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# Youth and Generation Studies

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## Lectori salutem!

Youth and Generation Studies has entered its second year and continues to grow. Our academic journal, launched last year, has already achieved its initial goal of providing DOI identifiers for published articles, thereby promoting academic transparency. As part of the continued development of YGS, internationally experienced journalist Waka Ikeda will now oversee the journal's administration. Her task is nothing less than establishing youth and generational research within the ranks of Q journals. We wish her every success in realising our shared objective.

The final article in this issue is a book review by Ákos Pörtl. In his widely discussed book *The Anxious Generation*, Jonathan Haidt argues that the widespread use of smartphones and social media in the early 2010s has caused a "great rewiring of childhood", leading to an epidemic of mental health issues among young people, including anxiety, depression, and self-harm.

The conference report by Enikő Szakos addresses this topic. The conference *Back to the Future – Locked Screens in the Classroom*, hosted by the Youth Research Institute on December 10, 2024, in Budapest, Hungary, brought together educators, policymakers, and mental health professionals from across Europe to examine the impact of smartphone-free learning environments.

Our latest issue also contains three longer articles. The study by Thiri Pyae Kyaw provides an overview of theoretical and empirical research on epistemological beliefs and teaching-learning concepts, with particular emphasis on their implications for teacher education in Myanmar. Adrian Estrela Pereira, Byambasuren Nyamkhuu, Nourhane Snani, Gulmira Kussaiynkyzy and Do Thi Dung explore the importance of digital transformation strategies in maintaining the relevance of higher education institutions in an increasingly digitalised world. Their article reviews the current status of digital transformation in both public and private higher education institutions, identifies the main barriers hindering these processes, and discusses potential institutional and government policy initiatives to support digital transformation in higher education.

In 2019, it was estimated that more than 14 million young people aged 15-29 experienced mental health problems, and the Covid-19 pandemic has further exacerbated the mental health challenges of young people across Europe. Georgina Kiss-Kozma's central question concerns the extent to which the experiences of loneliness and mental health issues among young people in Hungary align with international trends.

We hope you enjoy reading this issue.

**Levente Székely**  
**Editor-in-Chief**

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# Epistemological Beliefs and Teaching-Learning Perceptions of Student Teachers: A Literature Review

Thiri Pyae Kyaw<sup>1</sup>

This article reviews theoretical and empirical research on epistemological beliefs (EBs) and teaching-learning conceptions (TLCs), with a particular focus on their implications for teacher education in Myanmar. Epistemological beliefs—assumptions about the nature of knowledge and processes of knowing—have been shown to influence how teachers interpret information and evaluate claims (Hofer & Pintrich, 1997). Teaching-learning conceptions, which encompass beliefs about the purposes of education and the roles of teachers and students, directly shape instructional practices (Chan & Elliott, 2004). Research consistently demonstrates that sophisticated epistemological beliefs correspond with constructivist teaching-learning conceptions, while naïve beliefs reinforce transmissive orientations (Brownlee et al., 2001). In Myanmar, where teacher-centred practices have long dominated (Soe et al., 2017), recent reforms promote student-centred pedagogy and 21st-century competencies (Pyae Kyaw, 2022; Pyae Kyaw & Kimmel, 2023). By situating Myanmar within broader debates, this review underscores the importance of culturally grounded perspectives in the study of teacher beliefs. It concludes with implications for teacher education and policy, and identifies directions for future research, including longitudinal designs, interdisciplinary approaches, and the integration of digital technologies.

**Keywords:** epistemological beliefs, teaching-learning conceptions, student teachers, literature review

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## Introduction

The quality of education is closely linked to how teachers and students conceptualise knowledge, teaching, and learning. Epistemological beliefs (EBs)—assumptions about the nature of knowledge and processes of knowing—provide the philosophical foundation for how educators make sense of information, evaluate evidence, and engage with learners (Hofer & Pintrich, 1997). Teaching-learning conceptions (TLCs), by contrast, capture beliefs about the roles of teachers and students, the purposes of education, and the strategies most likely to foster learning (Chan & Elliott, 2004). Together, these constructs shape classroom practices, professional identities, and the broader implementation of educational reform.

Research has consistently shown that sophisticated epistemological beliefs, such as viewing knowledge as complex, evolving, and open to justification, are associated with constructivist

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teaching-learning conceptions that prioritise inquiry, collaboration, and critical reflection (Brownlee et al., 2001; Cheng et al., 2009). Conversely, more naïve epistemological assumptions often align with transmissive conceptions, in which knowledge is treated as fixed and teaching as the delivery of information. These patterns underline the importance of investigating EBs and TLCs in teacher education, where the cultivation of reflective, adaptive, and student-centred approaches remains a global challenge.

Although epistemological beliefs and teaching-learning conceptions have been widely studied in Western contexts, research in non-Western settings remains limited. In Myanmar, for instance, teacher education has long been dominated by traditional, exam-oriented practices that privilege rote learning and teacher authority (Soe et al., 2017). Recent reforms, articulated in the National Education Strategic Plan (2016–2021), aim to shift towards student-centred learning and 21st-century skills (Pyae Kyaw & Kimmel, 2023). This reform context provides a unique opportunity to examine how epistemological beliefs and teaching-learning conceptions intersect in ways that may both enable and constrain educational transformation. By situating Myanmar within broader theoretical and empirical discussions, this review contributes to the effort to diversify and contextualise research on teacher beliefs.

The purpose of this article is to synthesise key theories and empirical findings on EBs and TLCs while foregrounding their relevance to Myanmar’s teacher education system. In doing so, it highlights both established debates and emerging directions in the field, offering insights for policy, practice, and future research.

## Conceptual Foundations

### 1. The Nature of Beliefs in Education

Beliefs constitute deeply held assumptions that influence how individuals interpret experiences and guide their actions (Rokeach, 1968). In contrast to knowledge, which is typically subject to empirical validation and collective consensus, beliefs are personal, subjective, and often resistant to change (Nespor, 1987). Within education, beliefs function as interpretive filters: they shape how teachers approach instructional decisions, frame classroom interactions, and evaluate pedagogical innovations (Pajares, 1992; Richardson, 1996). For student teachers, beliefs about knowledge and teaching are particularly consequential because they form the foundation of professional identity and serve as predictors of future practice.

Educational beliefs are formed early, often during what Lortie (1975) termed the “apprenticeship of observation,” where individuals accumulate implicit theories about teaching through years of schooling as learners. These beliefs are typically emotionally charged, context-dependent, and resistant to revision (Nespor, 1987). As a result, teacher education programs must address not only the acquisition of knowledge and skills but also the transformation of entrenched belief systems if they are to foster meaningful change in practice (Richardson, 1996).

## 2. Belief Change and Conceptual Change

Beliefs, while relatively stable, are not immutable. Research in psychology and education has examined how beliefs evolve in response to new experiences, evidence, and reflection. Bendixen (2002) identified three conditions for belief change: dissatisfaction with existing assumptions, exposure to viable alternatives, and opportunities for critical reflection. Similarly, Vosniadou (1994) argued that transformative shifts require supportive environments where learners can reconcile contradictions between prior understandings and new perspectives. Yet, belief change is often emotionally and cognitively demanding, particularly when it challenges core assumptions linked to identity or professional roles (Sharot et al., 2011).

Closely related is the concept of conceptual change, which refers to the restructuring of knowledge frameworks in response to evidence-based reasoning (Kimmel, 2007). Whereas belief change may occur without empirical justification, conceptual change requires deliberate cognitive conflict and engagement with structured learning experiences. The two processes are interdependent: exposure to new pedagogical theories in teacher education can trigger both reconsideration of epistemological beliefs and reorganisation of disciplinary knowledge. In practice, however, achieving such change is complex. Even when student teachers adopt more sophisticated beliefs, they may revert to traditional practices under the pressure of conservative school cultures and societal expectations (Nahalka, 1997). This underscores the need for sustained professional support to ensure that belief and conceptual change translate into lasting instructional innovation.

## Epistemological Beliefs

### 1. Defining and Theorizing Epistemological Beliefs

Epistemological beliefs (EBs) refer to individuals' assumptions about the nature of knowledge and the processes of knowing (Hofer & Pintrich, 1997). They shape how learners evaluate evidence, justify claims, and approach problem-solving. Within educational contexts, these beliefs influence both teachers' instructional decisions and students' approaches to learning, making them a central concern in teacher education (Fives & Buehl, 2008; Schommer-Aikins, 2004).

Early research conceptualized EBs as developing through a sequence of stages. Perry's (1970) scheme, based on longitudinal work with Harvard undergraduates, proposed a progression from dualism (viewing knowledge as absolute truths) to relativism and, ultimately, contextual commitment. Belenky et al. (1986) extended this trajectory with their *Women's Ways of Knowing*, emphasizing how social and gendered experiences shape epistemological development. Later, Baxter Magolda (1992) and King and Kitchener (1994) further elaborated stage-based models, linking epistemological growth with identity development and reflective judgment.

Challenging the notion of a single, hierarchical path, Schommer (1990) proposed a multidimensional model. Rather than a unified construct, she argued that epistemological beliefs comprise distinct dimensions that can develop independently, including the certainty of knowledge (absolute vs. evolving), the simplicity of knowledge (discrete facts vs. complex concepts), the source of knowledge (authority vs. reason), and the speed and control of learning (quick learning vs. effortful development; fixed ability vs. improvable skills). This reconceptualization shifted the field toward

more nuanced understandings of how beliefs function across different contexts and domains.

Subsequent research, notably by Hofer and Pintrich (1997), refined these frameworks by distinguishing between beliefs about knowledge (e.g., certainty, simplicity) and beliefs about knowing (e.g., justification for claims, reliance on authority vs. reasoning). Chan (2006) further emphasised cultural influences, showing that beliefs about effort and innate ability can also be integral components of epistemological worldviews in non-Western settings. These developments highlight that EBs are not only cognitive structures but also socially and culturally embedded perspectives.

## 2. Evolution and Current Directions

Since the 1990s, research on epistemological beliefs has expanded along several trajectories. One line has examined the relationship between EBs and learning outcomes, showing that sophisticated beliefs are associated with deeper comprehension, self-regulated learning, and critical thinking (Buehl & Alexander, 2001). Another has explored the domain-specificity of EBs, with evidence suggesting that individuals may hold more advanced beliefs in one discipline (e.g., science) while maintaining naïve beliefs in another (e.g., history) (Muis, 2004; Buehl & Alexander, 2001).

More recently, person-centred approaches have identified distinct profiles of epistemological beliefs among students and teachers, revealing that belief systems often cluster in patterned ways rather than existing along a single continuum (Korom et al., 2023). These studies underscore the variability and context-dependence of epistemological thinking. In addition, interdisciplinary work has drawn on feminist and social epistemology, situating EBs within broader discussions of culture, identity, and power relations (Hofer & Bendixen, 2012; Fasco et al., 2024).

Particularly relevant to teacher education is the finding that EBs are malleable yet resistant: they can evolve through exposure to new ideas and reflective practice but often revert under institutional pressures. This tension is visible in contexts like Myanmar, where reforms encourage student-centred pedagogies, yet deeply ingrained teacher-centred traditions persist. Research on Myanmar student teachers has shown that while many endorse constructivist ideas, their epistemological beliefs about the source of knowledge often remain authority-driven (Pyae Kyaw, 2022; Pyae Kyaw & Kimmel, 2023). This illustrates how cultural and institutional environments shape the trajectory of epistemological development and highlights the importance of situating EBs within specific sociocultural contexts.

## Teaching-Learning Conceptions

### 1. Defining and Theorizing TLCs

Teaching-learning conceptions (TLCs) encompass the beliefs and assumptions that teachers hold about the purposes of education, the roles of teachers and students, and the instructional strategies most conducive to learning (Chan & Elliott, 2004; Samuelowicz & Bain, 1992). These conceptions reflect broader pedagogical philosophies and strongly influence classroom practices

and professional identity.

A consistent distinction in the literature is between teacher-centred (or transmissive) conceptions and student-centred (or constructivist) conceptions. Teacher-centred orientations view teaching as the delivery of knowledge, with students positioned as passive recipients. By contrast, student-centred orientations regard teaching as the facilitation of learning, where students actively engage in constructing meaning through inquiry, collaboration, and critical reflection (Trigwell & Prosser, 1993; Chan & Elliott, 2004).

Theoretical perspectives on TLCs are closely linked to learning theories. Behaviourism underpins transmissive conceptions, emphasizing stimulus-response conditioning and measurable outcomes (Skinner, 1953). Cognitivism shifted attention to internal processes such as memory and schema development, framing learning as the reorganisation of information (Anderson, 1994). Constructivism, in turn, emphasises the active role of learners in building knowledge through experience and social interaction (Piaget, 1977; Vygotsky, 1978). While these paradigms are often contrasted, in practice teachers may draw eclectically from each, reflecting the complexity of educational contexts.

## 2. Empirical Insights

Empirical studies consistently link constructivist conceptions of teaching with practices that promote deep learning, critical thinking, and collaborative problem-solving (Brooks & Brooks, 1999;., 2009). Teachers with student-centred conceptions tend to use formative assessment, group work, and inquiry-based tasks, whereas those with transmissive orientations rely more on lectures, rote learning, and high-stakes testing (Black & Wiliam, 1998; Fraser, 2012).

TLCs are also shaped by cultural and institutional contexts. For example, research in East Asian settings has shown that collectivist traditions can coexist with student-centred practices, producing hybrid approaches that blend authority with facilitation (Chan, 2006). In Myanmar, traditional teacher-centred pedagogy has long dominated, emphasizing memorization and exam preparation (Soe et al., 2017). However, recent studies suggest a gradual shift: student teachers increasingly endorse more constructivist views, recognising the importance of critical thinking and creativity (Pyae Kyaw, 2022). This shift reflects broader policy reforms, particularly the National Education Strategic Plan (2016–2021), which seeks to align classroom practices with 21st-century competencies (Pyae Kyaw & Kimmel, 2023).

Overall, TLCs function as a bridge between teachers' epistemological assumptions and their enacted practices. Understanding how these conceptions are formed, sustained, and transformed is therefore critical for educational reform efforts, particularly in contexts undergoing systemic change.

## Interrelationship Between EBs and TLCs

The relationship between epistemological beliefs (EBs) and teaching-learning conceptions (TLCs) has been widely discussed in both theoretical and empirical research. At a theoretical level,

models of epistemological development, such as Perry's (1970) scheme, suggest that as individuals progress from dualistic to relativistic understandings of knowledge, their approaches to teaching and learning also shift. Those holding more sophisticated epistemological beliefs are more likely to adopt student-centred conceptions of teaching, emphasizing inquiry, problem-solving, and collaborative learning, rather than transmissive methods focused on memorization and authority.

Schommer's (1990) multidimensional model similarly illustrates how specific epistemological assumptions shape teaching orientations. For instance, teachers who view knowledge as certain and handed down by authority figures often favour teacher-centred strategies, while those who see knowledge as complex and evolving are more inclined towards constructivist approaches. Hofer and Pintrich (1997) further highlighted the role of justification in knowing: teachers who expect claims to be supported by evidence are more likely to encourage critical reflection and dialogic learning in their classrooms.

Empirical research reinforces these theoretical links. Brownlee et al. (2001) found that preservice teachers with more sophisticated epistemological beliefs were also more likely to endorse constructivist teaching-learning conceptions. Chan and Elliott (2004) reported similar findings among Chinese student teachers, showing that naïve beliefs about knowledge correlated with transmissive orientations, while sophisticated beliefs aligned with constructivist approaches. These studies underscore that the two constructs are not independent but mutually reinforcing: epistemological assumptions shape conceptions of teaching, which in turn guide classroom practices.

In Myanmar, this interrelationship has particular significance. Although reforms under the National Education Strategic Plan emphasise student-centred pedagogy, many student teachers continue to hold authority-driven epistemological beliefs, especially regarding the source of knowledge (Pyae Kyaw, 2022; Pyae Kyaw & Kimmel, 2023). This tension reflects how deeply ingrained cultural traditions of teacher authority interact with reform initiatives promoting constructivist learning. Understanding this interplay is crucial for designing teacher education programs that not only encourage constructivist teaching-learning conceptions but also foster the epistemological shifts needed to sustain them.

## Implications for Teacher Education and Policy

Understanding the interplay between epistemological beliefs and teaching-learning conceptions carries important implications for teacher preparation and educational reform. Because beliefs act as filters that shape how new information is interpreted (Richardson, 1996), teacher education programs must explicitly engage with student teachers' assumptions rather than treating them as neutral or secondary concerns. Without deliberate attention, entrenched beliefs formed during the "apprenticeship of observation" (Lortie, 1975) may persist, limiting the impact of reform-oriented curricula.

One implication is the need for reflective practice in teacher education. By encouraging preservice teachers to critically examine their assumptions about knowledge and learning, programs can foster greater alignment between espoused theories and enacted practices (Brownlee et al.,

2001). Reflection, however, must be supported by opportunities to test and apply new approaches in authentic classroom settings, otherwise belief change risks remaining superficial (Bendixen, 2002; Tillema & Knol, 1997).

A second implication concerns the design of teacher education curricula. In Myanmar, reforms emphasise constructivist teaching methods (Soe et al., 2017; Pyae Kyaw & Kimmel, 2023), but achieving this requires programs that integrate theoretical perspectives with practice-based learning. Courses that combine exposure to alternative pedagogies with structured teaching practice can provide the cognitive conflict and reinforcement necessary for both belief and conceptual change (Vosniadou, 1994; Nahalka, 1997).

Finally, implications extend to policy initiatives. Professional development that continues beyond initial training is critical for sustaining change. Even when preservice teachers develop more sophisticated epistemological beliefs during their studies, they may revert to transmissive practices once they enter school environments dominated by tradition and exam pressure (Nahalka, 1997; Pyae Kyaw, 2022). Policies that support mentorship, collaborative learning communities, and long-term reflection can therefore help sustain reforms and prevent regression into established patterns.

In short, addressing epistemological beliefs and teaching-learning conceptions is not an optional complement to teacher education, but a central element of meaningful educational reform. This is especially evident in Myanmar, where reform goals depend on equipping student teachers with the capacity not only to adopt new pedagogies but also to revise the underlying beliefs that guide their professional practice.

Taken together, these implications highlight that transforming teacher education requires more than the transmission of new methods; it involves reshaping the beliefs that underpin instructional decisions. As Myanmar's reforms illustrate, aligning classroom practice with student-centred approaches depends on sustained support for belief and conceptual change, both during initial preparation and throughout teachers' professional careers. Yet, important questions remain about how these processes unfold across different contexts, cultures, and stages of professional development. Addressing these gaps requires a more systematic research agenda, which the next section will outline.

## Future Research Directions

Although considerable progress has been made in understanding epistemological beliefs and teaching-learning conceptions, several gaps remain that warrant further investigation. Expanding the research agenda will not only strengthen theoretical insights but also provide practical guidance for teacher education and reform.

### 1. Understudied Contexts

Much of the existing research has been conducted in Western higher education settings, with relatively few studies in non-Western contexts (Chan, 2006; Chan & Elliott, 2004). In Myanmar,

where traditional teacher-centred practices remain dominant (Soe et al., 2017), recent studies indicate a gradual shift toward more constructivist orientations (Pyae Kyaw, 2022; Pyae Kyaw & Kimmel, 2023). Further research is needed to understand how local cultural traditions, institutional structures, and reform initiatives shape the development of EBs and TLCs. Comparative studies across regions could also illuminate how different contexts influence the relationship between beliefs and teaching practices.

## 2. Longitudinal Research

Most studies of EBs and TLCs rely on cross-sectional designs, offering only snapshots of beliefs at a single point in time (Hofer & Pintrich, 1997; Schommer, 1990). Longitudinal approaches are needed to capture how beliefs evolve across the trajectory of teacher education and into professional practice. Tracking student teachers from entry into their programs through their early years in the classroom would provide valuable insights into when and how belief and conceptual change are most likely to occur, as well as the conditions that sustain or undermine these changes over time.

## 3. Interdisciplinary Approaches

Epistemological beliefs and teaching-learning conceptions intersect with broader issues of psychology, sociology, and cultural studies. For example, Belenky et al. (1986) highlighted how gender and social experience shape ways of knowing, while Chan (2006) emphasised cultural dimensions of epistemology. Future research should build on these insights by adopting interdisciplinary perspectives that connect individual belief systems with the social and cultural environments in which they are embedded. Such approaches would enrich understanding of how beliefs are formed, negotiated, and transformed in diverse educational contexts.

## 4. Technological Integration

The increasing use of digital technologies in education raises new questions about how EBs and TLCs are shaped in online learning environments. While much existing research predates this shift, examining how beliefs about knowledge and learning adapt in response to digital platforms is increasingly relevant. Investigating, for instance, how online collaboration influences beliefs about the source of knowledge, or how digital assessment practices shape teaching-learning conceptions, could extend the field in important ways.

## Conclusion

Epistemological beliefs and teaching-learning conceptions are fundamental to understanding how teachers interpret knowledge, design instruction, and enact educational reform. Research demonstrates that sophisticated beliefs about the nature of knowledge often align with constructivist conceptions of teaching and learning, while naïve beliefs tend to reinforce transmissive approaches (Brownlee et al., 2001; Chan & Elliott, 2004). These interconnections

highlight that teacher education cannot be limited to the acquisition of new methods but must also engage with the deeper assumptions that shape professional practice.

In Myanmar, this challenge is particularly salient. Traditional authority-driven models of teaching have long shaped classrooms (Soe et al., 2017), yet reforms under the National Education Strategic Plan call for student-centred, inquiry-based approaches (Pyae Kyaw, 2022; Pyae Kyaw & Kimmel, 2023). The success of these reforms depends not only on curriculum change but also on the capacity of teacher education programs to foster belief and conceptual change. Addressing this requires reflective practice, ongoing support, and policies that sustain innovation beyond initial training.

By situating Myanmar within the broader literature on EBs and TLCs, this review contributes to diversifying the field and foregrounding the importance of cultural and institutional contexts. It underscores the need for future research that examines understudied populations, employs longitudinal designs, and integrates interdisciplinary and technological perspectives. Ultimately, deepening our understanding of epistemological beliefs and teaching-learning conceptions offers a pathway toward more responsive, equitable, and transformative teacher education.

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# THE LONELIEST GENERATION?

Georgina Kiss-Kozma<sup>1</sup>

In 2019, more than 14 million young people between the ages of 15 and 29 were estimated to have experienced mental health problems, and the Covid-19 pandemic has worsened the mental health of young people across Europe. The OECD report *Health at a Glance: Europe* found that half of young people in Europe said they had not received adequate help to deal with their mental health problems. UNICEF reports that suicide is the second most common cause of death among young people in Europe after road traffic accidents. According to an EU survey from 2022, there are more loners among young people than among the older generation. The mental health of young people is becoming a bigger issue every year. This is not surprising, as a fifth of young people in Hungary are considered lonely. However, in addition to loneliness and lack of companionship, young people also struggle with the frustration of insecurity. The issue of young people's loneliness has become even more central to public discourse in the wake of the Covid-19 pandemic, and as a result of these two trends, the place and role of young people in society is taking an increasingly prominent place in the discursive space. One of the central questions of this study is to what extent the loneliness and mental health of young people in Hungary are in line with international trends.

**Keywords:** Hungarian youth, mental health, loneliness, social support

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## Introduction

Are we really heading for the greatest discontinuity in the history of Western societies, and are we at a crossroads of mutually reinforcing social changes - be it the effects of technological innovation, globalisation or the polycrisis - that will present societies with new challenges that require us to fundamentally reshape everything we have thought about the functioning of society and its basic rules? From redefining the institution of the family, the way knowledge is acquired, the boundaries of life stages, to redefining the rules of world power, economics and geopolitics, to our faith in the future? Most countries in the European Union and many regions in western industrialised countries are facing demographic challenges - some would even call it a catastrophe. Education, the media and politics are struggling with the phenomenon of 'fake news', and life expectancy has increased so much thanks to the heyday of welfare states that the boundaries between life stages are becoming increasingly blurred. At the same time, a growing body of international research shows that the youth phase of life is in crisis. The World Happiness Report 2024, commissioned by the United Nations and now in its twelfth edition, has broken down its findings by demographic cohort, making it possible to compare the happiness levels of people in different age groups.

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And this is no coincidence: The report begins with the fact that we used to think - as in William Shakespeare's *As You Like It* - that people become more dissatisfied and unhappy over time, but the results of happiness research show a more nuanced and dynamic picture. We find that people born after 1980 are less happy, even on a global level.

An additional burden for the youth stage of life is the fact that, if we look back over the past years and decades, we can see signs of crisis in almost all areas of life: Westerners have experienced economic, demographic and migration crises, they have had to live through a pandemic despite believing that medical science was already advanced enough to avoid it, and they have had to face the frightening prospect of war despite trusting that the political system in their part of the world was already advanced enough to resolve conflicts through diplomacy. According to linguists, language reflects the spirit of the times and is also capable of capturing it. In line with this statement, we can characterise the current trend of major social and technological change as a perma-crisis. A perma-crisis can be defined as a long-lasting, protracted period of instability and uncertainty. To continue the linguistic approach, the Youth Research Institute conducted a 'word of the year' survey among Hungarian youth at the beginning of 2024. In the survey, a representative sample of 1,000 young people between the ages of 15 and 29 were asked to choose the phrase from a list that best describes the year 2023. The results show that young people in Hungary see the past year primarily described by the words "inflation", "war" and "poison". When choosing the word of the year, it should also be noted that we tend to choose words whose frequency of use has increased. We can therefore assume that the frequency of use of these terms in everyday language has increased.

One area that is of the greatest importance for society and young people in the permanent or polycrisis is the 'crisis of communities', which can lead societies to loneliness in the long term. We are therefore living in a transitional period in which more and more of the grey swans are turning out to be black swans.

## The changing and protracted youth stage of life

Youth has always been a time of constant and significant change. Young people have the greatest potential for change, react most quickly to social, economic and political changes and can adapt to new situations more quickly than their elders. The social environment has a considerable influence on the youngest age group, which is why the youth stage of life is constantly changing. The long period of prosperity in Western culture has meant that young people have been living better than their parents' generation for decades: the average life expectancy at birth has risen steadily thanks to the continuous development of medicine, and fortunate constellations in the social, economic and political spheres have enabled young people to stay in school longer and thus raise the level of basic education in society. This has also meant that important life events - such as attaining the highest level of education, entering the labour market, leaving home, getting married and starting a family - are being experienced later and later in life, meaning that the adolescent stage of life is not only subject to constant change, but is also being stretched out further and further. Whereas it used to be confined to the teens and twenties, the most important life events are now experienced less and less by the under-thirties. Recognising this fact, the

Youth Research Institute defined the youth life stage more broadly in its empirical research in early 2023, looking at 15- to 39-year-olds instead of the 15- to 29-year-old age group commonly used in national youth research practise (Kiss-Kozma and Székely 2023).

The crises of the last two decades can also be recognised in the self-reflection of the younger generations. Since 2008, data from the large-scale youth survey, which was launched in 2000 and has been repeated every four years since then, has been analysed in order to paint a picture of the problems faced by young people between the ages of 15 and 29 in Hungary. Over the last decade, the impact and priority of the problems perceived by young people have changed, as the problem maps from 2008 and 2012 show a very different picture of young people's lives in Hungary. On the way to the present, concrete problems were increasingly replaced by more ethereal, post-material problems: Hopelessness and uncertainty about the future have risen from third place in 2008 to first place in 2020 (in 2008 this was a pressing problem for only a tenth of the young people surveyed, but in 2020 it is perceived by almost a quarter of them as a priority for their generation). Similarly, aimlessness has climbed from fifth to third place within a decade. The results from 2020 also show another change worth highlighting: lack of friendships and communities was articulated as a new problem for the younger generation and immediately rose to the top, to fourth place. There is only one dimension where there were no significant shifts, namely that of material security, which is obviously related to the fact that this is the stage in young people's lives when they start to become independent, and in this process the issue of material goods plays a key role (independence from the family of origin, building one's own existence, starting a family are all life events for which material resources are a necessary, but not the only prerequisite). According to the results of the Youth Research Institute 2023 survey, young people continue to see uncertainty and an unpredictable future as the most important problems facing their generation. In the first part of the problem map, with the exception of financial worries, problems of a psychosocial nature are usually mentioned, such as the aforementioned uncertainty, an unpredictable future, lack of goals or lack of friends and communities (Kiss-Kozma and Székely 2023). International studies have also shown that frustration due to uncertainty about the future is increasing and has recently been higher among younger people (World Economic Forum 2023). Uncertain circumstances draw attention to the importance of maintaining mental health and well-being.<sup>2</sup>

## International overview

The mental health of young people is not a challenge specific to Hungary, as international surveys have shown a steadily worsening trend in recent years: in 2019, it was estimated that more than 14 million young people between the ages of 15 and 29 in the European Union had mental health problems, and the Covid-19 pandemic has worsened the mental health of young people across Europe. The OECD report *Health at a Glance 2022: Europe* found that 23% of the adult population in Europe reported not receiving adequate mental health care in 2022, while half of young people

<sup>2</sup> Every year from 2023, the Youth Research Institute publishes the Youth Report, which includes all the topics, issues and events that have been significant for youth in the year under review. In the 2023 report, both the top five issues for 2023 and the expectations for 2024 included the topic of mental health of young people (Youth Report 2023).

(49%) reported the same. A UNICEF report has highlighted that suicide is the second leading cause of death among young people in Europe after road traffic accidents, highlighting the serious consequences of poor mental health, and an EU survey in 2022 (Casabianca & Nurminen 2022) found that there are more loners among young people than among the older generation. In response to these surveys on young people's mental health, work is already underway in the Council and EU Member States have begun to develop their views on how to prevent mental health problems among young people. At the Council meeting of 27 November 2023, 27 Member States adopted Council conclusions on the mental health of young people, proposing measures such as improving their living and working conditions, promoting young people's access to mental health services, promoting research on the mental health of young people, combating stigmatisation, sharing best practises between EU Member States and promoting a safer and healthier digital space, including measures against hate, violence and abuse in the media and social media.

The aforementioned happiness index of the World Happiness Report, published for the 12th time in 2024 by the United Nations, shows how satisfied people in 143 countries around the world are with their lives, listing the results by age group for the first time. This provides some general insights into the differences in happiness levels between people in different age groups. For example, it was found that people born after 1980 have lower levels of happiness worldwide. However, it is important to note that there are large regional differences. In North America, for example, happiness levels among young people (aged 15–24) have fallen significantly since 2006–2010, meaning that they are now unhappier than their older peers. The subjective happiness level of young people has also fallen in Western Europe, while it has risen in Central and Eastern Europe, meaning that young people are now equally happy on both sides of Europe. In Hungary, people are less satisfied compared to the previous year, which is mainly due to the dissatisfaction of the older age group, which ranks 36th in the happiness index for those under 30, but only 70th for those over 60. Despite the decline, the subjective happiness level of the population in the years 2021–2023 has risen the most compared to the period 2006–2010, ranking 15th in terms of the increase in recent decades. However, Hungary lags behind the other countries in the region: in the ranking of countries in terms of life satisfaction, Romania is in 32nd place, Serbia in 37th place and Slovakia in 45th place, while Hungary is only in 56th place (Helliwell et al. 2024). Similar trends can be seen in the results of the Hungarostudy, which has been published regularly since 1988 and provides a comprehensive picture of the physical and mental health of the Hungarian population. According to the 2013 survey, the general satisfaction indicator and the happiness indicator have deteriorated since 2006, while both indicators in 2021 are above the 2006 level. In other words, the population's satisfaction and happiness are slowly but steadily increasing. Here, too, comparisons by age group show that satisfaction and happiness decrease significantly with age (Székely et al. 2022). The mental health of young people is becoming an increasingly important issue from year to year (Székely and Kiss-Kozma 2024), which is confirmed by both international and national trends (Kiss-Kozma and Székely 2023). However, in addition to loneliness and lack of community, young people also struggle with frustration resulting from a sense of insecurity (Székely 2023).

## Trapped by stereotypes – or lonely digital natives in the light of data

In literature, the youth of today is labelled with a series of terms that immanently imply two causally related characteristics: They are lonely and technologically wired. They are also referred to as digital natives (Prensky 2001), Generation Z, postmillennials, Facebook generation, net generation, iGeneration, zappers, instant online generation, dotcom kids (Pál and Törőcsik 2013) and homo zappiens (Veen and Vrakking 2006), which usually refers to those born between 1995 and 2009 (Pál and Törőcsik 2013; Juhász 2017). Their communication differs significantly from that of previous generations, as it is mostly done via digital means (Tari 2011) and they maintain social contacts in real and virtual space simultaneously (McCrindle and Wolfinger 2010). As a result, it is generally assumed that they are alienated from their personal relationships. However, a number of studies refute this (McCrindle and Wolfinger 2010; Selwyn 2008) and suggest that, like previous generations, they value face-to-face contact with friends and acquaintances. This is confirmed by previous large samples of youth research and by the findings of the Youth Research Institute.

### The Hungarian context

In our study, we analyse the extent to which young Hungarians feel lonely using the dataset of the Hungarian youth sociological research project, the Hungarian large- sample youth survey. As part of the research project, 8,000 young Hungarians between the ages of 15 and 29 were surveyed in 2020. The Hungarian large-sample youth survey started in 2000 and was repeated every four years thereafter. The target group of the survey was young people living in Hungary. We also use the results of the surveys conducted by the Youth Research Institute 2023. In the Youth Research Institute 2023 survey, the focus of the analysis of these factors was on the topic of social relationships. The survey was conducted by the Youth Research Institute between December 2022 and January 2023 among Hungarian citizens aged 15 to 39 in a nationally representative sample of 1,000 people using a face-to-face interview (TAPI).

### Results

In the intergenerational problem map of Hungarian youth, uncertainty, unpredictability and the lack of communities can draw our attention to the question of whether the resilience of young people in Hungary has changed, or at least whether it can be assumed that changes and crises in the world are not only perceived by them, but can also affect their psychological resilience. The results of the latest survey in the large-scale youth survey series, which was conducted in autumn 2020, shed light on young people's perception of safety and the role of communities in their lives. In the questionnaire, they were asked to answer the question of how safe they feel overall. The answers were given on a scale of one to five, with one being "not at all" and five being "completely". The results show that 15- to 29-year-olds in Hungary feel safest at home (4.4), in their own community (4.23) and in their immediate neighbourhood (4.22), while they feel least safe in countries outside the European Union (3.59) and on the internet (3.68). In other words, the closer they are physically to their family and their immediate personal relationships, the safer

they feel. In the questionnaire, the young people were also asked how afraid they were of certain events. Here too, respondents were asked to rate their opinion on a scale of one to five, with one being not afraid at all and five being very afraid. Young people in Hungary tended not to be afraid of another world war (2.76), but this changed in 2022 when fear of the coronavirus epidemic was replaced by concern about inflation and, above all, Russia's war in Ukraine. These were the topics that most concerned the young people between the ages of 18 and 21 surveyed by the Youth Research Institute, even before discussions about holiday plans or plans for (further) education and employment. Almost six tenths of them were not even talking about the coronavirus epidemic at this point. This suggests that young people are sensitive to the events around them. This is also supported by the findings that the coronavirus epidemic in autumn 2020 affected the lives of young people in several ways: primarily the time they spent online (23) and their financial situation (19). While the latter clearly had a negative impact (90%), their relationship with their family (66%) and their connection to spirituality, religion and God (59%) were positively affected. The results for 2020 also show the importance of family and friendships in other areas: on the trust scale, young people in Hungary trusted their family the most, followed by their friends.

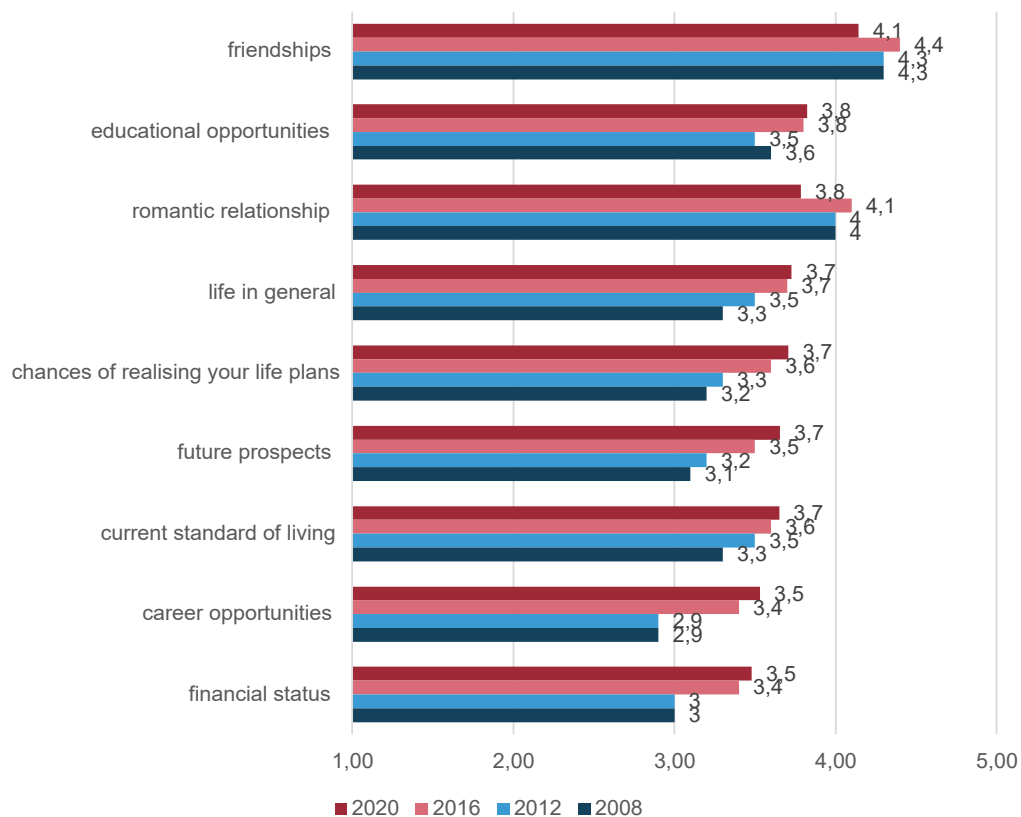
This is emphasised by the fact that they prefer to spend their free time with their family and friends, even if the screen is still the dominant leisure activity. The growing importance of their relationships with family and friends is also reflected in the results, which show that while young people are generally satisfied with almost all aspects of their lives, their satisfaction with their friends and partners was at its lowest in 2020, i.e. in the period between 2008 and 2020 (Fig. 1). The role of personal relationships, i.e. family and friends, is therefore still important in the lives of young people in Hungary, and the coronavirus epidemic has also shown, albeit mainly indirectly<sup>3</sup>, that in times of crisis, personal relationships become more important in the lives of young people.

According to the World Health Organisation (WHO), "health is defined as "well-being in body, mind, spirit and society" (Constitution of the World Health Organisation). Our quality of life encompasses physical, mental and social well-being. The complexity of mental health is reflected in the fact that the definition also includes self-acceptance, the ability to successfully cope with difficult situations, the ability to trust and the ability to maintain meaningful human relationships.

The greatest difference in social support was found with regard to the level of education. A quarter (26%) of respondents with primary education never or rarely felt they had much in common with people around them, compared to only 18% of respondents with high levels of education, i.e. those with tertiary education. A quarter of respondents with a low level of education (24%) never or rarely feel that they belong to a circle of friends, while only a fifth (20%) of respondents with the highest level of education can be considered to have no circle of friends. While 23% of respondents with primary education never or rarely feel that they have someone in their lives with whom they can talk about their problems, only 12% of respondents with higher education find it difficult to establish this kind of close connection.

<sup>3</sup> For example, the coronavirus epidemic had the effect of increasing young people's interest in politics by increasing their exposure to public and political issues within the family and in their communication with friends. Young people also became more interested overall, entering into a denser communication space, which resulted in an increase in the average political communication even among young people belonging to the less politically involved group, which basically rejects politics (Hajdú et al., 2022; Szabó és Oross, 2021).

## Figure 1. Satisfaction



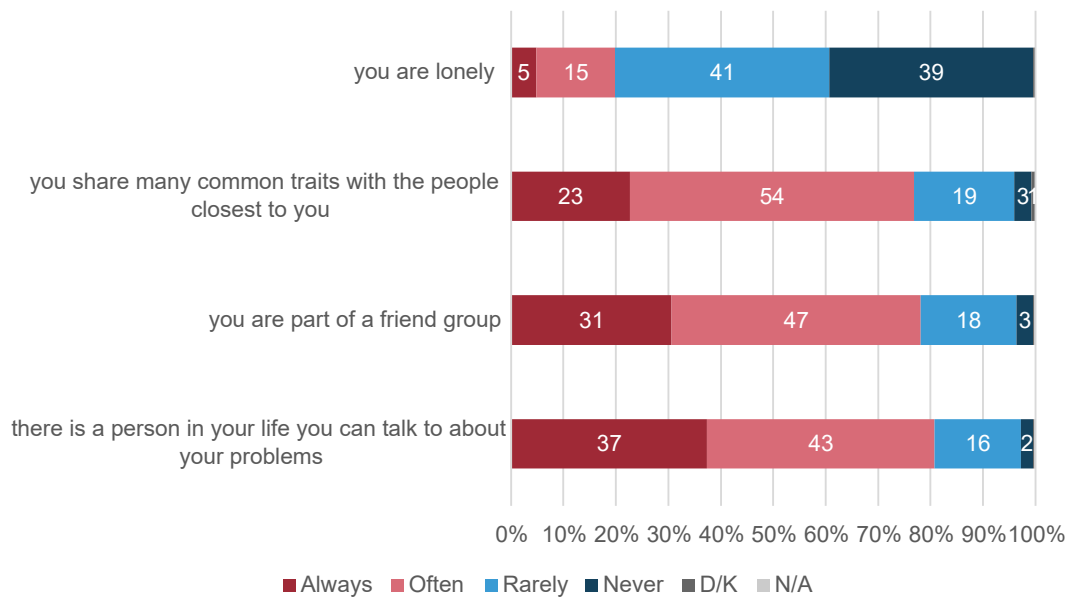
Source: Hungarian Youth Research 2020. (How satisfied are you with the following? Please answer on a scale of 1 to 5, where 1 means you are not satisfied at all and 5 means you are completely satisfied.) N2008, N2012, N2016, N2020=8000; scale averages

There are no major differences between the sexes in this respect, except for one point: while just over a sixth of females (17%) feel that they never or rarely have someone to talk to about their problems, more than a fifth of males (20%) said that they never or rarely talk to anyone about their problems. And looking at the age differences confirms the finding that social relationships are most important in adolescence, which has already been confirmed by previous studies. 15 to 19-year-olds were above average in all aspects of the survey: 84% feel (often or always) that they have someone in their lives to talk to about their problems (average: 80%), 88% are part of a group of friends (average: 78%), 80% find common ground with people in their immediate environment (average: 77%) and 82 per cent never or rarely feel lonely (average: 80%).

The greatest differences in social support were found with regard to the level of education. A quarter (26%) of respondents with a primary school education never or rarely felt they had much in common with those around them, compared to 18% of respondents with a high level of education, i.e. those with a university education. A quarter of respondents with a low level of education (24%) never or rarely feel that they belong to a circle of friends, while only a fifth (20%) of respondents with the highest level of education can assume that they do not have a circle of friends. While 23% of respondents with a primary school education never or rarely feel that they have someone in their life with whom they can talk about their problems, only 12% of respondents with a higher level of education find it difficult to establish such a close connection. There are no major differences between the sexes in this respect, with the exception of one point: while just over a sixth of women (17%) feel they never or rarely have someone to talk to

about their problems, more than a fifth of men (20%) said they never or rarely talk to anyone about their problems. A look at the age differences confirms the finding that social relationships are most important in adolescence, which has already been confirmed in previous studies. 15 to 19-year-olds were above average in all aspects of the survey: 84% feel (often or always) that they have someone in their lives to talk to about their problems (average: 80%), 88 per cent are part of a group of friends (average: 78%), 80% find common ground with people in their immediate environment (average: 77%) and 82% never or rarely feel lonely (average: 80%).

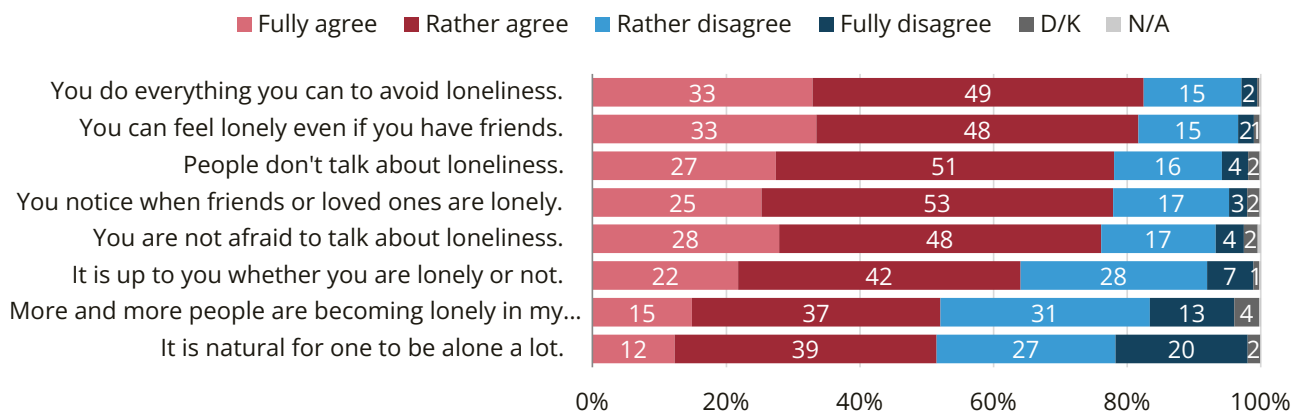
**Figure 2. Perception of social relationships**



Source: Hungarian Youth Research Institute, 2023 (How often do you feel that ...?) N2023=1000; averages

To summarise, eight out of ten young people aged between 15 and 39 in Hungary stated that they rarely or never feel lonely. However, it should be noted that 15% of young people often feel lonely, while five per cent always feel lonely. This is important because a number of studies have confirmed that people who feel lonely frequently or for long periods of time are more at risk than those who are "only" occasionally dissatisfied with their relationships with others. And loneliness that becomes chronic has psychological, physical and, in some cases, medical consequences. In other words, a fifth of teenagers and young adults are at risk and vulnerable to persistent or frequent feelings of loneliness. Research has also addressed the issue of societal perceptions of loneliness, as there is often a negative cultural image of loneliness in society, which can lead to social taboos. However, some progress has been made in recent years, mainly thanks to the ongoing discourse on young people's psychological and mental health. However, the fear of stigmatisation can still lead to feelings of loneliness being hidden. This is reflected in the findings and proposed measures adopted by the 23 EU Member States on 23 November 2023 in the call to combat stigma. In terms of society's perception of loneliness, one thought-provoking finding is that while three quarters of respondents (76%) said they were not afraid to talk about loneliness, the same proportion (78%) also completely or somewhat agreed with the statement that people do not talk about loneliness. Two possible conclusions can be drawn from this, which need to be investigated

### Figure 3. Agreeing with statements

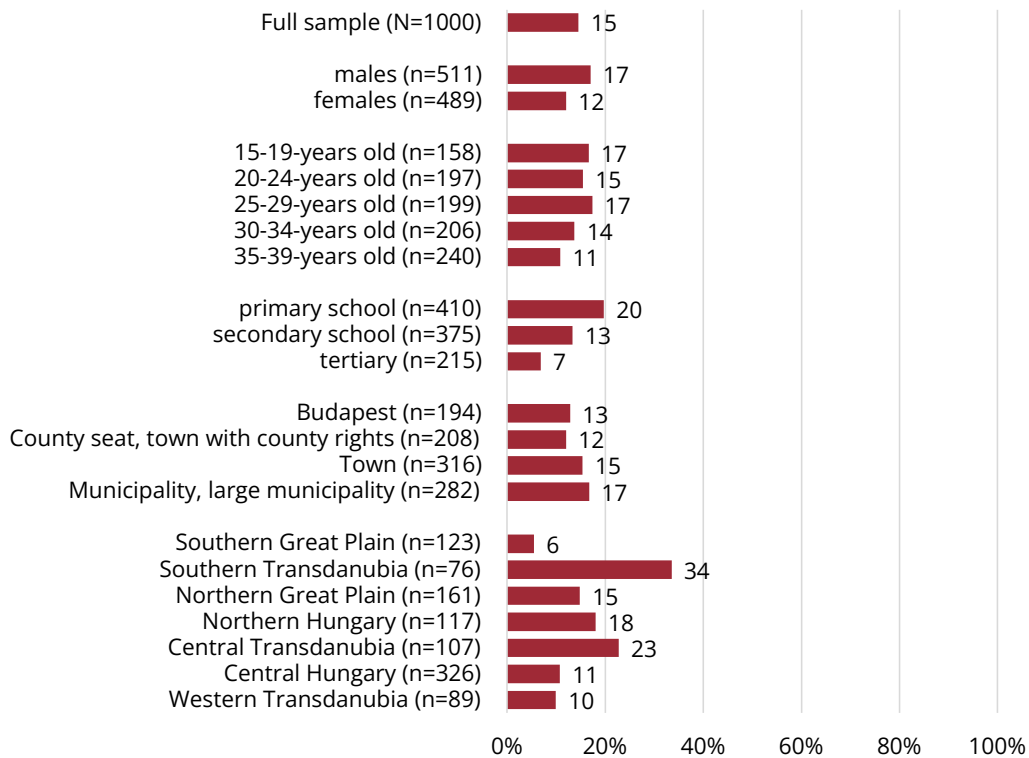


Source: Hungarian Youth Research Institute, 2023 (Please tell us whether you rather agree or rather disagree with the following statements.) N2023=1000; averages

in the future: On the one hand, society's openness to this topic may have become more dynamic in the younger age group, i.e. young people may find it more natural to talk about certain mental health difficulties and challenges. On the other hand, the result can also be explained by the fact that people do not like to think of themselves as tabooing certain topics of social importance. It can also be concluded from the responses that young Hungarians generally pay attention to the state of their environment: Every second respondent (52%) believes that more and more people around them are lonely, and 78% said that they recognise when their friends or relatives are lonely. When asked whether society or the individual is responsible for this, they favoured the latter: almost two thirds (64%) believe that it is up to the individual whether they are lonely or not. The majority of young people (82%) fully or somewhat agreed that someone can be lonely even if they have friends, but opinions were more divided when it came to how natural it is for someone to be alone a lot (51% said it was natural, 47% said it was unnatural) (Fig. 3).

If young people do not have the right tools to prevent the feeling of loneliness from persisting in their lives, it can become a pathological condition. One of the most important coping strategies is social support, which is a protective factor for health and can prevent pathological psychophysical consequences. The survey data shows that the vast majority of young people surveyed (82%) take measures to avoid feeling lonely. Most are with their families (31%) or turn to their peers (26%). Social support is followed in order of frequency by active coping strategies such as playing sport (20%) and going on outings and walks (20%). However, digital technologies are also used alongside traditional coping strategies: Almost a fifth of 15 to 39-year-olds in Hungary resort to digital tools to overcome loneliness, with 19% consuming audiovisual content (TV, videos, music), the same proportion using computers, mobile phones and social media, and 17% contacting a friend via social media. The importance of the different relationships also varies with age: the younger someone is, the more important their friendships are, while as they get older they turn to family members to overcome loneliness. A passive attitude towards loneliness is more characteristic of men, those with primary education, those living in a village or large municipality and young people in southern and central Transdanubia, who are less likely to do anything about their feelings of loneliness (Fig. 4).

**Figure 4. Does nothing when feeling lonely**

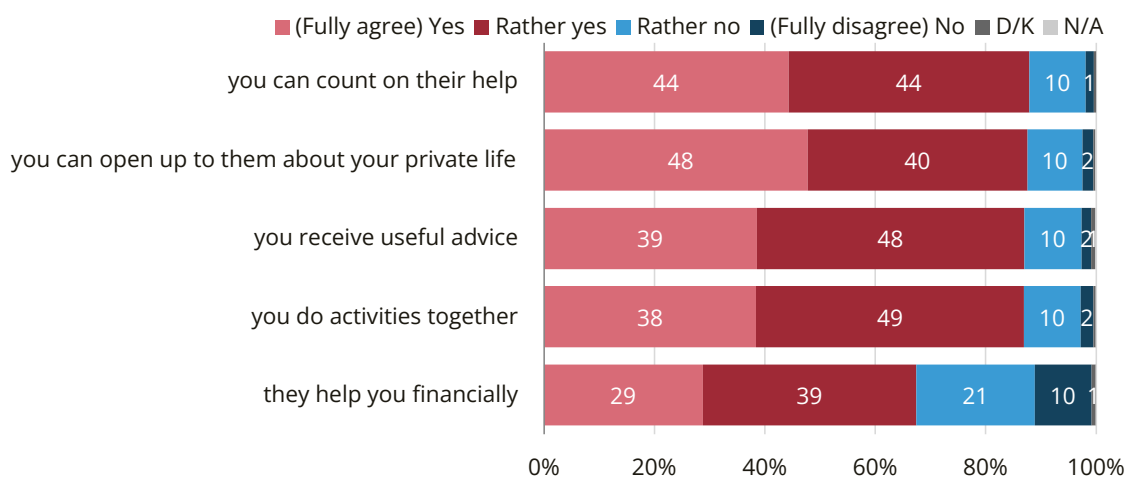


Source: Hungarian Youth Research Institute, 2023 (What do you do when you are feeling lonely? Nothing.) N2023=1000; averages

The prominent role of social support is also reflected in another dimension: one in two young people feel that they can rely on both family and friends (51%), one third (32%) rely more on family and one sixth (15%) rely more on friends.

The quality of relationships is influenced by many factors, but 9 out of 10 young people feel close to someone when they can count on their help, when they can open up to them, when they receive useful advice and, last but not least, when they can spend quality time with them, i.e. when they do activities together. Financial support is the least important aspect: only seven tenths of respondents feel close to a person if they receive financial support from them (Fig. 5).

**Figure 5. Do you feel close to someone when...**



Source: Youth Research Institute, 2023 (Do you feel close to someone when... ?) N2023=1000; averages

Young people in Hungary have on average four people around them with whom they can organise activities, nearly three people they can hug, who can give them emotional support when they need it, who can give them useful advice or help them with their tasks. They could also name an average of two people who would help them financially if they were in need.

## Conclusion

Eight out of ten Hungarians aged between 15 and 39 said they rarely or never felt lonely. At the same time, 15% of young people say they often feel lonely and a further 5% say they constantly lack company. These findings are significant in that several surveys have confirmed that people who feel lonely frequently or for long periods of time are at greater risk of being vulnerable than those who are only occasionally dissatisfied with their relationships with others.

Chronic loneliness has psychological, physical and, in some cases, medical consequences. In other words, a fifth of teenagers and young adults are at risk, vulnerable and exposed to persistent or frequent feelings of loneliness.

The use of generational labelling is not only prevalent in youth sociology, but also in public discourse through media coverage. The theory is that members of this generation have become alienated from real relationships, work and nature as a result of accelerated technological change. During the coronavirus pandemic, the issue of loneliness among young people has increasingly taken centre stage in public discourse.

Social support is one of the most important coping mechanisms. A sense of belonging or belonging to a community is particularly important for maintaining young people's physical and mental health. It is no coincidence that social support is on the third level of Maslow's pyramid of needs. Almost eight out of ten young Hungarians aged between 15 and 39 stated that they are a member of a group of friends with whom they identify emotionally and share many common characteristics. The overwhelming majority (80%) are therefore able to talk to someone about their problems, and all this provides them with a background that ensures they rarely or never experience loneliness.

Both international and national data show that the youth stage of life is changing and lengthening. The effects of globalisation, the emergence and spread of digital culture and the poly- or perma-crisis are drawing attention to the mental health and mental resilience of young people. The crises of recent years and societal trends such as ageism have had both a direct and indirect impact on young people's lives. The Youth Report published by the Youth Research Institute has also highlighted young people's mental health as one of the most important issues in the youth sector in 2023 and 2024. It is expected to remain an important issue in the coming years.

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# Digital Transformation: A Pathway to Connect Higher Education Institutions to the Requirements of Increasingly Digitalised, Interrelated and Globalised Societies

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Over the past two decades, the use of digital technologies in higher education has reshaped traditional teaching and learning paradigms. COVID-19 has highlighted the importance of digitalisation mechanisms and emphasised the need for higher education institutions (HEIs) to engage in strategic digital transformation (DT) projects. Despite the investments, challenges such as insufficient internet access and limited digital competence prevent students from benefiting from the new technologies. In this context, the following research primarily aims to reflect on the importance of DT strategies to ensure the relevance of HEIs in an increasingly digitalised world. To support the main purpose, this article presents three specific objectives:

- (1) to review the current state of digital transformation in public and private HEIs;
- (2) to identify the main barriers that prevent digital transformation processes; and
- (3) to discuss possible institutional and governmental policy-oriented initiatives to encourage digital transformation in HEIs.

The methodology used is based on the application of Qualitative Document Analysis (QDA), a rigorous approach that aims to systematically identify, examine and select relevant academic sources. The study argues that in order to maintain their relevance, higher education institutions need to develop strategic plans for digital transformation that include short, mid and long-term goals.

**Keywords: digital transformation; higher education; COVID-19; digitalisation, information and communication technologies**

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## Introduction

In recent decades, higher education institutions have undergone digital transformation processes. As pioneers in the e-learning domain, they are now evolving into institutions offering blended services and focussing on the co-creation of knowledge. The aim of this paper is to present the following:

- (1) an overview of the dynamic aspects of digitalisation and the concept of a cluster organisation as an academic agile business case;
- (2) additional arguments for the internal stakeholders of universities to develop an understanding

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of and better meet the demands of the digital society, in particular the competences and processes required in the digital transformation process to capture the quality of a university's response;

(3) examples of how selected universities have managed their digital offerings within their strategic management framework, planned tools and platforms within academic agile business models; and

(4) a selection of supports for a management team leading the digitalisation of the university. The study is based on a literature review using meta-analysis as research method.

The challenge for higher education lies not only in the fact that VUCA concepts, which stand for volatility, uncertainty, complexity and ambiguity, entail considerable risks but also offer numerous benefits if implemented responsibly (Panthalookaran, 2022). The future students who are entering university have been born and raised in an environment where the internet has become as commonplace and ubiquitous as a television set or a light bulb (Abad-Segura et al., 2020). This digital generation uses computers and smart devices consistently to an extent that is unprecedented when compared to the user behavior of all other generations. Consequently, our students are often better educated in the IT skills that form the core of most imported DT competencies.

The recent digital transformation is not only impacting the economy, institutions and businesses, but is fundamentally changing lives and lifestyles, especially the way our societies are organised (Argüelles-Cruz et al., 2021; Benavides et al., 2020; UNESCO IESALC et al., 2024) – think, for example, of energy or health systems at country level, smart catalytic city activities in growing urban areas, or future markets with a global dimension such as autonomous cars or smart manufacturing. In this context, society's greatest desire is that our existing and future university graduates and labour force have the necessary skills. Therefore, teaching/learning processes need to meet the new challenges.

## Digital Transformation Conceptual Framework

Higher education institutions are facing major challenges in order to meet the requirements of a digitalised, networked and globalised society (Haque et al., 2023; Kannadhasan et al., 2020; Molenda, 2022). As information and communication tools and connectivity have created a multitude of changes and opportunities in society, businesses and government systems, higher education institutions are confronted with stakeholders who place new demands on higher education (Cheng et al., 2022; Giesenbauer & Müller-Christ, 2020; Langrafe et al., 2020). As a starting point, digital transformation can be understood as a concept that indicates that the institutions need to focus on long-term strategic approaches in which the integration of digital technology leads to changes in both organisational activities and business models (Bygstad et al., 2022; Mohamed Hashim, Tlemsani, & Duncan Matthews, 2022; Mohamed Hashim, Tlemsani, & Matthews, 2022; Sá & Serpa, 2020).

One of the most important questions that arises is whether the teaching, research and transfer projects designed and implemented by universities for the community and society meet the needs of digitised, interconnected and globalised societies by taking full advantage of the many benefits associated with obtaining, processing and using large amounts of diverse data, without overlooking the risks associated with rapid processing and biased and non-transparent data extraction, with

insufficient control over the use of data for unethical purposes. This issue deserves to be examined in the context of the 21st-century framework, in which there are more and more globalised societies, living increasingly intertwined lives, both on a digital and analogue level. It is important to emphasise that even in this complex, dynamic and multi-layered context, the structures and processes of higher education institutions continue to value collaboration, cooperation and inclusivity (Castells, 2014; Phelps, 2007; Ramose, 2009).

Digital transformation is now considered one of the main drivers of public ICT policy and is at the centre of numerous reports defining the main strategic areas and priorities for its implementation, compared to other similar and related concepts such as digital government, e-government, e-governance, e-gov, information society, knowledge society, virtual society, and network society (Brunetti et al., 2020; Kraus et al., 2021; Peng & Tao, 2022; Tangi et al., 2021). In contrast, the digital transformation has not yet reached this level of maturity in other research areas that are either less technology-oriented or not yet aware of the impact and characteristics of information and communication technologies in our society (Benavides et al., 2020; Brunetti et al., 2020; García-Morales et al., 2021). This is the case of higher education institutions, whose mission can be summarised as organisations that aim to produce, organise, disseminate and maintain specialised knowledge and provide specialised training at the highest level for undergraduate, postgraduate and doctoral students through teaching and learning activities or extracurricular technical, scientific, and cultural activities (Abad-Segura et al., 2020; García-Peñalvo, 2021; Phelps, 2007).

## Hei Functions In Globalised Societies

The flexibility that enables users to adapt to different learning speeds and learning methods should be provided. It is a fundamental requirement of the digital society that the educational system should be inclusive and provide education to everyone who wants and needs it (Rapp & Corral-Granados, 2024; UNESCO IESALC, 2022). The lack of access to technology is a major obstacle to people's development. This is perhaps one of the deadliest catches for the world in the digital age. In a world where technology companies can impact the daily lives of a significant number of people, the consequences are even more compelling.

The new requirement is to be agile, because nothing is more constant than change (Miceli et al., 2021). In order to see change as an opportunity, the pain of transitions should be smoothed through planning. This means that stakeholders in the education system should continuously come together to promote collective change. To enable individuals to work on a level playing field and remain competitive, lifelong learning systems must be feasible and available. These systems must collaborate with students and utilise all modern technological advantages of digital means, which are defined by universities as requirements of digital transformation.

The digital transformation also requires the existence of a certain infrastructure to support education, training, and re-training (UNESCO, 2016; UNESCO IESALC, 2023; UNESCO IESALC et al., 2024). It is a challenge for universities to recognize and meet the requirements of these digitalised, networked and global societies. HEIs must be flexible when it comes to transferring knowledge to individuals and designing their structures and curricula in line with information technologies that are constantly opening up new standards. If international developments are not followed and predicted, all the work done so far can be undone. Without continuous monitoring, research and

rapid decision-making to ensure competitiveness, this will lead to a less competitive state.

The strategic future goal of higher education is also fundamentally linked to intercultural competence, the ability to act confidently in transnational networks and the willingness to comply with contracts, principles, and ethical standards of academic behaviour in democratically constituted societies.

This leads to various changes in the structure, organisation and programs offered by higher education institutions. Changes in curricula should move towards interdisciplinary learning that focuses not only on domain-specific knowledge but also on digital and other soft skills (Akkari, 2012; Betancourt, 2004; Candau, 2012; Zenk et al., 2024). Institutional change should focus on technology-enhanced new learning environments that result from close collaboration and interaction and the joint development of educational concepts with students and companies. Collaboration with industry is gaining importance leading to research opportunities and the implementation of innovative teaching methods that prepare students for the digital workplace with highly qualified and individualised pedagogical skills (Mahmood, 2021; Ramírez-Montoya et al., 2021; UNESCO, 2020; UNESCO IESALC et al., 2024).

Educational institutions, especially universities, are indispensable for societies and economies facing digital challenges, but are also struggling to keep pace with the ongoing processes of change. The demands that companies place on university graduates are constantly changing as the digital revolution has created a need for a highly skilled and knowledge-based workforce. The requirements for self-motivated, autonomous learning and collaboration as well as developing the ability to innovate and problem-solve in digitally networked contexts have increased exponentially (Akour & Alenezi, 2022; Giang et al., 2021; Goulart et al., 2022; Hollenstein et al., 2022; Kaputa et al., 2022; Tang et al., 2020).

Digital transformation, digitalised societies and economies enable people everywhere to use digital devices to find and share information, keep up-to-date with news and political events, while facilitating the functioning of national and state institutions and organisation of health and education services (Cetindamar Kozanoglu & Abedin, 2021, 2021; livari et al., 2020). In this sense, digitalised societies are characterised not only by technological change, but also by changes in all areas of the economy and society (Brunetti et al., 2020; UNESCO IESALC, 2023; UNESCO IESALC et al., 2024).

## **Digital Competences: Challenges For Students, Workers, Citizens, And Hei**

Despite numerous recent advances, technology researchers still do not have a holistic and standardised concept of digital transformation. Moreover, business people are increasingly concerned about the social and ethical implications of widespread use and mastery of technology, rather than the impact on the planet. At the same time, the integration of all relevant aspects of technological expertise is simply unattainable for narrow efficiency and market-based models. It follows that it is the moral duty of of educators in economic policy to educate university students transversally and ensure that the entire population acquires common digital knowledge to discuss technological change.

In terms of key technologies, there is no definitive agreement about what these technologies are, but the most frequently mentioned ones include big data, analytics, blockchain, Internet of Things, (advanced) wireless technology, machine learning, artificial intelligence, cognitive computing, robotics, virtual/augmented reality, 3D printing, cloud technology, high-performance computing, fog computing, edge computing, etc. (Ashaari et al., 2021, 2021; Benitez et al., 2023; Bucea-Manea-Țoniș et al., 2021; Hersh, 2020)

Timely access to innovations of the continuously future-oriented education requires close collaboration between industry and educational institutions to equip the future workforce with new digital competencies (Goulart et al., 2022; Li, 2022; Rotatori et al., 2021). This commitment is all the more important as we live in an era of digital transformation, where other more difficult to teach skills such as collaborative problem-solving, practical creativity, originality in idea generation, time-management, leadership, negotiation skills and independence in learning are required (Akour & Alenezi, 2022; Goulart et al., 2022; Hollenstein et al., 2022; Marion & Fixson, 2021; Tangi et al., 2021). These necessary skills and competencies generally correspond to the skills of 21st-century, the "5Cs": creativity, communication, collaboration, critical thinking, and citizenship (Jessica Jane FitzPatrick, 2021). People are simultaneously drivers of the digital age that is currently taking place and are affected in all aspects of their lives by this digital transformation, which is driven by a rapidly growing amount of data, an increasing number of digital resources available, and the use of digital technologies. Citizens should therefore be able to handle data properly and manage a wealth of diverse digital resources efficiently.

For the digital age we will need versatile, lifelong digital skills and competencies that go beyond digital literacy. Future workers and entrepreneurs should master general and advanced digital skills at different levels in programming, simulation, data processing, and computational thinking as well as various application areas such as visualisation. Both the growing number of students willing to participate in new forms of digital learning and the need for more and more different digital technologies point to potential large business opportunities and define new potential areas of expertise for researchers and educators (Ovcharuk et al., 2020). Formal frameworks for fostering these multi-grade digital skills and competences are crucial not only for students at different educational levels, but also for professional, as well as for educators and future employers (Akour & Alenezi, 2022; Alenezi et al., 2023; Monteiro & Leite, 2021). These opportunities will benefit from collaboration between education and training.

One widely cited and upheld group of stakeholder demands is based on the requirements of Industry 4.0. Industry 4.0 is characterised by a dynamic, flexible network of interconnected value chains in which data-driven, digital ecosystems allow for a strong connection between product and production "turning the product into the means of production" (Benitez et al., 2023; Cañas et al., 2021; Karnik et al., 2022). This fourth industrial revolution can only be achieved by creating smart environments that carefully combine new technologies and human intelligence withinto the common good and address the challenges of demographic change. Despite their typical scepticism towards major innovations, higher education institutions and their management models must engage in a long-term transition process towards continuous updating and lifelong learning of all human capital (Dede & Richards, 2020; Morley & Jamil, 2021).

The complexity of developing digital transformation strategies in higher education institutions

stems from the broader societal changes associated with digitalisation. First of all, HEIs need to be aware that they operate in digitally advanced societies embedded in a broader societal ecosystem, and that digitalisation therefore affects a large number of their stakeholders. Stakeholders demand a wide range of new services, curricula and social activities related to institutional development and digital transformation (Benavides et al., 2020; Giang et al., 2021; Goulart et al., 2022; Kaputa et al., 2022). In the broadest sense, these services and activities are not only interconnected learning experiences that correlate with high employability and employee well-being but also overarching societal values and controls (Schettino et al., 2022).

## Cultural Changes: A Way To Implement The Digital Transformation Processes In Higher Education Institutions

For the digital transformation to be successful, it must be an organisational change. For large higher education institutions, change should start small and model transformative leadership, urgency, structure and strong communication (Eddy & Kirby, 2020; Ruben & De Lisi, 2017). The top vision should not only be shared by a small group of leaders but by the entire university community. In this context, the team needs to educate the institution about what it means to live and support the vision of teaching and learning in the digital age. It must be actively supported by adequate funding to ensure that updated infrastructure, resources and instructional design support are provided for faculty and students (Eddy & Kirby, 2020; Grabill et al., 2022). There should also be increased investment in and sharing of data resources.

Faculty members are critical to the overall success of digital transformation, and infrastructural investments such as the establishment of online courses and technologically equipped classrooms are meaningless without highly skilled faculty members who are able to utilise these powerful tools to promote learning outcomes (lifelong learning in higher education (Owusu-Agyeman, 2021; Schiuma et al., 2022). This means that the curriculum must be ready for use not only in terms of teaching materials and support, but also in terms of the human resource infrastructure to support it.

Among the many interactions, some of which involve legal constraints, the most important aspect is that which links managers with researchers and lecturers. Some of the issues that have been perceived as detrimental to these relationships are the lack of informed and decisive decision-making and insufficient time for critical thinking and reflection on initiatives undertaken. The processes that need to be undertaken to address these problems lie in defining, simplifying and adapting the bureaucracy and administrative tasks to achieve greater financial efficiency and greater flexibility and availability of resources.

Due to the impact of the digital transformation on HEIs, a new style of leadership is required. Changes in organisational and management culture are required; without these, alignment between strategy, structure, and culture is not possible (Sharma & Jain, 2022). Digital transformation requires changes at a strategic level in a higher education institution, and developing a digital strategy can give institutions a competitive advantage (Brasil, 2018, 2021; UNESCO IESALC et al., 2024). In order to make and implement strategic decisions, governance mechanisms, which in the context of

the HEIs are all responsible administrative bodies, should be able to align the strategy with their goals and fulfill the expectations and needs of stakeholders (Brasil, 2018, 2021; UNESCO IESALC et al., 2024). A significant milestone is to achieve a changed and innovation-oriented culture for the higher education institution. This implies (1) the continuous formulation and implementation of innovation and science, technology, engineering and mathematics initiatives by the government; (2) administrators to become technology enablers; (3) focus on market needs and partnership creation in co-developing digital strategies; (4) human capital to be developed; and (5) robust management and governance mechanisms and competences to be promoted (Weiss et al., 2021).

## Ethical Considerations In The Digital Transformation

In recent years, the discussion about digital transformation has attracted a great deal of attention. The aim of these initiatives is to open up digital opportunities to every university student. However, it is also necessary to discuss possible side effects of the initiatives in order to avoid potential risks. Ensuring the safety of the young population (in particular their enhancement to good use, their online privacy, and their critical stance as digital consumers) must remain a key focus of higher education institutions adopting digital transformation initiatives.

The digital side effects do not only concern the content of the educational process, but also the reality of people in the educational context. From this perspective, numerous studies have been conducted on the use of digital technologies in higher education institutions. As higher education institutions are increasingly interacting with digital technologies, they should be better prepared to consider data protection and ethics

Digital transformation has become an important part of the higher education sector by focusing on networked digitalisation to solve problems and create sustainable solutions (Giesenbauer & Müller-Christ, 2020; Mohamed Hashim, Tlemsani, & Matthews, 2022). On the other hand, privacy settings can also be used as a tool to control consumer behavior. In this direction, HEIs are also investing in research initiatives aimed at protecting members of society from the risks arising from the rapidly increasing use of digital-oriented tools in people's everyday lives (Jiang, 2022).

In the digital space, security and ease of use must be balanced, especially to ensure access for students from different social and economic backgrounds. However, measures to protect the transfer of knowledge that go hand in hand with initiatives to promote a balance between access and data security often make higher education institutions' initiatives more expensive and less attractive to the end user: the student.

## Conclusion

The digital transformation of higher education institutions and the role of digital technology in these organisations' relationships with students, teachers and society are currently topics that demand the immediate attention of the academic and corporate research community. Evidence of this growing attention is provided by research in matters related to this topic, such as (Benavides et

al., 2020; Qureshi et al., 2021). Conceptually, digital transformation in HEIs could be understood as a continuous process of reinventing the organization that involves the dynamic adaptation of the organisation's strategy, processes, use of technology and organisational culture to meet the environmental changes and prepare it for the expected challenges so that it is able to take advantage of the opportunities of the digital age.

Information and communication technologies (ICT) enable the individualisation, customisation and lifecycle support of educational processes and their digital content. Furthermore, student acquisition, authentication, and helpdesk processes can become more efficient with improved accuracy (Waghid, 2023). ICT also enables differentiation by offering attractive pedagogical responses to individual expectations, which promotes student satisfaction and completion and moves to the level of differentiators.

Despite the considerable progress in research on digital transformation, current research cannot yet properly assess the changes in higher education institutions. Among the changes are that traditional face-to-face teaching will soon be complemented by innovative and personalised education; faculties supervising assignments together and without disciplinary overlap will be replaced by interdisciplinary research groups; that funding agencies and governments will deploy complex validation procedures that develop automated processes within educational workflows; and that isolated universities will be replaced by educational networks that offer better services based on students' individual learning characteristics (Alenezi et al., 2023; Guppy et al., 2022; Stevens et al., 2021). There is an emerging trend to replace the traditional physical, one-way and independently organised processes with blended and networked processes that are interactive, dynamic and interconnected (Dixit & Pathak, 2023; Haleem et al., 2022).

The digital transformation is having a profound and far-reaching impact on higher education institutions. Its process is changing the institutional nature and operational models in higher education by challenging existing management practises and scholarship. The changes associated with digital transformation in higher education institutions go beyond the creation and use of digital systems and tools: they aim at a systematic and strategic development with technological, institutional and administrative aspects that improve access and opportunities for students from different social, political and cultural backgrounds.

Higher education institutions can provide the foundation and environment to foster society-wide digital transformation by developing competences in students and offering curricula that support learning experiences, meaningful challenges and more open discussions. In this context the article summarises seven recommendations for higher education institutions for digital transformation processes:

- (1) Promote the creation the appropriate infrastructure to support digital transformation projects;
- (2) Decentralise the decision-making power to enable flexibility and adaptability of higher education departments;
- (3) Engage and digitalise all administrative services at every organisational level;
- (4) Seek to participate in enriching environments to share information and experiences with other similar organisations;
- (5) Promotion of innovative initiatives and constant re-evaluation and adaptation of ongoing

initiatives;

(6) Promotion of digital literacy and professional development of members of all higher education institutions;

(7) Promotion of intercultural and interdisciplinary competences among students.

Digital transformation has become a significant challenge for organisations of all kinds, and higher education institutions are no exception. As a global trend, digital transformation is embedded in various research disciplines all around the world.

The isolated application of digital tools cannot be considered digital transformation. Likewise, digital transformation in universities should not be viewed solely as a response to increasing national and international competition, as a survival strategy in a changing education market, or as a means of increasing academic performance, but rather as a necessary process to maintain the value of HEIs in an increasingly rapidly changing and interconnected world. While it is indeed important for higher education institutions to demonstrate that they can keep pace with and contribute to digital developments in the wider context of business and society, the question of how they can best use digitalisation to fulfill their social, cultural and educational mission should be a subject of ongoing discussion among higher education stakeholders. They should explore how both educational and societal value can be enhanced through various digital tools, digitisation strategies, innovative initiatives and the modernisation of scholarship.

In conclusion, understanding digital transformation as a natural process that higher education institutions must undergo is increasingly important for all stakeholders in the education system, including students, professors, coordinators administrative staff and the society in general.

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# Conference Summary

## Back to the Future – Locked Screens in the Classroom

Enikő Szakos<sup>1</sup>

The increasing presence of smartphones in the classroom has sparked global debate on their impact on students' concentration, social interactions, and mental well-being. The Back to the Future – Locked Screens in the Classroom conference, held by the Youth Research Institute on December 10, 2024 in Budapest, Hungary, convened educators, policymakers, and mental health professionals from across Europe to examine the implications of a smartphone-free learning environment. Through keynote speeches, panel discussions, and interactive roundtables, participants explored the effects of constant digital connectivity on cognitive development and emotional resilience. The event provided a platform to share research-based insights and practical strategies aimed at fostering focused, engaging, and balanced educational spaces.

**Keywords:** future, digital, screen, youth, smartphone, school

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### The Keynote Presentations

#### The Neurological and Psychological Impact of Smartphone Use

Ákos Pörtl, a family safety expert at the Youth Research Institute, emphasised that childhoods dominated by smartphone use can lead to significant and potentially long-term negative consequences. He highlighted the role of major technology manufacturers in linking smartphone use to dopamine production. Dopamine, a neurotransmitter that activates the brain's reward centres, reinforces behaviours that generate pleasure. When smartphone interactions become dopamine-driven, children may develop compulsive habits that hinder cognitive development, academic performance, and mental health. Given these risks, international collaboration is essential for developing regulatory frameworks that govern smartphone use in educational settings, including possible school-wide bans.

#### Community-Based Interventions: The "It Takes a Village" Initiative

Rachel Harper, principal of St. Patrick's National School in Greystones, Ireland, introduced the "It Takes a Village" initiative, a community-based program designed to improve the well-being

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of primary school children. This initiative arose in response to increasing anxiety levels among students and focuses on enhancing digital awareness and emotional intelligence among children, parents, and teachers. The program fosters collaboration among eight local schools, shifting the emphasis from individual responsibility to collective action. It incorporates workshops, a voluntary smartphone-free code of conduct, and the use of play therapy in an effort to strengthen students' mental resilience. Notably, the initiative has led to a complete absence of smartphones among students at Harper's school and has attracted global interest.

## Section 1: Regulatory Perspectives: Policies from the UK, Ireland, Hungary, and Slovakia

The panel discussion titled *The Changing Educational Environment: Regulations, Perspectives, and Experiences from the United Kingdom, Ireland, Hungary, and Slovakia* examined how various countries approach smartphone regulations in schools. The session, moderated by Dorina Marton of Mathias Corvinus Collegium (MCC), featured the following speakers:

Rachel Harper, Principal of St. Patrick's National School Greystones, spokesperson for the "It Takes a Village" initiative (Ireland), Robin Millar, former Member of Parliament for North Wales (United Kingdom), and Michal Bozik, researcher at the Institute for Child Psychology and Pathopsychology and representative of the Slovak Ministry of Education (Slovakia).

Bozik detailed Slovakia's recently implemented smartphone restrictions, which followed extensive consultations with school administrators and parents. The primary motivation for the regulation was the increasing prevalence of cyberbullying and social exclusion among children. The policy aims to reduce incidents of online harassment while encouraging more face-to-face interaction and stronger peer relationships. The restrictions for younger students are particularly stringent, banning smartphones from all school premises, not just classrooms.

Millar provided insights into the UK's legislative approach, emphasising that while the country has an overarching online safety law, additional measures specifically targeting school smartphone use are under consideration. He noted that policymaking in this area requires persistence, stating, "This process is a marathon, not a sprint."

### Parental Engagement and Voluntary Restrictions

Harper stressed the importance of community-driven education and voluntary compliance with smartphone restrictions. She argued that parental support is crucial for the long-term success of such initiatives. Encouraging parents to establish and uphold smartphone-free norms within their communities creates a self-reinforcing cycle of support for these measures.

### Social Media and Gaming: Differentiating Risks

The discussion also touched on the growing awareness of social media's negative impact, a concern even acknowledged by figures like Facebook founder Mark Zuckerberg. Millar pointed out that the most severe cases of social media-related harm have pushed the issue into the public consciousness. However, panellists distinguished between the effects of smartphones and video games. While video games can have certain cognitive and social benefits, smartphones

employ unpredictable reinforcement mechanisms that drive compulsive use, increasing the risk of addiction.

## **Section 2: The Impact of Smartphones on Student Well-being, Mental Health, and Learning Abilities**

The second panel discussion of the conference focused on the effects of smartphone use on students' psychological and cognitive development. Experts from various fields shared insights into how excessive screen time influences children's ability to focus, interact socially, and engage in learning.

Marie-Estelle Dupont, a clinical psychologist and author from France, emphasised that children using smart devices predominantly experience emotions such as fear and excitement rather than curiosity and joy in learning. Andrej Omulec, a professor at the Faculty of Applied Social Studies in Nova Gorica, Slovenia, highlighted the importance of parental responsibility in regulating smartphone usage. Jozica Pongrac, a family and couples' therapist as well as a lawyer from Slovenia, discussed the social pressure of online visibility. Ryan Blank, an educator, historian, and Head of Political Studies at Harrow School in the United Kingdom, provided practical teaching strategies for managing declining attention spans in students.

The discussion, moderated by Enikő Szakos, a researcher at the Mathias Corvinus Collegium Learning Institute and Head of Department at István Nemeskürty Faculty of Teacher Training, Ludovika University of Public Service, underscored the urgent need for parental guidance, educational policies, and community-driven approaches to mitigate the adverse effects of smartphone use. Experts emphasised that fostering meaningful human connections and critical thinking skills is essential in an increasingly digital world.

Marie-Estelle Dupont noted that her generation was among the last to learn reading and writing without constant screen notifications. One of her key recommendations was that parents should only introduce smartphones to children once they have mastered the use of handwriting tools, as excessive screen time hinders the development of fine motor skills and sensory-motor abilities.

Andrej Omulec addressed the issue of parental responsibility, pointing out that many parents attempt to gain their children's affection by purchasing smart devices while failing to establish boundaries for their use. He provided a simple example: instead of allowing children to use their phones as alarm clocks, parents could buy a basic alarm clock. He argued that parents must make responsible decisions about delaying technology exposure and strictly regulating screen time.

Jozica Pongrac discussed the social pressure of online visibility, explaining that people today feel compelled to share every aspect of their lives on social media to affirm their existence. She linked this phenomenon to a fundamental need for connection. Drawing on scientific research, Pongrac stressed the necessity of delaying smartphone usage, highlighting that the human brain only fully develops around the age of 25. Early exposure to digital stimuli, therefore, can have long-term negative effects on mental health and cognitive functions.

Ryan Blank provided practical teaching insights, explaining how he adapted his lessons to

accommodate students' declining attention spans. He structures his classes into 10–15-minute segments to maintain engagement and emphasised that teachers should avoid assigning screen-based homework, as this contributes to excessive daily screen exposure.

Marie-Estelle Dupont warned that young people are particularly susceptible to manipulation due to their underdeveloped critical thinking skills. She argued that the classical dialectic of thesis-antithesis-synthesis is too challenging for many students today, leading to frustration.

Andrej Omulec reiterated that parents must set clear boundaries on technology use, as children's brains are not yet mature enough to make independent choices about screen time. He noted that in Slovenia, many children, when asked what they want, respond with "nothing," a reflection of their cognitive immaturity exacerbated by excessive smartphone use.

Jozica Pongrac concluded by stressing that providing material goods is not the key to good parenting. Instead, fostering emotional connections and strong familial bonds is essential for children's well-being and development.

### **Section 3: Regulation in Education – Balancing Technology, Rights, and Safety in Schools**

This panel examined the role of technology in education, exploring the legal, social, and psychological implications of digital devices in schools. Experts discussed smart device regulations, digital safety risks, and the importance of institutional collaboration in promoting healthy digital habits.

Szabolcs Frigy, director of Katona József High School, addressed the social effects of smartphone use in schools. Balázs Puskás, legal expert, analysed the legal aspects of smartphone regulations and international practices. Anna Takács, police captain, highlighted digital safety risks and preventive measures for young people. The discussion was moderated by Luca Bártol, a student of MCC.

#### **Technology and the Right to Education**

Szabolcs Frigy said that smartphones have become a status symbol in schools, leading to exclusion and bullying among students who do not own the latest devices. However, experts agreed that digital tools do not fundamentally impact the right to education. Balázs Puskás explained that the primary concern is the negative effect of excessive screen time on social interactions and mental health. Hungary's recent legislation, which restricts smartphone usage in schools from 1 September 2024, has already shown promising results, increasing social interactions and reducing bullying.

#### **Digital Risks and Educational Authority**

Anna Takács highlighted that many young people face digital threats such as cyberbullying, phishing, and child exploitation, often without sufficient protection. Police reports show that victimisation can begin as early as 10-11 years old, with young offenders frequently unaware of the consequences of their actions. This highlights the urgent need for awareness campaigns.

Szabolcs Frigy pointed out that social media influencers have increasingly replaced teachers as primary sources of information, undermining educators' authority. Restoring the credibility of teachers is essential for combating misinformation and guiding students towards reliable knowledge.

### **Institutional Collaboration and Further Regulations**

Institutions are launching joint initiatives to reduce digital dependence. The Diocese of Vác in Hungary introduced a "digital detox" campaign in Catholic schools, measuring students' screen time and raising awareness about device usage.

Experts agreed that digital regulations improve students' physical and social development. Approximately eight screen-free hours daily promote physical activity, social connections, and better peer relationships. The police offer preventive education programmes, and panellists supported stricter regulations, especially regarding social media. Balázs Puskás referenced Australia's recent ban on social media for those under 16, suggesting that a similar approach could be applied in Hungary. Experts emphasised the need for clear, proactive policies to protect children's well-being and establish firm digital boundaries.

## **Section 4: Mental Health, Cognitive Development, and Emotional Intelligence in Youth**

The panel discussion, moderated by Ákos Pörtl, family safety expert at the Youth Research Institute, examined the effects of digital device use and excessive screen time on students' mental health, cognitive ability, and emotional intelligence.

Dr. Rita Pécsi Uzsalyiné is an educator and researcher in pedagogy, focusing on emotional intelligence and its role in effective learning and personal development. Dr. Melinda Hal is a clinical psychologist specialising in the impact of digital device usage on mental health, well-being, and behavioural development. Szilárd Horváth is the founder of Búzaszem School and a media professional at MTVA, advocating for education models that emphasise movement, arts, and human connection over digital dependency. Berci Trauttwein is the developer of the OUT application, a digital tool designed to encourage reduced screen time and promote real-life experiences among young people.

### **Mental Health and Emotional Intelligence**

Melinda Hal stated that psychological well-being is intrinsically linked to physical health, academic performance, and overall life quality. Digital overuse negatively affects expected lifespan, learning efficiency, and even demographic trends.

Rita Uzsalyiné Pécsi highlighted that emotional intelligence is crucial for applying knowledge effectively. Intelligence alone does not guarantee success; social skills and collaboration play an equally vital role. However, the current education system predominantly focuses on IQ-related competencies, often neglecting emotional development, which can lead to burnout even among university students.

## **The Búzaszem School Model**

Szilárd Horváth emphasised that optimal brain function requires movement and artistic engagement. Thus, Búzaszem School integrates physical activities, arts, and genuine human connections into its curriculum. In 2011, the institution eliminated smartphones from classrooms. By 2018, collaboration with parents led to a near-complete reduction in screen time at home. The school's self-regulatory model resulted in increased happiness among students, teachers, and parents, as well as improved neurological maturity in students. He noted that parental screen habits strongly influence children's behaviours, reinforcing the need for digital restrictions both in schools and at home.

## **Cognitive Development and Parental Influence**

The panellists have also discussed that children whose parents read to them at home show cognitive advantages of up to 1.5 years compared to peers exposed primarily to digital content. The impact extends to vocabulary, comprehension, speech development, and fundamental cognitive abilities.

## **Digital Addiction and "Digital Autism"**

Excessive screen time can lead to addiction comparable to substance abuse. Current Hungarian regulations contain loopholes, and experts advocate for stricter policies, including zero-tolerance approaches for young children. Unlike alcohol and tobacco, which feature warning labels, smartphones lack explicit cautionary statements despite their potential for neural damage, stressed Melinda Hal. Approximately 25 percent of individuals under the age of 18 suffer from mental disorders, with "digital autism" being one of the emerging concerns. This condition, linked to excessive screen exposure, impairs cognitive development, increases anxiety and depression, and alters personality traits. Experts recommend delaying smartphone introduction and enforcing mindful usage to mitigate long-term consequences.

## **Conclusion**

All panels emphasised the urgent need for regulatory action, institutional collaboration, and proactive digital education. From legislative measures to school-based initiatives, a comprehensive strategy is essential to fostering a balanced digital environment that safeguards students' mental health, cognitive growth, and emotional intelligence. The Back to the Future – Locked Screens in the Classroom conference brought together experts from diverse fields to examine the profound impact of smartphone use on students' cognitive development, mental health, and social dynamics. Across the four panel discussions, participants explored how excessive screen time affects learning, emotional intelligence, and well-being, emphasising the need for parental responsibility. Practical solutions — such as phone-free policies, digital detox initiatives, and alternative teaching methods — were highlighted as essential for fostering focused, resilient learners. Ultimately, the conference underscored the urgency of reclaiming the classroom as a space for deep engagement, critical thinking, and meaningful human connection, advocating for a balanced approach to technology use.

# The Anxious Generation: A Review

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The significance of Jonathan Haidt's *The Anxious Generation* is perhaps best understood through the lens of Pascal's Wager, which Haidt himself refers to in one of his papers (Haidt, 2023a):

*"If you listen to the alarm ringers and we turn out to be wrong, the costs are minimal and reversible. But if you listen to the skeptics and they turn out to be wrong, the costs are much larger and harder to reverse."*

The subtitle of the book - *How the Great Rewiring of Childhood Is Causing an Epidemic of Mental Illness* - encapsulates its central thesis. As Haidt has summarised in various public interviews: we have overprotected kids in the real world and underprotected them online.

The book is structured into four main parts, of which the first is entitled Tidal Wave. In this introductory section, Haidt presents foundational statistics and empirical data illustrating the mental decline among young people, particularly during the period from 2010 to 2015. This timeframe coincides with the widespread adoption of smartphones among members of Generation Z, which enabled constant access to social media, online video games and other internet-based activities. Haidt refers to this period as "the great rewiring of childhood", suggesting that digital exposure during formative years has effectively altered the neurological development of children.

A key finding in this chapter is the sharp rise in depression, anxiety, and self-harming behaviours among adolescents, particularly girls. In addition to U.S. data, Haidt references comparable international trends, notably in English-speaking and Scandinavian countries. He

draws on the work of Jean Twenge, a psychology professor at San Diego State University, who has conducted over 190 studies on Generation Z and published the influential 2018 book *iGen*. Twenge's work also highlights the detrimental impact of excessive social media use on adolescent mental health.

The second chapter is entitled Decline of Play-Based Childhood, in which Haidt delves into the root causes of deteriorating youth mental health, emphasising the shift away from traditional, play-based childhoods. Haidt discusses how modern childhood - centred around digital devices - has undermined fundamental developmental experiences such as unstructured play, secure parent-child attachments, and a coherent transition from childhood to adulthood.

Referencing the literature on child development, including Stuart Brown, M.D.'s seminal work *Play*, Haidt underscores the critical cognitive and emotional benefits of free play. Brown writes "The genius of play is that, in playing, we create imaginative new cognitive combinations. And in creating those novel combinations, we find what works." (Brown, 2009) According to Haidt, human brain development is supported by two complementary systems: defend mode (which responds to threats) and discover mode (which seeks opportunities). He argues that young people today are increasingly locked in defend mode - constantly vigilant and anxious - at the expense of curiosity and exploration.

The third chapter is entitled The Rise of the

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Phone-Based childhood. Here Haidt provides further evidence of the harm caused by a childhood dominated by smartphones. He explains why these effects are more pronounced in girls, who are especially vulnerable to harmful social comparisons and relational aggression on social media platforms. On page 34, Haidt presents a graph showing that the rate of depression among girls has increased 2.5 times since 2010. While boys have not experienced the same degree of emotional harm, they tend to retreat into online gaming and other digital realms, spending less time in the physical world and forming fewer real-life relationships.

Haidt also applies the economic concept of opportunity cost to digital consumption. He argues that the 40-50 hours per week young people spend on screen-based leisure activities displace time that could be spent on real-world, developmentally essential experiences. This results in four core harms: sleep deprivation, attention fragmentation, and addiction.

The last chapter, *Collective Action for Healthier Childhood* is Haidt's call to action, where he outlines practical steps for reversing the damage. He proposes coordinated interventions involving parents, educators, governments, and technology companies. Key recommendations include:

- Encourage frequent, unstructured, outdoor play among children, ideally in mixed age groups, and with minimal adult supervision.
- Integrate children into real-world communities rather than online networks.
- Prohibit smartphones for children under the age of 14. Their first phone should be a basic device limited to calling and text messaging.
- Delay access to social media platforms until at least high school, preferably age 16.
- Enforce smartphone-free school environments, requiring devices to be stored in locked pouches or lockers

throughout the school day.

A particularly compelling argument is Haidt's collective problem thesis, popularised by Tristan Harris in the film *The Social Dilemma*. It posits that it is difficult for individuals to opt out of social media or smartphone use when their peers remain active users. Effective solutions, therefore, must be collective. Legal frameworks, Haidt argues, are essential tools for resolving such coordination problems. As with tobacco regulation in the 1990s – spurred by whistleblower Jeffrey Wigand – he suggests that meaningful change can occur when society acknowledges corporate responsibility and imposes legal boundaries to protect minors. (Haidt, 2023b)

Haidt also references whistleblower Frances Haugen's 2021 disclosures about Facebook (now Meta), which catalysed regulatory scrutiny of Big Tech. He expresses cautious optimism that, unlike the decades-long struggle to regulate tobacco, the case for protecting children from digital harm may be addressed more swiftly, in part due to the growing body of scientific evidence, including his own.

In conclusion, Jonathan Haidt's *The Anxious Generation* is a landmark publication that offers both a comprehensive diagnosis of a growing public health crisis and a set of actionable solutions. The book's primary strength lies in its integration of scientific research, case studies, and policy proposals tailored to various stakeholders – parents, educators, policymakers, and technology developers.

Haidt effectively illustrates the urgent need to reclaim childhood from the digital sphere and restore the essential elements of human development, particularly free play. While the book is grounded in a solid body of research, Haidt himself acknowledges the necessity of further studies to better understand the long-term implications and to develop effective interventions.

Finally, the book's academic credibility is underscored by its extensive references - 66 pages of cited research and studies - which reinforce the validity of its claims. These claims, for many parents and educators, may already reflect their lived experience.

This book is essential reading for anyone concerned about the mental health and well-being of our children and adolescents, regardless of their prior engagement with this topic.

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Adrian Estrela Pereira is a PhD candidate at Eötvös Loránd University, researching power relations in higher music education curricula between Brazil and Hungary. He holds a master's degree in Music Education (UFBA) and additional degrees in music, electrotechnology, and information systems. His research focuses on decoloniality, music education, and digital transformation in higher education. He has published in international academic journals and presented his work at global conferences.

### Ákos Pörtl

Ákos Pörtl is a family security expert at the Youth Research Institute and the founder of the Switch Off! movement, which advocates for healthy screen habits by delaying the use of smartphones and attention-grabbing digital devices among children and adolescents. He is actively engaged in science communication on screen addiction, focusing on the attention economy, persuasive design, and the impact of screens on adolescent brain development and dopamine regulation.

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Georgina Kiss-Kozma defended her doctoral thesis (PhD) with summa cum laude at the Doctoral School of Political Theory of Pázmány Péter Catholic University. She is Deputy Director at the Youth Research Institute and researcher teacher at the Center for Sociology at Mathias Corvinus Collegium. She is also a member of the editorial board of the Youth and Generation Studies.

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