the next decade. The analysis reveals several critical trends:

Higher education faces unprecedented challenges in student recruitment, retention, and attainment as these generations transition through the system. Many Millennials (born 1981–96) prioritise work–life balance, seek purpose-driven education, and view learning as a continuous journey. They prefer experiential learning and value peer support over competition, particularly in postgraduate education. Generation Z (born 1997–2012) represents the most diverse generation in history, with distinct expectations for their education. They demand flexible, technology-integrated learning approaches and generally place strong value on diversity, inclusion, and social justice. Financial strain and scepticism about the value of degrees are significant barriers to their participation. Generation Alpha (born since 2013) is emerging as the most technologically immersed generation, anticipated to have high university participation rates enabled by their engagement with digital learning tools and social media. Their attitudes to a university education are potentially moderated by their Millennial parents and their own experiences with, and decisions to participate in, higher education. They demonstrate increased curiosity and individualism, while being shaped by global challenges and extensive exposure to AI and digital learning tools. These macro-level generational shifts require HEIs to adapt their educational delivery, support services, and value propositions in order to remain relevant and sustainable in the changing landscape of post-compulsory education.

Introduction

The demographic and socio-economic composition of the current and near-future post-compulsory student community intersects with technological, pedagogical, and governance challenges that will shape HEIs over the next decade (Deloitte, 2024; Giroux & Frey, 2024). While there are significant variations between national university systems, the critical fact remains that universities' financial stability as well as their social licence to operate is frequently dependent on the design, provision, and completion of an education for students entering post-compulsory education for the first time (undergraduate programmes) and/or those returning to higher education to reskill or upskill (postgraduate programmes and lifelong learning) (Marshman & Larkins, 2020; Pavlov & Katsamakas, 2020). The global higher education sector faces unprecedented challenges in student recruitment, retention, and attainment as Generation Z (those students born between 1997 and 2012) transition through higher education and into graduate employment and the Millennial generation (born between 1981 and 1996) move through their employment journey and return to higher education for reskilling as postgraduate or lifelong learning students. These challenges are amplified as the next generation (Generation Alpha, born since 2013) begins to enter undergraduate education in the next five to seven years (Dimock, 2019).

There are many ways to define and understand the role that students play in enabling and sustaining a successful HEI. There is a universal recognition that without students (and the programmes, practices, and experiences they engage with) both the future and the identity of what a university stands for are existentially compromised (Barnett, 2024; Pedler et al., 2022).

There are many ways to define and understand the role that students play in enabling and sustaining a successful HEI.

The inherent institutional capabilities that enable innovation, evolution, and growth in teaching and learning are challenged by the consequences of the decline in both student engagement in higher education as well as the value propositions of the time, money, and opportunity cost of completing a higher education qualification (Coffin, 2021).

The critical importance of lifelong learning to the future of HEIs has been documented by both consultants and academics. Many of these studies warn of the risks of declining enrolments in postgraduate programmes across many university sectors,

including Ireland, the UK, and Australia (Anielska, 2022; Howard, 2021; Macleod et al., 2024); significantly increasing dropout rates from postgraduate programmes (Namakula & Ndaba, 2024) and soft demand for microcredential programmes and online learning in a post-pandemic market shaped by the cost of living crisis (Brown et al., 2021; Olcott Jr, 2022; Thi Ngoc Ha et al., 2024). This future pipeline for student recruitment is further complicated by the emerging trend of weakening demand for undergraduate programmes (Dania et al., 2023), with EY forecasting in 2022 that developed economies had reached "peak higher education" (Friday, 2022).

Methodology

This report takes an informed critique approach to aggregating and critically summarising the academic and professional literature and scholarship on the supply chain of current and future students and how they understand, value, and enable their relationships to higher education throughout their careers. The informed critique methodology involves a structured scoping approach to synthesising and critically analysing existing academic research, policy documents, media reportage, and statistical data. We explored the research question holistically as opposed to systematically, allowing for the consideration of the constraints (including the broad multidisciplinary nature of demographic and behavioural research on Millennials and Generation Z) while addressing critical questions of comprehensiveness and relevance (Farrukh & Sajjad, 2023). We used the literature to synthesise important and novel insights through performing content analysis, exploring the scope and nature of generational change, and exposing the research trends that impact directly on the future strategic direction of higher education (Paré et al., 2015).

Generational Shifts

Understanding generational shifts is crucial for predicting and adapting to changes in higher education participation patterns. Millennials and Generation Z students demonstrate markedly different attitudes towards higher education compared to their predecessors (Baby Boomers and Generation X). This is influencing enrolment trends and institutional strategies. This section of this report takes a deep dive into the demographic, socio-economic, and attitudinal characteristics of the two generations currently in the higher education market, as well as an insight into the generation that will be entering higher education in five years' time (Generation Alpha).

The construct of generations is a relatively recent and contested one (Rudolph et al., 2021). It offers a valuable sociological framework for understanding shifts in demography, socio-economics, and attitudes, while allowing for significant individual

variation within and between the relatively arbitrary generational decades. While there are shared cultural and historical experiences that create common generalised characteristics within age cohorts, these manifest in life experiences differently across individuals and contexts (Twenge, 2017). The generational construct remains useful precisely because it acknowledges both patterns and exceptions within and between generations. This flexibility allows for the study of broad social trends (such as education) while recognising individual agency. It is difficult to explore the characteristics of generations without making macro-level generalised, aggregated definitions that transcend the segmentation of the generation at either a meso- or micro-level.

Millennials

The Millennial generation, born between 1981 and 1996, exhibits distinct sociographic, demographic, and attitudinal characteristics that differentiate them from previous generations (Deal et al., 2010; Ng & Johnson, 2015). For higher education this generation has, in the main, already completed their undergraduate experience and are now into the second phases of their careers making difficult decisions on the efficacy of postgraduate education, defined by mounting debt, cost-of-living struggles, and study–work–life balance (De Gayardon et al., 2018; Tough, 2023). Millennials are a culturally and racially diverse, tech-savvy, and urban-oriented generation. The desire to live within urbanised environments disproportionately affects economically disadvantaged Millennials, who face higher housing costs in city centres (Lee, 2020). Rising urban rents force lower-income Millennials into longer commutes from affordable suburbs or into shared housing arrangements, exacerbating economic strain, a trend that particularly impacts minorities and first-generation university graduates (Dilmaghani, 2022). Those who entered the workforce during the 2007–09 global financial crisis face unique challenges impacting their economic well-being and leading to lower salaries and wealth accumulation, especially assets (Kurz et al., 2019). The advantages which Millennials generally have over previous generations, in terms of more education and longer working lives, are countered by weak prospects for economic growth through challenges in home ownership and investment opportunities to support retirement (Gale et al., 2020).

Deloitte (2024), in their annual socio-economic report based on a global survey of over 22,000 Millennial and Generation Z individuals in 44 countries, identified 5 factors that are shaping the way Millennials are engaging in work, and the attitudes and ambitions they tend to engender in the workplace. Compared with other generations, they are “cautiously optimistic about the economy and their personal finances” but still uncertain about the future. At a macro-level, they strongly believe that having purpose

influences their satisfaction with work and their workplace. The enacting of real action on sustainability and climate change (for example) drives career decisions and consumer behaviours for many Millennials. They have generally positive perceptions about generative AI but are deeply concerned that it might replace jobs or enable younger generations to challenge more rapidly them for career advancement. For most Millennials, work–life balance, flexibility, and adaptability are the most valued priorities for making life decisions about their career and further education. Finally, the critical importance they place on stress management, mental health, and well-being places pressures on employers to support and respond to their ongoing health and creates fears of precarity or being discriminated against because of it. The 2023 Deloitte (2023) global survey identified that 78% of Millennials place a high value on work–life balance (compared to 47% for Baby Boomers). They seek purpose-driven work and prioritise flexibility in the workplace over salary or career ambitions. They strongly feel they can have a positive impact on the employer with regard to personal development opportunities and workload.

The critical importance of work–life balance is a defining characteristic of Millennial attitudes to work. Those Millennials raised by deeply engaged and politically aware parents integrate their concerns about globalisation, technology and social media, economic inequities, and social order and equity into how they work, live, play, and learn (Myers & Sadaghiani, 2010). It is through this purposeful engagement with the importance of balance that many Millennials find happiness through engaging in meaningful work, particularly when led by transformative leaders, the building of connections and friendships in the workplace, and the expression and sharing of gratitude (Yap & Badri, 2020). High levels of satisfaction with work–life balance also contribute to the enabling of creativity among Millennials, forging clear intersections between creativity at work and creative pursuits outside the workplace (Mihelič & Aleksić, 2017).

Millennials and Higher Education

Many Millennials view education as a continuous journey rather than a finite achievement. They favour hands-on, experiential learning in non-competitive settings and value individualised, relevant feedback and feed-forward (Elam et al., 2011). Those Millennials in education are agile in their uses of technology to manage information, create the capability to manage the balancing priorities of work, life, and study, and to enhance

Many Millennials view education as a continuous journey rather than a finite achievement.

their learning experiences through things such as group work and research, though less so than Generation Z (Chan & Lee, 2023). Millennials often seek authentic leadership, which extends to their relationships with academics and the HEI itself (Andi, 2018). In this context, in order to remain motivated and engaged within their learning experiences, they expect to be treated as valued individuals (Au-Yong-Oliveira et al., 2018).

For Millennials considering postgraduate education (or as mature students entering undergraduate education), the student journey lifecycle from recruitment through to graduation varies significantly from that of previous generations. Millennials are highly influenced by social media users and peer feedback. They often rely on online reviews, social media influencers, and digital marketing when making purchasing decisions, including those related to education (Kusumawati, 2018). To enable experienced Millennial online purchasers, the web presence, purchase facilitation, payment, and enrolment for postgraduate programmes needs to be quick, safe, and seamless, with high levels of data protection and privacy (Indahingwati et al., 2019; McHaney, 2023).

As a social act, Millennials often rely heavily on peer support and value the social aspects of learning. Especially in postgraduate education, they see their peers as advisers and collaborators rather than competitors, which fosters a supportive learning environment not always augmented by the systems and structures of the university (such as grades, awards, scholarships, and other competitive motivators in traditional higher education) (Janmere & Auzina, 2018). Millennials have progressed past the highly competitive nature of their high school and undergraduate education into valuing the importance of networking, connections, and cohort-based learning (Akhras, 2015; Shushok Jr & Kidd, 2015). In terms of assessment, Millennials are concerned about the stress and time commitments in high-stakes assessments and prefer alternative assessment strategies that align with their learning styles and reduce cognitive load, which is a challenge higher education must rise to in an era of deep concern about generative AI and integrity (Clark, 2018; Powell & Forsyth, 2024).

Generation Z

Generation Z, born between 1997 and 2012, represents approximately 32% of the global population and will comprise 27% of the global workforce by 2025 (Deloitte, 2023). At a macro-level, they are the most ethnically and racially diverse generation in history, especially in the Global North. For example, 48% of Generation Z in the United States identifies as a racial or ethnic minority, which is significantly higher than previous generations (Parker & Igielnik, 2020). In the Irish 2022 census, the proportion of Generation Z identifying as ethnic minorities is also higher than the national average

(Central Statistics Office, 2022). According to the Brookings Institute, Generation Z demonstrate higher levels of compulsory and post-compulsory education attainment, prioritising education due to job market demands, greater access to digital learning, and parental encouragement to pursue higher education for economic security. However, this is often countered by the rising costs of higher education and the widening gaps of access from equity groups (Dollinger, 2023). Generation Z exhibit significantly different values and behaviours around family and marriage, often supporting diverse family structures, valuing independence before marriage, prioritising career development, and being more accepting of non-traditional relationships and cohabitation (Parker & Igielnik, 2020).They generally embrace different (and some would argue more progressive) views on gender fluidity and sexual orientation, as well as enhanced multicultural affiliations and connections (Frey, 2020; Rice & Moffett, 2021). Many Generation Z individuals have a strong sense of social justice, valuing tolerance, acceptance, and inclusivity. They are motivated by the desire to make a positive impact on the world, and they value feeling safe (mentally, physically, and economically) (Seemiller & Grace, 2024).

Like Millennials, Generation Z has high expectations for employment, and they seek meaningful work, regular feedback, and work–life balance, engaging in work, life, and play through deep connections enabled by a critical, open, and often public use of social media (such as Instagram and TikTok) (Parry & Battista, 2019; Stahl & Literat, 2023). They have entered the higher education system and workforce during a time of great political, societal, and economic uncertainty (i.e. Brexit, the Covid-19 pandemic, war) leading to a shortage of acceptable jobs (Scholz & Rennig, 2019). In response, Generation Z has deployed entrepreneurial ways to balance work and leisure, often converting hobbies or passions into successful start-ups (Brînză & Butnaru, 2024). Compared to both Millennials and Generation X (the generation comprising of their parents, for the most part), Generation Z is deeply concerned about economic justice issues such as education costs, poverty, access to healthcare, and affordable housing, in part because they are deeply impacted by the rising costs putting these critical services out of reach (Bogueva et al., 2024). Generation Z prioritises independence in opinions and actions, often rejecting traditional values, roles, and social structures (often called a “worldview break” from other generations) (Yanitskij et al., 2019). They are passionate and active in singling out issues like racism, sexism, and homophobia, both in terms of advocating for fairness and equity for themselves and others, as well as being an active member of a more progressive and inclusive society (Bogueva et al., 2024).

Generation Z and Higher Education

At the macro-level, Generation Z's attitudes and expectations about their higher education experiences and practices reflect a fundamental shift from that of Millennials. They are the most highly educated of the generations experiencing opportunities for higher education, with learning support and extracurricular learning enabled by a deep and pervasive exposure to technology (Pfefferová et al., 2024). Their engagement with technology and social media, and their focus on career outcomes, drives demand for more flexible, technology-integrated, and practical approaches to higher education, as well as drives disruption of the more traditional models of higher education teaching, learning, and assessment (Hernandez-de-Menendez et al., 2020; Mahesh et al., 2021). Generation Z students value diversity and inclusion, both in their engagement with their cohort and in the curricula they are studying. They seek authentic relationships with their faculty, with whom they expect a deep sense of trust and openness (Demirbilek & Keser, 2022). They demonstrate a strong sense of social consciousness and collaboration in their learning, expecting the university and its teaching to be aligned with their values and behaviours (Seemiller & Grace, 2016). They engage with smaller chunks of learning to match shorter attention spans, an increasing recognition of neurodiversity, and the complexity of their engagement with work, life, and play (Dollinger, 2023; Nagy et al., 2024).

The higher education participation decisions of Generation Z are deeply influenced by their relationships to family and peers, and the connection of these influencers to their financial and work–life balance decisions (Bowden & Doughney, 2012). Financial strain is a significant deterrent for many potential students in Generation Z, with the cost of university education, the costs of living while at university, and in some sectors the potential debt associated with it making higher education less appealing than simply entering the workforce (Nieuwoudt & Pedler, 2023). There is a growing perception among Generation Z that university degrees do not necessarily lead to better employment prospects, especially in regions with high unemployment rates (Gil & Sanagustín-Fons, 2019; Loveland, 2017). The rise of alternative career pathways has also influenced this trend, with digital platforms offering specialised training, coding bootcamps, and online learning opportunities at a fraction of university costs (Staley, 2019). Many Generation Z individuals are drawn to entrepreneurship and digital content creation, which are careers that often do not require formal degrees (Cismariu & Hosu, 2019). They have also witnessed Millennials (e.g. siblings, members of their peer group) struggling with underemployment despite holding degrees, leading them to reconsider the return on investment of university education (Elayan, 2022).

Generation Alpha

Generation Alpha is the first generation born entirely within the twenty-first century (born since 2013). By 2025, they are expected to comprise nearly 2 billion people globally. The distinctiveness and uniqueness of this generation is contested in the literature, especially as the ubiquity of technology, screentime, and social media transcends Millennials, Generation Z, and into Generation Alpha (Nagy & Kölcsey, 2017). There is ongoing contention around the conceptual framing of these generations as digital natives (Kirschner & De Bruyckere, 2017). In their study of middle-school children and games-based learning, Abbasi et al. (2023) have identified several differentiating characteristics of Generation Alpha (drawn from their engagement with their schoolteachers), noting that they:

> Exhibit behaviours such as being more curious, free from any rules, being more ill-tempered, more mobile and more self-centred than Generation Z; moreover, they also had high self-esteem, and they were more emotional and more conscious. In terms of communication, Generation Alpha was also determined to be more closed and behave more individually than Generation Z. (p. 123)

The influence of social media and the strong social connections which it enables are seen as strengths in the education and employment markets for the future for Generation Alpha (Moravčíková, 2022). These factors can enhance the ability of potential students to network, market their ideas, and gain support for entrepreneurial activities (Ziatdinov & Cilliers, 2021). There is emerging evidence that the parents of Generation Alpha children (mainly Millennials) are educating them about the critical importance of a work–life balance and raising them to strongly value sustainability and social responsibility (Karatayev et al., 2024). From a brand marketing perspective, many Millennial parents believe in making their children feel heard and validated, which can lead to Generation Alpha having a strong voice in the family, where they contribute to shaping family decisions on education, social action, and location (C3 Team, 2024). Millennial parents also encourage their children to stand up for their beliefs and celebrate their individuality, while ensuring their safety online and in social and educational settings (Brain, 2022). Generation Alpha is growing up amid significant global challenges, including high rates of poverty, overpopulation, pollution, polarisation, global warming, and geopolitical conflict. These factors shape their social and psychological development, making them more aware of, increasingly politicised about, and potentially deeply impacted by global and local issues from a younger age than previous generations (Aydemir, 2020).

While their status as natives in digital technology use is contested, Generation Alpha are moving through their compulsory education experience in a highly digital environment, familiar with mobile devices, virtual assistants, and AI from a young age (Blanco & Gutiérrez, 2022). The integration of generative AI tools into their school education is

exponentially increasing, with the technology assisting with homework and research, which could potentially lead to behavioural changes such as impatience for answers, anxiety, and low self-esteem in problem-solving while also facilitating the development of more complex question- and information-seeking behaviours (e.g., the engineering of prompts for generative AI) (Marimekala & Lamb, 2024).

It is predicted that one in two Generation Alphas will obtain a university degree, reflecting their ease of access to a massified higher educational system and the wider implications of government policy designed to encourage participation, especially in countries like Australia, Ireland, and the UK (Hannon, 2023; Ziatdinov & Cilliers, 2021). Generation Alpha is expected to thrive in higher education environments that heavily integrate technologies such as personalised digital learning, gamification, and virtual classrooms, many of which have defined and are increasingly present in their school experiences (Jukic & Skojo, 2021). It remains unknown how the higher education experience will be designed and delivered over the next two decades as this generation move into and through their university experience. At a curricular and assessment level, there will need to be a shift towards holistic education that focuses not only on academic knowledge but also on developing critical and impactful skills in digital citizenship and social responsibility (Blaj-Ward & Winter, 2019). The majority of the literature on Generation Alpha focuses on technology immersion and the ubiquity of screens. For higher education, that presents a challenge but not an existential one. The bigger challenge comes from the integrity, validity, and applicability of knowledge and authority in an era of on-demand, fragmented, and unmediated access to knowledge, opinion, and expertise.

The Challenges for Higher Education of Generational Change

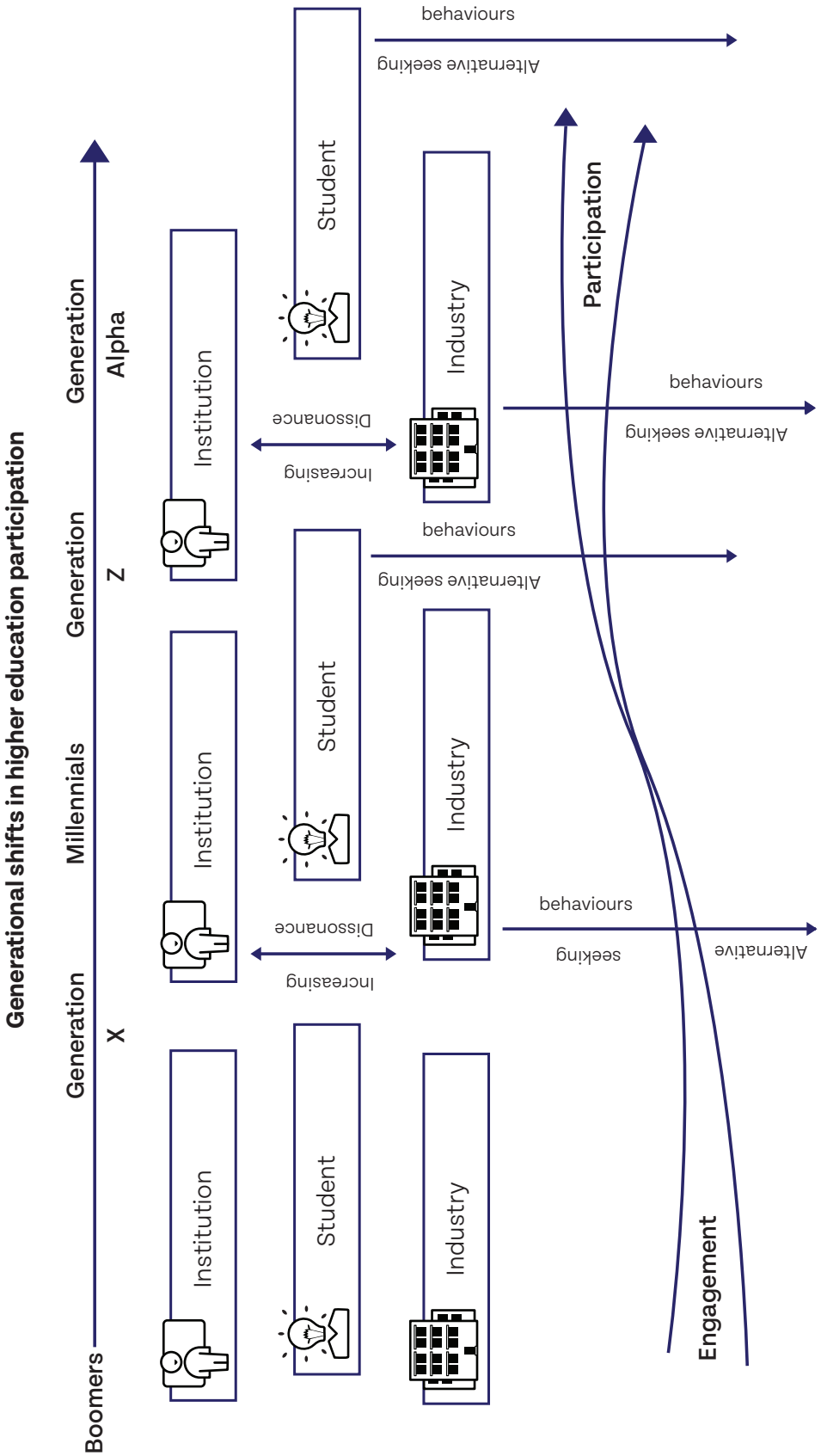
Millennials and Generation Z will make up 70% of the workforce by 2025 (Deloitte, 2023, 2024). The workforce composition in areas such as business, education, health, and engineering will change markedly as the generational shifts impact on different industries, ranging from the impacts of technology, to value-seeking behaviours, to the critical importance of relationships within a workplace and the increasing impacts of financial precarity on job and career choice (Baum, 2020; Koulopoulos & Keldsen, 2016). These are generations wanting to find better work–life balances, both while undertaking their first post-compulsory educational experiences (Generation Z) and while navigating the challenges of balancing career ambitions, family, financial stress, and lifelong learning (Millennials). In both generations, individuals seek to build and apply the skills of adaptability, flexibility, creativity, and responsibility into their ways of working, their engagement and participation in higher education, and the ways in which they choose to live their lives.

They want technology to enable these ambitions but not be the modality or practice that defines how they work, live, play, and learn.

There is significant empirical and anecdotal evidence that points to dissonance between the expectations and priorities of the current generations of students entering undergraduate and postgraduate education with the current operating model of higher education. There is also evidence that the pedagogical approaches of HEIs are out of alignment with both the expectations of current and future students and with the industries they will enter or are working in as graduates (Al-Majeed, 2024; Joshi, 2020). The 2024 Deloitte global survey of Millennials and Generation Z (2024) found that one-third of these generations have opted out of higher education due to financial pressures, personal circumstances such as mental health, or to pursue family and career choices that do not require a higher education. This dissonance extends to workplaces, where Millennials and Generation Z students question the benefits of higher education to support work readiness and socialisation, (Omilion-Hodges et al., 2022), skills acquisition and relevance (Ioannou, 2024), and preparedness for identifying and shaping an effective, safe, and non-toxic workplace culture (Alimmah et al., 2023).

In Figure 1, this dissonance is represented across the generations entering into and passing through higher education. As the market for higher education students moves past Generation X (born between 1965 and 1980) and into the three generations scoped by this report, the more out of sync programmes, recruitment models, retention strategies, and value propositions become. Each cycle of misalignment increases the risks that prospective students will seek alternatives to traditional higher education, facilitated by the relative ease of access to online learning, short courses, microcredentials, on-the-job training, social media learning, and crowdsourcing, or the by-passing of education completely. The model depicted in Figure 1 represents two significant pressures that are driving this increasing dissonance: the recruitment axis (or participation) in higher education, both as a decision taken after completing compulsory education and as an ongoing engagement in the traditional suite of postgraduate education right up to terminal degree, and the student experience axis (engagement), which impacts on the design of the teaching, learning, and assessment experience itself. Each cycle of reaction to these pressures changes the ways in which higher education programmes are designed and delivered. Each change drives further dissonance between the institution and its desired intentions, the student, and the workplaces that are seeking graduates. In this section, we will explore these pressures and how they are driving university, student, and industry behaviours and responses (especially the alternative-seeking ones).

Figure 1: Generation shifts and stakeholder alignment



Recruitment axis: Declining student participation rates

The simple equation is that where participation in higher education (measured through enrolment in programmes, retention within those programmes, and achievement through completion) declines, so does the size of the university. The consequential effects of declining participation include a decline in financial stability and ongoing viability, from reduced tuition revenue, which can account for between 20–40% of institutional operating budgets (Kelchen, 2018), to decreased revenue from the diverse sources aligned with student housing and campus services such as food and beverages and, in some sectors, reduced state funding from enrolment-based budget allocations (Mitchell et al., 2019). From both a strategic and operational perspective, declining participation in higher education impacts the viability of programmes, the shape and size of faculties and their staffing, the sustainability of student services such as libraries and learning technologies, and the overall competitive position of institutions measured through national and global rankings (Adam, 2024; Grawe, 2021; Van Damme, 2021).

There is significant policy discourse across several cognate national higher education sectors that evidences the declines in participation from different socio-economic, programmatic, and disciplinary perspectives. Accounting for the impacts of the Covid-19 pandemic on student enrolment and the subsequent bounce-backs of 2021/22, there has been an overall decline of student enrolments across Ireland, Australia, and the UK, and marked declines in some sectors of the US higher education market over the last decade (Hersh & Merrow, 2015; Kamenetz, 2010; Mintz, 2021). These declines are not consistent, nor are they catastrophic yet. They are aligned to several demographic and political factors (birth rate declines, high levels of employment post-pandemic, policy changes on immigration, increasing costs of living), many of which are aligned to the generational changes shaping the workforce as outlined in the generational shifts section of this report. A report into comparative national higher education systems completed by the Australian Council for Education Research identified that the "mismatch between student supply and labour market needs are a key driver of policy directions" across sectors (Teo et al., 2023, p. 79). This was supported by critiques of the demand-driven higher education that operates across most national sectors, in which demand from students sets tuition fees (Australia and the United States) and/or the entry requirements for undergraduates (in Ireland) (Marginson, 2020; Norton, 2017; Ortagus et al., 2020). The intersection between policy imperative, demographic realities, and the economic realities of a modern HEI in a marketised environment creates significant tensions and expectations around student recruitment, retention, and attainment.

In the United States, while in 2024 there was an overall increase of 2.9% in enrolments in higher education , this has primarily been due to lower dropout rates for continuing students, with first-year enrolments in undergraduate programmes declining

5% since 2023 (Nietzel, 2024). This decline (in part) stems from demographic shifts arising from shrinking birth rates following the 2008 baby boom (Grawe, 2021). Moreover, rising tuition fees in an era of skyrocketing student debt and high cost of living have challenged the value proposition of a college education (Mitchell, 2021). A strong job market post-pandemic that values job-ready skills over traditional degrees has also provided incentives for students to engage in lower-cost and faster alternatives to traditional higher education, such as self-directed learning and online short programmes (Kaplan, 2023; Levine & Van Pelt, 2021).

The Australian Universities Accord report (O'Kane, 2023) was a sweeping review of the Australian higher education system. The panel identified declining (or what they described as "subdued") participation rates in university programmes as a whole and more specifically in low socio-economic communities. The report identified that, between 2021 and 2022, commencing domestic higher education enrolments declined overall (10.4%) and, broken down into specific cohorts: students of low socio-economic status (11.7%); regional, rural, and remote students (8.1%); and First Nations students (8.0%). In late 2024, the Australian Labour government announced proposals for an international student cap, reducing the numbers of new international students to 2023 levels. This resulted in universities predicting significant staffing, services, and infrastructure cuts for 2025 (Chau, 2024), which in turn will impact the opportunities and places available for domestic undergraduate and postgraduate students.

In the UK, part-time enrolments in programmes have declined by 42% since 2009/10, and applications for undergraduate enrolment direct from high school fell by 0.13% in 2023 and 0.3% in 2024, although there were small increases in equity groups and from disadvantaged backgrounds at an undergraduate level (UCAS, 2024). Participation rates have slowed across several key markets in the UK since 2022 (Bolton, 2024). International student enrolments in undergraduate programmes have experienced a sharp decline in response to a more hostile visa policy environment from the Sunak government as well as changes arising from Brexit, which resulted in a 44% decline in international postgraduate enrolments in the UK (Morgan, 2024). While there has been significant government and institutional effort into widening participation among equity groups, there remains increasing gaps in retention rates, graduate outcomes, and enrolment in high-tariff or elite institutions, especially in England (Bolton & Lewis, 2024).

In Ireland, the most recent figures offer a more mixed picture for participation. With a younger population, the impacts of EU membership and Brexit, and markedly different government funding arrangements which shift the enrolment/revenue nexus, Ireland is anticipated to hit peak enrolment levels in higher education by 2031/32 at nearly

250,000 students (Broderick & Smith, 2022). There was a threefold increase in EU students studying in Ireland post-Brexit since 2017 (ICEF, 2023). Overall enrolments in undergraduate programmes have remained relatively stable, with postgraduate enrolments declining (although a significant increase in technological universities has offset declines in other parts of the sector) (Government of Ireland, 2024). Contrary to the policy changes in Australia, the UK, Canada, and the United States, the Irish government has identified international students as a significant growth opportunity, aiming for 10% growth in these numbers by 2030 (Kennedy, 2024). The Irish government has identified access to higher education for equity groups (defined as those from socio-economically disadvantaged areas, new mature students from socio-economically disadvantaged areas, new students with a disability, and new students from the Traveller community) as a key priority between 2022 and 2028 (Higher Education Authority, 2023). There remain significant disparities in access to higher education, with around 10% of students from disadvantaged areas attending university and around 9% of mature students engaging in higher education. These disparities extend from undergraduate through to postgraduate education, where the gap between disadvantaged and affluent students participating in higher education is 12% (Higher Education Authority, 2021).

There was a threefold increase in EU students studying in Ireland post-Brexit since 2017

The reality is that millions of young people still apply to and enrol in undergraduate higher education programmes every year. The early warning signs of softening participation in these programmes at a national, disciplinary, or equity level indicate future challenges for HEIs over the next decade of declining birth rates into the next generation of students of school-leaving age. The more significant declines in postgraduate participation and the increasingly competitive and febrile environment in this market are more concerning, especially where the generations now making up most of the workforce are at the peak of the most recent birth rate spike. This can be in part explained by the declining value proposition of the time and financial investment put into lifelong learning at university. Wilkinson & Wilkinson (2023) observe that the declining value of a higher education experience in the UK has been exacerbated by marketisation, with students "perceiving of themselves and presenting themselves as educational consumers who pay for a service and expect that service to be delivered". In the UK higher education sector, the impacts of the remote teaching that was widespread during the Covid-19 pandemic; large, under-resourced growth in student numbers; and the impacts of real cuts in funding have led to a growing perception of students as customers and a decreasing satisfaction and confidence in their "customer experience" (Husbands,

2023). This marketisation rhetoric has also influenced Australian government policy, with amendments to legislation mandating that universities ensure the success of students through early interventions to identify those at risk of failure, and through changes to entry and progression processes in order to better channel students into appropriate degrees (Australian Government, 2023)

Within the two generations currently enrolled in higher education programmes there has been a significant decline in the perceived value of the degrees offered by universities, with Generation Z students more likely to question the return on financial investment and relevance to career preparedness of a university degree (Behle et al., 2015; Mosca et al., 2019). The decision to participate in postgraduate higher education for Millennials is shaped by economic factors, their previous experiences with university education during their undergraduate degrees, and their career aspirations, with traditional postgraduate education programmes seen as both an opportunity for career advancement and a financial burden (Towers & Towers, 2020). In response to this trend of declining enrolment, universities are redesigning and restructuring the suite of postgraduate offerings and disciplines (Lang, 2023; Shanahan & Organ, 2022) in order to stem the seeking of alternative avenues for learning. These alternative seeking behaviours are driven by the proliferation of fragmented, scaffolded postgraduate programme structures and online and blended delivery modes as a way of ameliorating the financial and work–life balance risks of participation in traditional higher education (McCartney & Rick, 2021). Millennials value innovative postgraduate learning models like microcredentials and stackable qualifications for their accessibility and work–life integration potential (Selingo, 2017), and they pay careful consideration to their legitimacy, the quality and brand value of the institution offering them, and their market value with employers (Brown et al., 2020).

Student Experience Axis: Declining Student Engagement with Higher Education

Student engagement in teaching, learning, and assessment is a complex and broadly defined ecosystem of activities. Engagement encompasses both in-class and extracurricular participation, usually measured across the duration of a student's enrolment in higher education. Engagement has become increasingly measured, metricised, and analysed as a predictor of student success through learning analytics (Vytasek et al., 2020), as an indicator for student well-being or mental health issues (Boulton et al., 2019), and as a proxy for the quality of teaching in national or local student satisfaction surveys (Kandiko Howson & Matos, 2021). Engagement spans the ways in which students enact their formal and informal learning and professional development through assessment, class activities, connected learning, network development, and participation in wider life (Bryson, 2020; Harrington et al., 2021).

Even before the pandemic, universities around the world were reporting student disengagement with lectures, with assessment, and with the usually highly valued tutorial experience (Chipchase et al., 2017; Williams, 2022). Martin and Bolliger (2018) identified significant declines in student motivation and participation, particularly in virtual learning environments where scale or the use of technology diluted the presence or availability of the academic. Larger institutions with high student-staff ratios are finding it challenging to increase student engagement, as scale makes personalisation and one-to-one learning difficult to deliver effectively (Bryant, 2023b; Gannaway et al., 2018). The pursuit of cost-effective and scalable mechanisms to enable and increase student engagement intersects with the pressures on many undergraduate students to work during their undergraduate higher education experience (Flynn et al., 2023; McCormick et al., 2023). This balancing act is more challenging in postgraduate education, where the often-inflexible structures of traditional higher education such as weekly lectures/tutorials, semester dates, and campus attendance compromise students' capacity to engage in their learning (Creed et al., 2022).

The structural influences on student engagement were dramatically reshaped during the pandemic, with asynchronous delivery and online synchronous learning shattering the established dynamics of the previously campus-based metrics of engagement (Hughes, 2023; Tipple & Linden, 2024). The social isolation caused by pandemic-era lockdowns impacted engagement in collaborative activities, asynchronous interactive learning, and extracurricular learning opportunities, which led to lasting effects on students' ability to engage in collaborative learning activities, affecting both academic performance and peer relationships (García-Morales et al., 2021; Thornton et al., 2023). Aristovnik et al. (2020) identified increased anxiety and stress levels among students (especially notable among equity groups such as part-time students and those from

disadvantaged backgrounds), which has had negative impacts on their capabilities to engage academically. Since the pandemic, the issues of mental health and well-being have continued to drive changes in the levels of student engagement. Wang et al. (2024) found elevated levels of anxiety and depression in American and Chinese university students have remained significantly higher than pre-pandemic baselines, with 41% of students reporting ongoing mental health concerns. Sheedy O'Sullivan et al. (2022) have linked significant declines in academic engagement to changes in health, eating habits, alcohol intake, and mental health well-being among Irish students, which have continued to influence engagement even after the lockdowns have been lifted and students have returned to campus. Aside from the significant pressures this increase in mental health issues places on university student and well-being services, these downward pressures on student engagement directly alter the ways in which universities enable connection and belonging among the student community, the design of the learning spaces on campus, and the kinds of in-class support critical to provide for the accessibility and universal design necessary to support neurodiversity and mental health issues (Mothersill et al., 2024; O'Regan, 2020).

The Irish Higher Education Sector Context

All national higher education sectors share common practices, challenges, and structures. In addition to this, there are unique demographic, educational, and pedagogical trends within each sector that through policy, cultural norms, and the size and shape of the sector help to define both the generations themselves at their macro-level and the extrinsic and intrinsic response of HEIs to help them transition into and through higher education. In this report, we have explored studies and data from across many different sectors, including Australia, the UK, Europe and the United States. In this section of the report, we will focus specifically on the Irish higher education sector.

There has been a substantial increase in higher education participation in Ireland over the last three decades, but inequality of access across equity groups and between regional and urban communities remains a major challenge. This is a trend that is potentially starker, as participation in higher education moves through the end of Generation Z and into Generation Alpha. The weaker labour markets for young people in Ireland (Social Justice Ireland, 2024) have positively impacted participation in undergraduate higher education. However, the necessity to forgo earnings and increase part-time and casualised employment negatively influences the decision to pursue higher education, especially at a postgraduate level. Post-pandemic, many institutions have maintained elements of hybrid learning that were offered initially as emergency measures, creating a more flexible approach to education delivery (McManus et al., 2024; Taylor, 2023). This has resonated with Generation Z students, who have demonstrated greater comfort with digital learning tools and hybrid formats than with in-person learning.

Digital literacy expectations have shifted significantly, with students arriving on campus with different technological competencies and expectations than previous generations. This has influenced both curriculum design and campus infrastructure development, as institutions have worked to integrate more digital tools and platforms into the learning experience. These factors have fed into the reimagination of programmes and the positioning of lifelong learning (Flynn, 2023; Kinsella, 2020) and an increased focus on part-time, flexible, mature, or modular approaches of lifelong learning in Irish HEIs (Irish Universities Association, 2022).

...with students arriving on campus with different technological competencies and expectations than previous generations.

Aligned with the increasing mental health and well-being pressures felt by Generation Z and Millennials, Irish students and staff have reported high levels of psychological distress among Irish students and staff, with significant differences across various demographic groups, and in particular higher distress levels among female, transgender, and socio-economically disadvantaged students (Bickerdike et al., 2022; Cullinan et al., 2024). Financial pressures, academic stress, and social uncertainties contribute to this mental health landscape, which places psychological safety risks on innovation. A study by Murphy (2017) argued that students in Irish higher education felt there was a stigma attached to disclosing their mental health status, which required HEIs to increase their capacity to provide personalised and often one-to-one support to students, in order to minimise the flow-on effects of academic failure or dropping out.

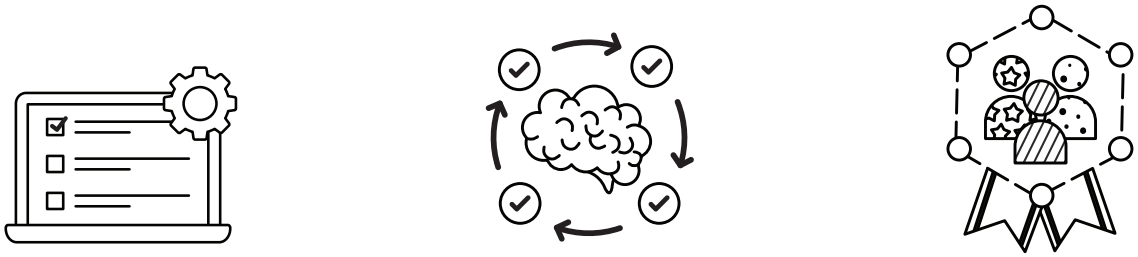
Reimagining Higher Education to Adapt to Generational Change

Generational change is a real and significant phenomenon, though its nature and implications for higher education sectors and institutions are complex and multifaceted. Generations are not merely static groups with fixed characteristics. Instead, they are a constellation of ideas and discourses that emerge when societal ideals and values collide, leading to social change (Foster, 2013). The relationship between generations involves both continuity and change. As individuals and communities from one generation strive to distinguish themselves from their predecessors, they contribute to ongoing social innovation and transformation and make decisions about the appropriate resources required to achieve these aims (Bengtson, 2017).

It is critical for higher education leaders to immerse themselves and their strategic forecasting in the life experiences, behaviours, and ambitions of the generations transitioning into higher education at both undergraduate and postgraduate levels, as well as the generation yet to enter higher education. The warning signs of disengagement and declining participation are there. As noted earlier, the situation is not yet catastrophic, but crisis has exposed the fragility of the ways in which we design and deliver education. It will be necessary for higher education leaders to develop and deploy the skills needed to navigate these generational shifts. Institutional recruitment, attainment, and retention strategies will need to build in crisis resilience and preparedness into the longer-term future planning of the sector. The programmes, units of study, and educational experiences and practices of the university will need to adapt or be reimagined for future cohorts of students, while maintaining the quality and accreditations of higher education to be able to ameliorate the dissonances of expectation, practice and ambition.

Based on the detailed analysis of the literature and its direct relevance to the educational attitudes and purchase and engagement behaviours of those generations currently in higher education, and with a clear eye on the generation that will increasingly dominate participation trends in education over the next two decades, we propose three reimagination horizons (see Figure 2) for sector organisations, policymakers, and HEIs to articulate plans to grow their markets, address the slowing of demand in undergraduate and postgraduate recruitment, and attract students to their programmes and educational provision. These cover the areas of programme/course design (the product), lifelong learning (the student journey), and innovation (the people).

Figure 2: Adapting to generational change – three reimagination horizons



1 **Reimagine programme/ course design (The Product)**

2 **Reimagine lifelong learning (The Student Journey)**

3 **Reimagine spaces for innovation (The People)**

Reimagine Programme/Course Design

There is an adage in marketing education when talking about how marketers sell products: "Customers do not buy quarter-inch drill bits; they are buying quarter-inch holes." The drill bit is a means to an end. The socio-economic, demographic, and attitudinal profiles of Millennials and Generation Z are not running in opposition to the principles and structures of HEIs. It is the rationales for the decision to participate and the calculation of both the value and values proposition that are out of alignment with what HEIs teach and how they teach it. The programmes and courses that institutions offer must first tell a story that includes impact, influence, creativity, and inspiration. Second, they must tell that story in a way that aligns with the perceptions of value, work–life balance, and the capacity to effect change on society. Third, they must align with the areas of learning unique to the university, unique to the ambitions and values of the institution, and unique to the career and life path ambitions of the cohort. This is critical to reduce

the risk of alternative seeking behaviours, where prospective learners search for other educational opportunities outside of higher education that tell that story better.

For Millennials and their engagement with postgraduate programmes, leadership development, exposure to inspirational leaders and leadership theory and practice, and the active formation of connections, networks, and peer learning systems is critical. Curriculum needs a holistic approach that integrates experiential learning, immediate feedback, and the agile integration of digital technology and digital practices to meet the expectations and learning styles of postgraduate students. Programme designers need to reconsider the linear, packaged structures of lecture/tutorial modes, semester hours, and programme rules and replace them with user choice, stackability, and personalisation. Flexibility. Adaptability. Sustainability. These are three of the central pillars of Millennial life expectations, as articulated by the Deloitte reports referred to earlier (2023, 2024). These value sets and expectations influence how programme and unit design support more flexible forms of engagement (asynchronous, online, blended), how to engage more adaptable forms (chunked learning, agile uses of technology to support engagement, multimodal delivery, trans- and multi-disciplinary approaches), and how sustainability and responsibility live at the thematic heart of the programme.

For Generation Z and undergraduate programmes, the nuanced, safe, and seamless integration of technology is critical. Generation Z students have been exposed to the use of technology for most of their lives. Typically, technology use has been ubiquitous throughout their school education, and their education experiences were impacted by remote learning during the pandemic. They expect technology to be integrated into their learning environments (e.g. online modules, hybrid formats, and asynchronous learning). There is a strong case for the increasingly critical selection and deployment of technology tools, enabling students to have agency and autonomy over their use (Docherty, 2018; van Wyck, 2022). Creating safe spaces for active learning but also self-critical reflection and thinking is critical for Generation Z, both in physical spaces but also within the structures of the programmes and the online spaces enabled by universities. Opportunities for early feedback, reflection, identification, and support for threshold concepts, including non-linear pathways through content and skills development, are all critical for learners who have engaged in adapted forms of active learning at home and in school. Generation Z students have a higher sustainability literacy and are motivated by the impact of sustainability issues on their lives and futures. There is palpable anger on the part of many that this is the future they have inherited. Integrating sustainability topics into the curriculum can align with Generation Z's values and prepare them to navigate the polycrisis they now face.

Generation Alpha also will likely expect highly personalised, technology-integrated learning environments based on their experiences in secondary school, which will have been influenced strongly by the pandemic. Their higher education experience may blend traditional campuses with immersive digital experiences, adaptive learning platforms, and AI-assisted tutoring. Teaching methods will likely need to emphasise practical skills development, project-based learning, and real-time collaboration across global networks. There is an increasing expectation for more flexible degree structures, microcredentials, and continuous learning options. Universities may need to adapt by offering shorter, more intensive programmes and hybrid delivery models that accommodate different learning styles and work/life balances.

Reimagine Lifelong Learning

Lifelong learning has been written into many university strategies and government policy statements as a strategic growth opportunity in a highly competitive market environment. The term "lifelong learning" currently encompasses everything from traditional postgraduate programmes to microcredentials, executive education, online learning, stackable non-awards, learning opportunities, and all points in between. The unifying message is that students need to reskill or upskill at each phase or shift in their career, and the university is there with a product to facilitate that career ambition across their life journey.

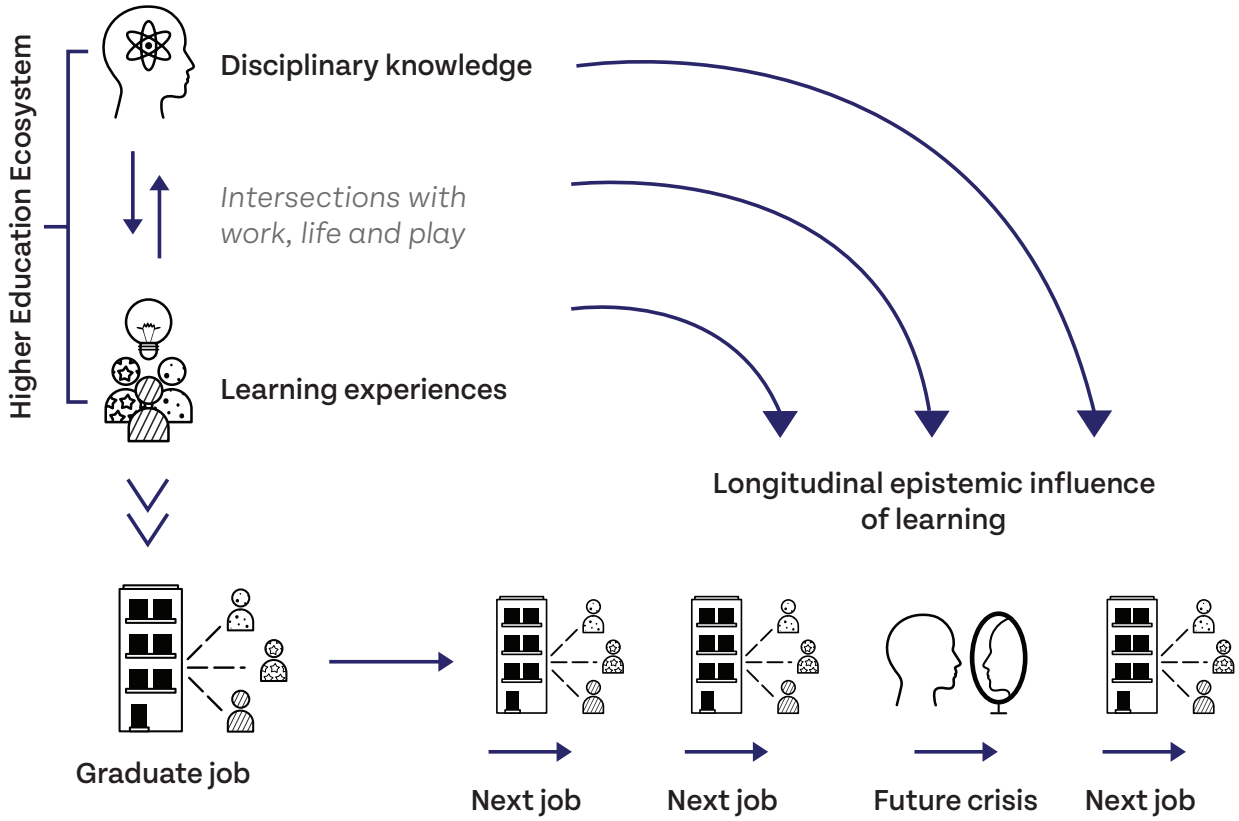
The challenge with Millennials (as the primary market for postgraduate learning) is that the pressures of work–life balance, the comparatively late start to having a family, and the asset paucity (e.g. around buying a first home) places pressures on high-cost postgraduate programmes which in most sectors are not co-funded or subsidised to the same degree as undergraduate programmes. It also creates an existential challenge in that the value of the first degree must be inferred to be time-limited or directly connected to the graduate employability outcomes of achieving "the first job" in order to influence the value propositions of further and ongoing study. The alignment of undergraduate study to the acquisition of employment has had a direct and consequential impact on the decline in demand for undergraduate education among Generation Z students. Generation Alpha will come of age in an environment where their parents (Millennials) and elder family members (Generation Z) may be questioning the value of an undergraduate degree and are increasingly taking advantage of alternative seeking behaviours such as online learning, MOOCs, and micro-learning. They face unique learning challenges: digital overwhelm from constant information streams, scepticism about traditional educational institutions, and a preference to be taught immediately applicable skills rather than theoretical knowledge.

As these generations become the dominant cohort of students and much of the workforce, it will be critical for HEIs to reimagine their approaches to lifelong learning, rethink the models of delivery, and, in line with the previous reimagination horizon, reimagine what and how we teach so that it is more aligned with the values, beliefs and ambitions of the incoming generations. Bryant (2023a) posited the notion of resonant learning as a counter-concept to the immediacy of the overt focus by university recruitment and retention strategies on students attaining their first job, and the ongoing need to retrain for each successive career shift. Resonant learning (see Figure 3) is the longitudinal epistemic influence of learning over time. It is how learning can extend past the construction of learning activities, assessment, feedback, and milestones to create a lasting and resonant impact throughout a student's career. Resonant learning leverages the memories, feelings, and reflexivity of those learning experiences to represent pathways towards the lifelong value of learning.

Resonant learning is created through learning experiences and the emotions, attitudes, and ambitions that are promulgated when students engage with the curriculum and its activities. The impact of the resonant experience lasts longer than the currency of the theory or examples of practice. Resonant learning is more about the ripples that emanate from a rock thrown into a pool of water, rather than the rock itself. Resonant learning experiences might not surface into practice until five or ten years after the completion of the degree. Resonant learning enables discoveries made during the learning process to enhance the generalisability of the insights gained, impacting students' capability to apply skills to different unknown future circumstances (Hibbert, 2021).

Resonant learning is more about the ripples that emanate from a rock thrown into a pool of water, rather than the rock itself.

Figure 3: Resonant learning model (Bryant, 2023a)



With both Millennials and Generation Z deploying learning strategies that focus on building modular, transferable skills rather than domain-specific expertise, resonant learning supports their desire to quickly remix and repurpose knowledge and skills when facing unfamiliar challenges or yet-to-be experienced crises. Resonant learning can be catalysed in multiple ways, from the practical (enabling the creation of personal knowledge management systems, to capture and organise insights for future reference) to the pragmatic (the critical importance of creating experiences in learning that act as the connective tissue for memory and recall). Generation Alpha will continue to accelerate the importance of resonant learning. The assertions of individuality and the creation of small, closed networks of knowledge and peers, along with the disaggregation of knowledge sources through social media, highlight the importance of ensure that the exposures of higher education and the experiences created matter.

Reimagine spaces for innovation

The final reimagination horizon is centred on the capability and capacities of staff to innovate, design, and implement the changes needed to engage with the generational shifts. University teaching and learning practices are relatively static phenomena. Many of the established methods of teaching and their related policy and infrastructure architectures have underpinning (and sometimes dominant) elements that are decades – and sometimes centuries – old. These practices are often passionately defended in the literature and in the popular press (see Fulford and Mahon [2020] in defence of the lecture, French et al. [2024] on the efficacy of the high-stakes written exam, and Stevens et al. [2021] on the debates regarding the efficacy of online and face-to-face education). This is not to argue that pedagogical innovation is not happening in institutions, rather that the tensions between the defence of the norm and the time–benefit–risk calculations of innovating are growing.

There is an argument that HEIs need to engage in a radical co-design of the core experiences of university education to adapt and leverage the changing demographic, socio-economic, and attitudinal characteristics of the next three generations transitioning through higher education. Any strategic re-design will need to challenge (in a rigorous and evidenced way) every assumption of pedagogical practice, from the degrees and their structures to the ways universities engage in teaching, learning, and assessment to the ways in which institutions credential and leverage their reputation for recruitment. This is not an easy proposition to make at an institutional level. It will require a whole-of-academy approach that empowers transdisciplinarity and practice sharing between institutions, students, and industry in order to develop new third spaces of strategic innovation. It will require brave, engaged, and trusting leadership to acknowledge that change takes time and that innovation needs resources and support. Safe spaces will need to implement successful innovation, change, and most importantly agile and authentic co-design with input from past, current, and future students. Building these safe spaces engenders a culture of rewarding innovations that spark rhizomatic change, nurture ecosystems of engagement and connection within the practices of teaching and learning, and form communities that evoke deep and authentic senses of belonging and resonant learning.

Safe spaces to innovate are underpinned by the reality that universities must evolve and adapt to the changing social, cultural, and economic futures they are facing. They create an environment in which staff, students, and the community at large co-design a radical, aspirational, and future-forward redesign of the foundations, practices, and assumptions of higher education, building on the successes of the past (as opposed to rebuilding from the ground up every time). Enabling this aligned culture

of innovation delivers a university experience relevant to the students and industries of the future, and creates an environment in which transformation and impact are resonant long past the first degree or next career milestone. And that challenge starts now, with the critical necessity to reimagine postgraduate education in a reasoned and proactive way, rethinking the design, delivery, assessment, and marketing of the courses, programmes, and products institutions deploy to the market and to the community they serve.

This challenge starts with the reimagination of undergraduate education, the role of generative AI and the critical importance of debate, openness, flexibility, adaptability, and responsibility to the ways in which institutions teach. The journey of Generation Z students into post-compulsory education has another five to eight years to run before Generation Alpha's journey begins. The portfolio of learning activity, assessment ambition, belonging and disciplinary knowledge, and skills that define both the structure of institutional undergraduate offerings and the fabric and culture of a teaching institution needs to be defined by the intersections of what the generations teaching and the generations learning seek to gain from higher education. It is not a one-way street of throwing the baby out with the bathwater; collaboration, storytelling, and listening are critical, especially for cohorts coming directly from school education experiences. Postgraduate education represents a more immediate and economically impactful challenge for many institutions. The pressures to redesign not just how and what we teach, but the ways in which they are constructed (e.g. stackability), certified (e.g. microcredentials), and recognised (e.g. badging, non-award programmes) are more immediate and competitively shaped. The growth of non-university providers, online programme management vendors, and corporate training is driving the need for a competitive response to ensure the viability and relevance of HEIs to the provision of responsible, sustainable, and creative postgraduate education.

Conclusion

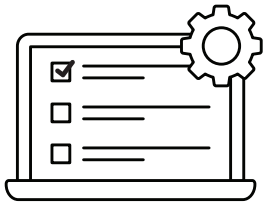
The landscape of higher education across the globe is undergoing a profound transformation, driven by the unique socio-economic characteristics, learning expectations, and personal societal values of emerging generations as they enter, transition through, or decide to engage again in higher education. As Millennials, Generation Z, and Generation Alpha enter or re-enter higher education, universities face a critical imperative to fundamentally reimagine their approach to learning, curriculum design, and institutional culture. The path forward for governments, sector bodies, and individual institutions requires a holistic, adaptive strategy that considers and addresses three critical reimagination horizons: programme design, lifelong learning, and spaces for innovation. Institutions must move beyond traditional, rigid educational models to create more flexible, responsible, personalised, and technology-integrated learning experiences in both undergraduate programmes and postgraduate offerings. At the heart of this challenges lies the development of learning, teaching, and curricula that do not simply impart knowledge or repeat the models of learning that worked for previous generations, but create and share compelling stories of impact, influence, creativity, innovation, and societal change.

The concept of resonant learning emerges as a powerful framework for understanding educational value beyond immediate career outcomes and transcends all three reimagination horizons. By creating learning experiences that generate lasting emotional and intellectual connections, universities can support students' ability to adapt to unknown future challenges. This approach is particularly crucial for generations navigating rapid technological, economic, and social transformations such as those mentioned in this report. Critically, reimagining higher education is not about wholesale replacement of existing structures, but about a thoughtful, collaborative, and purposeful evolution of the core functions of education. It requires brave leadership that creates safe spaces for innovation, encourages cross-disciplinary approaches, and listens deeply to the aspirations of both teaching and learning generations. Universities must become dynamic ecosystems that continuously adapt, co-design, and respond to changing societal needs.

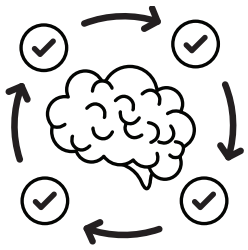
The stakes are high. As alternative educational pathways proliferate and traditional degree models are questioned by both students and industry, HEIs must proactively demonstrate their relevance, value, and capacity for meaningful impact. By embracing flexibility, sustainability, and authentic engagement, universities can not only survive but thrive in this new educational landscape, preparing students to navigate an increasingly complex and unpredictable world.

Recommendations

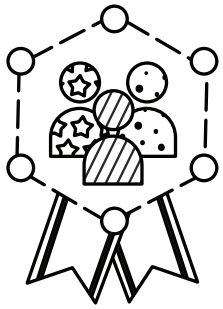
This report outlines three re-imagination horizons for transforming higher education in and through the generational shifts:



Programme/Course design:
HEIs must redesign their offerings to align with generational values and expectations. For Millennials, this means emphasising leadership development and flexible learning models. For Generation Z, it requires seamless technology integration and a focus on sustainability. For Generation Alpha, preparations should include highly personalised learning environments and AI-assisted education



Lifelong learning:
Traditional approaches to continuing education must evolve beyond conventional postgraduate programmes. The concept of resonant learning is introduced as a framework for creating lasting educational impact that extends beyond immediate career goals, which is particularly important for generations facing unique economic and social pressures



Spaces for success::
Universities need to create safe spaces for pedagogical innovation and radical co-design of educational experiences. This requires challenging established teaching methods and embracing transformative change while building on past successes. Success depends on engaged leadership, resource allocation, and authentic collaboration with students, industry, and staff across disciplines.

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