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The current issue is the second of the twelfth volume of the *Athens Journal of Education (AJE)*, published by the [Education Unit](#) of Athens Institute.

Gregory T. Papanikos
President
Athens Institute



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The [Education Unit](#) of Athens Institute organizes its 27th Annual International Conference on Education, 19-22 May 2025, Athens, Greece sponsored by the [Athens Journal of Education](#). The aim of the conference is to bring together scholars and students of education and other related disciplines. You may participate as stream leader, presenter of one paper, chair a session or observer. Papers (in English) from all areas of education are welcome. Please submit a proposal using the form available (<https://www.atiner.gr/2025/FORM-EDU.doc>).

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Important Dates

- Abstract Submission: **DEADLINE CLOSED**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **21 April 2025**

Social and Educational Program

The Social Program Emphasizes the Educational Aspect of the Academic Meetings of Athens Institute.

- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit

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Conference fees vary from 400€ to 2000€
Details can be found at: <https://www.atiner.gr/fees>



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A World Association of Academics and Researchers

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The [Education Unit](#) of Athens Institute is organizing the 9th Annual International Symposium on “Higher Education in a Global World”, 7-10 July 2025, Athens, Greece sponsored by the [Athens Journal of Education](#). The aim of the symposium is to examine educational developments throughout the world in universities, polytechnics, colleges, and vocational and education institutions. Academics and researchers from all areas of education are welcomed. You may participate as stream organizer, presenter of one paper, chair a session or observer. Please submit a proposal using the form available (<https://www.atiner.gr/2025/FORM-COLEDU.doc>).

Important Dates

- Abstract Submission: **27 May 2025**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **9 June 2025**

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More information can be found here: <https://www.atiner.gr/social-program>

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The Connection between Mentoring, Continuous Learning and Sustainability

By Minna Maunula^{}, Minna Maunumäki[±] & Sirkku Lähdesmäki[°]*

The potential of continuous learning, sustainable development and mentoring in adult learning and working life has long been identified. However, the connection between mentoring, continuous learning and sustainability has been limited in research. This study addresses this research gap and answers the question: What are mentors' perceptions of the connection between mentoring and continuous learning and sustainability? The data consists of interviews with mentors (N=10). The data was analyzed using a thematic analysis based on a data-driven approach. The results show that mentors' perceptions of mentoring and continuous learning are related to the temporal, content and contextual dimensions of learning. In mentoring, past, present and future phenomena related to the working life are addressed and learned. The aspects of context awareness, relationality, and transferability were also evident in mentors' reflections. The connection between mentoring and continuous learning is deeply linked to sustainability issues, offering support to new generations as they navigate the transition into the evolving workforce. This support is structured to promote ecological, economic, and social sustainability. The sustainability of working life is also strengthened by mentors' opportunities for continuous learning. However, more research is needed to develop mentoring programmes in order to unlock the broad potential of mentoring.

Keywords: mentoring, continuous learning, sustainable development, working life, sustainability

Introduction

A rapidly changing world and global megatrends such as digitalization, climate change, an aging population and various crises are creating constant demands for adults to learn new things (Dufva, 2020; Kinnari, 2020; 2020; Finnish Government, 2020). These phenomena are global trends to which both higher education and the workplace must respond (OECD, 2006). Education and the workplace are important learning environments for adults, as the learning demands created by societal and global changes require continuous learning in everyday working life for everyone at work (Lemmetty & Collin, 2020). In Finland, for example, the Ministry of Education and Culture and the parliamentary reform of continuous learning focus on continuous learning, especially for the adult population during their working life, where continuous learning means the continuous development and improvement of skills throughout the life cycle (Finnish Government, 2020; Ministry of Education

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and Culture, 2019; 2022). Continuous learning is a process aimed at promoting individual and organizational learning (Tannenbaum, 1997). Billett (2020) points out that learning at work should not be seen as something that happens by itself but is influenced by many factors. Consequently, learning at the workplace is a complex process, but it can be encouraged and supported (Dochy et al., 2022). Research suggests that the majority, around 80-90%, of adult learning takes place at work (Yeo, 2008; Marsick & Watkins, 1990). As only a small proportion of adult learning takes place in formal education and training, it is important to consider how learning at the workplace can be supported. Both in formal education and in everyday contexts such as workplaces and society, it is important to consider how the ongoing learning at work of adults in transition from education and training to workplace can be supported and made visible (e.g., D'Abate & Eddy, 2008).

In this article, continuous learning is limited to the interface between mentoring in formal education and training, and the transition to working life and continuous learning in the workplace. These stages in adult life often intertwine and manifest themselves as continuums in the life course. Workplace learning refers to learning that takes place at work and during or for work, which focuses on the work situations, work practices and work processes in which learning takes place (Billett, 2020; Collin, 2006) and can be supported in various ways. Mentoring is one way to support the transition between education and work and early career learning from a continuous learning perspective (e.g., Damsa et al., 2017; Harteis et al., 2020). In this context, mentoring can be defined as a development partnership that bridges the gap between career pathways (Blake-Beard, 2009).

Mentoring is an important way to strengthen adults' continuous learning in a way that is sustainable in working life. Continuous learning in adults' lives and at the workplace is a necessity to maintain adequate individual skills and competences (Lemmetty & Collin, 2020), but also to achieve the SDGs in the community (Blaj-Ward, 2023). Globally, the SDGs aim to address global problems such as poverty, inequality and climate change (United Nations, 2015). Unesco (2019) has highlighted the concept of education for sustainable development, which states that education should provide all individuals with the necessary knowledge, skills, values and attitudes and the opportunity for transformative continuous learning and active citizenship.

Mentoring is a key, but so far under-researched, factor in promoting continuous learning and sustainable development goals. However, in recent years there has been more research into the aims and importance of mentoring in achieving the SDGs. These studies (e.g., Blaj-Ward, 2023) are united by a desire to make mentoring processes in higher education more transparent and to develop their learning cultures to meet the multiple challenges of sustainable development. Empirical research on mentoring from the perspective of mentors and mentees, especially in the context of continuous learning, is still rather scarce so far. To address this research gap, this study empirically examines the bridging of adult formal education and continuous learning in the workplace from a mentoring perspective. It takes as its starting point the idea of learning as a life-long and deep process that intertwines with the different life courses and contexts of adults. The intersection, meeting and overlapping of family, work, study and leisure in adult life reflects a temporal continuum: past,

present and future, and the idea of the life course as a whole. In the adult life-course, learning can manifest itself as a continuum resource that strengthens individual resilience and development, as well as shared and organizational goals (Biesta, 2022). The research material consists of interviews with mentors with diverse work experience and the research question is: *What are mentors' perceptions of the connection between mentoring and continuous learning and sustainability?* The overall structure of the article is as follows: first, a Literature Review is presented, introducing previous research on mentoring, continuous learning and sustainable development, followed by a description of the methodology of this study. Next, the Results are presented, followed by the Discussion and Conclusion sections.

Literature Review:

Mentoring as a Bridge to Continuous Learning and Sustainable Development

Mentoring is no longer defined by the archetypal instructional and guiding attitude (Blake-Beard, 2009) but by a reciprocal and dialogical opportunity for mutual learning. Higgins and Kram (2001, p. 281) have proposed a theory and arguments where mentoring is viewed as a multifaceted phenomenon - a developmental network. This approach is based on the theory and methods of social networks, and it examines mentoring as a diverse relationship (Dobrow & Higgins, 2005). Mentoring is seen as a processual form of experiential learning that is built through a mentoring relationship (Bell & Bell, 2016; Reid et al., 2020). Mentoring is also seen as a tool that creates a guiding relationship (Sharma & Writer, 2015). According to Kram (1985, p. 161), the mentorship relationship progresses through specific stages (initiation, cultivation, separation, and redefinition) and a reciprocal dynamic relationship can foster the development of individuals as it evolves. While the young mentee gains tools to face the challenges of the early career phase, the more experienced mentor may reassess their perspectives. Mentor therefore supports the development of the mentee professionally through guidance, facilitation and support (Adler & Stringer, 2018) but at the same time opens the mentee to reflect on their own perceptions, experiments and professional career.

In this study, mentoring is defined as a developmental partnership that acts as a pathway between stages of career pathways (Blake-Beard, 2009). It supports the development of professional identity and helps to adapt to the constantly changing conditions of working life. Mentoring offers individuals ways to build bridges between different cultures, areas of expertise and professional practices. It can therefore be described as bridging mentoring, which is reciprocal and mutually beneficial; a good mentoring relationship is not a one-way street, but one in which both mentor and mentee learn and develop. Volk (2012) also defines it precisely through a reciprocal relationship. McDougall and Connolly (2020) argue that reciprocity provides an opportunity to reframe the issues that arise. They argue that reframing conversations in a mentoring context can contribute to a shift in thinking towards more progressive possibilities.

The support and guidance provided by mentoring help individuals to adapt and succeed in a changing and diversifying working life. Mentoring is thus an essential

part of modern professional development and lifelong learning, and it supports individuals' ability to navigate the constantly changing and diverse working life (Blake-Beard, 2009). In their study, Rubbi Nunan et al. (2023) identified four themes defining the mentoring relationship, which are positive relationship, growth and enabling, psychological safety, and purposefulness. According to them, the nature of the mentoring relationship in the context of working life is informal, mutualistic, and context-bound. Therefore, informal conversations related to the integration of leisure and working life also strengthened the mentoring relationship (Durbin et al., 2019). Previous research shows for example that personal, dialogic and targeted mentoring and coaching strengthen teachers' well-being and shows that high-quality and effective relationships have a positive impact on teachers' emotions, engagement, interpersonal connections and sense of achievement (Stuckey et al., 2019; Squires, 2019; Attard-Tonna, 2019).

Maunula et al. (2023; 2024) have also found that mentoring can support the learning of both the mentor and the mentee. At its best, mentoring can be a dialogical and educative process in which the mentor and mentee create new knowledge and understanding together as equal partners (Maunula et al., 2023). Educative mentoring can be seen in the mentoring relationship as developmental, integrative, and advanced. According to Maunula (et. al., 2024) developmental mentoring provided the mentee with answers and concrete guidance in the early stages of their career. Integrative mentoring was understood as an equal dialogue relationship. Advanced mentoring intrinsically emphasized equality between the mentor and mentee, centering on mutual learning and shared professional growth.

Mentoring can support adults' continuous learning. The goals and meanings of continuous learning are understood in different ways, and many goals are set for continuous learning (Biesta, 2022; Laalo et al., 2019). Continuous learning has been criticized for its vision of global competitiveness and labor market focus, and for ignoring issues such as human development, the environment or civilization (Kinnari et al., 2022). According to Biesta (2022), learning is increasingly associated with the goals of performance management, comparative advancement, competition and market-oriented social morality, with those who can steer educational processes towards predetermined learning outcomes and ideal identities being considered the best and the best teachers. Consequently, it would be increasingly important for educational institutions and organizations to pay attention to the objectives of mentoring and to the training of mentors from an educational and sustainability perspective. Sustainably set goals and objectives can help all parties involved in mentoring to grow together towards sustainable thinking and full subjectivity (see Biesta, 2022).

The phenomenon of mentoring and continuous learning is also fundamentally linked to the sustainability aspect. Sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brutland's commission, 1987, p. 43). A systemic understanding of ecological, economic and social sustainability is needed to address the diversity and complexity of the problems. Environmental sustainability focuses on reducing biodiversity and environmental pressures. Economic sustainability refers to balanced economic growth. Social sustainability

includes issues such as human rights, equality, equity and inclusion. In recent years, the goals and relevance of mentoring have increasingly been studied from the perspective of the Sustainable Development Goals (Blaj-Ward, 2023). Previous studies have highlighted the link between formal education, professional development and the non-educational environment. For example Bangeni, Fourie, and Pym (2023) have reflected on the role of mentoring in supporting the multiple transitions which dual professionals navigate and what this means for the provision of inclusive, quality education (Sustainable Development Goal SDG 4) with a focus on higher education. Blaj-Ward et al. (2023) have studied mentoring as part of lifelong learning and equitable access to quality education at all stages of an individual's life and career from a micro-credentials perspective. Mentoring is a valuable support system for academic researchers who want to design micro-credentials that contribute to the achievement of all the Sustainable Development Goals (SDGs). Overall, mentoring organizations is crucial to supporting the UN's Sustainable Development Goals. For example, Mentoring Europe is building a European mentoring landscape for a more inclusive European society (Mentoring Europe).

Methodology

This study examines mentors' (N=10) perceptions of the connection between mentoring and continuous learning and sustainability. The data for the study consists of face-to-face or live online interviews with 10 mentors. All interviews were carefully transcribed for further analysis. The data was collected as part of a larger dataset that looked at mentoring from the perspective of mentors. During the interviews, mentors were asked open-ended questions about, for example, their perceptions of mentoring, the learning that takes place during the mentoring process and ethical issues for the future.

The mentors had participated in mentoring training at least once and had varying degrees of mentoring experience. Mentoring experience ranged from 15 years to first-time mentors. The educational background of the mentors was a minimum master's degree. Their work experience also varied from five to almost 40 years long. They also had a wide range of work experience. Many of them have worked as a front-line employee or in a specialist role. From this perspective, the mentors studied have a strong experiential and perceptual base on the subject of the study. For this study, the mentoring relationship of the mentors surveyed had lasted one year. The mentees involved in the mentoring relationship were business students at university and in transition from studies to working life.

The research question is: *What are mentors' perceptions of the connection between mentoring and continuous learning and sustainability?*

The data analysis commenced with a holistic approach to obtain a comprehensive overview. The analysis then focused on the mentors' perceptions of the connection between mentoring and continuous learning and sustainability, along the lines of the research question. Thus, the content analysis of the data is data-driven (see Hsieh & Shannon, 2005). The analysis focused on mentors' perceptions of the connection between mentoring and continuous learning and sustainability, and these

perceptions were coded from each interview data. Continuous learning and sustainability were the main themes of the analysis. In line with these themes, sub-themes were formed from the data, through which the substantive breadth of the data was structured. The sub-themes and dimensions for continuous learning were: temporal dimension, the content dimension and contextual dimension. The next stage of analysis looked at how mentoring as continuous learning reflects the sustainability sub-themes of ecological, economic and social dimensions. The findings of this research are constructed according to these main themes and sub-themes.

At all stages of the research, the research team has been self-critical in its awareness of critical points related to the different stages of the research (Patton, 2002). The research topic is broad and includes big concepts. The topic as a whole is timely, and it is both a strength and a challenge to combine mentoring, continuous learning and sustainability in the same study. This was a challenge at various stages of the research process, and the conceptual starting points in particular required particular rigor. The credibility and reliability of qualitative research can be strengthened by triangulation and self-critical observations made by a multidisciplinary team of researchers at different stages of the research process. Reliability is strengthened by discussions within the research team (e.g. Korstjens & Moser, 2018). The researchers discussed the results before the analysis, after the first analysis phase, after the preliminary results took shape, and further during the theoretical and more detailed results reporting phase. Reflective discussion between the researchers guided the interpretation of the analysis results and the way the results were presented, and through the process and discussions a common understanding of the analysis, the results and their systematic presentation emerged. In qualitative research, it is important to be able to return to the different stages of the research and to critically examine how the results were structured.

Results

Mentors' perceptions of the connection between mentoring and continuous learning included three dimensions: temporal, content and context dimensions, which are presented in the first part of the results. The second part of the results shows how mentoring as continuous learning reflects the ecological, economic and social dimensions of sustainability. These dimensions will be explored in more detail below.

Mentoring and Continuous Learning

Temporal Dimension

Mentoring was seen by mentors as learning in a wider sense, and integrating different temporal dimensions. In the past, mentors themselves had felt that they had not received sufficient support early in their careers. Many career decisions had been made with little knowledge, alone and in uncertainty. Many training and career options and opportunities had also been unknown to the current mentors at the time.

This experience motivated them to act, and they wanted to contribute to changing the status quo and helping the new generations entering the workforce and their future. They were grateful that the experience they had accumulated over the years was valued and could be put to good use.

"Having been a mentor in my own organization in the past, I felt that it was an opportunity to give something to the mentee. I myself have had to learn the hard way, so I would be happy to help. We've had two-way confidential conversations. They are good for me too, they give me a perspective." Mentor 4

"In mentoring, the discussion becomes equal and gets a response. It makes you realize that you are useful. You get a sense of joy and gratitude for the mentoring." Mentor 9

In the mentoring process, mentors reported that they used their own accumulated experience as a mirror for discussions with their mentee. Mentors emphasized that in a forward-looking mentoring approach, simply transferring knowledge does not contribute to learning. The mentee should, according to the mentors, acquire the ability to adapt to current and future change situations, to be flexible and to think critically. This is what the mentor can do to guide learning in the mentoring process.

"In the beginning, we got off to a good start, telling each other about each other's backgrounds and establishing a relationship of trust. It has progressed so that the mentee has chosen the topics. Mentoring is more thought-provoking, and it's my job to bring out points of view. It has allowed us to discuss hard and soft issues." Mentor 4

"Mentoring is about broadening perspectives on thinking and situations." Mentor 10

According to the mentors, learning in mentoring took place in many different time perspectives. Mentors reflected on their own past experiences in working life, constantly analyzed current changes in working life and discussed with their mentee the issues of the future. Mentors described mentoring as a process and a year-long journey together as a significant learning process, where both participants learned from each other and together in all time dimensions and about a wide range of content.

Content Dimension

Mentors described mentoring as a free-form mutual sharing of experiences, reflection and learning with the mentee. This enabled continuous learning on a variety of content for both the mentee and the mentor. The mentors appreciated the opportunity to learn for themselves during mentoring, for example they were interested in different digital skills and new content in university education. However, the content covered was mainly driven by the mentee's initiatives and needs. According to the mentors' perceptions, the mentor's accumulated experience of the content was one of the starting points for mentoring and learning, but mentoring was not just about transferring knowledge, but at best about a joint articulation of new phenomena in the changing working life.

"It was extremely interesting to have those discussions and useful to think about the concrete issues myself. I learned myself, I'm not used to... young people have to make interview videos and film on the phone. That's what I felt I had learned myself. Luckily, I have an expert in my circle of friends, so I asked him for sparring, for both of us."
Mentor 1

According to the mentors, the diverse content of mentoring was a natural part of the process. Initially, the content covered in mentoring was related to practical knowledge and skills that the mentee would need in the near future, such as how to write a CV and how to succeed in job interviews.

"I can see that my mentee is motivated and committed, especially in concrete actions. And moments of shared joy are important, for example, that a young woman had overcome her fears and contacted a potential employer and then got the job. These are all things that can be celebrated together." Mentor 6

"We talked about concrete issues at the end of their studies, what kind of jobs they are looking for, where their current work experience fits in. Mentee made applications and CVs and I commented on them. Job search tactics too, trying to find the keywords that make you stand out from the crowd. What you need to have on LinkedIn. Really specific, what they need and what we also went through." Mentor 1

As the mentoring process progressed, the issues became deeper and more complex. According to the mentors, the discussions were at best able to arrive at content that would help the mentee prepare for future challenges in the working life. Mentors' perceptions were that the changing working life will be more challenging than the current one, requiring everyone, from employees to managers, to be able to learn and innovate.

"The content was driven by the needs of the mentee. Professional self-awareness and, at a broader level, self-awareness is fairly fragile in a young person in their twenties, so we were considering, for example, what I am like, what I am not like, what I want, what I don't want. Quite often the young person has not thought about these things, and they were enormously fruitful discussions." Mentor 8

Contextual Dimension

According to the mentors' perceptions, the content of the mentoring sessions could be meaningfully reflected in different contexts. However, they stressed the importance of understanding the relational aspect. Decades-old knowledge and skills cannot be transferred as such, but their core content, ethics and working cultures can be learned by application and reflection. For example, motivation, the courage to apply for a job and careful preparation for a job interview were issues that could be reinforced through mentoring.

"There were two particularly meaningful moments in mentoring: the mentee got the internship, when the mentoring relationship started, it was a nice turning point at that point. The second was when, after the internship, he applied for a permanent position."

We sparred over what strengths to highlight and what to emphasize in particular. Then he got the job, his first real permanent job. It was not my own success, but it was a joy to be there with him. When you see that enthusiasm and joy, you somehow feel that you have been there along the way, watching from the sidelines." Mentor 3

The mentors also found it useful to reflect together on the characteristics and general processes of work communities. According to the mentors, work-related skills were both individual and community-related, and their responsibilities were discussed with the mentee. Work communities as diverse contexts for learning and as enablers of continuous learning was a theme with many relevant themes. One was related to well-being at work, the skill of job delimitation and the whole issue of good management. This theme was more relevant today than in their early years, according to the mentors, and was relevant in all contexts. The mentors themselves also learned more about the topic during mentoring.

"It's good to teach the younger ones not to repeat my own mistakes, for example in terms of coping and such. Mentee was very good at thinking about these. For example, how to keep a balance between work and studies." Mentor 1

"I hope that mentoring has made me more sensitive to understanding people's thoughts and perspectives even better at work. I would listen more to the group and colleagues: I hope I have gained a new perspective and that my perspective has broadened." Mentor 7

The context of mentoring was broad and the transferability and applicability of the content was identified as both a strength and a weakness of mentoring. The mentor's responsibility towards the mentee was, according to the mentor, to be respectful and allow the mentee to grow at the mentees' own pace. The mentee's learning was anchored in mentees' starting points and context, which the mentors respected and gave space to the process.

"I knew that in university there wasn't much about transition and what the working life was like. I thought I would be able to give general advice regardless of the sector. To open up what skills are needed. Mentee wanted to ask a lot of questions about specific things in our field. But I personally feel that I can give more on a general level about expertise and work, what it means to be in the workplace and what is project work and so on." Mentor 7

According to the mentors' perceptions, continuous learning in the mentoring process was varied in time perspective, comprehensive in content and recognizing different contexts. Many of the mentors emphasized that both mentee and mentor learning occurred continuously at different stages of the mentoring process, which reinforced their understanding of the multi-dimensional nature of mentoring. Thus, the continuous learning embodied in mentoring responded in many ways to changes in the working life.

Mentoring, Continuous Learning and Sustainability

Ecological Dimension

Mentors' perceptions of mentoring and continuous learning formed links with different dimensions of sustainability. Mentors did not directly talk about sustainability as a concept, but in terms of content, sustainability was expressed in relation to many concrete phenomena. Mentoring and ecological sustainability were linked at many levels in the mentors' perceptions, both individually and through the perspectives of the work community.

"I feel that since there is free education in Finland, I feel that I have received a high-quality education, so of course I want to help my alma mater, my home university, and its graduates to enter society and working life. Of course I want to contribute my own knowledge and input." Mentor 7

According to the mentors' perceptions, the new generation entering the workforce brings a new mindset to working life. Mentors appreciated and learned from mentee thinking, for example, the importance of sustainability leadership practices and decisions, and their importance had become more prominent in mentors' perceptions. According to the mentors, the future culture of the workplace would evolve significantly with the sustainability skills of the new generations.

"Mentoring is hugely rewarding. I've talked about it to colleagues, family and friends. I mean just enormously giving and I find that gives me a professional context, even the way I look at my colleagues and my ability as a close manager and leader. Of course mentoring supports that too. I'm not an HR manager myself, but more analytical and issue-oriented. It helps me to empathize and remember people's inner worlds." Mentor 8

The mentors further reflected that the new generations seem to be able to use different digital solutions in a sustainable way in their working lives, based on what they observed in the mentoring. This would also be an opportunity for older generations to learn new practices. Learning from and with others at work was strongly reflected in the mentors' thinking, which also relates to sustainability and ecology. The mentors' perceptions reflected the need for a constant capacity to learn in working life and the authenticity of learning situations, as in mentoring. This is also linked to the ecological nature of learning: learning situations open up on an equal footing, without costs or environmentally damaging arrangements.

Economic Dimension

The links between mentoring, continuous learning and economic sustainability emerged in several mentors' reflections. For example, mentors felt that mentoring provided deep, meaningful and engaged learning for all participants, resulting in benefits for them personally, but also for the workplace and society at large. The use of time resources for learning was also respectful of the needs of both in the mentoring relationship. Mentoring was not costly for either party, but provided a

multi-dimensional, ongoing learning experience and future-oriented professional strengthening.

"Expectations that I would learn from the mentee. For example, how they think: the experts of the future, about the world and about work. There was such an expectation, but frankly it surprised me how much you learn by yourself and get different perspectives." Mentor 7

Mentoring and continuous learning were perceived by mentors as a sustainable response to the constant changes in working life. Mentors considered mentoring to be an economically rational solution and reflected more broadly on the importance of continuous learning as part of the future of working life. Continuous learning was, in their view, a natural part of working and developing in the workplace. Mentors raised the idea that mentoring could benefit the whole work community and even society in an economically sustainable way. Being a mentor had also strengthened their perception of their own skills.

"Mentoring also opens your eyes to how much you already know and understand about different things. You become a bit blind to your own knowledge. In mentoring, you learn a little bit by accident that, wait a minute, I actually know something about this subject. Perhaps you can appreciate your own skills differently than before." Mentor 3

Learning through mentoring was, according to mentors, an individual's intangible enrichment, especially early in their career, but also as their career developed. They further suggested that mentoring or other flexible approaches to learning that are strongly linked to working life would have many benefits, including financial ones. Mentors emphasized the mentee perspective in their speeches, but also raised reflections on the later stages and broader perspectives of mentoring and careers. Mentors saw the changing working life from different perspectives: from the societal level, from the level of work communities and from the level of individuals. They saw the changing working life as combining many reforms, demands and opportunities to act strategically and proactively in a sustainable way.

Social Dimension

The mentors' perceptions reflected the social sustainability considerations discussed in the mentoring conversations. According to the mentors, the new younger generations in particular needed support in general to cope and to balance their lives. Some mentors had shared their own ethical dilemmas with mentees and described how they had dealt with similar situations themselves. Practical ethical case stories had also been shared as a basis for learning and discussion in a confidential mentoring relationship. Some of the mentors had, together with their mentees, reflected on and anticipated future ethical issues in their working lives. The awareness that there could be different stages and twists and turns along the career path in the future was also valuable, according to the mentors.

"There was talk that my career hasn't gone like in the movies, in a linear way. I've been doing a second degree in between. Realistic examples are needed, that things don't always go as you plan and expect, and that's fine too." Mentor 1

Overall, mentoring and continuous learning were perceived by mentors as strongly reflecting social sustainability. Through mentoring, the mentee's social capital and networks were strengthened. For example, the mentors shared their own contacts for the mentee to use in the job search. The mentee's and mentor's understanding of the social dimensions of working life, such as awareness of the diversity of work communities, empathy and interaction skills, were also strengthened. Mentors stressed that everyone, including mentees, will work as part of a social community. Working in a community would require individuals to be accountable and ethical, for example by discussing the culture of the work community within the community. However, mentors' perceptions revealed that mentoring is not intended to pave the way for mentees.

"I didn't just think about giving the right answers, because everyone builds their own path. It's your own experience, and if someone can avoid such pitfalls, then they have done their job. For me, this is another opportunity to volunteer." Mentor 3

"I think about it from a broader perspective, I have this humanistic concept of the human being and that there should be development in the mind, be it in the personality or in the professional part, that through reflection the person develops, refines, grows as a human being, this is my idea and challenge." Mentor 4

During their mentoring relationships, the mentors had found that difficult decisions in changing working lives require a multifaceted reflection on social sustainability and ethics. What they found essential in working life was the ability to recognise the complexity of change situations and the solution-oriented and active search for new approaches. In the mentoring relationship, the mentors had recognised that their old solutions did not necessarily work as such in complex and changing work situations. There is a need to recognise changing contexts and to structure the whole. Recognising such a situation was a demonstration of the mentor's own ethical agency.

"Many people probably don't learn that expertise until they've got their first specialist job. In that sense, there were bad questions and of course I knew what I could and couldn't answer. I had the expectation that I would have given you a list of things to apply for when you graduate, but I didn't have one. I was only able to advise on where to look and how different organizations under the ministry, for example, were structured. I tried to open up the field a bit. I knew myself that this was not something I could offer. So I found that I had to clarify my own ideas a lot and try to give the best advice I could." Mentor 7

Mentoring and the continuous learning it enables was inherently socially sustainable. Regardless of background and context, generations entering the working life had the opportunity to learn with the support of a more experienced mentor and to build understanding together. The mentors who had worked in the workplace also

brought new lessons and valuable insights into the perceptions and expectations of the new generations.

Discussion

The purpose of this study was to explore mentors' perceptions of the connection between mentoring, continuous learning and sustainability. The results of the study show that mentors' perceptions of mentoring reflect the broad potential of mentoring for continuous learning. Mentors identified mentoring and continuous learning as embodied in time, content and context. Mentoring combines different temporal dimensions as a natural continuum. The mentoring process enabled learning from past events, present circumstances and needs, as well as anticipating and preparing for the future. The content of mentoring was broad and sometimes unforeseen. The idea behind the mentoring process, according to the mentors' perceptions, was to reflect on and learn from their accumulated experience in working life together with their mentee (also Dobrow & Higgins, 2005; Bell & Bell, 2016; Reid et al., 2020). At the same time, mentoring was based on the needs of the mentee and the joint formulation of a solution to the mentee's current skills needs, which has traditionally been seen as a basic premise of mentoring (e.g., McDougall & Connolly, 2020).

In the mentoring process, the mentor and mentee operate in different contexts, which mentors consider essential to take into account and remember. Mentoring is not about transferring knowledge, as the world is changing and working life is evolving at an accelerating pace. However, relationships are formed between work contexts and there is transferability between core phenomena. Reflection on the process of change is another important aspect of mentoring. Mentoring provides an opportunity for both mentee and mentor to learn (also Billett, 2020; Collin, 2006), both from each other and together (also Maunula et al., 2023; Sharma & Writer, 2015). In the mentors' perceptions, mentoring involved all dimensions of time, reinforcing the changing perspective of work and the importance of understanding its relationality. Continuous learning is essential in changing work contexts, as emphasized by Collin (2006) and Lemmetty and Collin (2020). Understanding different contexts during the mentoring process, or enabling this understanding to start building, is essential for mentoring and continuous learning.

The second aspect of the study looked at mentoring and continuous learning from a sustainability perspective. According to this study, mentoring and continuous learning respond to current perspectives and needs for sustainability in the workplace. Tailored support in the form of mentoring helps new generations to attach themselves to the working life in a sustainable way, providing important knowledge, skills and attitudes. Mentoring and continuous learning are linked to all three dimensions of sustainability as defined by the United Nations (2015). The Sustainability Ecological goal dimensions relate to the precision of mentoring in terms of content focus and flexibility in terms of time. The economic objectives are also well achieved, in particular the cost-effectiveness of voluntary activities. In particular, the social dimension is met in terms of learning in the mentoring relationship, as equal access to early career support for the accumulation of human

capital is important, in line with the findings of Blaj-Ward (2023). Mentor learning also reinforces the upgrading of skills needed in the workplace in a sustainable way. While the mentee hopes for concrete help in the early stages of their career, as the process progresses, continuous learning and sustainability play a bigger role. Mentoring, continuous learning and sustainability form an integrated whole, combining the rapid changes in the world of work and the different forms and contexts of learning that they allow (also Bangeni et al., 2023).

The mentors' perceptions covered a broad range of topics on how mentoring, continuous learning and sustainability are connected. According to mentors' perceptions, mentoring is a multi-dimensional process and cannot be fully anticipated and managed (Rubbi Nunan et al., 2023). Mentoring, continuous learning and sustainability are current phenomena in working life and more discussion and practice is needed on issues such as the principles of sustainable development and their application. In the future, mentoring processes should be studied in more detail, especially from a learning perspective. Mentoring would also seem to have potential as a tool in the development of inequalities in society. As the cost of training becomes increasingly concentrated on both the employer and the employee, the use of informal learning methods, and mentoring in particular, is likely to become more widespread. In addition, further reflection is needed on how mentors can be trained and prepared for this important role, which has multiple societal implications. The article suggests that mentoring can be implemented as a non-formal education and a form of continuous learning based on researched knowledge about mentoring. The article suggests that mentoring can be implemented as a non-formal education and continuous learning activity based on researched knowledge about mentoring. Mentoring can be implemented from a variety of angles. If the aim is to form a developmental network (Dobrow & Higgins, 2005) and a processual form of experiential learning that is built through a mentoring relationship (Bell & Bell, 2016; Reid et al., 2020), planning and familiarity with mentoring is essential. The phases of the mentoring relationship, namely initiation, cultivation, separation, and redefinition, as identified by Kram (1985), represent the optimal objectives that the mentor aims to achieve.

This study suggests that mentoring may play an even more important role in the future as the themes of continuous learning and sustainability become more concrete in working life. However, the content of mentoring programmes needs to be further developed on the basis of research evidence. Awareness of the process nature of mentoring among those involved in the mentoring process, understanding the informal nature of learning and recognising the interactive centrality of mentoring is at the heart of development and building sustainable mentoring.

Conclusions

This study examined mentors' (N=10) perceptions of the connection between mentoring, continuous learning and sustainability. The study was based on the premise that the potential of continuous learning, sustainable development and mentoring in adult learning and working life has long been identified. Previously,

the connection between mentoring, continuous learning and sustainability has been limited in research. This study provided new and timely information, answering the research question: What are mentors' perceptions of the connection between mentoring and continuous learning and sustainability? The data for the study consisted of qualitative interviews with mentors. The data was analyzed using a thematic analysis based on a data-driven approach. Two main themes emerged from the data: mentoring and continuous learning and mentoring, continuous learning and sustainability. In addition to these, three sub-themes were structured into each of the two main themes. The results show that mentors articulated the potential of mentoring in a broad way. The results show that mentors' perceptions of mentoring and continuous learning are related to the temporal, content and contextual dimensions of learning. In mentoring, past, present and future phenomena related to the working life are addressed and learned. The aspects of context awareness, relationality, and transferability were also evident in mentors' reflections. The connection between mentoring and continuous learning was deeply linked to sustainability issues, offering support to new generations as they navigate the transition into the evolving workforce. This support was structured to promote ecological, economic, and social sustainability. The sustainability of working life was also strengthened by mentors' opportunities for continuous learning. According to the results of this study, quality mentoring can meet the needs of continuous learning in the workplace in a sustainable way. The research also identifies potential limitations, such as the number of mentors studied and the impact of their background on the results obtained. However, in this qualitative study, the starting point and objective was to obtain in-depth data and understanding of the phenomenon under research, where information power (Malterud et al., 2016) is essential not the sample size. The quality and depth of the data was further confirmed in the interview dialogue, where the mentors' personal perceptions were widely expressed. The diverse backgrounds of the mentors studied further added to the richness of the data, bringing out a wide range of perceptions about the connection between mentoring, continuous learning and sustainability, in line with the aim of the study. However, more research is needed to develop mentoring programmes in order to unlock the broad potential of mentoring. We suggest that further research is needed to develop mentoring programmes. It is also beneficial for those involved in mentoring to be familiar with the principles of mentoring. Awareness of the process nature of mentoring, an understanding of the informal nature of learning and a recognition of the interactive centrality of mentoring is at the heart of development and building sustainable mentoring.

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Work Supervision for Master's Degree Students in Management in the Social and Health Care Field

By Hannele Laaksonen & Seija Ollila[‡]*

This study targets university students of development and management in the social and health care field, and its goals were to discover 1) how does group supervision suit supporting college students, 2) what benefits can students receive from supervision and 3) how can group supervision be developed? The Tampere University of Applied Sciences' supervisor training program piloted a supervision program for master's degree students (N=30) in management in September 2021. The purpose of the study was to chart the possibilities of supervision in advancing students' team formation and commitment to their studies. The master's students in management were divided into teams of 4-6 people and each team was supervised by one work supervisor. There were five team meetings during the six months. The supervisor trainees could practice their skills while the master's students could process feelings related to their studies and receive peer support in their challenges. The results show that team formation was successful and deepened during the process. The supervision received by individual teams affected the entire group's class spirit and commitment. Developing the contents of supervision should focus on good planning, structure and initiation. The supervisor's role was emphasized in development, particularly their approach, activity and reinforcing dialogue between participants. Based on the positive experiences, collaboration between the supervisor training and master's students will be continued and developed further.

Keywords: work supervision, Master's student, team commitment, team spirit, Finland

Introduction

Work supervision (henceforth supervision) started in the 1920s in the American social care field. It arrived in Finland in the 1950s, and became established in social care, the health care field and within the Lutheran church. Currently supervision is used in many fields in developing and supporting work, workplace communities and management work. Its forms include individual, group, workplace and peer supervision (Cutcliffe et al., 2011; Fowler & Cutcliffe, 2011).

Many scholars have tried to define supervision, but finding an exact unambiguous definition is challenging, as it can be understood as both a tool and a method, as well as a service and a profession (Cutcliffe et al., 2011). Supervision has emerged from practice and been influenced by many sciences, such as health care, social psychology and various theories of personality, interaction and organization. Supervision is thus considered a reflective learning process based on interaction between the supervisor and supervisee. The supervisee's work and its assessment

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are key to the process. Supervision is not about the supervisor training or teaching the supervisee (Hyrkäs et al., 2005). Rather, the supervisee learns new and meaningful things about their work and work experiences in collaboration with other members of the workplace community and the supervisor (Niemelä, 2019, pp. 57, 64). As a process, supervision thus requires both time and processing matters together.

Supervision is always confidential communication between the supervisor and supervisee, in which the supervisor respects the supervisee's expertise in their own work. The supervisor's role is to help the supervisee discover new perspectives on matters important to them. The supervisor is not meant to give ready-made answers and solutions but will help the supervisee process matters through their expertise (Kivinen, 2018, p. 54). Ethics are a central part of supervision. The supervisee's situation may be very sensitive and delicate, which requires ethical skills and professional communication skills.

There has been fairly little student-directed group supervision and research into it in Finland. In a study on supervision of classroom teacher students (Savolainen, 2015), the students felt that supervision should be confidential, regular, pre-emptive and voluntary. Students saw supervision as something needed only after other tools had been exhausted. They wished that supervision would be available quickly and easily to all who desire it. Regarding contents, the respondents discussed matters related to their work, supporting wellbeing and difficult situations, which could be processed in supervision. In addition, they wished for new perspectives on their work.

Kattainen (2016, pp. 161-175) has studied master's students' supervision from the perspective of self-management, learning and development. The study examined two groups, which met for six 90-minute sessions. The groups' goals were to help with managing studies and support for graduating. They wished for empowering discussions and processes. Central results were recognizing one's own learning style, strengthened team spirit, learning from experiences and support in combining studies, work and family.

The goal of Tikkanen's (2017) study was to develop students' group supervision to better support their learning needs. The study also wished to increase students' interest in mental health and substance abuse work in a criminal psychiatric unit. The study produced a model of group supervision, which includes the purpose and goals of student supervision and four themes related to criminal psychiatric care. However, the model could not be tested with new students due to a lack of time. The results show that the students had not received sufficient information about supervision, which was unfamiliar to them even as a concept. Its purpose and goal had remained unclear to them.

This study charts the potential of supervision in advancing students' team formation and commitment to their studies. The pilot group consists of master's students in development and management in the social and health care field. The degree program is started by 30-40 students each year, who work in teams throughout their studies. Quick commitment to their team and its work will also help the students commit to their studies. However, one to four students quit their studies within the first six months each year, which is unfortunate from the perspective of

cost-effectiveness. Some students' graduation may also be delayed, which can lead to them quitting their studies. Sometimes the teams have internal problems which have required intervention from teachers.

Student teams are extremely important in this program, as work in the social and health care field is largely organized as teamwork, which they can thus practice as part of their studies. Various courses also include team assignments, which require cooperation and sharing of responsibility. The teams assess their own functioning in writing every six months, whose results the project manager sends to the teacher-in-charge. In case a team has problems functioning and sharing responsibility, the project manager contacts the teachers-in-charge, who discuss the matter with the team as necessary.

The purpose of this study was to chart the experiences of master's students in social and health care development and management on group supervision organized for them. The study questions were 1) how is group supervision suited to supporting college students, 2) what benefits can students receive from supervision and 3) how can group supervision be developed. The goal of the study was to produce new information on group supervision aimed at students, which can be utilized in both supervisor training and in developing supervision aimed at students. The benefits of this pilot study may be obvious to student teams from the perspective of quicker team building, more committed students, fewer students quitting and more graduations on time. These are, however, long-term effects, which may be difficult to prove as results of supervision.

Literature Review

Supervision is defined and understood, both as a concept and a practice, in highly variable ways. Its background consists of several theoretical perspectives and tendencies, upon which it is built (Kärkkäinen, 2012). Some frames of reference include e.g., psychoanalytical, solution-centric, dialogic and resource-centric tendencies. Other influences include psychodynamic, psychotherapeutic, learning theoretical and positive psychology. In the Finnish context supervision refers to guidance and support organized by a trained supervisor, in which the supervisee's work-related questions and phenomena are processed reflectively to attain work goals. The goal is to develop the supervisee's work, increase their readiness, preserve their resources and improve workplace wellbeing (Ollila, 2006; 2008; 2014).

Supervision does not merely seek to solve problems arising from work or ensure the completion of tasks, but to increase the supervisee's understanding of various individual and communal processes and challenges at work and offer support (Alila, Määttä, & Uusiautti 2015). The principal goals are to defuse work pressures, process ethical challenges (Blomberg & Bisholt, 2016) and to act as support to each individual's professional identity (Berggren, Barbosa da Silva, & Severinsson, 2005; Ollila, 2014). The strengths of the individual and the workplace community should not be forgotten, as processing and emphasizing them reinforces a positive attitude towards overcoming challenges. Supervision thus also acts as a forum that pre-emptively lessens work-related stress.

Supervision proceeds from the supervisee's needs, experiences and questions in different situations. The supervisor does not act as a teacher, mentor, facilitator or a consultant. Their role is to help the supervisee discover new perspectives, meanings and insights into their work through reflection. Open and confidential discussion, reflecting together and maintaining reciprocity are central principles of supervision (Knight, 2011). Supervision also offers the possibility of peer support.

Coaching and supervision are very close to each other. Supervision was originally used as a problem-based way of processing difficult client experiences, while coaching has been associated with sports (Kupias, 2022). The methods have their own approaches and goals, but both depend on the guide's frame of reference. Both seek to aid the employee in managing work as variedly as possible. Supervision has an important role as a method that advances learning and develops the organization's functioning (Immaisi, 2012). Supervision is a process of professional support, reflection and learning, which affects individual development at work (Evans & Marcroft, 2015).

The principal forms of supervision are individual, group, workplace, peer and management supervision (Kivinen & Ollila, 2023). The first two are, as the names imply, conducted individually or in groups with the supervisor. Group supervision can however be conducted both as supervision between professions or as peer support between people in the same profession or performing the same tasks (Vanne, 2021). Workplace supervision involves the entire workplace community and their manager. Peer supervision consists of a group that performs supervision without a specific supervisor (Kärkkäinen, 2012). One may also speak of peer group supervision, in which an outside supervisor familiar with the profession supervises employees or managers (Valtasaari, 2023).

Supervision has traditionally been highly process-like and lasting from one to three years. Due to the hectic pace of modern workplaces, such long-term supervision has become rare and processes generally last only for a few meetings (Paunonen-Ilmonen & Heinonen, 2020). Relatively brief processes can also yield good results, particularly in group and management supervision (Bullington & Cronqvist, 2018). Methods have also, sometimes forcibly, become increasingly digitalized, which can be seen as an opportunity to increase supervision's accessibility to various professions (Kivinen & Ollila, 2023).

The effects of supervision are varied, but fundamentally positive. According to several studies, people who have received supervision have experienced better job satisfaction and flexibility and improved workplace communication and interpersonal skills. It is generally experienced as an important forum that enables the safe processing of difficult matters and is important both personally and professionally (Austin, 2016; Barham, de Beer, & Clark, 2019). Group supervision in particular was seen as useful when participants were willing and motivated to participate comprehensively, the sessions reflective and goal-oriented, the participants respectful of each other, sessions regular and confidential and processes suitable to the participants' workplace conditions, i.e., available to them (Allbutt et al., 2017). Committing to the supervision process strengthens the advantage of individual and group-based peer support.

Methods

Research Setting and Sampling

Management studies in the social and healthcare field are conducted as multiform learning the students perform alongside their work. They have approximately three to six in-person or remote learning days per month. The class that started in Fall 2021 consisted of 30 students. The students all had a bachelor's degree or equivalent related to the social and health care field. All students were also required to have at least two years of work experience in the field.

This qualitative study utilized elements of action research in the form of a "marketplace stroll" (Tuomi & Sarajärvi, 2018). The class's studies started in August 2021 through two orientation days. Permanent student teams were formed on the morning of the second day, which was followed by group supervision in the afternoon. The teams were formed by first allowing the students to meet each other through an "Italian marketplace stroll", which is a modified version of a "cocktail party" meeting game (Vanninen & Nieminen, 2016). The stroll was conducted inside a large lobby. The students (N=30) were instructed to talk with any other student they met for two minutes about whichever subject to get to know them better. Each meeting would last for two minutes, after which the teacher-in-charge would give a sound signal announcing a switch of conversation partners. During the stroll each student had time to talk with ten other students.

After the stroll, the students were sorted into groups based on their previous degree (nurse, public health nurse, midwife, physical therapist, laboratory assistant, social worker, etc.). The guiding teacher then observed the groups and chose one with six members of the same profession. They were then asked to form teams that were as heterogenic as possible. All students were allowed to be active and express their wish to join particular teams to their leaders. The guiding teacher did not participate in the team formation further and waited until the students were done.

Afterwards the six supervisor students presented themselves to the teams. From now on, "supervisor students" will be referred to as work supervisors. The teams moved to a separate location with their own work supervisor, where they became acquainted better and agreed on initial dates for supervision dates in the Fall. The organization had defined the following goals for the supervision: 1) team members becoming acquainted and building trust, 2) establishing ground rules for the team, 3) commitment to ground rules and studying and 4) successful team formation. At the beginning of supervision each team discussed these goals and potentially set their own goals for supervision. Each team gathered for five 90-minute sessions of supervision during Fall 2021. Some meetings were organized through the Teams platform. The work supervisors had their own group supervision, during which they discussed contents of management students' supervision and potential challenges.

The six work supervisors, who participated in the study had the following earlier degrees: Master of health science, nurse, psychiatric nurse, master of pedagogy, medical doctor and licenciate degree in political science. All had several years of experience in their field and two had training as therapists. A supervisor

agreement was made with each of the six supervisors. The work supervisors conducted their supervision without pay.

Data Collection and Analysis

The students who participated in supervision provided information on the group supervision's implementation, benefits and development needs through writing and themed interviews. The written questions were formed based on the goals of the supervision:

- How was group supervision implemented as a whole?
- How did group supervision reach the goals set by the team?
- What benefits have you gained from group supervision?
- How could student group supervision be further developed?

The written questions were sent to the student teams as e-mail attachments approximately a month before the planned themed interviews. They were asked to submit their answers at least a week before the themed interview. A study conductor read the responses before the interviews and formed the following supplementary questions for the themed interviews:

- Which themes did you discuss in supervision?
- Which theme was most useful and why?
- Which methods did the supervisor use in addition to discussion?

The interviews were conducted in February 2022 via Teams by interviewing each team for 30 minutes. The interviews were recorded and transcribed. The themed interview started by discussing the team's responses to the written questions. All potential additions and clarifications were recorded. Afterwards the interviewer asked the above supplementary questions. The written answers consisted of eight pages written on size 12 Arial font and a line spacing of 1.5. The transcribed interviews consisted of 14 pages, using the same settings. Authentic expressions are quoted in the results to increase reliability.

The data were collated by adding both the written and transcribed oral responses under each question. The data were then read several times. The sentence was chosen as the unit of analysis, after which the data were compressed, grouped and abstracted into subcategories, categories and main categories (Tuomi & Sarajärvi, 2018).

Respondents' Background

The management students (N=30) had an average of 14 years of experience in their field and 43% worked as managers. Approximately 57% had a nursing degree, along with various specializations. Of the rest, 13% had a social work degree. The rest were radiographers, laboratory assistants, physical therapists or midwives (Table 1). The data were collected during the interviews.

Table 1. *Respondents' Background*

Background degree	Number %
nurse (n=17)	57
radiographer (n=3)	10
midwife (n=3)	10
bioanalyst (n=1)	3
social worker(n=4)	13
physical therapist (n=2)	7
works as manager (n=13)	43
Work experience	Average years
Experience in the social and health care field	14

Ethical Approval

Ethical approval was obtained in June 2021 from the head of the health care unit. As the class started their studies, they were told about supervision and its goals, purposes and implementation. They were told at the earliest point that they would be asked to provide feedback and to participate in a themed interview. The students were given a privacy notice and a research notice, which provided information on the interviews and data handling, storage and protection. Consent to participating in the study was asked through the electronic eLomake editor. All stages of the study have followed scientific principles such as honesty, diligence and accuracy (TENK, 2012).

The supervision was part of an obligatory course. The students were given the chance of not participating in the themed interview and a small portion did not participate in the Teams interview, but all participated in forming the written responses. Individual students could be absent from supervision meetings, but generally all participated. The teams' answers were not individual opinions but collective ones. It is thus not possible to identify individual students from the answers. The data have been presented in a way that also obscures the identity of the supervisor. No answers can be connected to individual supervisor students. They participated in a feedback discussion as part of their training.

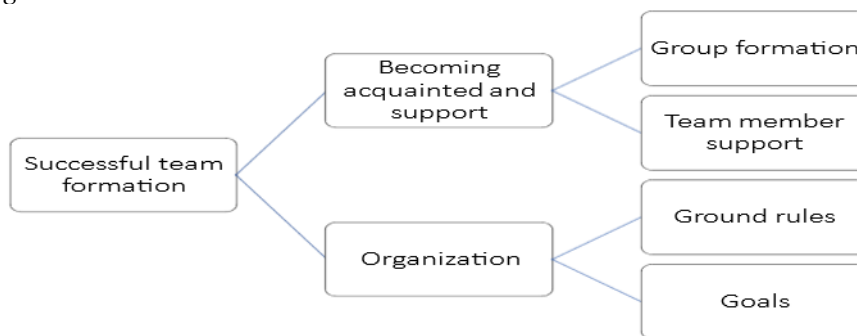
Results

The results of the study are presented below in the order of the study questions, starting from the supervision goals set by the teams, followed by assessing the supervision as a whole and its benefits, ending in ideas on further developing it.

Reaching Goals

The supervision groups were asked how well the teams were able to reach the goals they set for themselves. Thoughts on setting goals for supervision were split among the teams, as four had set goals for themselves while two claimed they had not set goals at the start of supervision. Some set goals included team formation, becoming acquainted, successful cooperation, self-management and graduating on time. Content analysis was used to abstract these into the main category of *successful team formation*, which contained the categories of *becoming acquainted and support* and *organization*. Their subcategories were *group formation*, *team member support*, *ground rules* and *goals* (Figure 1).

Figure 1. Successful Team Formation



The responses show that the teams built their own ground rules: “*everyone committed and kept to the ground rules*”. The team members’ multiform support was seen in the replies as flexibility, as “*cooperation has been flexible and proper*”. Support was also experienced as guidance, listening, openness, encouragement and consideration. The teams became acquainted on a deeper level and built trust with each other. Discussing challenges in their studies made them feel calm and “*we could support our self-management well*”. Team building under supervision was successful, as “*the team became a tightly knit unit that listened to each other*”. However, some of the respondents were not sure about the effect of supervision on team formation, as the teams generally spent a great deal of time together outside supervision.

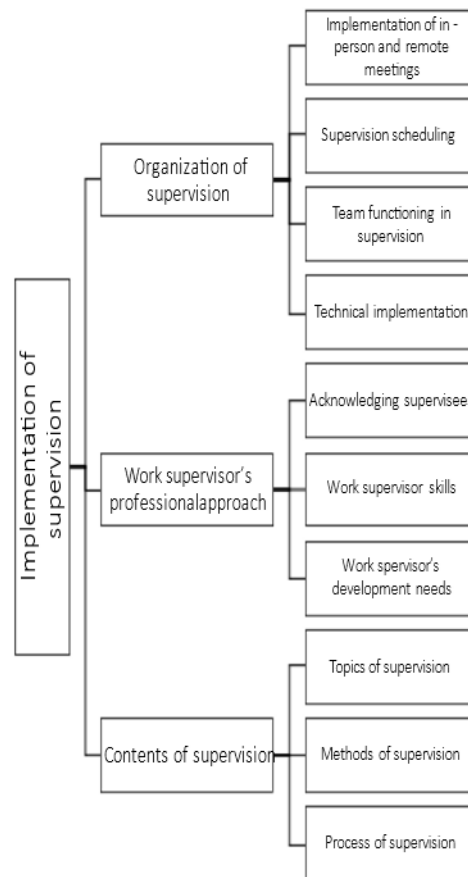
Implementation of Supervision

The teams’ responses on how supervision was implemented as a whole were analyzed through inductive content analysis, forming three categories: *organization of supervision*, *contents of supervision* and *supervisor’s professional approach*. Supervision was seen as a pleasant part of one’s studies and an important gesture of the university’s support to students. Organization of supervision also contained the following subcategories: *implementation of in-person and remote meetings*, *technical implementation*, *supervision scheduling* and *team functioning in supervision* (Figure 2).

Supervision was conducted remotely or in-person, depending on the teams’ wishes and needs. Remote meetings had a policy of keeping cameras on so that everyone’s face would be visible. The technical implementation had occasional

difficulties, such as dropped connections, problems with headphones, weak noise signal and dark video. Sufficient lighting was considered important so that all faces could be seen properly.

Figure 2. Implementation of Supervision



Agreeing on scheduling for supervision could be difficult, as “*it was challenging to find time among all other school work*”. Other teams had an easier time of finding time and scheduling meetings beforehand, while others had more challenges. Some found the 90-minute length of the session suitable, while others found it too long, particularly for the later sessions. The functioning of the teams in supervision was seen as positive and “*the implementation was overall very effortless*”. The students praised their own teams for functioning well.

The second category, *work supervisor's professional approach*, contained the following subcategories: *acknowledging supervisees*, *work supervisor skills* and *work supervisor's development needs*. The students felt that they had equal opportunities to speak and that “*even the quiet ones were heard*”. The work supervisor gave the students space and was interested in them and their assignments.

The *work supervisor skills* subcategory contained the work supervisor's ability to ask further questions, form wholes out of the topics of discussion and raise matters to a more abstract level. The work supervisor's presence gave the meetings structure, and their calmness was seen as an advantage.

The responses also mentioned some challenges related to the work supervisor's work, which are here categorized as *challenges of professional development*. Work supervisor could forget scheduled things or to provide final feedback. Some work supervisor multitasked during the meeting, which could be seen as unprofessional. The work supervisor's "negative emotional states" or "personality analysis" were seen as uncomfortable. Personality analysis in particular, in which the work supervisor categorized students based on their temperament, was not seen as proper, particularly given how little time they spent together.

The contents of supervision category contained the following subcategories: *topics of supervision, methods of supervision and process of supervision*. The respondents felt that the topics or supervision were suitable and good. They especially mentioned situations where the respondents felt that the supervision was well-structured and the work supervisor capable of altering the theme to suit the participants' needs. The supervision groups discussed many topics, as shown in Table 2. The students felt that the work supervisor asked them for topics of interest and that they could affect the themes of supervision. In case the students did not suggest any themselves, the supervisor had prepared topics.

Table 2. Topics Discussed in Supervision

Case studies	My strengths and weaknesses as a manager
Challenges	Relaxation
Combining work and leisure	Self-knowledge
Conflict case	Self-management
Discussing group work	Sharing experiences
Future plans	Stress, anxiety
Goals	Successes
Ground rules	Use of time
Group dynamics, functioning in a group	Values
Handling others' strengths	What is a good manager
I as a manager in five years	What is supervision
Managing studies	Workplace wellbeing
My feelings	
My resources and wellbeing	

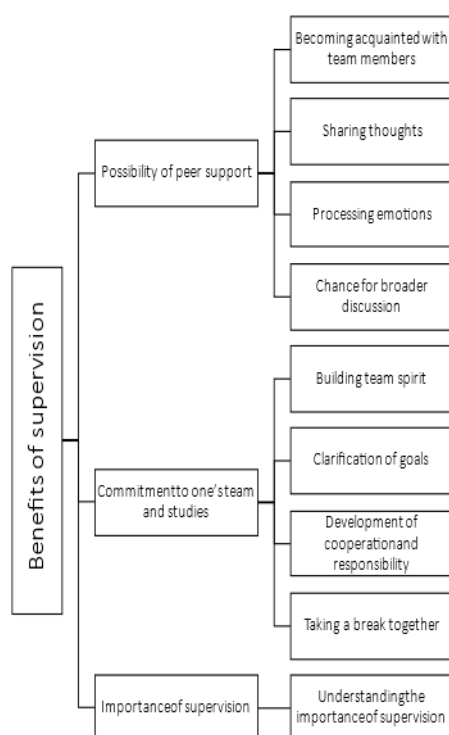
There were some responses contrary to the above. Some felt that not all sessions had a clear theme, which they found frustrating. Some wished for more varied perspectives and a clearer structure. Some sessions did not reach a relaxed atmosphere, which bothered the participants. The sessions were partially seen as additional work that gave "only a little added value".

The most common method of supervision was discussion and listening, which sought to form a genuine dialogue. Some sessions started with a relaxation exercise followed by examining one's feelings. Some work supervisors also assigned a topic that was then discussed together during the next session. Some work supervisors kept records of previous topics and would start the following session by asking if the participants still wished to discuss something related to the previous topic. During the final session, the supervisor reviewed the team's journey together.

Benefits of Supervision

The benefits of supervision included the possibility of peer support, commitment to the team and studying and understanding the importance of supervision (Figure 3). Peer support “*deepened us getting to know each other*”, gave an opportunity and courage to “*share thoughts*” and to hear “*others have the same thoughts*”. It deepened discussions about feelings and reflection on topics such as “*uniting personal life and studies*”. Part of sharing thoughts included the courage to present one’s own thoughts and to receive advice from team members.

Figure 3. Benefits of Supervision



Processing emotions as part of supervision was discussed in diverse ways. The participants felt a need to share their emotions, unburden themselves and “*to be able to tell how it feels*”. They talked about their stress and anxiety as part of supervision, which made them feel better. Supervision thus offered a chance for broader discussion.

Commitment to one’s team and studies could be seen in building team spirit, clarification of goals, development of cooperation and responsibility and taking a break together. Supervision united the team members and increased their group spirit, not only within their own team but with the entire class, so that “*we learned to trust each other*”.

The students’ personal goals became clearer during the process and were shared with their team. Supervision made reaching their goals easier. Developing cooperation and responsibility were seen as clear benefits of supervision, as “*all took responsibility for the team’s results and actions*”. During the process, the students discovered “*ways of self-management*” and learned to recognize their own strengths.

All teams receiving supervision may have had a positive effect on the entire class's commitment and teamwork skills.

The teams' answers emphasized using supervision as a way to take a break, despite busy study schedules. It "*made us make time*", which enabled the teams to discuss matters in greater depth and to share their thoughts. The students felt that this would not have happened without supervision and the teams would have merely rushed through their assignments otherwise. The responses emphasized the importance of supervision as support for studying. Supervision was empowering and gave resources for starting their studies. The experience also gave them understanding of the role of supervision and that it did not always require a major issue; supervision could also focus on matters such as the team's functioning.

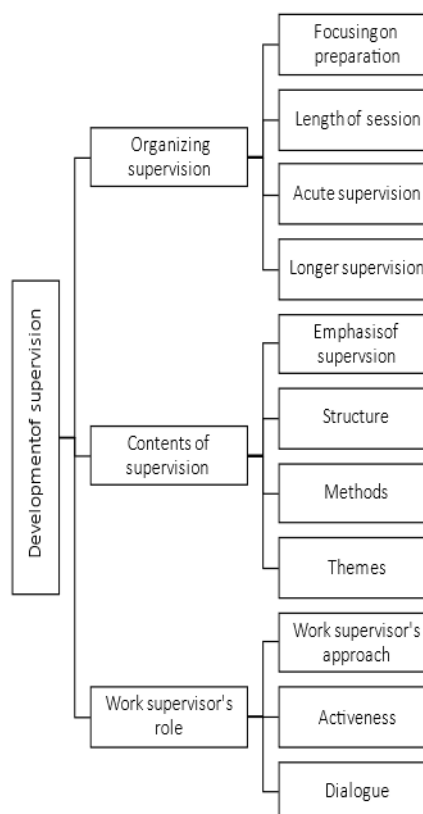
Development of Supervision

The *development of supervision* main category contained three categories: *organizing supervision*, *contents of supervision* and *role of the work supervisor* (Figure 4). *Organizing supervision* included preparation, length of session, acute supervision and longer supervision. Supervision started on the students' second day of studying, which the students considered insufficient preparation. They wished for more explanation of supervision on a theoretical and practical level from the perspective of goals and purpose. Some students had no previous experience of supervision, which also caused confusion.

The students pondered the length of the session and suggested shorter durations than the program's 90 minutes, usually 60-minute sessions. They also considered the length of the program. They wished for "*supervision until graduation*" and "*more sessions early on, followed by fewer sessions through the year*". It would be good to have a final summary of the process and everything the team learned towards the end of their studies. In case it is not possible to have supervision throughout their studies, they wished for the opportunity to receive crisis supervision if necessary.

The *contents of supervision* category contained the subcategories *emphasis of supervision*, *structure*, *methods* and *themes*. The emphasis of supervision should be on the students and not the supervisor's opinions. The supervisor should be neutral and not introduce their personal views into the discussion. The structure should focus on clarity, good planning and initial orientation and tuning. Along with discussion, the students wished for "*more tools for studying*", "*more versatile use of tools*" and "*some assignments*", as they would be useful in their studies. The students suggested that suggestions for themes they wished to discuss could be collected from the entire class through e.g., an online form or as direct suggestions to the supervisor.

Figure 4. Development of Supervision



The *work supervisor's role* category contained the subcategories *work supervisor's approach*, *activeness* and *dialogue*. The students wished that the supervisor's approach would be firm in directing the discussion to the desired direction. They hoped that the supervisor would have prepared topics, new perspectives and approaches and the ability to stimulate conversation. They also hoped for more "*attempts to challenge and reach a realization*" and attempts to "*dig out the leadership from the participants*", as they were students in management. Dialogue is important in supervision and there should be a focus on including even quieter students. They wished for more "*dialogue between team members*" and "*both the work supervisor and supervisees throwing themselves*" into the discussion.

Conclusion and Discussion

This study charted the experiences of master's degree students in social and health care management on group supervision organized for them. It also sought answers to the study questions: 1. How was group supervision implemented as a whole? 2. How did group supervision reach the goals set by the team? 3. What benefits have you gained from group supervision? 4. How could student group supervision be further developed? The results to the research questions were collected into a SWOT analysis, which is presented in table 3. The analysis contains a

distillation of factors supporting and hindering management students' group supervision.

Table 3. Study Results on Management Students' Supervision

	Supportive Factors	Hindering Factors
Internal	<p><u>Strengths</u></p> <ul style="list-style-type: none"> -including supervision as part of course work - support for team building - permanent team work for students during education - common goals and ground rules - flexible practices regarding in-person and remote meetings - possibility of processing the team's needs -some of the work supervisors had sufficient guidance skills - work supervisors' background training in the social and health care field and long-term work experiences 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> - insufficient initial information on work supervision - Lack of clear goals in teams' supervision - work supervisors' failure to grasp structure of the process - work supervisors' unfinished training and undeveloped professional skills - unprofessional behavior from work supervisors - work supervisors' unclarified professional growth - multitasking during remote meetings
External	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> - versatile implementation of in-person and remote meetings - remote meetings through Teams, no travel required - supervision supports studying management and team formation - experience of supervision during studies makes it easier to seek supervision at work 	<p><u>Threats</u></p> <ul style="list-style-type: none"> -lack of motivation of the supervisees - dropped remote connections and low quality of equipment - scheduling challenges - in-person meeting locations, reserving spaces -management students get a wrong picture of work supervision, if the professional approach of the work supervisors is insufficient

Based on the results presented in the SWOT analysis, group supervision is suited for supporting university students in their studies. Supervision improved team formation and commitment to goals and commonly accepted ground rules. Successful team formation also allowed the students to receive support from other team members. The supervision was organized as remote and in-person meetings and scheduled according to the wishes of each group. The teams' functioning in supervision was seen as fluent and positive. However, some remote sessions faced challenges such as dropped connections. Remote supervision requires sufficiently good technical connections (Kivinen & Ollila, 2023).

The work supervisor's professional approach meant versatile acknowledgement of supervisees, listening, giving space and showing interest in supervisees' opinions. Even quiet participants were included in discussions. Other shows of professional approach included the ability to ask additional questions and to raise matters to a more abstract level. The supervisors could, however, also have challenges in their professional development, such as occasional lapses in attention, showing negative

emotions, forgetting schedules, forgetting to give feedback and multitasking during supervision.

Under supervision contents, the topics, methods and process were separated. Supervision's topics arose from the team's needs, but in case they failed to suggest one, the supervisor had prepared topics for discussion. The participants were satisfied with structured supervision, in which the supervisor could alter the theme based on the team's needs. Supervision that lacked a clear theme was seen as frustrating. Tikkanen's (2017) study contained four prepared themes for the supervision process related to the students' field. This model could also be piloted for supervising university students.

The methods of supervision were discussion and listening, which sought to create a genuine dialogue. Some supervisors gave assignments, which were then discussed during the following session. Summarizing the previous session at the start of each new one was seen as a good procedure. One session started with an activity, such as a greeting round or a relaxation exercise. Afterwards they summarized the key observations from the previous session's topic and potentially continued discussing it. They would then discuss the assignment, if applicable, followed by the session's theme. At the end of the session, the supervisor summarized the day's discussion.

The benefits of supervision were shown to be peer support, commitment to team and studying and understanding the importance of supervision (Vanne, 2021). Supervision allowed the teams to have broader discussions, process emotions, share their thoughts and become acquainted on a deeper level. The work supervisor's role is to help the supervisees to discover new perspectives on topics that are important to them (Kivinen, 2018), which was realized in the students' dialogic reflection.

The students shared their feelings and expressed themselves on topics such as the challenges of combining work and family. The teams felt their trust and relationships with their teammates had deepened during the supervision process. They felt that supervision had increased group spirit within the entire class, as was also found in the study by Kattainen (2016). Supervision helped clarify goals and improve cooperation and responsibility. Supervision making the team take a break and analyze matters was seen as significant. An understanding of the importance of supervision in today's hectic work culture also grew. It is, however, worth considering whether team formation could have happened equally effectively in the teams' normal meetings without supervision.

The supervision provided for management students offered its participants support and a chance to manage stress, as theoretical literature has discussed (Alila et al., 2015; Blomberg & Bisholt, 2016; Vanne, 2021). Supervision offered a space for confidential discussions in which matters were reflected on dialogically according to the principles of supervision (Knight, 2011). Supervision is a learning process (Alhanen et al., 2016; Immaisi, 2012), which was realized for each team in this study through a strong communicative relationship with team members and the supervisor. The learning process could be seen concretely in the teams' deep considerations of case studies of various themes and in their analyses of supervision.

Supervision aimed at students should be developed in the facets of organizing, contents and the supervisor's role. Preparing the group beforehand is an important aspect of the supervision's success. This includes explaining the purpose and goals

of guidance to students both theoretically and practically, in which issues in this study were found to be lacking in the work supervisor's actions. A similar development need was identified in the study by Tikkanen (2017). Some students felt that 90-minute sessions were too long, and some wished the sessions were spread over a longer period of time, even the whole duration of their studies. They also wished for acute supervision, to which the team could have access on short notice. A similar wish was expressed in the study by Savolainen (2015).

In some supervisions, the work supervisor talked too much about her-/himself, the structure of the supervision was not clear, and the supervision could lack a theme. It is important for the contents of supervision that the focus of discussions is on the students, the supervision's structure is clear, and each session has a meaningful theme. Supervision's methodical activities should be broadened through e.g., operational methods. Some wished that the supervisor's approach should be stronger and even more dialogic, which requires professional skills from the supervisor in helping the supervisees process matters (Kivinen, 2018). The results form a partial picture of the supervisor student as a teacherly and guiding role, which some of the students expected. They particularly wished for the supervisor to use more methodical activities, to challenge the supervisees more and to join in bravely themselves.

Although in this study it was found that the supervisors had professional weaknesses and they were also students themselves learning about supervision, in spite of that, the study yielded many good results. The work supervisors' professional weaknesses were presumably partly due to the fact, that some of them still had relatively little experience in acting as a work supervisor. Perhaps the next step would be to recruit work supervisor students who are in the final stages of their studies. Presumably, their professional skills may have developed further.

Supervision is generally recommended as a one-to-two-year process. In this manner, its benefits are surely greater than those of a brief supervision process. However, according to Bullington and Cronqvist (2018), even a relatively brief supervision process can have good results, particularly as group supervision. The social and health care management degree program could be piloted as a longer-term project, such as ten 90-minute sessions spread over the entire student period. Longer-term student supervision would give new information on the potential of supervision in defusing conflicts within teams and managing stress.

The pilot program described in this study gave the management students personal experience of supervision, which may inspire them to seek supervision for themselves or their employees in the future. The supervisor students have their own challenges in finding sufficient opportunities to reach their training quotas, so the university offering them ready-made groups is also helpful to their studies.

Student supervision could have also been studied via individual interviews, which might have given deeper results. Charting the experiences of supervisor students would also give further information on further developing supervision for students. The results of this study can be used in developing both supervision aimed at students and supervisor training.

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Leadership as Social Competence in PhDs in Relation to Professional Achievement: Three Empirical Investigations

*By Miriam Aparicio**

Leadership assessment is analysed in 3 investigations: a) a quantitative study carried out with scientists (R&D), where a distinction between chief/leaders (units' director or chief) and subordinate members in academic units of research was made; b) 2 qualitative studies also carried out at the third-level: the first one with PhDs from 4 National University of Cuyo Schools and the second one with PhDs/ PhD students from Argentina and other countries who participated in internationalization programmes in France. The latter is based on the hypothesis that the highest level of education achieved, added to the immersion in another culture after having undergone a national process of selection before the mobility programme, could result in a greater valuation of the of the so-called social and management competencies, which, according to the OECD, are nowadays essential. Assessment was observed through different techniques. Study 1: the core variables were Mobility, Product, and Professional Satisfaction in relation to Leadership. Two questionnaires were used, and indexes and 7 grids were created. Studies 2 and 3 (qualitative): the hierarchical evocations technique was used to capture the “meaning” underlying behaviours. Results: a) the only constant variable in the group of scientists (“soft sciences” and “hard sciences”) was the negative evaluation of their bosses. b) In the groups made up by PhDs who were not scientists, leadership as such does not emerge, although a certain degree of relevance is given to the psychosocial/relational competencies as a factor of Professional Achievement, Mobility and Satisfaction.

Keywords: leadership, scientists, PhDs/PhD students, competencies, professional mobility, satisfaction at work

Introduction

The three researches that we will analyse include populations made up by third-level (PhD students and PhDs) and involve competencies, particularly psychosocial ones, among them Leadership. However, there are particular aspects that define the respective theoretical frameworks. It should be also pointed out that in the 3 studies mentioned above one variable was central: Professional Mobility. Among the scientists (chiefs and members), this variable was measured by the promotion in the hierarchy of the scientific system. Among the PhDs (many of them professors at the University of Cuyo), holding posts with different academic ranks (Instructor, Assistant, Associate, and Professor, both acting and tenured by competition), such ranks were taken into account (cf. Aparicio, 2014). In other words, the qualitative

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evaluation or Satisfaction with the leader, is carried out in relation to the Mobility observed.

Taking this into account, we make a presentation offering, first, the quantitative research, carried out within the strictly scientific field (hereinafter, 1. R&D, Research & Development Units) and the 2 qualitative investigations (hereinafter, 2. PICTO: Research Projects, Science and Technology Oriented and 3. IAM: International Academic Mobility).

Literature Review

1) R&D Research

Researchers have been exploring for elements that determine organisational success, including scientific ones, for decades. However, the role of the leader in academic units of research and management of scientific organisations are topics about which not much literature has been written, and most of which refer to academic organisations. Other studies concentrate on issues such as power, dedication, commitment, satisfaction at work, work atmosphere, etc. It is generally assumed that “good leadership results in ‘higher workers’ morale, and this, in turn, in an increased effort which eventually leads to higher productivity in the organisations”. International literature on factors which affect organisational work and group productivity is abundant, but its results are somehow controversial (Perrow, 1968).

In Argentina, Aparicio has been analysing the issue of leadership in relation to satisfaction, productivity, human resources and external resources as well as its relationship to professional mobility, since 2002. This aspect is especially relevant in present-day Argentina, since the structural barriers imposed by the system could become a source of conflict and generate psychosocial patterns which may affect academic-scientific organisations internally (Argentina, 1996; Aparicio, 2007^a and b; 2014; 2015 b; 2022 b).

In this present study, our referent will be the important research done by the UNESCO, recognised as “International Comparative Study in Organizations and Performance of Research Units” (1971-1989).

From the analysis of the correlations between the main variables found – Satisfaction, Professional Mobility, Productivity –, after the construction of indexes and 7 grids, it emerges that some psychosocial factors are related to effectiveness, as well as a social-psychological factor and with professional mobility (Bennis, 1959; Payne, 1958; Etzioni, 1961, 1965; House & Wigdor, 1965; Cole & Cole, 1967; Burke, 1965; Andrews et al, 1979; Hollander, 1975; Stolke-Heiskanen, 1979; Rossel, 1970; Greene, 1975; Argyris, 1975; Peltz & Andrews, 1976; Dessler & Valenzi, 1977; Eden & Shani, 1982; Fiedler, Novak & Sommerkamp, 1982; Kwiek, 2018; Li, Yin, Fortunato & Wang, 2020).

Regarding Leadership in scientific organisations, we recovered the studies of the “founding fathers”, among them: Meltzer, 1965; Payne, 1958; Bennis, 1959; Burke 65; Fiedler, 1967, 1982; Rossel, 1970; Crowe, Bochner & Clark, 1972; Argyris, 1975; Greene, 1975; Hollander, 1975; Dansereau, Graen & Haga, 1975;

Meyer, 1976; Mehra, Smith, Dixon & Robertson, 1976; Dessler & Valenzi, 1977; Knorr, Mittermeir, Aichholzer & Waller, 1979; Eden & Shany, 1982; King, 1990; Spillane, 2005; García Carreño, 2021.

The Nomenclature of Science and Technology Fields (UNESCO, 1971-1989) was used in the present study. The “disciplinary homogenization” (system of beliefs, values and assessments associated with socialization and traditions) differs according to the disciplinary field to which it belongs, “hard” or “soft” sciences. This will lead to a different level of satisfaction regarding the different psychosocial factors at stake in the grids created: Merton, 1968; Crane, 1972; Bourdieu, 1972; Gaston, 1972 (“invisible college”). See Argentina, 1996. Also Aparicio, 2002, 2005, 2007 a and b, 2014, 2015 a and b, 2022.

In this article, we will analyse the role of leaders in scientific organisations and the level of acceptance/valuation by team members – both in “soft sciences” and “hard sciences” – in relation to Professional Mobility and Satisfaction.

2 and 3) PICTO – IAM (Oriented Scientific-Technological Innovation Programme - International Academic Mobility)

Let us consider the global stage for a moment. On it, new psychosocial and management competencies have become essential for decision-making and for managing change and human resources management in the face of uncertainty. This is linked, moreover, to geographical and professional mobility related to the Internationalization of Higher Education, which began with the Bologna process. Indeed, in 1998, representatives of the governments of Germany, France, Italy and the United Kingdom signed the Sorbonne Declaration. It was then when the need to create a common space for higher education, which encouraged mobility and students’ exchange programmes, became evident. In 1999, with the signing of the Bologna Declaration, the creation of the European Higher Education Area (EHEA) was formalized. The constitution of a flexible university system was agreed to in order to facilitate greater possibilities of training and employment, through the recognition of degrees obtained in other countries.

In our particular case, the Alfa Tuning Latin America Project (2004-2007 and 2011-2013) also had a great influence; a high-impact project generated by European universities to respond to the challenge set out in the Bologna Declaration and the Prague Communiqué. Through inter-university collaboration, a certain homogeneity between the education provided by the European and the Latin American universities was sought to be achieved. The aim was that students and graduates would accomplish greater competitiveness in their working lives, on the basis of their training in developing generic and specific competencies.

It is not our purpose to deal here with the Bologna process, its evolution and consequences; nor about the Tuning Latin America Project. One of the meanings given by the Merriam-Webster Dictionary assigned to the English verb “to tune” is to consider: a) generic competencies or abilities that every subject needs to implement in order to effectively resolve personal and professional life situations, being common to any university degree (ability to learn, to solve problems, to make decisions, interpersonal skills); b) specific competencies of each thematic area (for

an analysis of the 27 generic and specific competencies, their descriptors and indicators, cf. Beneitone, 2007; Glavinich, Aparicio, Duarte et al, 2020).

Nor will we deal with the different approaches to competencies or on the ups and downs that their formation has undergone since the 1980s, since there is a vast literature (Bologna Declaration, 1999; Delors Report, 1996; UNESCO Declaration, 2009, OECD (2018^a, b, c, d), Lévy-Leboyer, 2003; Le Boterf, 2001. Instead, we will follow Perrenoud (1999, 2008) and, particularly, Kallioinen (2010) as their conceptions were framed within the context of creation of the European Higher Education Area. The Tuning Project (2007), where the competencies are linked to a quality higher education that provides students with relevant learning for their working life, is also recovered. The development of core competencies does not imply the mere acquisition of knowledge, but rather its operational use in cultural spaces, social interaction and professional development, that is, the development of capacities for the creation of new knowledge. In this sense, competencies are understood here, and in a generic way, as a wide range of knowledge, skills and aptitudes that illustrate a person's ability to develop their professional tasks. That is, they show the ability to solve cognitive, practical, personal and social problems within a specialized area of work or study (Kallioinen, 2010. Also see Roegiers, 2008; Palmer, Montaña & Palou, 2009; González & Wangenaar, 2003; Villa & Poblete, 2011; Sánchez-Elvira, López-González & Fernández Sánchez, 2010; Bingimlas & Hanrahan, 2010; Boekaerts & Cascallar, 2006; Blanco, 2009; Alonso, Fernández & Nyssen, 2009; Attali, Brandys, Charpak, Feneuille, Kahn, Kristeva & Touraine, 1998; Villarroel & Bruna, 2014; Alexander, Escudero Nahón & García Ramírez, 2017; Magaña Medina, 2022, PISA 2015, OECD 2016 a and b; 2017 a and b; 2018 UNESCO, OECD; Henseke & Green, 2016; Martin, 2018; Boix Mansilla & Gardner, 2007; Boix Mansilla, 2016; Bringle & Clayton, 2016; Jimeno, Lacuesta, Martínez, Villanueva, 2016).

Rather, we are interested in knowing something more about the competencies actually formed in Latin American countries and in Argentina; particularly, non-disciplinary ones (knowing how to know); the formation of action knowledge (Shön, 1983, 1992; Argirys, 1982,...), procedural knowledge (knowing how to do), knowledge to live together (knowing how to be), social competencies and meta-competencies for management. Among the latter, in the international literature, the role of leadership stands out.

Our objective is to know if this psychosocial competency is recognized and valued by those who have reached the highest level of education (Doctorate degree) as well as to observe to what extent it is linked to personal development (in this case, to Satisfaction and Mobility in the hierarchical scale), and also organizational and national (innovation).

In this sense, in Argentina, Aparicio has been investigating the problem since the 2000s (cf. Publications/production, link CONICET). Many of her research works concern social competencies and the quality of both the university and scientific-technological systems, focusing on different variables/indicators). In particular in the last decade (2016-2021), she has conducted two (2) qualitative investigations with doctors from UNCUYO (PICTO), PhDs and PhD Students to which we refer in the second part of this article (PICTO and IAM). The findings

resulting from the fact that a similar methodology and techniques that incorporate common items have been used—allow us to make inter and intra comparisons between the respective populations/samples and observe convergences and divergences; in the case at hand, in terms of training and/or assessment of what Aparicio calls “social and management competencies” and, in particular, the role of Leadership.

The findings – due to having used a similar methodology and techniques that incorporate common items – allow inter and intra comparisons between the respective populations/samples and observe convergences and divergences; in the case at hand, in terms of education training and/or assessment of what Aparicio calls “social and management competencies” and, in particular, in the role of Leadership. These investigations were:

2. A study was carried out in Argentina with three (3) actors from the National University of Cuyo –, scientists, professors and administrative/academic support staff – in order to observe the strengths and weaknesses of the system according to the shared representations regarding the competencies, and which were developed or “lacking” in those who had gone to University. The objective was to implement continuous improvement programmes (PICTO - Oriented Scientific-Technological Innovation Programme). In this article we focus on doctors.

3. To complement the previous study, another research was carried out in Europe with Argentine and foreign PhD graduates who participated in Internationalization and bilateral Cooperation programmes. The hypothesis considered is that the highest level of education achieved, added to the immersion in another culture after having undergone a process of selection, where competencies other than disciplinary were assessed, could show a higher level of development of some psychosocial competencies (IAM - International Academic Mobility), Aparicio, 2019, 2020 a, b).

Moreover, Mobility has been Aparicio’s object of study since the 1980s (cf. especially, link CONICET; 2016-2022; 2022 a; 2022 b).

First, she addressed intergenerational mobility (the first research work in the world with 3 real generations along the same line: home survey on graduates, parents and grandparents, 1,129 family groups). Then, since the 1990s – in the light of increasing globalization and the structural imbalances that generated the fall in jobs and structural unemployment (particularly in Argentina, in 2001-2002) – she conducted new studies with graduates, dropouts, and delayed students in relation to the established required length (1983 - 2004/2014). Regarding Mobility, career mobility was analysed from the French-Argentine comparative study whose axis is academic-professional trajectories – a term introduced by Aparicio and which has become extended nowadays) – as well as the factors that impact on them. These researches, which involve field monitoring, were carried out with multiple populations: university students, scientists, state personnel, health personnel, decision makers, among others (Aparicio 2005, 2009, 2016).

Globally, since the 2000s, Aparicio began working with cohorts covering more than two decades in two (2) national universities in Argentina: National University of Cuyo (UNCuyo) and the National University of Technology, Mendoza Area,

(FRM, UTN). Her research generates multiple complementary studies in which she analyses, among other aspects, the articulation or gap between Academic Education, and the Scientific-Technological System and between Education-Work, addressing the factors that influence the achievement/trajectories of PhDs/PhD students and scientists (grassroots, sociocultural, pedagogical-institutional, psychosocial and structural). She also approaches competencies of different kinds, often almost absent, and which are necessary to function in the current world of work (Aparicio, 2003, 2005, 2007a and b, 2015 a and b, and many other articles referring to trajectories: 2012, 2016, 2019, 2020, a and b; 2022 b. cf. Aparicio, link CONICET).

Finally, there is a third aspect addressed between social and management competencies: leadership, since it is considered a very important variable in the face of change. However, we cannot stop here for reasons of brevity. The international literature is abundant in this regard. Let us just say that we have been particularly interested in the concept of Transformational and Transactional Leadership, following the Full Range Leadership Model (hereinafter, FRLM) by Avolio and Bass (2004). Such model, with its potential and critical points, is based on the research developed by Burns (1978), who distinguished, for the first time, between leaders who acted through exchange programmes models, calling them *transactional leaders*, and those whose behaviours seemed to transcend individual egoism, whom he described as *transforming leaders* (De Vries, Roe & Taillieu, 1997; Lievens; Van Geit & Coetsier, 1997; Yulk, 1999; among others). The latter are oriented to strengthen a mutual commitment with their followers and raise their motivation and morale, to work on identifying higher goals and to awaken credibility and enthusiasm in their followers. Transformational leadership includes four dimensions: *Individual Consideration*, *Intellectual Stimulation*, *Inspirational Motivation*, and *Idealized Influence*. Other models can be consulted in García Carreño (2021).

Objectives

1) R&D Research

The research work had several objectives (Aparicio, 2014; 2015b, 2022 b). As far as we are concerned here the central objective was to know the valuation of the scientific leader made by members of the different groups from the “soft” and “hard” sciences – with the characteristics which identify and/or homogenize them – in relation to the Professional Mobility known during their trajectories and the Satisfaction achieved.

2 and 3) PICTO – IAM

a) To observe the importance that the different groups of PhDs and PhD Students who have experienced professional mobility (whether they are scientists or doctors working in a university environment), give to social and management competencies among the achievement factors that they prioritise when considering professional demands and, in particular, leadership.

b) To know their shared representations regarding the articulation or gap of current university education in relation to labour demands and quick changes.

Hypotheses

1) R&D Research

- a) Within scientific organisations, satisfaction regarding the leader varies according to the disciplinary fields (“soft” and “hard” sciences).
- b) Satisfaction with the leader is not related to Productivity or Professional Mobility in the scientific pyramid (“soft” and “hard” sciences).

2 and 3) PICTO – IAM

PhD and PhDs Students do not sufficiently recognize the role played by non-disciplinary competencies, particularly, leadership, with institutional differences depending on careers and contexts.

Research Questions (R&D, PICTO and IAM)

- a) Are there differences concerning Satisfaction with the leader and associated aspects among the different groups addressed, and depending on disciplinary fields? (R&D, PICTO and IAM)
- b) How strongly does Leadership emerge as a factor associated with academic-professional achievement in groups, and in relation to organisational and national macro innovation? (Gaglio, 2011; Alter, 1999; Alkrich, Latour & Callon, 2006) (PICTO and IAM).

Design

We will not stop on the analysis of all the items/questions incorporated in the respective researches, related to the valuation of leadership by scientists and of the social and management competencies, by doctors and PhD students.

In the R&D research, only methodological aspects and findings on Leadership will be outlined.

Taking our objective into account, in the PICTO and IAM researches, we will show how important leadership and related aspects such as decision-making, problem-solving, adaptation to change, and flexibility are to these groups of PhDs students and doctors. We will use the technique of hierarchical evocations which allows us to capture the extent to which there is awareness of the role that this variable currently has among the above mentioned population who have reached the highest level of education. Their representations also reveal which competencies considered should be strengthened as a priority. It should be noted that both their

answers and their “silences” will be analysed, since “silences” as such do not exist: they speak for themselves and tell about ignorance and deficiencies, among other aspects. Not knowing which competencies should be prioritized – according to the experience of the countries that lead the learning ranking – is already worrying at a time when the “new normal” will require a great capacity of adaptation and decision-making (OECD, 2000, 2016 a and b, 2018).

Specifically, in the latter, we only return to some very representative qualitative item(s) in some of the researches, presenting the Summary Table, the 4-plane or quadrant Figure and the 3D Figure (3 dimensions). In others, for brevity reasons, we will summarize the result and/or recover a figure. In these items the importance given to social and management competencies and, among them, to leadership is observed.

The order of presentation is: R&D, PICTO and IAM.

Materials and Methods

Since it was considered relevant to assess what the actors think and value *in situ*, both quantitative and qualitative methodologies were used, in addition to the quantitative-descriptive part. In the case of qualitative methodologies (PICTO, IAM). As we have pointed out, the focus is on the assessment, not only of generic competencies or “know to know” but, particularly, of those related to “procedural knowledge” and “knowing how to be/live together”: social and management competencies.

Scientific production review on the subject shows the near non-existence of field research with those actors that go beyond the quantitative aspect. Furthermore, it shows only a diagnosis of the situation (emergencies, vacancies), yet not the “meaning” that certain trainings and behaviours acquire in the light of contextual changes, that is, those which have impact on the possibilities of achievement of the subjects, the level of development of their professional trajectories and their opportunities for insertion, permanence and promotion within the labour field) (OECD, PISA 2017 a, b and 2018). For this reason, in these 2 researches, an attempt was made to go beyond the long list of “generic and specific competencies” proposed by Tuning to investigate what, *in the daily reality of the different sample groups and higher education institutions*, were the central concerns, strengths, vacancies, the most valued competencies and the “absent” competencies. These aspects can only be achieved through qualitative methodologies.

Sample

1) R&D Research

A stratified sample was taken from universities and different disciplines, based on a population of researchers (scientist and professors of the Incentive Program), both from the metropolitan and the Cuyo regions (N=1511). The final sample is

N=355 - R&D Units (5% error margin). At this first stage, the research professors were from Universidad Nacional de Cuyo (N= 53 Research Units): one chief or director and members.

2) PICTO

The sample consisted of three (3) actors included in the university system: professors, doctors/scientists, and academic support staff from four (4) UNCuyo Schools: Basic and Natural Sciences, Engineering, Economic Sciences, and Philosophy and Literature. It was not representative because the responses were, in all cases, voluntary and informed consent was required.

3) IAM

The sample is made up of PhD students who have participated in university or business exchange programs, since 2018, in Paris. We worked with different cohorts (2002-2003; 2013-2014 and 2018-2019) (quantitative descriptive level/ percentages). Also, on a qualitative level, in the last period (2018-2019), we worked face-to-face, with some volunteers (20% of the total). This last group included some foreigners who lived there for internal exchanges (“brassage”). Finally, 10 voluntary interviews were then added. This provided other views and perspectives, influenced both by training and contextual imprint.

Techniques

1) R&D Research

Two questionnaires were used. The questionnaire concerning the R&D units was answered only by Chiefs-Directors, who informed about their units (human and financial resources, scientific exchanges, age of the research units’ members, national and foreign income resources/budgets and the scientific product, among others).

The Core Members’ questionnaire provided data and opinions, and referred to the social role of individuals working in the R&D Units, as well as information about working atmosphere, jobs ‘perceptions, and opinions on budgets, resources, services, power and influence, research work organisation, leadership, etc.

If we focus on the Grids, we can say that the answers obtained from the Core Members Survey gave rise to a number of grids and indexes, which were later matched to other variables, among which are Production (as an indicator of efficiency), Satisfaction and Professional Mobility (as an indicator of achievement, especially in the field of science).

7 central Satisfaction grids (Grid L: About the job; Grid N: Satisfaction with chief of research units; Grid O: Planning and organisation of research activities in the unit; Grid I: Responsibility); a Product grid and a Professional Mobility grid were developed (cf. link Conicet, Aparicio, 2014, 2015 b, 2022 b).

2 and 3) PICTO – IAM

The same techniques were applied in the two (2) qualitative investigations. As said before, some common items were maintained when this was relevant to foster inter and intra group comparisons. A semi-structured survey with open sentences and hierarchical evocations techniques were used. Moreover, an interview with a voluntary group was also carried out. Upon combining the frequency with which some words were named and the order of importance given to them by the respondents, that interview made it possible to observe which representations were a priority (central core) and which were peripheral (Moscovici, 1961; Abric, 20012001 a and 2001 b). From this combination, 4 categories, which already enter the quadrant of the nucleus of representation or priority aspects (P2), emerged; already in the peripheral quadrants (P3, P4 and P1). Here we only focus on the “Social/Relational” category, which includes Leadership.

Next, we chart these 4 quadrants or planes. The items addressed here refer to Leadership and related aspects, seen either as a Strength of the training received, or as a claim towards the training institutions.

Below, we show the 4 quadrants (the abscissa axis corresponds to the frequency of the evoked words and the ordinate axis corresponds to the order of importance of these terms, as supported by the actors) (Figure 1).

Figure 1. Quadrants (Hierarchical Evocation Technique)

P 1 (-+)	P 2 (++)
P 4 (--)	P 3(+)

P2 (++) quadrant: that is the nucleus of the representation and it shows the most frequent and most important categories.

P3 (+-): quadrant where categories of low frequency and high importance are located.

P4 (- -): the least important, which are also the least frequent categories are shown here.

P1 (-+): in the P1 quadrant are the low frequency and high importance categories.

Briefly: the importance that each category has for each group is expressed by the position reached by the emerging categories shown in each quadrant.

Procedures

In the 3 researches we worked face to face with the actors. The time for the application was unlimited and, at the same time that the semi-structured survey was answered, opinions were provided. They were complemented with an interview conducted by those who were really interested in continuing with the research. The interviews were recorded and then transcribed. In all 3 studies, informed consent was requested and the material was collected personally.

Results

We present the results in the same order: R&D, PICTO and IAM.

1) R&D Research

Table 1. Satisfaction Indexes

	Minimum	Maximum	Mean	Deviation
Planning	50.77	100.00	88.7590	10.0119
Atmosphere at Work	44.71	96.47	80.5409	10.5910
Supervision/Boss	2.50	100.00	74.3000	26.2832
Level of Satisfaction with Co-workers	6.67	100.00	63.4234	25.2896
Material Factors	21.54	92.31	61.9982	14.7697
About one's Job	35.00	91.67	61.6858	12.2830
Responsibility	10.00	100.00	58.7059	28.0216

As shown in the grid (Table 1), the highest level of Satisfaction is present in the variables Planning (88.75) and Atmosphere at Work (80.54), while the index for Professional Mobility is among the lowest (53.99). The variables which were central for this research were correlated (cf. Aparicio, 2014). The 8 items in this grid include the level of Satisfaction of the members regarding their chief's competence, his/her personality, his/her qualifications as a leader, his/her support, etc. The index varied between 2.50 and 100.00, with the mean of 74.30 and the standard deviation of 26.28, which indicates a high level of satisfaction.

Briefly: general in satisfaction on the part of the subjects towards their bosses or leaders became a relevant issue of these scientific-academic *sui generis* organizations.

Other results were (Aparicio, 2014, 2022 b): No co-relation was found between mobility and product. It becomes clear that there is a positive significant association between Professional Mobility and the indexes for Satisfaction at work, Responsibility for specific tasks and Planning; and a negative significant association with the Boss/Supervisor (Table 2).

Table 2. Co-relation between Professional Mobility and Indexes of Satisfaction

	Atmosphere at work	About the job	Responsibility	Material Factors	Supervisión	Planning	Satisfaction with co-workers
Mobility Index	.086	.370***	.407***	-.013	-.436***	.276**	.028

* Significant co-relation 10% (p <0.10)

** Significant co-relation 5% (p <0.05)

*** Significant co-relation 1% (p <0.01)

Let us now observe the co-relation between Professional Mobility and Satisfaction in "hard" and "soft" Sciences.

Table 3. Co-relation between Professional Mobility and Indexes of Satisfaction. “Hard” Sciences

	Atmosphere at work	About the job	Responsibility	Material factors	Supervision	Planning	Satisfaction at work
Mobility Index	.040	.488***	.576***	.011	-.455***	.278	.038

* (p <0.10)

** (p <0.05)

*** (p <0.10)

Considering now hard or soft sciences as variables (Table 3 and Table 4), we observe that, in the context of “hard sciences” (Table 3), Professional Mobility is positively and significantly associated to the indexes for Job (0.48 at 1%) and Responsibility (0.57 at 1%). There is, in addition, a negative significant co-relation with the index for Satisfaction with bosses or directors (-0.45).

Table 4. Co-relation between Professional Mobility and Satisfaction Indexes. Social and Human Sciences

	Atmosphere at work	About the job	Responsibility	Material factors	Supervision	Planning	Satisfaction at work
Mobility Index	.122	.233	.180	-.013	-.456**	.354**	.030

* Significant Co-relation 10% (p <0.10),

** Significant Co-relation 5% (p <0.05),

***Significant Co-relation 1% (p <0.01)

Here, a negative and significant association can only be found in the index for Satisfaction with the Supervision or the unit's leader (-0.456 at 5%), while there is a positive association with Planning (0.354 at 5%). See Table 4.

Analyzing the grid of co-relations (Pearson), we can see that significant associations at 1% and 5% between Professional Mobility and Satisfaction are different in the “hard” and “soft” sciences grid, which implies that each disciplinary group values different aspects of satisfaction.

In other words, the most movable subjects in “hard” sciences find satisfaction in some aspects – typically present in their discipline – which are different from those in “soft” sciences (Crane, 1972; Gaston, 1972).

There is only one aspect in common: researchers from both fields feel they are not satisfied with leadership in their teams.

In other words, there is a low valuation/discontent with the team Director/Chief.

2 and 3. PICTO – IAM

Doctors (PICTO and IAM) were asked about the following Nodes/Items among other aspects: a) What competencies do they claim from the University)?; b) Strengths of the training provided by their University. They were also asked about: 1. What competencies do companies that recruit “hard sciences” PhDs and PhD Students value most? 2. What competencies are valued as a priority by soft science university companies?; 3. What competencies value the Universities about PhDs and PhD Students inserted in the field of “hard” sciences?; 4. What competencies do universities value about university students trained in the field of “soft” sciences?

Finally, it should be noted that concerning the problem addressed, the following qualitative dimensions were also observed. Among them: Innovation, Creativity, Satisfaction, Influence of Automation and Robotics (positive and negative); Priority changes that would be introduced in the Education System and in the Employment System.

Let us observe now, according to PICTO or IAM research works separately.
PICTO (UNCuyo PhDs)

Here we recover several items (the item number at the end takes up the item number in the semi-structured survey).

Table 5. Dimensions to which Professional Success is Attributed (Item 47a)

Subjects		26	
Sub-categories		4	
Frequency	Maximun	104	100%
	High	26.00	25%
Importance	Maximun	260	100%
	High	55	21%

Importance	<<Training Dimension>>	<<Economic Dimension>>	<<Cognitive- Procedural Dimension>>	<<Relational- Motivational Dimension>>
1	4.8%	1.0%	4.8%	11.5%
2	2.9%	0,0%	6.7%	10.6%
3	2.9%	1.9%	2.9%	13.5%
4	2.9%	1.9%	3.8%	10.6%
Frequency	14	5	19	48
	13.5%	4.8%	18.3%	46.2%
Importance	Low	Low	Low	High
	38	10	51	120
	15%	4%	20%	46%
	Low	Low	Low	High

Figure 2a. – 4 Planes

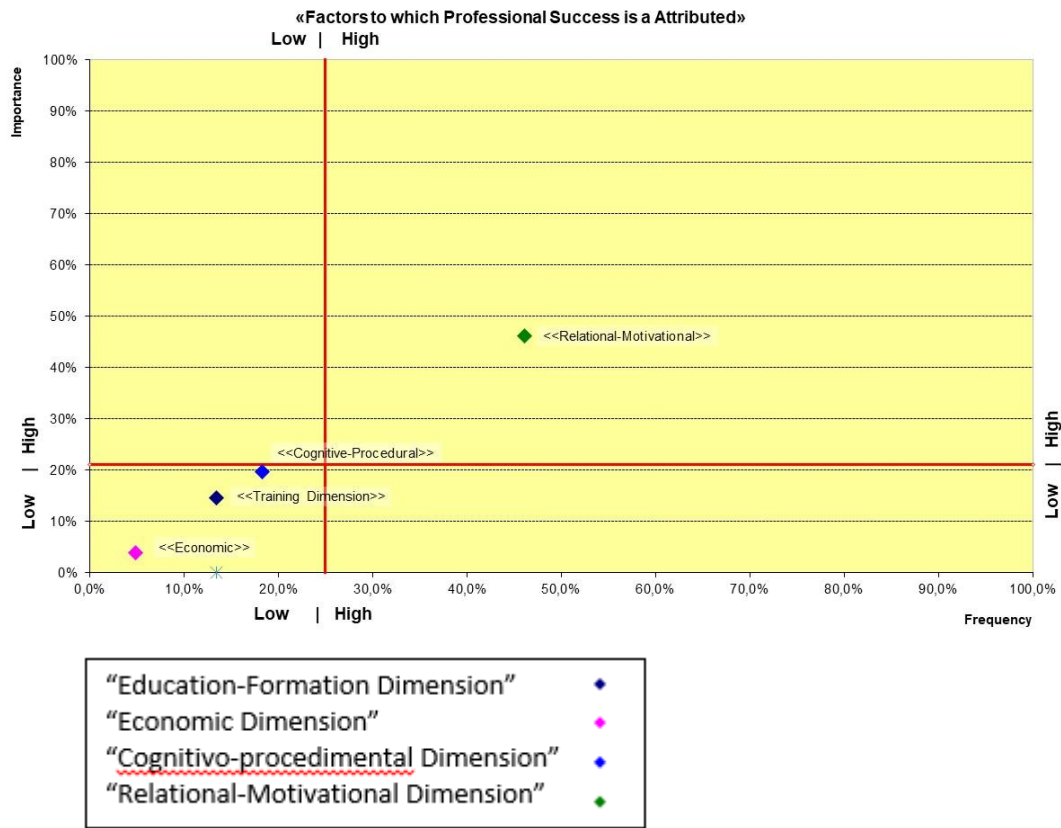
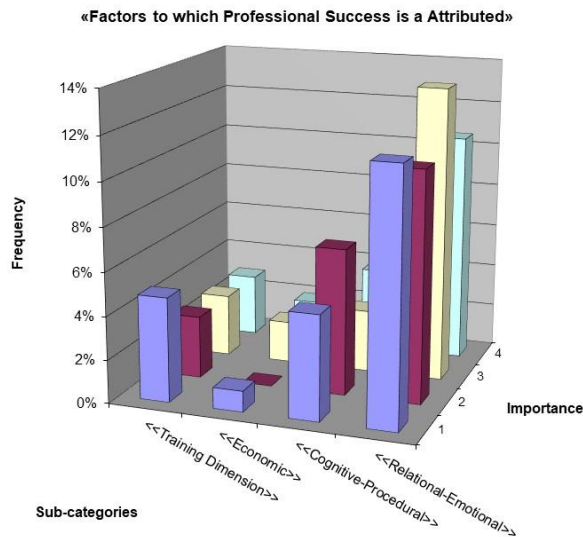


Figure 2b. – 3D (Three Dimensions)



As it can be seen in the Figure above only the Relational-Emotional factor enters the core (P2) of the representation relative to Achievement Factors. It is, by far, the most relevant (hereinafter, FH – Frequency High; 46.2%; IH - Importance

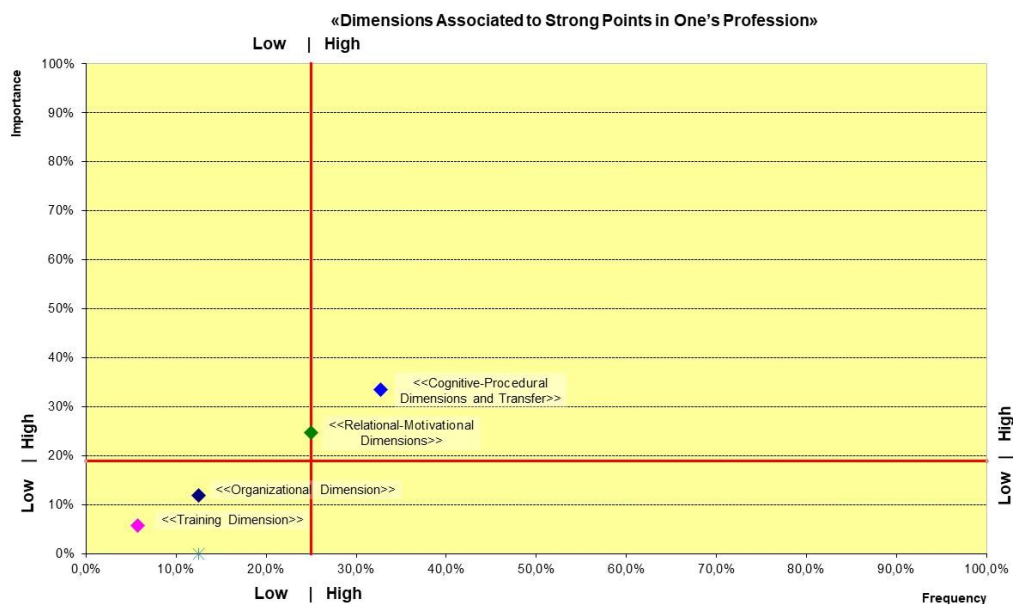
High, 46%). However, the term Leadership does not appear. Cf. Table 5, Figure 2 a – 4 Planes; Figure 2 b – 3D (Three dimensions). (cf. PICTO report).

Table 6. Dimensions Associated to Strong Points in One’s Profession (Item 50a)

Subjects		26	
Sub-categories		4	
Frequency	Maximum	104	100%
	High	26.00	25%
Importance	Maximum	260	100%
	High	49	19%

Importance	<<Organizational Dimension>>	<<Training Dimension>>	<<Cognitive- Procedural Dimension and Transference>>	<<Relational- Motivational Dimensions>>
1	2.9%	1.9%	9.6%	3.8%
2	2.9%	1.0%	6.7%	9.6%
3	2.9%	1.0%	8.7%	5.8%
4	3.8%	1.9%	7.7%	5.8%
Frequency	13	6	34	26
	12.5%	5.8%	32.7%	25.0%
	Low	Low	High	High
Importance	31	15	87	64
	12%	6%	33%	25%
	Low	Low	High	High

Figure 3a. – 4 Planes



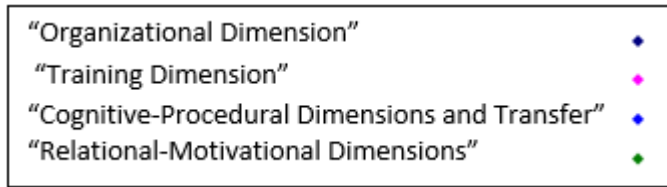
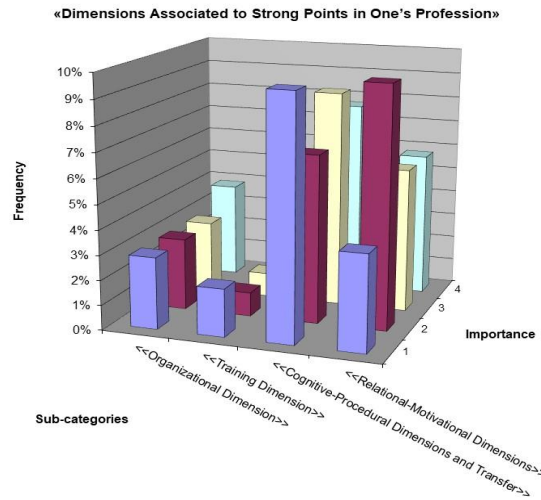


Figure 3b. – 3D



Once again, the Relational-Emotional Dimension (FH, 25%; IH, 25%) enters the nucleus (P2). However, the Cognitive-Procedural and Transference Dimensions, which was also located in P2 (see Figure of 4 planes or quadrants), was much more relevant, as far as we are concerned, the word Leadership was never mentioned (See Table 6, Figure 3a and 3b).

Table 7. Define what Competencies / Values are Required for Leadership (Item 100.3)

Subjects		26	
Sub-categories		4	
Frequency	Maximum	104	100%
	High	26.00	25%
Importance	Maximum	260	100%
	High	49	19%

Importance	<<Training / Competencies and other Factors>>	<<Relational and Management Competencies>>	<<Affective-Competencies>>	<<Cognitive- Procedural Competencies>>
1	3.8%	7.7%	5.8%	1.9%
2	2.9%	9.6%	3.8%	2.9%
3	2.9%	9.6%	2.9%	2.9%
4	0.0%	7.7%	7.7%	2.9%
Frequency	10	36	21	11
	9.6%	34.6%	20.2%	10.6%
	Low	High	Low	Low
Importance	31	90	50	26
	12%	35%	19%	10%
	Low	High	High	Low

Figure 4a. – 4 Planes

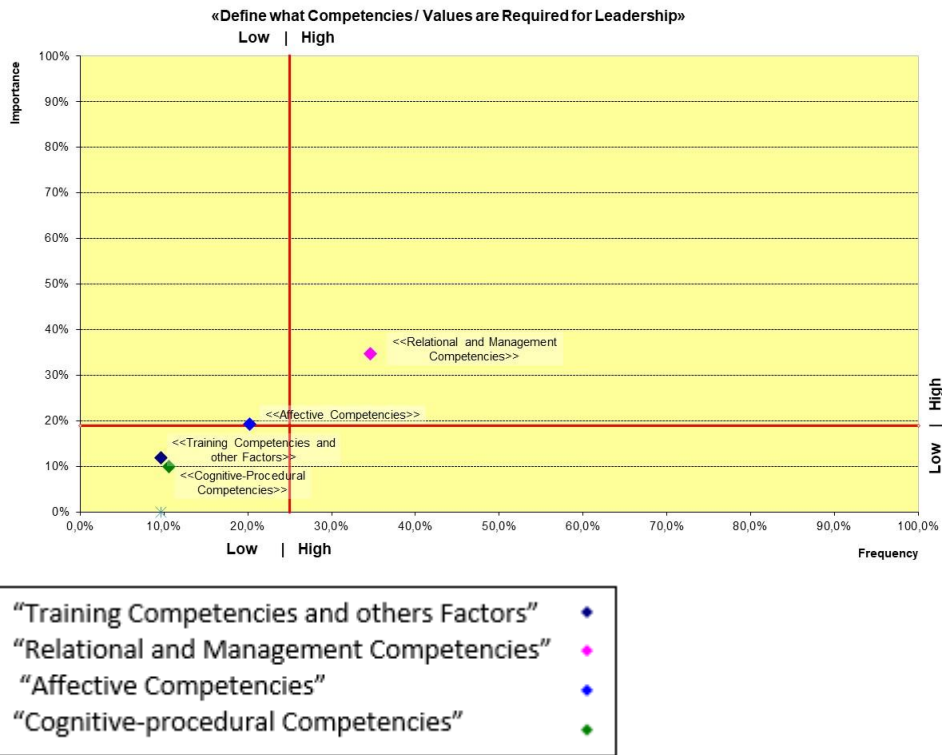
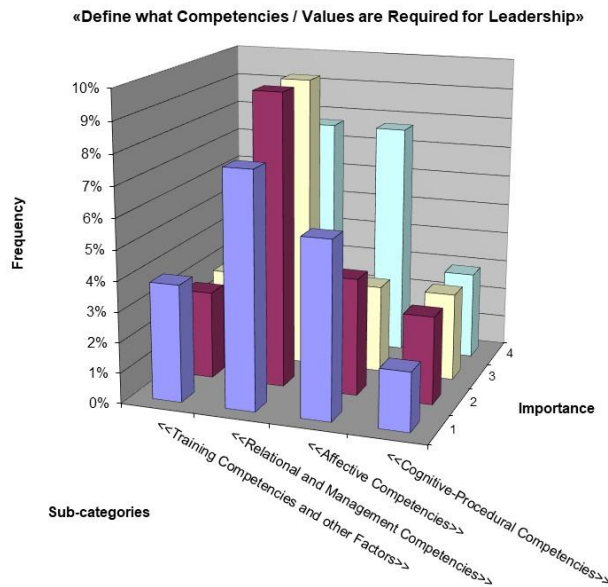


Figure 4b. – 3D



As it can be easily seen, only the category “Relational and Management Competencies” (FH, 34.6%; IH, 35%). enters the core of the representation. The term Leadership as an essential competency currently appears only twice. (See Table 7, Figure 4a and Figure 4b).

3. IAM

Table 8. Values of a Person Leading an Organization (Item 38.4)

Subjects		23	
Sub-categories		4	
Frequency	Maximum	92	100%
	High	23.00	25%
Importance	Maximum	230	100%
	High	40	17%

Importance	<<Educational Dimension>>	<<Socio-Cognitive – Management Dimension>>	<<Economic Dimension>>	<<Relational-Motivational Dimension>>
1	33%	4.3%	1.1%	16.3%
2	1.1%	8.7%	0.0%	14.1%
3	4.3%	4.3%	0.0%	12.0%
4	1.1%	4.3%	0.0%	10.9%
Frequency	9	20	1	49
	9.8%	21.7%	1.1%	53.3%
	Low	Low	Low	High
Importance	24	52	4	131
	10%	23%	2%	57%
	Low	Low	Low	High

Figure 5a. – 4 Planes

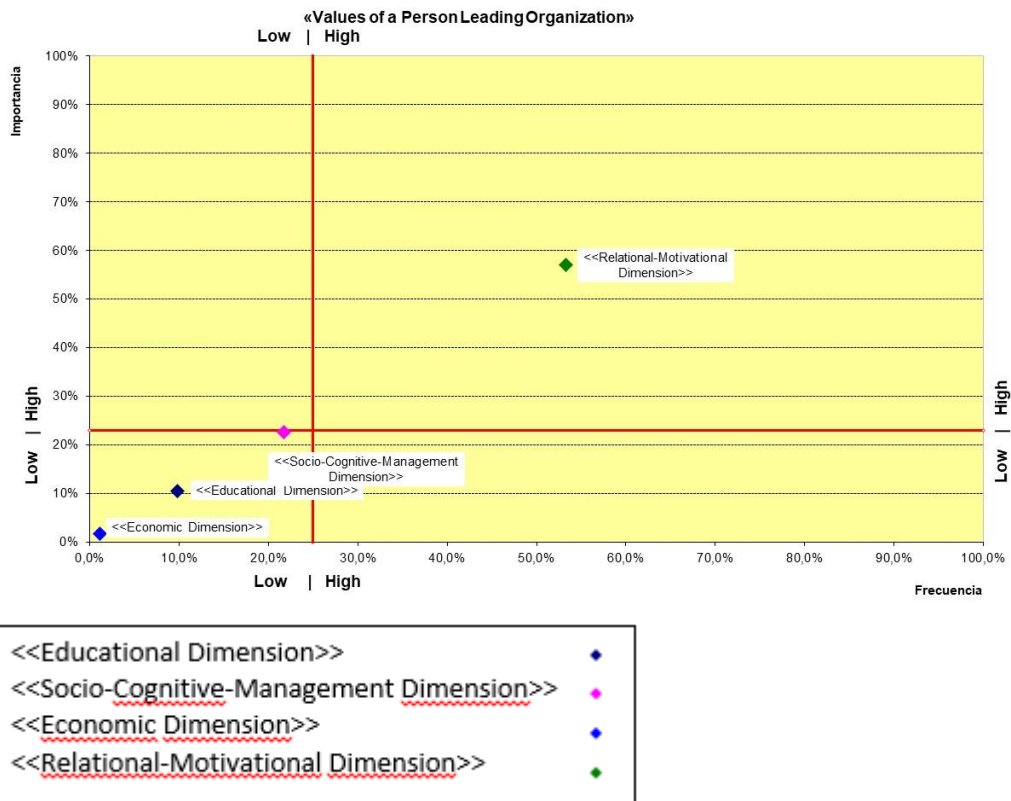
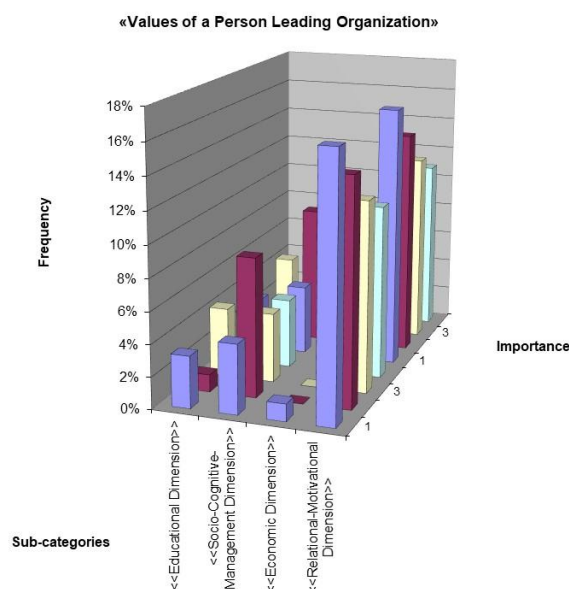


Figure 5b. – 3D



As it can be easily seen, the Relational-Motivational Dimension is the only one that is located in the nucleus; thus being the most significant (FH=53.3%; IH=57%), followed very distantly by the other dimensions located on the periphery. (See Table 8, Figure 5a and Figure 5b).

The subjects who participated in International Exchange Programmes mentioned the Relational-Motivational dimension 49 times in total, followed by the Socio-Cognitive dimension. That is, they recognized its importance regarding employability and their future. They also mentioned different terms related to social and management competencies. However, they did not reach the core of the representation; that is, they were considered secondary.

Indeed, only one (1) subject mentioned the term Leadership. He himself comes from a state-of-the-art university and is an engineer (he is doing a PhD in France). In many other items that respondents were inquired about, the results were along the same line.

Table 9. Competencies to be Developed in Students (Item 500.d)

Subjects		23	
Sub-categories		4	
Frecuency	Maximum	92	100%
	High	23.00	25%
Importance	Maximum	230	100%
	High	34	15%

Importance	<<Training Dimension>>	<<Social-Competencies Dimension>>	<< Socio-Cognitive-Procedural Competencies Dimension>>	<<Competencies for Life>>
1	2.2%	4.3%	7.6%	1.1%
2	3.3%	6.5%	5.4%	0.0%
3	2.2%	5.4%	5.4%	1.1%
4	1.1%	7.6%	1.1%	1.1%

Frequency	8	22	18	3
	8.7%	23.9%	19.6%	3.3%
Importance	Low	Low	Low	Low
	22	51	54	7
	10%	22%	23%	3%
	Low	High	High	Low

Figure 6a. – 4 Planes

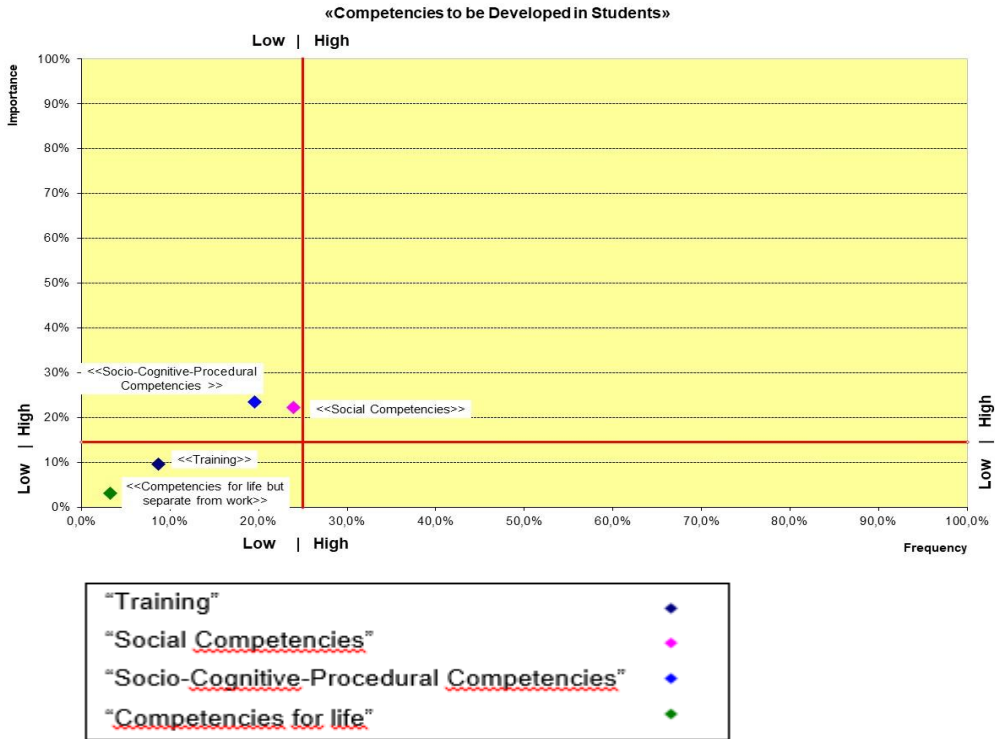
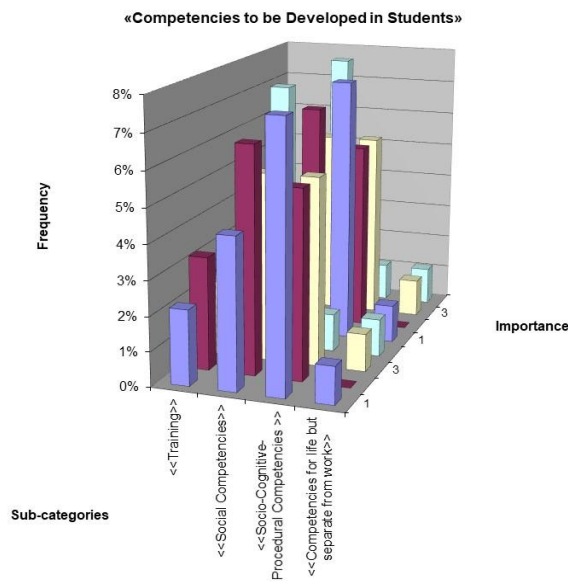


Figure 6b. – 3D



The figures in Table 9 entitled “Competencies to be Developed in Students” exempt from comment: no category entered the nucleus of the representation shared by PhDs and PhD students (IAM). The silences “speak” for themselves. The response rates were very low. In general, they did not know what the term competencies strictly alluded to. Consequently, they could not say which competencies the university system should prioritize in order to respond to the current demands of the world of work. (See Table 9, Figure 6a and 6b).

Discussion

1) R&D Research

The research of which we only address the Leadership variable here-shows, globally, that there are non-linear relationships between psychosocial, grassroots, and organizational variables in the scientific system (bosses/members).

Our results show that – among those who participated in Mobility programmes– the observed levels of Satisfaction with their group leader/chief, are not independent from Professional Mobility or from the associated fields of specializations. a) A significant association exists between Professional Mobility and Satisfaction at work, with no distinction between “hard” and “soft” sciences (disciplinary fields). b) Making a distinction between the two types of sciences, it can be detected that there exists a different association between the factors playing a role in the variables Satisfaction at work and Professional mobility in both “hard” and “soft” sciences. This reveals different professional, disciplinary, and personal identities (cultural homogenization/“invisibles colleges”). c) The only variable on which they agree in “soft” and “hard” sciences is the negative evaluation of the leader, which is our central variable here. In addition, other results are of interest. d) There is no correlation between Production and General Satisfaction. In addition, there are non-linear relationships between Professional Mobility and Satisfaction in relation to psychosocial and organizational factors in scientific groups (bosses/members). That is, those who reached higher levels within the scientific system do not find, within the same system, rewards or incentives related to their professional growth, taking into account the statistics of recent years and the macro-national situation. In other words, the more one achieves and, the higher level one reaches in the hierarchical scale, the more difficult it is to maintain the level achieved in economic terms (international stages, attendance at prestigious international conferences, publication in the best indexed journals of the WOS) and in psychosocial terms, with negative consequences (stress, burnout, demotivation).

Besides, the more the subject develops professionally, the more he/she expects from his Chiefs/Leaders. In this sense, what would be observed is a fall in Expectations. In other words, for the members of the team, the leaders lead little: lack of interest, apathy, lower relative production are evident, generating discontent in the group, regardless of the disciplinary field. Leading means making the changes that need to be made and having convictions, expectations and generating transformations. However, these changes are increasingly difficult to implement,

due to macro structural barriers; a problem that tends to worsen both in the scientific field and in the universities.

These findings could be interpreted in the light of different theories.

The Expectancy-Valence theory (Weiner, 1980; Feather & Davenport, 1981; Aparicio 2015a; Eden & Shani, 1982) offers an interpretative framework along the line: the higher the expectations for something that has a high value, the bigger the feelings of failure and helplessness when that is not possible to be achieved or does not meet the expectations generated.

From the “Investment-Model Theory” viewpoint (Becker, 1964), those who have reached a higher position and made a greater effort towards higher achievements of the group may expect more benefits, many of which are associated to management. Such benefits do not crystallize due to structural and organizational problems, having derivations in the behaviour of the Boss or Leader; behaviour that would be associated with the discontent found in the groups before a low “presence” of this psychosocial competence: leadership.

In short, the findings show an interplay between scientists, organizations and macro-structural contexts: bosses and members were part of a structural context which imposed important limits to promotion and development.

2 and 3) PICTO – IAM

The low appreciation of Leadership as such, shows a shortcoming in terms of university training. In Latin America, in general, and also in our country, the disciplinary aspects continue to be emphasized. On the contrary, the countries that lead the ranking in terms of learning (cf. OECD, 2000, 2016 a and b, 2017 b, 2018), the focus is on procedural knowledge and knowledge for life, on action knowledge. Finally, you can see other relevant publications on the problem of competencies and, particularly, social competencies (Cf: Rychen, 2016; Grayling, 2017; Bentley, 2017; Steimberg, 2017; Raiz, Zubair, Shanboz, 2017; Laukonnen, Biddel & Gallagher, 2018; Ehlers & Kellerman, 2019; Shoom, 2021; Field, 2023. OCDE: 2015 a, 2015 b, 2015 c, 2015 d, 2015 e, 2017, 2018, 2022 a, 2022 b, 2023 a, 2023 b; OECD and ILO, 2018).

Conclusion

The researches show low Satisfaction with the scientific leader and low valuation from the university PhDs; both are groups that have experienced a high professional-academic mobility.

In the research with scientists (R&D), the findings reveal that contentment among researchers varies depending on their professional mobility and disciplinary domains. In terms of leadership, the only common factor among researchers of the “hard sciences” and “soft sciences” was Dissatisfaction/Discontent or Nonconformity with the Chief/Director. In other words, this was the only common result among the multiple correlations analysed between Mobility, Professional Satisfaction, Product, Sciences “soft” and “hard” and Leadership.

Among Argentine PhD students and doctors (PICTO), Leadership as such is not mentioned, despite recognizing the importance of psychosocial and relational competencies, among other factors to be developed or prioritized when considering employability. If it is analysed according to trajectories the awareness of its importance (although it was observed through factors associated with Leadership but without referring to Leadership itself), increases within the framework of trajectories linked to exact and natural sciences and engineering.

Finally, among the Argentine exchange PhD students who participated in international academic mobility programs in France (IAM), the word was only mentioned once; word that was expressed by a graduate who came from one of the universities considered of excellence in the country.

This indicates a low awareness of its importance in the current work context, seen from the shared/social representations of the subjects (micro plane). And, linked to this, low awareness inferred from training institutions (mésó level), all of which will impact the possibilities of macro-national development and innovation (Aparicio, 2015a and b).

If we return to the hypotheses, the first one is not confirmed: Satisfaction concerning the leader in scientific organizations varies according to the disciplinary fields (soft and hard sciences). The second one, on the other hand, is confirmed: Satisfaction with the leader is not related to Productivity or Professional Mobility in the scientific pyramid (“soft” and “hard” sciences).

The findings are nonetheless surprising because, in academic debates and in daily life itself, this factor is frequently linked to achievement and innovation at the national micro, mésó, and macro levels; three planes that, in their self-sustaining interplay, constitute the pillars of the author's theory “The Three Dimensional Spiral of the Sense” (2015a and b).

This low appreciation of Leadership, both among scientists and university members of the highest level (doctorate/master), places the university institutions before a challenge: to reaffirm essential competencies currently for the management of organizations and for the development of individuals and countries.

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Teachers' Perspective on Online Learning during COVID-19: A Case Study in Greek Primary Schools

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The global pandemic due to COVID-19 has changed the way of teaching, and Online Learning came to the forefront. The aim of this study is to investigate primary school teachers' perceptions on Online Learning during the COVID-19 pandemic. A case study was conducted with 14 teachers from 5 Primary Schools in Greece. A thematic analysis of the semi-structured interviews showed six themes: Motivation, Support, Strategies, Benefits, Challenges and the Future of Online Education. First of all, teachers showed their initial stress, progressively their high motivation and, at the end, their tiredness. In addition, teachers perceived as important the support from different groups of people, including students' parents, colleagues, the school principal and family members. They also used a variety of instructional strategies for the implementation of Online Learning, such as the use of asynchronous online platforms, the use of educational videos and internet-based learning materials. Moreover, teachers perceived that they have benefited from this experience by digitising new teaching material and by maintaining the learning process. However, they have faced a considerable number of challenges, such as lack of resources, technical problems, lack of training and difficulty in the participation of all the students. Finally, teachers were uncertain about the future of Online Learning without denying its possible use as a complementary tool. To conclude, implications for practice and for future research are discussed.

Keywords: perceptions, teachers, primary education, online learning, pandemic COVID-19

Introduction

The continuous development of Information and Communication Technologies (ICT) has transformed the concept of Distance Learning and Online Learning (Ravanelli & Serina, 2014). The situation of pandemic caused by the SARS CoV-2 [COVID-19] brought to light the relevance of Online Learning as the main mode of transmitting knowledge worldwide. This has forced educators to transform their lessons into online and to digitise all teaching materials in a short period of time (Barbour et al., 2020; Huang et al., 2020; Van der Spoel et al., 2020).

The short transition period from Traditional to Distance Learning created an urgency for the professionalisation of teachers in terms of digitisation (Van der Spoel et al., 2020), with an emphasis on increasing teachers' digital competence. Undoubtedly, the implementation of Online Learning, which appeared as an emergency solution, provided an opportunity to further cultivate and deepen the

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digital skills of the educational community. This could contribute to the formation of a suitable framework for the development and consolidation of digital culture, which is expected to have a positive impact on family and social life (Stachteas & Stachteas, 2020). Likewise, towards this perspective the Agenda of the United Nations Educational, Scientific and Cultural Organisation [UNESCO] is defined, whose objectives have been hampered due to this unexpected emergence of COVID-19 (Portillo et al., 2020).

It has become clear that Online Learning is a modality that has gained much relevance. It is necessary to investigate in detail its implementation so that these enquiries allow us to advance in the knowledge of this type of teaching and that it would be carried out with guarantees of quality and success in Primary Education schools (Fauzi & Khusuma, 2020). Teachers have an important role in a learner's life and thereafter their perceptions play a crucial role in promoting effective teaching, especially when using technology. Therefore, this empirical study can help to bring solutions to Online Learning that might be carried out in Primary schools in the future.

Most of the studies found on this topic bet on the quantitative paradigm (Astuti & Solikhah, 2021; Babinčáková & Bernard, 2020; Catalano et al., 2021; Fakhrunisa & Prabawanto, 2020; Fauzi & Khusuma, 2020; Grivas, 2020; Lapada et al., 2020; Liakopoulou; 2020; Montenegro et al.; 2020; Niemi & Kousa; 2020; Nurliani et al., 2021; Portillo et al., 2020; Stachteas & Stachteas, 2020; Todd, 2020; Van der Spoel et al., 2020). For this reason, the originality of the research presented here is due to the qualitative nature of the methodology employed. Specifically, this study used a qualitative design to investigate Greek teachers' perceptions of online teaching during the pandemic.

Literature Review

Online Learning during COVID-19

The sudden closure of school activity came as a shock to the entire education community (Affouneh & Burgos, 2021). Many institutions maintained the teaching and learning process using online education, opting to cancel all face-to-face instruction to help prevent the spread of the virus (Barbour et al., 2020). Researchers and education practitioners saw Online Learning as a unique opportunity to support both students and institutions, as it fills the gap left by conventional education (Vlachopoulos, 2020).

It is important to note that because Online Teaching was implemented during a period of crisis, it is geared more towards an "Emergency Remote Teaching" which differs in essence with Online Learning (Hodges et al., 2020). Forces beyond the control of educators made them to employ a completely different method than they were used to (Wang et al., 2021). However, under these circumstances, it is very problematic to compare Face-to-Face Learning with Online Learning (Hodges et al. 2020).

The Case of Greece during the Pandemic

According to UNESCO (2021) and data collected from the global monitoring of school closures, Greece maintained a total school closure for 32 weeks, a number similar to most Eastern European countries and one of the highest in Europe. Furthermore, Liakopoulou (2020) highlighted that the Greek government adopted a rather technocentric approach and did not provide training for teachers and coordinators. Teachers from all over the country were invited to teach online, without being adequately prepared for it. Technical support was mainly offered by ICT teachers in each school and later support was given through online platforms (Grivas, 2020).

Also, it should be noted that there were no properly designed teaching materials or adequate logistical and networking infrastructure and technological equipment in the schools (Amorgianioti, 2020). In addition, a complex process was chosen for the initiation of asynchronous learning during the 2019-2020 school year. Later on, during the 2020-2021 school year, more emphasis was placed on synchronous Distance Learning through the Webex platform, however, other obstacles emerged, such as personal data protection and/ or copyright protection, including the fact that these legal issues were not explained in detail to the members of the school community (Liakopoulou, 2020).

Perceptions of Teachers

Various research that found globally, addresses Primary and Secondary teachers' perceptions of Online Teaching during COVID-19 (Aditya, 2021; Amorgianioti, 2020; Astuti & Solikhah, 2021; Babinčáková & Bernard, 2020; Catalano et al., 2021; Fakhrunisa & Prabawanto, 2020; Fauzi & Khusuma, 2020; Grivas, 2020; Lapada et al., 2020; Liakopoulou; 2020; Lie et al., 2020; Montenegro et al.; 2020; Niemi & Kousa; 2020; Nurliani et al., 2021; Orhan & Beyhan, 2020; Portillo et al., 2020; Putri et al., 2020; Rasmitadila et al., 2020; Shamir-Inbal & Blau, 2021; Sokal et al., 2020; Stachteas & Stachteas, 2020; Todd, 2020; Van der Spoel et al., 2020). Organisational and technological challenges perceived by teachers were highlighted, such as identifying motivating activities, grading student assignments, providing feedback on student work, and the challenge of better coordination with peers by teachers, principals and parents (Fakhrunisa & Prabawanto, 2020; Putri et al., 2020; Todd, 2020). Likewise, Rasmitadila et al. (2020) highlighted students' distraction at home, problems with their participation and maintaining their enthusiasm and motivation towards subjects.

On the other hand, the familiarisation time given to teachers was very short, so many felt that it was a temporary solution. They appeared not to be prepared at the beginning of the pandemic (Astuti & Solikhah, 2021). The technological expertise of teachers was very low, as there were teachers who were not proficient with applications, technological tools and computers (Rasmitadila et al., 2020). Orhan and Beyhan (2020), found that most of the educators perceived Online Learning as a technology-oriented process rather than a new teaching model, and therefore maintained traditional teaching techniques and material development during distance classes.

Other studies also mentioned the positive aspects of the new teaching experience and its benefits. Some teachers focused on the pedagogical value of Online Learning (Stachteas & Stachteas, 2020; Fakhrunisa & Prabawanto, 2020) and others on the importance of support from colleagues, parents and principals (Rasmitadila et al., 2020). Whilst others focused on the new pedagogical, technical and digital skills they acquired highlighting though the need for further training, the absence of which may increase the perceived challenges (Shamir-Inbal & Blau, 2021).

Last, some studies demonstrated teachers' attitudes, as well as their motivation, fatigue and perceived level of stress caused by this transition to Online Learning (Sokal et al. (2020); Fauzi and Khusuma, 2020). Teachers' previous experience and personal characteristics play an important role in their expectations of this teaching modality (Van der Spoel et al., 2020), as well as deficiencies in their digital competence training (Portillo et al., 2020).

Methodology

Research Problem and Questions

The global pandemic forced educational institutions to adapt to remote learning. In Greece, primary school teachers faced the challenge of moving from traditional teaching to online teaching. Faced with this problem, it is convenient to know and analyse the perceptions of teachers towards this new teaching model, this aspect is a priority in order to evaluate its effectiveness and identify areas for improvement that will allow us to move forward in these educational models.

Research should not simply launch into an exploration without presenting reasons for it (Thomas, 2013). It is about telling what the project will achieve. In particular, this study pursues the following objectives:

General Objective:

- To identify the perceptions of Primary Education teachers in Greece about Online Teaching implemented during the pandemic by COVID-19.

Specific Objectives:

- To investigate the motivation of Primary Education teachers in Greece.
- To examine teachers' perceptions of the school's instructional strategies and personal strategies.
- To explore the technical support available during Online Teaching, according to the perspective of Greek Primary Education teachers.
- To identify Primary Education teachers' perceptions of the benefits and challenges of using Online Teaching during the COVID-19 pandemic.
- To determine the possible change in perceptions between the 2019-2020 academic year when the pandemic started and in the 2020-2021 academic year.

As Silverman (2014) suggests when studying this type of behaviour, it is often best to start without a hypothesis, keeping your research question simple. According to the stated objectives, and the theoretical framework of reference, the research question posed in this study is:

What are the perceptions of Primary School teachers in Greece about the Online Teaching modality that was implemented during the COVID-19 pandemic?

Design and Participants

A non-experimental design was implemented using the qualitative paradigm. Semi-structured online interviews were conducted involving 14 teachers from five public schools in South and West Attica, Greece that used online teaching during the school years 2019-2020 and 2020-2021. Convenience sampling strategies were applied in the sample selection process of this study. In addition, in order to achieve a more diverse sample, gender, age, years of teaching experience, level of ICT training were taken into account by trying to investigate participants with different demographics, levels of education and experience (see Table 1).

Table 1. Participants' Profile

		Frequency	%
Gender	Men	3	21.4%
	Women	11	78.6%
Age	Less than 30	1	7.1%
	31-40 years	5	35.7%
	41-50 years	4	28.6%
	51-60 years	4	28.6%
Teaching Experience	5-10 years	1	7.1%
	11-15 years	4	28.6%
	16-20 years	4	28.6%
	21 years or more	5	35.7%
ICT Experience	Little	3	21.4%
	Basic	7	50.0%
	Advanced	2	14.3%
	Master	2	14.3%

In addition, participants were asked open-ended questions to answer independently and in any way they wished. The structure of the interview was also divided into two parts. The first part included questions on demographic characteristics (gender, age, years of educational experience, level of ICT literacy). The second part of the questions was based on the main topic of the study. The main themes and questions are presented below.

Themes: Teacher Motivation, School and Personal Instructional Strategies, Technical Support, Benefits and Challenges of Online Teaching.

Questions:

1. How have you reacted to the COVID-19 pandemic scenario at the beginning of the crisis and the following school year?

2. Has the level of your motivation been consistent from the initial school closure until the end of last school year? And at the beginning of the new school year until now?
3. What instructional strategies were adopted in your school to implement Online Teaching? What about you as a teacher?
4. Do you think that the methodology used has been appropriate? (Justify)
5. What technical support did you use for the online teaching?
6. What kind of preparations do you carry out in order to create a productive classroom environment in the online learning process?
7. What do you think are the benefits of online learning in general and especially in times of pandemic?
8. What challenges do you see in online learning?
9. What measures have you implemented during the pandemic to improve Online Teaching with your students? What improvements do you think Online Teaching should implement?

Thematic Analysis and Ethical Considerations

Thematic analysis was used for this project following the procedures set out by Braun and Clarke (2006), and also, ATLAS.ti 9 was used to facilitate the initial coding and categorisation. To ensure the transparency of the information provided, the research was conducted in a comprehensive manner, and the transcription and reporting of the data was carried out in accordance with the needs of transparent analysis. In addition, the intention to have a variable, albeit small, sample size also increases the reliability of the results. The ethical guidelines of the British Educational Research Association [BERA] (2018) were followed in this study; consent forms were secured, anonymity and consent for the recording of the interview was guaranteed.

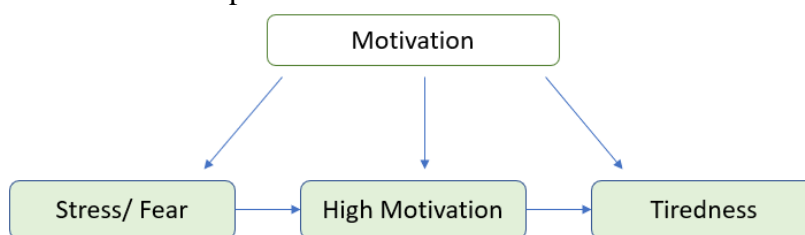
Results

After coding the interview transcripts, 32 codes/themes emerged, which were categorised and prioritised into six broad categories. These categories are: Motivation, Support, Strategies, Benefits, Challenges and the Future of Online Education, which will be analysed below.

Motivation

Firstly, it seems that some teachers expressed some stress and fear at the beginning of the implementation of Online Learning. As it was a new experience for most of them, they mentioned that they did not know how they should act and what to do (see Figure 1).

Figure 1. Thematic Map: Motivation



One teacher mentioned that *"at the beginning I was scared and nervous as I had never worked on the Webex platform because there was no do need to use it professionally before"* (Teacher 14, 45. F. basic). In any case, they all perceived that there was a relaxation during the second wave of pandemic as they already had the experience of the first round of implementation of Online Teaching.

Most of the teachers interviewed who expressed fear and stress, had little experience with the technologies and only one teacher had experience at Master's level. This perhaps means that previous experience with the technologies may have affected the initial reaction in terms of motivation of the teachers interviewed. Those who had previous experience in using technology or experience in this type of teaching modality felt more confident. Moreover, this initial fear was expressed from both younger and more senior teachers.

On the other hand, almost all teachers showed high motivation to use this kind of modality. Some directly from the beginning and others after their first online contact expressed that they wanted to support their pupils as they loved these children and their job.

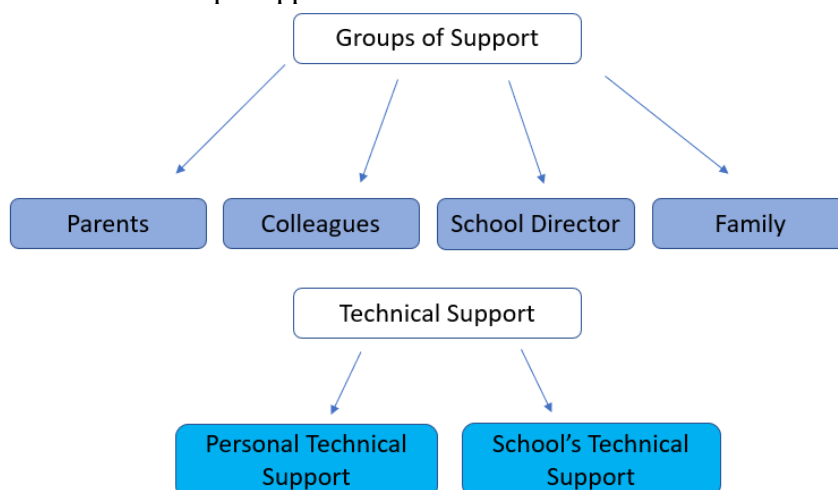
However, the motivation of the teachers went through many uncertainties.

Towards the end, just before Easter, I felt tired... I felt that it was time for schools to open again, that we had to stop this whole process... psychologically I couldn't do it anymore, imagine that during the Easter holidays I didn't even want to turn on the computer anymore (Teacher 2, 53. F. master).

Support

The Support category includes different kinds of support that teachers received both on a personal and technical level, and was therefore grouped into two subcategories: "Support Groups" and "Technical Support". On the one hand, the different groups of people who supported the teachers were the students' parents or their own family members, colleagues and the school principal. On the other hand, the technical support is divided between the "Personal Technical Support" and the "School's Technical Support" (see Figure 2).

Figure 2. Thematic Map: Support



First of all, all the teachers interviewed perceived support and communication with the students' parents as important. They maintained a continuous collaboration with them and consider their role in the implementation of Online Learning as indispensable. Moreover, teachers reported that most parents were at their children's side to look up, upload or print homework assignments and explain homework to them. However, teachers also noted that there were parents who were not involved and did not communicate regularly.

On the other hand, the role of both the school principal and the collaboration between colleagues was an important support that was particularly emphasised in the teachers' interviews. Teachers highlighted that by working in groups they helped each other and acted as a team.

The ICT teacher helped me personally with Webex. He taught me what he knew, how to turn off the platform, how to test the microphone, how to test the camera, etc. So, it was the colleagues' solidarity in the school that helped me (Teacher 12, 29. F. little).

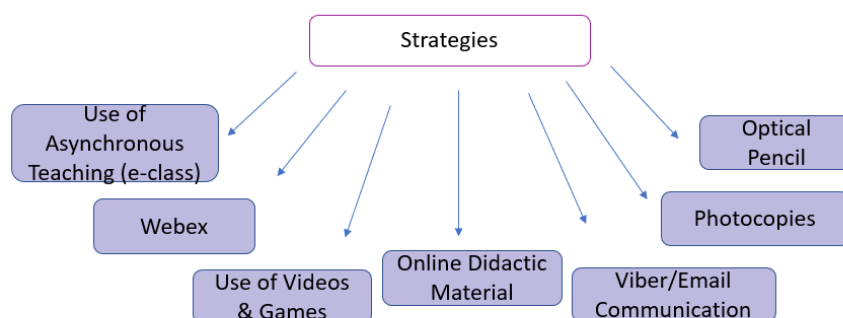
Also, a few teachers highlighted the importance of the psychological support and technical support they received from family members, such as their partners, their own children or their friends.

At the same time, the technical support they received was either from their school, or equipment belonging to themselves or their family members. On the other hand, there were teachers who had to make a financial outlay to buy technical support from their own budget.

Strategies

Teachers used various strategies during the implementation of Online Learning, such as the Webex and e-class platform, the use of educational videos and games, the use of online didactic material, photocopies for homework, communication with parents via the Viber application and emails, and the use of optical pencil (see Figure 3).

Figure 3. Thematic Map: Strategies



Synchronous and Asynchronous teaching was used in a complementary way. *Along with Synchronous Teaching, I used Asynchronous because some students might not have been able to connect, so the lesson material, the instructions, I uploaded them to e-class...and everyone could see the assignments, what we had done, or send me questions if they didn't understand something* (Teacher 7, 35. F. basic).

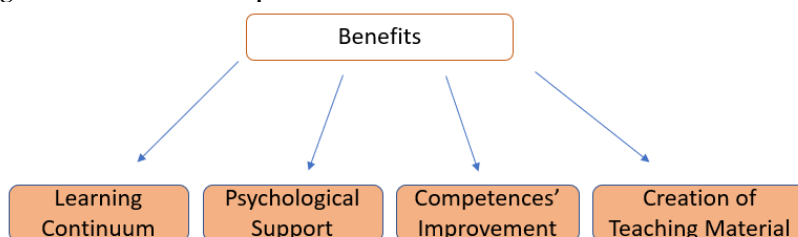
On the other hand, there were many teachers who used the Viber application or e-mails for communication and not the e-class platform recommended by the Ministry of Education and Religion. With these communication tools (Viber and email) it seemed easier and quicker for them and the parents to communicate. Another strategy of the teachers was the use of didactic material they found on the internet or Open Educational Resources (OER) such as blogs, photocopies already made by other teachers that they thought could be useful and they shared and used them with their students.

It is also important to note that many of the teachers who participated in the research attempted to continue the traditional model of teaching. Therefore, they prepared photocopies, sent them to the students and their parents printed them out. Teachers mentioned that *"they sent the photocopies during the weekend so that parents had time to print them"* (Teacher 10, 36. M. advanced), and that *"for students who could not print, they sent the homework to the principal and the parents picked it up from school"* (Teacher 12, 29. F. little).

Benefits

Four themes emerged from the data analysis that were grouped under the category of Benefits that teachers perceive to have gained from the implementation of Online Learning. These are: continuity of learning, psychological support, creation of teaching materials and improvement of their digital competences (see Figure 4).

Figure 4. Thematic Map: Benefits



Firstly, teachers mentioned that *"the only solution during the pandemic was Distance Education"* (Teacher 7, 35. F. basic). *"They were not so much concerned about the curriculum, whether students would be left behind, etc., but mostly that students would not lose contact with the school"* (Teacher 10, 36. M. advanced). Many of them see it as a *"necessary evil"* for the continuity of learning and contact with students.

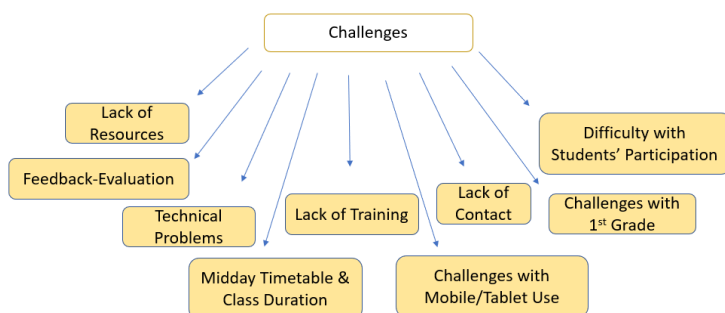
At the same time, according to the teachers, the monitoring of online classes functioned as a psychological support for all parties involved. In particular, one teacher emphasised that *"he thinks that with many of his students he is closer now, because he was there when they needed him.... he was their psychological support"* (Teacher 10, 36. M. advanced).

On the other hand, it is interesting that many teachers perceived the creation of the didactic material as a benefit, even though it is very time-consuming. *"It was an opportunity to update it as I had to reconstruct everything digitally"* (Teacher 2, 53. F. master). Among the digital material they created presentations, photocopies, own texts, exercises, etc. Finally, the teachers emphasised that they improved their skills and that *"this occasion also allowed them to update their pedagogical methodologies"* (Teacher 4, 38. F. master).

Challenges

Nine themes emerged from the data analysis that were grouped under the category of teachers' perceived challenges in dealing with Online Learning during the pandemic. These are challenges that teachers believe call into question the effectiveness of the implementation of Online Learning (see Figure 5).

Figure 5. Thematic Map: Challenges



First of all, it is essential to note that almost all teachers mentioned that there was no infrastructure for the implementation of Online Learning. Moreover, during the second school year it was compulsory. The schools are not equipped to offer quality Distance Education to the students. Also, there were families with many family members that needed more computer resources and they did not have enough devices for everybody.

The government depended on us and we paid for everything at our own expense, I had to upgrade the internet line at home to be able to do the lesson, get a new computer, get an optical pen to write and send materials... (Teacher 9, 50. F. basic).

Apart from the lack of resources, teachers highlighted that there were often technical problems that made distance learning difficult. In particular, the connection was bad, microphones did not work, platforms collapsed and many computers were obsolete.

At the same time, quite a few teachers mentioned that challenges arose with the use of the mobile phone or tablet. Many students used their mobile phones, which made it difficult for them to participate in the lesson. In particular, *students using the mobile phone found it more difficult to concentrate, to see what was on the screen because it was small, or to do homework and send it to us* (Teacher 9, 50. F. basic).

Also, most of the teachers perceived the difficulty in assessing students within the Online Learning. They perceived that it was much more time-consuming to correct the students' assignments as the correction was through the pictures they received with the completed homework. Similarly, many teachers found it difficult to implement Online Learning with students in the first year of Primary school, mainly due to their age and the fact that they cannot read and write yet, a distance collaboration was more difficult. Also, *"it is difficult for them to sit so many hours in front of a computer and follow the programme they are given"* (Teacher 6, 37. M. basic).

On the other hand, the teachers interviewed find it difficult to follow the midday timetable proposed by the Ministry of Education and Religion, and the 30-minute duration of each class. Some teachers suggested that *"because it is a special condition, the classes have to be readjusted"* (Teacher 10, 36. M. advanced).

In addition, many teachers highlighted that one of the main drawbacks is related to socialisation and the absence of pupils' contact due to Online Learning. *"These two generations of children were deprived of many things that face-to-face education offers ... their friends, socialisation"* (Teacher 6, 37. M. basic).

Also, most of the teachers perceived a lack of training to take on this teaching modality with quality guarantees. They say that they would like to be updated and better trained in Online Learning. They consider that the few seminars that were given were very theoretical, optional and offered very late, which forced them to "train themselves".

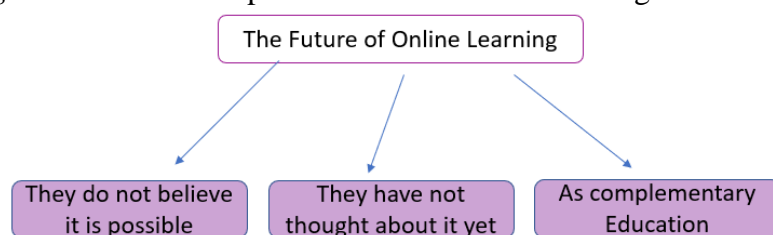
Finally, there were students who, due to their learning difficulties or the lack of training of their parents, or sometimes due to financial difficulties, were not able to participate and have the corresponding attention from the teacher during Online Learning. Therefore, when they returned to face-to-face learning at the end of the school year, they made less academic progress compared to the rest of the class. In particular, some teachers expressed their concern, *"the students who had difficulties came back with more difficulties...or some students got lost within this process"*

(Teacher 5, 52. F. little). However, other teachers mentioned that there were cases of students who, although they had attention deficit or hyperactivity, had more participation during the online classes. Concluding that *"may be due to the fact that there was less distraction because they had their parents next to them"* (Teacher 4, 38. F. master).

The Future of Online Learning

In terms of teachers' perceptions of a future use of Online Learning, three categories emerged: teachers who do not think it is possible and those who have not yet thought about it. In addition, there is a group of teachers who consider its use in a complementary way (see Figure 6).

Figure 6. Thematic Map: The Future of Online Learning



On the one hand, some teachers were opposed to the future use of Online Learning in Primary schools, stating that it was something they did not want to do again and that it would be quite tedious to use two forms of teaching, face-to-face and online, at the same time. Therefore, according to their perspective it is a form of teaching that they would only use in emergency situations or because its implementation would be compulsory.

I wouldn't like to use Online Teaching in the long term, I don't know why... maybe I don't feel so confident, I don't feel the satisfaction of being able to offer what I have prepared in my mind or I don't see the result in the students as I expect (Teacher 5, 52. F. little).

On the other hand, other teachers were sceptical about the future use of Online Education. It is something they have not yet thought about and cannot answer. Finally, there were some teachers who stated that they would like to use Asynchronous Teaching as a complementary instruction. That is, to integrate into their teaching the use of a platform, e.g., e-class, for uploading lesson material, extra material or feedback to students.

You can easily combine an asynchronous platform to create your flipped classroom. That is, you can send your videos through the platform, your questions, your feedback and whatever you want for the course and at the same time do Face-to-Face Teaching. (Teacher 1, 43. F. basic).

Discussion and Conclusions

In the analysis of the results, the themes that emerged were organised into six broad categories: Motivation, Support, Strategies, Benefits, Challenges and the Future of Online Learning.

When considering the motivation of the teachers in the study, it seems that, according to the results, their motivation went through many variations and concerns: from stress and fear, to high motivation and lately to tiredness. The teachers' tiredness could be justified by the long duration of this situation. This is alarming because high levels of stress over a long period of time can lead to teachers' burnout (Sokal et al., 2020; Tzifopoulos, 2020).

On the other hand, many of the teachers participating in this research, who expressed fear and stress, had little or basic experience with technologies. Previous experience with technologies may have affected the initial reaction in terms of motivation of the teachers interviewed (Van der Spoel et al., 2020; Portillo et al., 2020). However, interestingly, a worldwide research finding of more than 20,000 teachers showed that years of classroom experience also seems to be important when implementing this type of teaching. Older and more experienced teachers were much more willing to experiment with new modes of digital instruction than less experienced teachers (Pota et al., 2021).

As for the category of personal or technical support, both kinds of support were considered very important for the implementation of this learning and teaching modality. In many cases, especially at lower educational levels, such as the first grades of Primary Education, Distance Education is not feasible without extensive parental involvement (Portillo et al., 2020; Di Pietro et al., 2020).

When considering the different strategies, according to the results, several possibilities emerged that teachers in this study used during the implementation of Online Learning (Webex and e-class platforms, Viber application, e-mails, internet teaching materials). At the same time, a quite popular strategy of the interviewed teachers was the use of teaching material they selected from the Internet, such as photocopies, ready-made assignments, videos or educational games, which depending on their use may raise legal issues about copyright protection and Creative Commons licences. However, these legal issues were not explained in detail to members of the school community (Liakopoulou, 2020).

In terms of the benefits of Online Learning, teachers highlighted the continuity of learning and psychological support, as well as the opportunity for the improvement of their competences and the creation and updating of new teaching material as highlighted in the research of Shamir-Inbal & Blau (2021).

Moreover, teachers perceived that the implementation of online learning faced a number of challenges. Notably, in many cases there was neither adequate logistical and network infrastructure nor equipment in schools or in students' homes (Amorgianioti, 2020; Fauzi & Khusuma, 2020). This, coupled with technical problems, poor internet quality or problems with mobile phone use (Liakopoulou, 2020; Rasmitadila et al., 2020), led in some cases to ineffective learning (Hodges et al., 2020).

Also, teaching in the middle of the day and the short duration of each lesson (30 min), according to the directives of the Greek Ministry of Education and Religion,

made it even more difficult for teachers to implement effective lessons. On the other hand, during the implementation of Online Teaching due to the "centralised" approach of the Greek Educational system (Mattheou, 2007), the same instructions were given to all Greek schools. Therefore, teachers were deprived of the possibility to adapt their lessons to the needs of their students and the specific infrastructure of each school.

Feedback of students' work and grading of assignments are important processes that, due to the change in teaching during the pandemic, were a major challenge for teachers (Putri et al., 2020; Fauzi & Khusuma, 2020). However, according to Tsai and Machado (2002), merely publishing or transmitting learning materials to learners on relevant platforms is not Distance Education.

The reasons that teachers found as obstacles to effective assessment, according to their own perspective, were, among others, lack of contact with their students (Niemi & Kousa, 2020) as well as lack of training on their part (Rasmitadila et al., 2020). Furthermore, both in this research and in line with other studies such as that of Grivas (2020), teachers mention that they need more practical rather than theoretical training; training mainly focused on "live demonstration" of the functions of online platforms.

In addition to specific training on Online Learning, teachers require general training to improve their digital skills. According to Tzifopoulos (2020), this lack of training is increased by two factors in the Greek education system. On the one hand, most teachers in Greece are close to retirement and do not have adequate ICT training, and on the other hand, there is a large percentage of substitute teachers who do not yet know their teaching subject very well, or their position in the school is temporary.

Regarding the challenge of participation of all students, teachers expressed concern about both the performance of these students and their socialisation due to the fact that there was little or in some cases no contact. The move to Online Learning highlighted the existence of a Digital Divide and exacerbated existing educational inequalities (Di Pietro et al., 2020; Cáceres-Muñoz et al., 2020; Montenegro et al., 2020). According to Cedefop (2020), learners from less favourable socio-economic backgrounds, refugees and immigrants, those from ethnic minorities and students with special educational needs are the ones who encounter more difficulties in their participation in Distance Education and therefore experience more learning losses.

Finally, regarding the future use of Online Learning, the teachers in the study considered its use as a temporary solution, so they did not have a very clear idea of its use in other teaching situations or were simply not in favour of continuing to use this system. However, some teachers agree to use Online Learning as a complementary tool to face-to-face education in a period when the school is functioning normally and therefore, as Stachteas and Stachteas (2020) point out, it is something that cannot be considered negligible.

As a final conclusion, it is clear that the COVID-19 crisis has changed schooling and teaching during the Emergency Remote Teaching, and even if that differed from what we have known so far as Online Learning, has indeed provided an opportunity to penetrate new areas and offer sustainable and effective learning solutions.

Implications for Practice

The global pandemic due to COVID-19 has changed schooling and teaching in a way never experienced in our lifetime. Teachers had to modify their pedagogy very quickly and this change had implications for practice which leads us to explore recommendations and future lines of research.

Firstly, it is clear that the COVID-19 crisis has indeed provided an opportunity for Online Education to penetrate new domains and offer sustainable and effective learning solutions. However, education policy makers and school leaders must be prepared for exceptional learning arrangements, as another crisis may occur in the future. Each institution should have the flexibility to implement this learning according to its needs and resources. At the same time, there should be continuous monitoring and evaluation of these new environments (Vlachopoulos, 2020; Niemi & Kousa, 2020).

Along with the framework for the implementation of Online Learning, it is imperative that governments ensure the provision of infrastructural devices for all members of the school community. On this shift of education towards digital, the European Union has published the "Digital Education Action Plan" (2021-2027), which sets out the criteria for high quality, inclusive and accessible Digital Education for all in Europe (European Commission, 2020). In addition, the Digital Divide emerged from the crisis by COVID-19, reflecting on measures to be taken for equity in education and some more of the Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (United Nations, 2020).

In addition, the implementation of Online Learning provided an opportunity to further cultivate and deepen the digital competences of the education community. However, more attention should be paid to the continuous training of teachers, the improvement of their digital competences and their further professional development, with an emphasis on the use of Online Learning and the inclusion of digital learning platforms.

The use of Online Learning in the future seems to be promiscuous. Right after this crisis, a door was opened for its use as a complementary teaching tool or within the Blended Learning Model in Primary and Secondary Education. According to Shamir-Inbal and Blau (2021), the blended environment seems to be the optimal way, as it can be an effective way to involve students as active participants in the learning process. Therefore, incorporating Blended Learning into school practices can strengthen both the pedagogical strategies of digital learning and students' self-regulated learning and teamwork skills.

Finally, further research on this topic is recommended. It would be interesting to investigate in the future how teachers incorporated Online Learning or digital learning platforms into their teaching. In addition, further research could be carried out in relation to the development of institutional technology integration plans to better understand the situation of teachers and educational organisations. Also, this research should focus on building and testing instructional design principles for effective technology adoption within their educational practice.

The findings of this research bring value to the research community. Therefore, it is recommended that further research on this topic could be conducted in order to

have a deeper understanding of the perceptions of teachers at all levels of institutions, as this crisis caused by COVID-19 brought new educational challenges and new ways of teaching and learning.

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Massivization of Higher Education: Evidence from Albania, Kosovo, and North Macedonia

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There is a significant expansion of universities in the Western Balkans and an increasing number of students enrolled. In a region where economic growth is sluggish and youth unemployment is high, education is one of the key proxies to determine future development. This rapid expansion of universities has not been accompanied by the provision of resources to maintain ambitious standards, quality, and relevance. This study examines the factors leading to a deterioration of education quality, tackling teaching competencies, infrastructure, and professors' ethics. Using original data, this study investigates the HE quality from the perspective of two main stakeholders – professors and students – in Albania, Kosovo, and North Macedonia. The study points out to outdated teaching methods, lack of enrolment quotas and skill mismatch with the labour market. It all boils down to low institutional monitoring criteria and lack of admission quotas, creating space for unethical behaviour and massivization of HE.

Keywords: teaching quality, massivisation, skill mismatch, unethical behavior

Introduction

Education has been a vital part of the revolution of Europe that has seen various countries on the continent and dominate the international scene (Subang, & Selangor, 2018). However, education has not had a remarkable impact in some European countries, especially Western Balkans, despite a massive engagement of the youth in higher education and the opening of additional universities. Even though the Western Balkans have largely relied on foreign donations and interventions from organizations such as the European Union to bolster the quality of higher education in universities and colleges, the quality of higher education administered in Albania, Kosovo, and North Macedonia has eroded (Parameswaran & Glowacka, 2015). The success and failures of the quality of higher education have been largely attributed to the massivization of the education sector and teaching methods employed in tertiary institutions.

There is a considerable expansion of several universities in the Western Balkans (WB) and an increasing number of student enrolments. The rapid expansion of universities has not been accompanied by the provision of resources to maintain high education standards, quality, and relevance. Higher education (HE) institutions have relied much on a sufficient quantity of outputs without much interest in the

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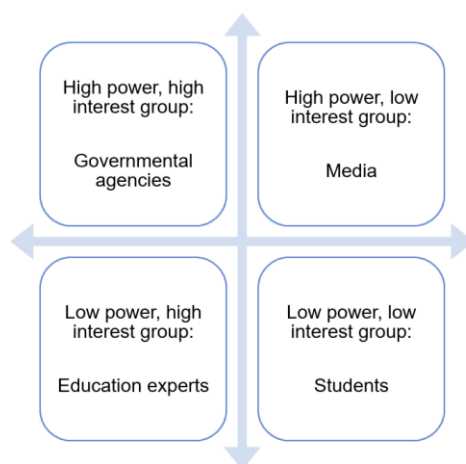
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adequacy of quality, even less so on research, which plunged the WB's labour market with large numbers of output that have caused disequilibrium in the labour market. Education policies, in the respective countries of the study, are usually disseminated via a top-bottom progression, starting from the Ministries of Education, Accreditation Agencies and other governmental agencies, often ignoring relevant stakeholders and particularly those engaged hands-on in the process, such as professors and students (Figure 1). This paper aims to get a closer look at higher education (HE) massivization in the context of the WB landscape by engaging in the dialogue of two main stakeholders of the HE sector – academic staff and students.

We define and argue the presence of mass education based on two main arguments. In the WB, a) almost every high school graduate has access to universities, regardless of their performance, as some of the private colleges do not apply entrance exams or, if applied, are usually formal, and b) the skill mismatch between demand and supply in the labour market leaves many graduated students from tertiary education redundant and unemployed. The argument for mass education in the HE is supported by stylized facts from our three sample countries.

Figure 1. Relevant Stakeholders in HE



Source: Authors (2022).

Figure 1 illustrates the relevant stakeholders involved in Higher Education (HE) in the Western Balkans. The diagram categorizes the stakeholders into three main groups:

1. **Governmental Bodies and Agencies:**
 - Ministries of Education
 - Accreditation Agencies
 - Other governmental agencies
2. **Educational Institutions:**
 - Universities
 - Colleges
 - Vocational Schools
3. **Non-Governmental and External Bodies:**
 - International Organizations (e.g., European Union)

- Employers
- Students and Academic Staff

These stakeholders play crucial roles in shaping the HE landscapes in the Western Balkans by influencing policies, providing resources, and engaging in the educational process. This categorization helps to understand the complex network of entities that impact the quality and structure of higher education in the region, highlighting the importance of collaboration among these stakeholders to address the challenges of mass education and skill mismatches in the labour market.

During the early 2010's the share of enrolled students in tertiary education in our sample countries from WB was around 40 percent. During the last decade, in Albania and Kosovo, the share of enrolled students has reached around 70 and 73 percent, respectively, whereas in North Macedonia the numbers are more alarming, going up to 96 percent (Ministry of Education, Science and Technology, 2022; Agency of Statistics of Kosovo, 2022; INSTAT, 2022; State Statistical Office, 2022). Meanwhile, in a more developed regional country, such as Slovenia, this trend is in reverse (Subang & Selangor, 2022). The rapid transition process may have distorted the link between education and quality and between education and employment.

According to OECD (2018) rankings, the quality of education in the WB is "disappointingly low", despite massive education going on. One of the related reasons concerning the second argument is the relatively high unemployment rate prevailing in the WB. The unemployment rate in Albania, Kosovo, and North Macedonia is 12 percent, 25 percent, and 16 percent, respectively. The unemployment rate among youth (ages 15-24) is even higher: 20.9 percent, 50 percent, and 35 percent, respectively. A high level of youth unemployment rate may have surged the WB governments to liberalise the education sector by licensing many additional public and private universities, to maintain the social peace, if not to also help stop emigration. Albania, Kosovo, and North Macedonia, respectively have 40, 32 and 19 actively operating universities. These are three small European countries with a population ranging from 1.8 to 2.9 million. For comparison, the HE system in small, developed countries of Europe like Luxemburg and Malta consists of only 5 universities each, whereas Switzerland with three times as much population as the WB sample countries, has only 12 active universities. If we additionally consider migration as one of the other structural issues these countries constantly face, the figures implying mass education become of higher concern. For example, only from 2015-2019 Kosovo lost almost 10 percent of its population as a consequence of migration. Therefore, what Karanovic and Karanovic (2015) refer to mass education in the WB as 'a bubble in the making', we say that by now these trends may be well out of proportion. Even though the skills mismatch issue has regained some attention of institutions and media, the massivization of HE is not yet part of the public discourse.

Additionally, the cost of investing in a university diploma in WB outweighs the economic benefits. In Kosovo, those with high school degrees (not university degrees) have the highest employment share in the private sector. In Albania, the share of jobseekers with a university education is around 7 percent of total job seekers, however, this share has been increasing by 1 percentage point each year in

the last four years. The unemployment among youth is not only because of the low economic absorption capacity to accommodate newcomers in the labour market, but also because of the skills mismatch in the labour market (Bartlett & Vavrus, 2014; WIIW, 2020). The presence of skills mismatch implies that universities in the WB either provide low-quality education, or are out of touch with the market and industry needs. Thus, delivering outdated curricula, or a massive number of enrolled students incentivised by the profit motive leaves universities uninterested in addressing structural issues in the education system – or all three of them. The latter is even truer given the lack of university enrolment quotas set by the Government, even in cases when, for example, more economists and law graduates are already redundant. The institutions should admit students who can be successful in the institution's academic program, including specifically recruited populations. The number of students should derive from the market needs, the physical infrastructure of HE institutions, and the number of academic personnel available.

In presence of mass education, neither the economy benefits from a “qualified” and educated workforce nor the university graduates capitalize on their education degrees, creating a deadweight loss effect. If anything, they both are on the losing side. One might argue that these countries need to shift the attention towards vocational schools and universities, as a way to address the matter of skills mismatch. However, since the highest unemployment rate pertains to graduates from vocational schools, begs the question if vocational schools in the WB are a victim of mass education and low education quality, if not lower than academic schools and universities.

Literature Review

Hiebert (2013) asserts that the Western Balkans countries have witnessed a tremendous increase in population in the last four decades. The continuous increase in population has created the need and the avenue to expand the high education sector to accommodate the growing number of students transitioning from high school to universities and colleges (Owlia & Aspinwall, 2016). The high proliferation of students has made it possible for most students who pass their high school exams to enrol in their preferred courses to become successful individuals in society (Jacoby & Howard, 2015). USAID, UNDP, SDG, and OECD ranked Kosovo bottom third among 72 countries that participated in the PISA test (Saqipi, 2019). The reason behind the deficient performance is linked to outdated practices, the traditional education system, and limited financial and professional capacities. At the same time, it faces delays in the implementation of reforms, preparation of curriculum and their implementation, and a lack of textbooks suitable for teaching and learning (Sokoli, Sirca, & Koren, 2021). Hence, regardless of their success in high school and entrance exams, students are enrolled in university programs. Enrolment of students with a considerable gap in learning from high schools into universities and colleges has affected the quality of education offered in HE institutions.

The standing paradox of massivisation is that it has led to the degradation of higher education quality through the proliferation of tertiary institutions. In most

Western Balkans countries, the number of public institutions has remained fairly constant in the last two decades of the 20th century and the first decade of the 21st century (Galloway, 2015). On the other hand, the population of students has increased exponentially. Hence, public universities have not been able to offer adequate vacancies. Consequently, private investors have managed resources to leverage the ballooning student population (Jacoby & Howard, 2015) by opening an exponential number of higher education institutions.

Through the ministries of education, the governments have played a key role in the “mushrooming” of private universities through authentication and registration of private universities (Lagrosen, Seyyed-Hashemi, & Leitner, 2014)]. Despite the tremendous strides made by Albania, Kosovo, and North Macedonia in the increased access to education, the growth has posed some serious challenges to the quality of higher education (Owlia & Aspinwall, 2016), as in the following.

Notably, private institutions in Western Balkans have actively engaged in the monetization of education. In most countries, private universities, colleges, and vocational training institutes are more numerous than public universities (Jucker & Mathar, 2014). The doctrine of education discourages the commercialization of education; private universities have actively engaged in turning the higher education sector into profit-making schemes at the expense of education (Ferguson, Illsko, & Roofe, 2018). Most private institutions have resorted to offering vacancies to students from affluent backgrounds at the expense of students from poor backgrounds (Hill, 2015). Most private universities have widely dished out vacancies to students based on how much they can afford it economically instead of students’ qualifications. Consequently, private facilities have been forced to offer education to low-ranking students in terms of academics.

Additionally, the monetization of education has led to a decrease in diversity in higher education. Diversity is a fundamental tool in assessing and implementing quality control measures in the education sector (Kapfudzaruwa et al., 2018). On the contrary, when private institutions enrol students based on social class, they leave a diverse population of students from other social classes that are academically endowed or have other talents integral in realizing the high quality of education (Krampf & Heinlein, 2014). The practice of engaging only with students from a certain background denies the students the ability to learn and appreciate other students’ cultures, which is critical in fostering critical thinking skills inside and outside universities.

Moreover, the massivization of the education sector has lowered the quality of education by creating a shortage of qualified faculty members. For quite a long time, public institutions of higher education have enjoyed a wide range of professors and lecturers (Kapfudzaruwa et al., 2018). However, the proliferation of private institutions has led to the scramble for faculty members, which has created an artificial shortage of human resources (Krampf & Heinlein, 2014). The lack of a proper framework to increase the training and employment of professors has lowered the quality of higher education. Even though many of the current professors themselves are educated in developed Europe or the U.S., the current system built on old values makes the pass-through of the western educational values difficult. Most of the activities of universities require the close supervision of lecturers and

other members of staff (Ivy, 2001) in the initial stages of employment. However, the shortage of qualified lecturers lowers the ability of learners to research and innovate.

Nonetheless, massivization has scaled down the quality of higher education by lacking valid institutional data. The general understanding would be that the increase in student enrolment has improved institutional data storage (United Nations, 2018). However, most institutions have failed to integrate technology to store and retrieve the data of students, examinations, and faculty members. The government and other educational stakeholders have been unable to conduct extensive research on the quality of education in Western Balkans countries (Thoresen, Doyle, & Klein, 2015).

Equally important, massivization has led to an increase in corruption cases, which has lowered the quality of education. Corruption cases have been rampant in higher education, especially after the massivization of the entire education sector (United Nations, 2018). Many corruption cases have occurred during examinations where unscrupulous lecturers have conspired with students to reduce the validity of examinations. There are evident cases, where lecturers have solicited bribes from students to award them good grades (Thoresen, Doyle, & Klein, 2015). Also, there are several public accusations and lawsuits against male professors allegedly conditioning female students for sexual favours to pass exams, as a by-product of massivization and lack of/or lowered internal controls. In addition, the employment of members of staff has been marred with cases of corruption where administrators hire their relatives, friends, or people who pay and meet certain obligations before they are given the jobs (Thoresen, Doyle, & Klein, 2015). It is imperative to note that the government and registration authorities have engaged in dubious dealings where they offer accreditations and charters to institutions that do not meet certain criteria, especially private institutions (Hiebert, 2013).

Notably, universities and colleges have witnessed massive intakes of students, forcing the education institutions to start other campuses (Mazzarol, 1998). The increase in student enrolment in higher education institutions has led to the establishment of satellite campuses (Hughes, 2018), which are not necessarily located far away from original campuses, meaning they were not opened to facilitate education but to increase the clientele. In Kosovo, public universities have seen a drastic rise in the number of students who wish to study which has prompted various institutions to institute mechanisms of moving some students to satellite campuses (Sokoli, Koren, & Gutierrez, 2018). However, the establishment of additional branches of higher education organizations has downgraded the quality of education because they were not opened to facilitate education for students but rather to increase the clientele, i.e., students enrolled.

Most of the satellite campuses in the Western Balkans cannot offer quality education to students. The universities lack the financial resources to build large structures that can accommodate all the students (Ofei-Manu, 2014). Also, the "satellite" campuses lack competent professors since some private institutions are driven by their passion for generating money but do not offer quality education that meets the needs of learners and the requirement of learners (Veloutsou, Lewis, & Paton, 2004). Additionally, massivization has led to the employment of inexperienced and inept lecturers since the satellite campuses are not closely monitored by the various universities that fall under them (Hemsley-Brown & Oplatka, 2006).

Equally important, massivization has largely contributed to lowering the quality of education through the introduction of irrelevant courses. Notably, the world is evolving at a first-rate in terms of innovation and technology (Srikatanyoo & Gnoth, 2002). It is the responsibility of universities and colleges to introduce courses that align with the market's demand and increase employment probability. However, the higher education system in the Western Balkans still holds to old syllabuses and irrelevant courses that do not serve the labor market needs nor current technology and innovation trends (McMahon, 1992). The courses have declared some graduates redundant since they lack the qualification of meeting the various employment obligations set by companies (Cubillo, Sánchez, & Cerviño, 2006). The desire to increase profits and reduce expenditures in higher education institutions prompts various institutions to introduce courses that do not meet the criteria set by the various departments of education.

One of the most effective teaching methods that positively impact the quality of higher education is lectures. Particularly, lectures are vital in instructing many students, especially in non-technical courses that do not require close supervision (Shahsavari & Sudzina, 2017). Common units such as communication skills and entrepreneurship can be effectively taught using lectures. Additionally, lectures are cost-effective as one lecturer can attend to many students (Tam, 2002). Also, the use of lectures in learning gives students the flexibility and freedom of closely following discussions put forth by teachers. Hence, training lectures in teaching methods is a highly effective tool for bolstering the quality of higher education (Sokoli & Hajrizi, 2020).

Digital learning is another teaching method by organizations, especially concerning the hands-on courses, to ensure that they foster a high quality of education administered to students. In the advent of digital transformation, most public and private institutions have embraced technology to run their activities (Sokoli & Koren, 2017). Digital learning allows tutors to teach students remotely with the use of computing devices and the internet. A student should not necessarily be in the school compound for them to study. A student needs a laptop, smartphone, and strong internet service for them to be in a position to connect to online classes.

Many universities have embarked in profit-making schemes that have been largely dependent on tuition fees paid by students. The education levels have deteriorated to a point where grades and certificates are issued even to students not attending classes at all. In Albania, there have been numerous cases reported by the media of private universities soliciting money from politicians to award them with degrees to seek elective posts. The monetization of higher education has drastically contributed to the loss of confidence in higher education by the public, which has forced some employers in North Macedonia to hire people based on experience as opposed to qualifications (Podolsky et al., 2019). On the contrary, students who acquire certificates from higher education institutions lack critical thinking skills that are integral in helping a person solve workplace problems.

Data

This study intends to investigate several aspects of HE in the Western Balkans, such as teaching quality, massivization, and other factors that may distort the relationship between professors, students, and the labour market. Ideally, these aspects would be treated using institutional data, nevertheless, several relevant variables are not reported and there are inconsistencies between reported data in Western Balkans countries. Therefore, we have directly contracted information from those involved hands-on in this process, i.e., professors and students. The data used in this study are from a primary source, retained via two questionnaires designed for professors and students. The questionnaires were distributed in eight different universities, public and private in Albania, Kosovo, and North Macedonia, from October 2021 - February 2022. The questionnaires were intended for public and private universities in three countries, covering around 60 percent of all HE institutions in three sample countries. The questionnaires were sent to the Quality Assurance offices and rectorate, which were then distributed to all mailing lists of Bachelor students and professors, as per our instruction. The distribution of questionnaires was realised at the discretion of universities. The questionnaires were distributed in an online format, i.e. Google forms, containing 14 questions each. The same questionnaires were distributed to professors and students, changing the questions' perspectives. For example, if professors were asked 'what teaching method do you use,' students were asked the same question as in 'what teaching method do your professors use.'

The response rate was more satisfactory from the students' side. There were 764 students and 197 professors who answered the full list of survey questions (Tables 2-3).

Rather than basing the questions on the standardised HESQUAL question styles and institutional-based questionnaire format, the conducted surveys go one step further by engaging in this conversation with two main stakeholders in the education system – professors and students. By taking their views on the quality of the HE and massivization, we took a closer look at the more intimate factors impacting this relationship, in terms of the quality of teaching, personal relations, and other factors that may distort this relationship and incentives for the labour market. The questionnaires seek to contract information on perceptions of four aspects of the HE in the Western Balkans: a) teaching quality, b) massivization of HE, c) employment, and an aspect not frequently ignored or avoided in academic studies, d) professors' ethics. Each variable is described in Table 1.

Table 1. Variable Description and Descriptive Statistics

Variable name	Information category	Students Freq. %	Professors' Freq. %	
Dependent: qualityhe	2. Which of the following factors most influences the quality of university education?			
	a) Number of enrolled students and study tariffs = 1	13.59	9.64	
	b) Quality of professors' publications in scientific journals = 2	22.61	19.8	
	c) Number of employed graduates = 3	40.92	55.84	
	d) University rigour in student evaluation, number of graduates = 4	22.88	14.72	
	1. Are you a student in?			
1.studentpubal	a) Albania - Public University 1	23.66	13.2	
2.studentprivl	b) Albania - Private University 2	1.44	58.88	
3.studentpubks	c) Kosovo - Public University 1	9.21	0.51	
4.studentprivks	d) Kosovo - Private University 2	54.9	9.14	
5.studentpubmk	e) Northern Macedonia - Public University 1	1.57	17.26	
6.studentprivmk	f) Northern Macedonia - Private University 2	9.15	1.02	
	3. Are your professors competent for the subjects they teach?			
1.competent	a) Are qualified, both theoretically and practically for the subjects they teach = 1	52.16	45.69	
2.competent	b) Lectures are up to date with the latest developments in the field of teaching = 2	20.00	25.89	
3.competent	c) Have the expertise but lack communication skills (knowledge transfer skills) = 3	16.47	9.64	
4.competent	d) Often lack subject expertise and communication skills (knowledge transfer) = 4	11.37	18.78	
	4. Are university laboratories, digitized etc. conditions for teaching/learning purposes?			
H E	1.conditions	a) Yes, administration, labos, workspaces, teaching system are modern and digitized = 1	56.97	68.53
	2.conditions	b) No, we continue to learn in the same environment and labs. as a decade ago = 2	11.84	5.08
	3.conditions	c) Partly invested in modernization and digitalization = 3	31.18	26.4
Q u a l i t y	1.studmotiv	a) No, because the quality of education depends on the quality of professors' lectures = 1	7.5	26.9
	2.studmotiv	b) Yes, student motivation is most important, regardless of teaching quality = 2	63.16	58.88
	3.studmotiv	c) The quality of education also depends on the quality of the professors = 3	26.71	-
	4.studmotiv	d) The quality of education depends on the quality of education in secondary schools = 4	2.63	14.21
	6. Which teaching method your professors apply?			
1.lectmethod	a) Classic lecture (ex cathedra) = 1	17.37	na	
2.lectmethod	b) Interactive lectures where student participation is stimulated = 2	38.03	na	
3.lectmethod	c) Application of digital platforms during the lecture = 3	20.92	na	
4.lectmethod	d) Practical exercises with active participation of students = 4	19.08	na	
	7. The knowledge gained at university will help you (or have helped you) to find a job?			
E m p l o y m e n t	1.emplskills	a) Yes, it has helped me (will help me) = 1	31.63	59.39
	2.emplskills	b) No, the labour market depends more on e.g. nepotism, political support, bribery = 2	38.43	9.64
	3.emplskills	c) It has (will help me) but additional training outside the university is also needed = 3	26.54	30.96
	4.emplskills	d) No (will not help me), because firms and institutions require other skills = 4	3.4	-
	Would you rather prefer?			
1.professchool	a) Vocational education (university level) but get a <i>professional degree</i> = 1	62.11	57.36	
2.professchool	b) Academic studies (university level) and receive a Bachelor degree (ac. degree) = 2	37.89	42.64	

Table 1. Contd.’

Variable name	Information category	Students Freq. %	Professors' Freq. %
8. Have you ever been sexually harassed by a professor?			
P r o f e s s o r s	1.sexassual	a) Yes, it happened to me personally = 1	2.1 9.64
	2.sexassual	b) No, it did not happen to me = 2	76.18 79.7
	3.sexassual	c) I have heard cases against other students = 3	19.34 10.66
	4.sexassual	d) I am a witness of such cases against other students = 4	2.37 -
9. Did a professor ever asked for a bribe to pass an exam or enroll at a university ?			
s t o d e n t s	1.bribe	a) Yes, it happened to me personally = 1	3.03 6.09
	2.bribe	b) No, it did not happen to me personally = 2	75.92 85.28
	3.bribe	c) I have heard cases from other students = 3	17.76 8.63
	4.bribe	d) I am a witness of such cases against other students = 4	3.29 -
Do you think that the number of students in universities affects the quality of teaching?			
H E M a s s i v i s a t i o n	1.nrstudents	a) Yes, it is excessive and based on infrastructure, academic staff and market needs = 1	47.24 30.46
	2.nrstudents	b) It is adequate, we do not have any problem with this number of admitted students = 2	36.71 53.3
	3.nrstudents	c) No, there is no impact = 3	16.05 16.24
10. Do you think there are enough universities in your country ?			
H E M a s s i v i s a t i o n	1.enoughcollg	a) There are many universities / colleges (more than enough) = 1	53.03 76.65
	2.enoughcollg	b) No, because the classrooms are overcrowded = 2	15.39 7.11
	3.enoughcollg	c) No, because youth unemployment is very high = 3	31.58 16.24
11. If you were given the opportunity, would you prefer to study abroad?			
H E M a s s i v i s a t i o n	1.studabroad	e) Yes = 1	92.24 na
	2.studabroad	f) No = 2	7.76 na
12. If the answer to the previous question is yes, then is it because:			
H E M a s s i v i s a t i o n	1.aboadbcs	a) The quality of education in our country is lower than in other countries = 1	26.84 na
	2.aboadbcs	b) Foreign diplomas increase employment opportunities in our country = 2	26.32 na
	3.aboadbcs	c) Just for experience = 3	16.71 na
	4.aboadbcs	d) For easier employment abroad = 4	30.13 na

Source: Authors (2022).

Methodology

All questionnaire data are categorical, including the dependent variables, with more than two possible discrete outcomes (table 1). The Linear Probability Model has the disadvantage of rendering fitted probabilities less than zero or greater than one and the partial effect of any explanatory variable (appearing in level form) is constant. This limitation can be overcome by using binary choice models, such as Logit or Probit models (Wooldridge, 2013). Therefore, given that the dependent variable is a categorical variable, this study employs the logit model. Furthermore, the dependent variable has more than two outcomes of no particular order, which requires using an ordered logit model.

Because all of your independent variables are categorical, it is necessary to calculate marginal effect for each outcome using the values of independent variables for each observation, and then averages these individual level marginal effects across the sample, instead of calculating margins at means, which intuitively does not help with the interpretation.

In ordered logit the proportion assumption may be violated, hence we estimate the model using multinomial logistic regression (mlogit). One disadvantage of the multinomial logit is that it may not perform very well if the distribution of possible

outcomes is not balanced, i.e., too few frequencies for an outcome. However, the mlogit model uses only variables that describe the characteristics of the individuals and not of the alternatives, which limits the usefulness of the model for counterfactual predictions.

The mlogit model works best when the alternatives are dissimilar and not just substitutes for one another, i.e., do not overlap, which is our case (Table 1). Mcfadden (1973) states that a mlogit should be used only in cases where the outcome categories are “plausibly assumed to be distinct and weighted independently in the eyes of the decision maker”. In the students’ estimated model (equation 1), the Hausman test was carried out to verify the difference of coefficients on the models.

$$\log(\text{qualityhe})^S = \alpha_0 + \alpha_1 \text{studpubprivalksmk} + \alpha_2 \text{competent} + \alpha_3 \text{lectmethod} + \alpha_4 \text{studmotiv} + \alpha_5 \text{conditions} + \alpha_6 \text{studyabroad} + \alpha_7 \text{abroadbcs} + \alpha_8 \text{emplskills} + \alpha_9 \text{professschool} + \alpha_{10} \text{nrstudents} + \alpha_{11} \text{enoughcolleg} + \alpha_{13} \text{sexassualt} + \alpha_{14} \text{bribe} + \varepsilon_i \quad (1)$$

Comparing the coefficients of the unrestricted model (where conditions was excluded); the results indicate that the null hypothesis that ‘the odds are independent of other alternatives’ cannot be rejected therefore there is no evidence of a violation of the IIA assumption, i.e., adding or deleting alternative outcome categories does not affect the odds among remaining outcomes (Table 2). Also, for each question, respondents can choose only one option and the response options on the questionnaires are no close substitutes, which helps maintain the IIA assumptions. The likelihood ratio chi-square of 112.93 with a p-value of 0.011 indicates that the model as a whole is statistically significant, as compared to the null model with no predictors. The pseudo R^2 statistic indicates that the model fit has increased at least 5.6%.

In the professors’ estimated model (equation 2), the Hausman indicates that there is no evidence of a violation of the IIA assumption (Table 2). The likelihood ratio chi-square of 117.58 with a p-value of 0.002 indicates that the model as a whole is statistically significant, as compared to the null model with no predictors. The pseudo R^2 statistic indicate that the model fit is increased at least 2.6%.

$$\log(\text{qualityhe})^P = \beta_0 + \beta_1 \text{professorpubprivalksmk} + \beta_2 \text{competent} + \beta_3 \text{studmotiv} + \beta_4 \text{emplskills} + \beta_5 \text{professschool} + \beta_6 \text{sexassualt} + \beta_7 \text{bribe} + \beta_8 \text{nrstudents} + \beta_9 \text{enoughcolleg} + \varepsilon_i \quad (2)$$

In professors’ questionnaire, certain variables that do not apply, like reasons for studying abroad, are not in the variable list. Additionally, it was noted that students’ responses pertaining to the lecture method were more honest compared to those of professors, because choice 1 (ex-cathedra lecturing method) was reported only 2 times in professors’ dataset. Based on practitioners’ knowledge, we are aware that this method still prevails, especially in public universities¹. As this variable could render biased results, it was excluded from the model.

¹Authors have more than 10 years of teaching experience in HE.

Results

In the following the results from two estimated models for students and professors using multinomial logit will be presented. The mlogit predicts the impact of different factors (teaching methodology, infrastructure, ethics and employability) have on HE quality, by estimating parameters describing marginal utilities. The results are interpreted as follows: if the explanatory variable is increased by one unit, what is the probability of quality in HE changing, compared to the baseline group (conditional on the baseline group). The purpose of the analysis is to investigate how well a multiple choice response can be predicted, conditional on the base category (baseline group = 0).

Table 2. Estimated Results from Students' Perspective

base = 4 (rigour)	outcome=1		outcome=2		outcome=3		outcome=4		Diagnostics
	b	se	b	se	b	se	b	se	
1.studentpubal									LR chi2(105)
2.studentprivat	-0.044	0.094	-0.049	0.140	0.198	0.155	-0.105	0.095	112.93
3.studentpubks	0.038	0.057	-0.110*	0.062	0.056	0.069	0.017	0.057	
4.studentprivks	0.004	0.040	-0.077	0.051	0.024	0.052	0.049	0.044	p = 0.011
5.studentpubmk	0.086	0.137	-0.306***	0.042	0.311**	0.153	-0.091	0.108	
6.studentprivmk	-0.070	0.045	-0.222***	0.054	0.274***	0.073	0.018	0.062	N= 764
1.competent									Pseudo R2
2.competent	0.007	0.034	0.062	0.041	-0.004	0.046	-0.065*	0.040	= 0.056;
3.competent	-0.004	0.037	0.053	0.045	0.021	0.052	-0.070*	0.043	
4.competent	-0.028	0.041	0.076	0.058	0.068	0.065	-0.116***	0.043	
1.conditions									Hausman
2.conditions	-0.048	0.044	-0.086*	0.046	0.036	0.065	0.098	0.062	iii = 0.999
3.conditions	-0.083	0.029	-0.005	0.038	0.049	0.043	0.038	0.037	
1.studmotiv									
2.studmotiv	0.007	0.028	-0.042	0.034	0.015	0.039	0.020	0.033	
3.studmotiv	0.101	0.104	0.068	0.111	-0.096	0.111	-0.074	0.074	
1.lectmethod									
2.lectmethod	-0.019	0.038	0.001	0.044	0.061	0.053	-0.043	0.047	
3.lectmethod	0.019	0.042	0.027	0.048	-0.059	0.055	0.013	0.051	
4.lectmethod	-0.002	0.042	0.013	0.050	0.005	0.060	-0.016	0.053	
1.emplskills									
2.emplskills	-0.001	0.031	-0.035	0.038	0.025	0.045	0.01	0.038	
3.emplskills	0.043	0.033	0.009	0.041	-0.029	0.047	0.02	0.041	
4.emplskills	0.034	0.076	0.100	0.098	-0.066	0.098	-0.07	0.077	
1.professchool									
2.professchool	0.003	0.026	0.006	0.031	0.058	0.037	-0.067**	0.031	
1.sexassual									
2.sexassual	0.068	0.068	-0.248***	0.124	0.134	0.108	0.047	0.098	
3.sexassual	0.077	0.073	-0.329***	0.126	0.237**	0.114	0.015	0.101	
4.sexassual	0.021	0.090	-0.399***	0.138	0.305***	0.155	0.072	0.137	
1.bribe									
2.bribe	0.013	0.035	0.012	0.041	0.024	0.049	-0.05	0.046	
3.bribe	-0.031	0.070	0.134	0.096	-0.079	0.093	-0.02	0.096	
1.nrstudents									
2.nrstudents	-0.073	0.027	-0.029	0.034	0.099***	0.040	0.004	0.035	
3.nrstudents	-0.018	0.039	0.016	0.045	0.041	0.038	-0.040	0.042	
1.enoughcollg									
2.enoughcollg	0.045	0.038	-0.134***	0.037	0.073	0.053	0.016	0.043	
3.enoughcollg	0.043	0.028	-0.031	0.034	-0.119***	0.038	0.108***	0.034	
1.studabroad									
2.studabroad	-0.010	-0.010	-0.075	0.050	-0.07	0.064	0.152**	0.066	
1.aboadbcs									
2.aboadbcs	-0.050	0.033	-0.040	0.043	0.019	0.048	0.071*	0.042	
3.aboadbcs	0.007	0.044	-0.021	0.051	0.010	0.056	0.004	0.047	
4.aboadbcs	0.004	0.035	-0.066*	0.039	0.015	0.046	0.047	0.039	

In Table 2, 4. *Rigour* (University rigour in student evaluation, number of graduates) is chosen as the base category (*rigour* = 0). The predicted marginal effects rendered no significant variables, when outcome = 1, i.e., number of enrolled students and study tariffs (1. *qualityhe*), compared to base category.

The predicted marginal effects, when outcome = 2 (2. *quailtyhe*, i.e., quality of professors' publications in scientific journals), compared to base category, other things being equal, are as follows. If the number of students increases in any of the universities in WB, the education quality is more likely to decrease in all cases, though significantly in *studentinpubks*, *studentinpubmk* and *studentinprivmk*. If lecturing conditions continue to be the same as a decade ago, then HE quality education is less likely by 8.6pp. Based on data tabulations, 18 students have reported personal sexual harassment from professors, 147 have heard of such cases from other students 18 others have witnessed such cases, indicating the presence of such phenomenon and low criteria and monitoring in HE in the Western Balkan countries. The results indicate that any type of sexual context (heard or experienced) in the HE significantly decreases the education quality in HE. If 2. *enough* (no, because the classrooms are overcrowded) increases by 1 unit then the 2. *qualityhe* is less likely by 13.4pp, confirming our postulation that more universities are feeding into more HE massivisation and less employment. If students who want to study abroad for easier employment abroad (4. *abroadbcs*) increase by one unit, then the 2. *qualityhe* is less likely by 6.6pp, as compared to *rigour*, possibly because local universities are left with lower end of quality students.

The predicted marginal effects, when HE quality depends on number of graduates i.e., outcome = 3 (3. *quailtyhe*), compared to base category, other things being equal, are as the following. If the number of students in all countries increases, then the HE quality determined by number of employed students is more likely in all sample countries, but significant only in North Macedonian universities. This is consistent with our postulation that the more students entering HE, the more selection criteria should be in place in HE. If 3. *sexassual* (I have heard cases against other students) and 4. *sexassual* (I am a witness of such cases against other students) increase by one unit, the probability that the quality in HE is determined by number of employed students is more likely. Some students may not particularly be preoccupied with the internal ethical standards of the university, probably more so in those universities where there is no punishment culture, but rather the economic capitalisation of their studies. In WB sexual education is not part of the education system, thus students' awareness may not be optimal. Furthermore, despite public and legal accusations against professors, there were no suspensions or dismissals.

The predicted marginal effects, when HE quality depends on number of graduates i.e., outcome = 4 (4. *quailtyhe*), compared to base category, other things being equal, are as the following. If professors' competencies increase for one unit (in all categories), then education quality is more likely to drop. This may be explained by the lack of proper didactic training and deficiencies in knowledge transfer from professors to students. If the number of academic universities increase by one unit, the HE education quality is likely to drop by 6.7pp. This is in line with prior expectations that academic universities are prone to massivization and lack proper coordination with the needs of the labour market. If the number of colleges'

increases for one unit because the unemployment is high in the WB, then the *4.qualityhe* is more likely to happen by 10.8pp. This is also in line with prior expectations that the increasing number of colleges should be faced with stricter accreditation criteria and monitoring processes to prevent further massivization. If the number of students not preferring to study abroad increases by one unit, then the *4.qualityhe* is more likely to happen by 15.2pp. Lastly, if the number of students wanting to study abroad because foreign diplomas enable more employment opportunities locally, then the *4.qualityhe* is more likely to happen by 7.1pp.

Table 3. Estimated Results from Professors' Perspective

base = 4 (rigour)	outcome=1		outcome=2		outcome=3		outcome=4		Diagnostics
	qualityhe		qualityhe		qualityhe		qualityhe		
	b	se	b	se	b	se	b	se	
3.professorpubks									LR chi2(105)
4.professorprivks	0.071	0.053	-0.010	0.108	0.007	0.121	-0.068	0.103	117.58
3.professorpubmk	-0.062	0.036	-0.226**	0.098	0.448	381.1	-0.160	381.1	p = 0.002
4.professorprivmk	0.180	0.107	-0.137	0.115	-0.041	0.157	-0.002	0.130	
1.professorpubal	-0.036	0.047	-0.053	0.127	0.213	0.138	-0.124	0.105	N= 197
2.professorprival	-0.062	0.037	-0.226**	0.098	0.496***	0.105	-0.207**	0.093	
1.competent									Pseudo R2 0.258
2.competent	-0.045	0.045	-0.099*	0.061	0.012	3.294	0.133	3.294	
3.competent	0.188	0.130	0.102	0.120	-0.247	1.104	-0.043	1.099	
4.competent	0.188	0.052	-0.055	0.081	0.218	4.305	-0.132	0.071	
1.conditions									Hausman ia = 0.957
2.conditions	0.168	0.166	-0.0478	0.834	0.032	0.191	-0.153	0.031	
3.conditions	0.127	0.077	0.063***	0.063	0.021	0.102	0.004***	0.071	
1.studmotiv									
2.studmotiv	0.110	0.042	-0.078	0.067	0.027	0.080	-0.059	0.058	
3.studmotiv	0.042	0.047	-0.028	0.096	-0.052	0.117	0.038	0.098	
1.empskills									
2.empskills	-0.053	0.059	0.040	0.113	0.091	0.131	-0.08	0.074	
3.empskills	-0.048	0.048	0.128*	0.072	0.264*	0.083	0.054	0.065	
1.professchool									
2.professchool	0.055	0.046	-0.019	0.057	0.005	0.072	-0.041	0.050	
1.sexassual									
2.sexassual	-0.072	0.081	-0.022	0.108	-0.066	0.124	0.160***	0.027	
3.sexassual	0.055	0.125	-0.108	0.131	-0.091	0.171	0.143	0.092	
1.bribe									
2.bribe	-0.047	0.111	0.053	0.125	0.342***	0.122	-0.348*	0.199	
3.bribe	-0.087	0.107	-0.013	0.150	0.304*	0.169	-0.204	0.211	
1.nrstudents									
2.nrstudents	-0.126	0.059	-0.019	0.069	0.109	0.083	0.036	0.054	
3.nrstudents	-0.137	0.063	-0.160**	0.074	0.264**	0.105	0.033	0.082	
1.enoughcollg									
2.enoughcollg	-0.096	0.021	0.078	0.113	0.103	0.127	-0.085	0.081	
3.enoughcollg	0.043	0.073	-0.097	0.065	0.141	0.094	-0.088*	0.051	

In Table 3, to be consistent with the students' approach, *rigour* (university rigour in student evaluation, number of graduates) is chosen as the base category

(*rigour* = 0). The predicted marginal effects rendered no significant variables, when outcome = 1 (*1.qualityhe*), compared to base category.

The predicted marginal effects, when outcome = 2 (*2.quailtyhe*, i.e. quality of professors' publications in scientific journals), compared to base category, other things being equal, are as follows. If the number of professors increases in any of the universities in WB, the education quality is more likely to decrease in all cases, though significantly in *professorpubmk* and *professorprival*. This could be explained by the increasing criteria from the accreditation agencies to have at least three PhD lecturers per program at a period of lacking doctorates. In addition to the massivisation of Bachelor's studies, the increased demand for PhDs led to a massivisation of doctorate studies, too. If *2.competence* (lecturers are up to date with the latest developments in the field of teaching) increases by one unit, the HE quality will likely drop by 9.9pp, as compared to rigour (base category). This finding may initially sound as an anomaly. Nevertheless, as mentioned in the theory section, students received at the HE come with a lot of education gaps from elementary and secondary education system, as confirmed by the PISA rankings. Therefore, students may face difficulties catching up with the latest developments and technologies. If *3.conditions* (partial modernisation and digitalization) increases by one unit, the *2.quailtyhe* is likely to increase by 6.3pp. If *3.emplskills* (it has (will help me) but additional training outside the university is also needed) increases by one unit, then *2.quailtyhe* increases by 12.8pp. This is in line with prior expectations, postulating that the current education system is insufficient in terms of quality and employment generation. If *3.nrstudents* (professors' perception that number of students does not impact teaching quality) increases by one unit, the drop of *2.quailtyhe* (quality of professors' publications in scientific journals) is more likely by 16pp. Professors may be accustomed with the historically large classrooms, therefore do not sense the marginal time consumption by additional students. Therefore, less time disposal for professors may naturally be associated with the diminishing quality of professors' publications.

The predicted marginal effects, when HE quality depends on number of graduates i.e., outcome = 3 (*3.quailtyhe*, i.e., HE quality depends on number of students employed), compared to base category, other things being equal, are as follows. If the number of *professorprival* increases by one unit, the probability that *3.quailtyhe* () is more likely by 49.6pp. As expected, if additional training is acquired for students (*3.emplskills*), *3.quailtyhe* is more likely by 26.4pp. Two significant variables *2.bribe* (*did not happen*) and *3.bribe* (*have heard of bribe cases*) provide contradictory results. As expected, more *2.bribe* (number of those who were not subject to bribe) lead to less need for *4.quailtyhe* (university rigour in student evaluation, number of graduates). However, *3.bribe* (the number of professors who have heard about bribe cases in HE) increases by one unit, the *3.quailtyhe* (number of employed graduates) again increases. The latter could be explained by distortions in the labour market, such as pervasive incentives and dishonest practices, i.e., nepotism and cronyism, especially in the public sector institutions of WB.

The predicted marginal effects, when HE quality depends on rigour in HE i.e., outcome = 4 (*4.quailtyhe*, i.e. University rigour in student evaluation, number of graduates), compared to base category, other things being equal, are as the

following. As expected, the increasing number of professors in the three WB countries, is more likely to decrease *4.qualityhe*, even though the difference is more significant in *professorprivat*. Partial investments in HE are more likely to increase *4.qualityhe* by 0.4pp. Around 40 professors have declared that have either heard or were personally had an issue of a student being sexually harassed. However, only in outcome 4 the results are significant. If the number of those who were not sexually assaulted increases by one unit, the *4.qualityhe* is more likely by 16pp. If *2.bribe* (number of those who were not subject to bribe) increases by one unit, then *4.qualityhe* is less likely by 34.8pp. If the number of professors thinking that more colleges are needed because unemployment is high (*3.enoughcollg*) increases by one unit, the *4.qualityhe* is less likely by 8.8pp.

Conclusions and Policy Implications

Western Balkans (WB) is a region that has started the education reforms, amongst other structural reforms, relatively late and later than the developed part of Europe. In a region where economic growth is sluggish and youth unemployment is high, education – as the main pillar of each society, is one of the key proxies to determine future development. However, the higher education (HE) system in this region does not rank well on international agencies and has been criticised for massivization. Therefore, this study has investigated the factors leading to the massivization and deterioration of HE quality in WB, by taking the perspective of two main stakeholders – professors and students – in Albania, Kosovo, and North Macedonia. Using survey data of primary source, the empirical model tackles typical factors pertaining to professors' competencies and teaching methods, students' motivation and academic curiosity and study conditions, but equally as important controls for circumstantial factors directly linked to the general education system standards, such as massivisation of colleges, employability of students and dishonest behaviour from professors.

The findings from the students' perspective are as follows. An increasing number of students in all three countries are more likely to decrease their HE quality in public and private universities. Increasing professors' competencies may not necessarily reflect better teaching quality, due to the lack of knowledge transfer capabilities and proper didactic training for professors. The increasing number of universities, reflecting massivization of the HE education in WB, is seen as a substitute for unemployment. There is a considerable number of students who prefer to study abroad to increase employment probability either locally or internationally. This perception of the students once again points to the lower education quality in WB. Furthermore, the majority of students have declared a preference for a professional university system that enables partial employment, as compared to the prevailing academic HE system. A critical finding of this study is the evidence of bribes and sexual assaults testified by students. The presence of such phenomena (confirmed also by public lawsuits and not only by students' perceptions) boils down to low monitoring and controlling criteria in the HE system.

Consistent with students' findings, the results have indicated that the increasing number of professors also reduced the quality of HE. This could be explained by the increasing criteria from the accreditation agencies to have at least three PhD lecturers per program at a period of lacking doctorates. In addition to massivization of Bachelor studies, the increased demand for PhD's led to a massivization of doctorate studies, too. Partial modernisation and digitalization were found to have an increasing impact on the quality of HE. Likewise, the results indicated that professors, too, agree that the current education system is not sufficient to provide student employment, and additional trainings are needed. The rapid increase of Ph.D.'s in the recent years may have created a non-complaining culture among current professors concerning the rising number of students and colleges. Despite disturbing results concerning professors ethics (sexual harassment cases and bribe cases), students seem to primarily be preoccupied with economic capitalisation of their studies, given the non-punishing culture of universities towards professors, pervasive incentives and dishonest practices, especially in the public sector institutions of WB. A bias in professors' response was detected in declaring fewer sexual assault cases than students, but nevertheless agree that such phenomena decrease the quality of the HE system.

The massivization of HE in WB is not only deteriorating the teaching quality in WB, but also impeding future economic and institutional development.

In order to stop the massivization of HE in WB, a joint commitment and coordination of actions of all institutions of HE, accreditation agencies and ministries of education is necessary to improve the quality of the teaching process. First and foremost, the HE institutions need to engage in a robust education system where they educate various people on the importance of embracing and practicing integrity in education. Creating awareness on improving the quality of education will go a long way in improving the confidence of people in the education system in Albania, Kosovo and North Macedonia (Pavlova, 2010).

Admission quotas need to be established to bridge the gap between graduated students in each faculty and economy needs and hence, reduce the excessive cadres and increase those required today and potentially in the future. Depending on the changing needs of the economies, admission quotas should be adaptable and if need be, certain programs should stop re-accreditation when market needs are filled or in excess of graduates.

Appropriate mechanisms and policies need to be established to evaluate the performance of professors and make their selection and re-election based on these performance indicators and not only on formal documents. The education system needs to be reformed by initially addressing the lack of teaching quality. Investments need to be made in the transfer of knowledge from the OECD and EU higher education institutions to Western Balkan one. Teaching quality should be a subject of external reviews carried out by dedicated bodies (quality assurance, accreditation, or evaluation agencies) to encourage institutions to set up and reinforce internal quality assurance policies and mechanisms that will include processes in safeguarding the quality of teaching, whereas the teaching criteria should be legally binding and set out by the ministries of education.

Low academic ethics are to a large extent the responsibility and culpability of governmental institutions. It is of utmost importance that universities in WB increase social responsibility, academic and financial transparency, and be subject to continuous internal and external audits.

It is imperative to note that research is the backbone of higher education and critical in triggering sustainable developments in WB countries. Nevertheless, the research investment in WB is less than 0.5% of GDP. Public funds need to raise for scientific research and support of both, professors, and students, in conducting scientific research.

Students are a high-interest stakeholder in this process, as the ultimate beneficiary or the damaged part, therefore their opinion and feedback regarding professors' performance should be formally taken into account. Each university should establish close cooperation with employers and adapt curricula based on market needs and demands.

Lastly, the HE system should be open to international applicants, in order to change the internal dynamics and steer up the competition for better publications and teaching methods.

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Students' Perceptions of Their Engagement in Statistics Class Activities

*By Lukanda Kalobo**

This paper investigates how students perceive their participation in Statistics class activities. Effective pedagogical practices depend on knowing how students interact with data-related tasks. To gauge the self-reported levels of engagement, interest, and perceived relevance of Statistics activities, the study polls students in grade 12. To fully understand the perspectives of students, the study uses a quantitative strategy that includes quantitative surveys. The implications of this study add to the conversation about statistics education. The results guide the development of curricula, instructional strategies, and educational policies to encourage meaningful participation and enhance student outcomes in statistics. A generation that is data literate and capable of using data for informed decision-making is created by adapting teaching strategies to students' needs and interests. The needs and goals of the students can be used to improve statistics programs.

Keywords: statistics, engagement, pedagogical practices, teaching strategies

Introduction

In today's information-driven era, the ability to make effective decisions is crucial for organizational performance and competition (Elgendy, Elragal, & Päivärinta, 2022). Applied statisticians play a vital role in advising stakeholders across various fields, including medicine, finance, and education, with the objective of improving decision-making under conditions of uncertainty (Longford, 2021). Recognizing the growing importance of statistics skills, educational institutions have integrated statistics activities into their curricula. However, the success of these initiatives hinges upon the students' perceptions of their involvement. By gaining insights into how students perceive their engagement in statistics activities, valuable guidance can be obtained to enhance pedagogical approaches in this domain. This study aims to investigate students' perceptions of their engagement in Statistics Class activities, focusing on their levels of engagement, influencing factors, challenges faced, and suggestions for improvement.

Problem Statement

While statistics education has received much attention in recent years, there has been little study on high school students' perceptions of their participation in Statistics class activities. Understanding how students view their participation in these activities is critical for enhancing teaching tactics and the efficacy of statistics programs. There is a void in the research covering the elements that impact students'

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perspectives, the obstacles they face, and their ideas for improving their statistics learning experiences.

Purpose and Research Questions

Investigating students' perceptions of their participation in class activities in statistics is the purpose of this study, which aims to close the gap that currently exists. The study's research questions included the following:

- How do students perceive their level of engagement in Statistics Class activities?
- What factors influence students' perceptions of their engagement in statistics activities?
- What challenges do students encounter while engaging in Statistics Class activities?
- What suggestions do students have for improving their learning experiences in Statistics?

The solutions to these issues can help teachers, curriculum developers, and policymakers enhance the teaching of statistics.

Literature Review

Research has illustrated that engaging students within the learning process increases their attention and focus, motivates them to practice higher-level critical thinking abilities, and advances important learning encounters. To build the groundwork for future study, academics must synthesize previously published work (Watson & Webster, 2020). A literature review is a research that synthesizes and analyses previously published material to advance ideas (Post, Sarala, Gatrell, & Prescott, 2020). All research initiatives and disciplines must take into account past, pertinent literature (Snyder, 2019). Here are the key components addressed in the literature review of this study.

Statistics at High School

At its core, statistics is the study of mathematics, in which students work on collecting, processing, analysing, and concluding data. Statistical science deals with data (Bina, 2020). Kalobo (2016) believes that the use of constructivist approaches and the application of inductive approaches in statistics education, the emphasis on statistical literacy, statistical reasoning, and thinking in statistics education can all improve statistics teaching and learning. According to del Mas (2017), using statistical literacy, reasoning, and thinking to identify desired learning outcomes in statistics can be very helpful both when considering teaching objectives and when developing assessment tasks.

Students' Perceptions of Statistics

According to Bond et al. (2012), perception is the result of an interplay between cognitive and non-cognitive elements. According to Gregory (1970), this idea is a productive process that draws on prior knowledge and experience and is also in charge of organizing, interpreting, looking for meaning, or trying to make sense of a situation. According to Chiesi and Primi (2010), students start beginning classes at varying degrees of proficiency, particularly in mathematics. In every statistics lesson, students' verbal statistical reasoning and numeracy abilities are frequently put to the test and pushed. In his 1991 study, Zeidner examined students of social science who were anxious about statistics and mathematics. The results revealed a negative correlation between students' final grade in mathematics for grade 12 and their impression of themselves as mathematicians, which in turn affected their performance. Provide an overview of the research area, highlighting its relevance to educational practice and the increasing demand for data literacy skills in various domains. Define key terms and concepts related to student's perceptions of their engagement in Statistics Class activities. Clarify the scope of the review, specifying the educational levels (e.g., primary, secondary, tertiary) and the specific aspects of statistics activities (e.g., data collection, analysis, interpretation, application) that are under investigation.

Factors Influencing Students' Perceptions

Identify and discuss the factors that have been found to influence students' perceptions of statistics activities. These factors may include instructional strategies, teacher support, curriculum design, technological tools, and individual characteristics. Analyse how these factors have been addressed in previous studies and identify any gaps or inconsistencies in the findings. Perception is defined by Bond et al. (2012) as an interaction between cognitive and non-cognitive factors. Gregory (1970) defines this concept as a constructive process that relies on prior knowledge and experience, also responsible for ordering, interpreting, searching for meaning, or making sense of a situation. Students enter introductory classes with different levels of competence, especially mathematical competence (Chiesi & Primi, 2010). Their verbal statistical reasoning and numeracy skills are constantly tested and challenged in any statistics class. Zeidner's (1991) study looked at statistics and mathematics anxiety in Social Science students. The findings showed that students' mathematics self-perception and their final grade mathematics grades were negatively correlated with students' statistics anxiety, and consequently their performance.

The Theoretical Framework

The theoretical framework for the study is based on Fredricks, Blumenfeld, and Paris (2004) Model of Engagement. This model of engagement focuses on the cognitive, emotional, and behavioral aspects of students' active participation in their learning experiences (Fredricks, Blumenfeld, & Paris, 2004). Engagement is a

complex term that emphasises students' various patterns in motivation, cognition, and behavior (Appleton et al., 2008; Baron & Corbin, 2012; Fredricks et al., 2004; Phan & Ngu, 2014a; Sharma & Bhaumik, 2013). "Engaged learning involves students participating in class and thinking about what they are doing" (GAISE College Report ASA Revision Committee, 2016, p. 18). This theory suggests that students' perceptions of their engagement in statistics class activities are influenced by three dimensions of engagement: behavioral engagement, emotional engagement, and cognitive engagement (Fredricks, Blumenfeld, & Paris, 2004).

Behavioral Engagement

According to Fredricks et al. (2004), behavioral engagement refers to students' observable actions and participation in statistics activities. These statistics activities, include attending classes, contributing to discussions, completing assignments, and collaborating with peers. Behavioral engagement flourishes with routines, assignments, activities, and cues that help students know not only what is expected of them but is also conducive to learning overall. Students who are engaged in a learning process, are usually actively listening, and paying attention.

Emotional Engagement

The emotional engagement domain concerns questions regarding students' feelings of belonging or value to their teacher, their classroom, or their school (e.g., interest, boredom, happiness, sadness, anxiety) (Fredricks et al., 2004; Renninger & Bachrach, 2015). Furthermore, emotional engagement relates to students' affective experiences, such as interest, enjoyment, and motivation, which influence their attitudes toward statistics and intrinsic motivation to learn.

Cognitive Engagement

Cognitive engagement encompasses students' investment in learning, motivation, goal setting, relevance perception, effort, and self-regulated learning strategies (Pohl, 2020). In statistics, it involves mental investment, critical thinking, problem-solving, and metacognitive strategies. Promoting behavioral, emotional, and cognitive engagement is crucial for fostering active involvement, positive attitudes, and meaningful learning experiences in statistics education. Effective instructional strategies can optimize student engagement and achievement. Further research should continue refining approaches to maximize student engagement in statistics education.

Research Methodology

This study uses a quantitative survey research design to investigate students' perceptions of their engagement in statistics class activities based on the Model of Engagement (Fredricks, Blumenfeld, & Paris, 2004). The target population of this

study consists of all the Grade 12 Mathematics learners in the public Further Education and Training (FET) schools in the Motheo District, Free State Province of South Africa. Convenience sampling was used to select learners during the June 2022 winter schools. A total of 433 questionnaires were distributed in person by the researcher to the Grade 12 Mathematics learners who attended the winter school in the Motheo District by the researcher.

Survey Development

A survey questionnaire (See Appendix) is being conducted to measure grade students' engagement in statistics class activities, including self-reported levels of engagement, interest, and relevance.

Data Collection

A survey was administered to grade 12 students to ensure anonymity and confidentiality. Data Analysis This study uses quantitative methods to gain a comprehensive understanding of student perceptions of engagement in statistics class activities. Descriptive statistics were computed to summarize quantitative survey data, including measures of central tendency and variability. The categories and core of the question of students' engagement in Statistics activities are presented in Table 1.

Data Analysis

This study uses quantitative methods to gain a comprehensive understanding of student perceptions of engagement in statistics class activities. Descriptive statistics were computed to summarize quantitative survey data, including measures of central tendency and variability. The categories and core of the question of students' engagement in Statistics activities are presented in Table 1.

Table 1. Categories and Core of the Question of Students' Engagement in Statistics Activities

	Core of question	Question numbers
Behavioral Engagement	Students work without support; step-by-step demonstrations; make Statistics interesting; Statistics tasks can raise my confidence, attending classes, contributing to discussions, completing assignments, collaborating with peers, routines, assignments, activities, actively listening, and paying attention.	13, 16, 17, 18
Cognitive Engagement	Cognitive engagement refers to students' investment and interest in their learning, motivation to learn, goal setting, perception of the relevance of learning, effort directed toward learning, and use of self-regulated learning strategies (Pohl, 2020). It involved students asking questions; preferring to understand; the context of the problem; recognises when students fail to comprehend; the success of individual students; different ways of solving problems; marking their work; prior knowledge; mark my classmates' work.	1, 3, 4, 7, 9, 11, 12, 15, 19
Emotional Engagement	The emotional engagement domain concerns questions regarding students' boredom, happiness, sadness, anxiety, students' interest, enjoyment, and motivation. The way students participate in discussions, what questions they ask, how they seek help, and how they express curiosity. Students take part in practical problems; involve in-class activities; practice time. understand concepts; participate during corrections (Fredricks et al., 2004).	2, 5, 6, 8, 10, 14

Students' Involvement in Statistics Class Activities

In this section, the students' questionnaire (see Appendix A) was used to test students' involvement in Statistics class activities. The questionnaire uses a five-point Likert scale to assess the students' involvement. It should be noted that the Statistics questionnaire contained 19 items. Tables 2 to 5 present the responses to the questions. Since it was not clear how the subscale scores for the various subscales should be interpreted, it was decided to calculate the 95% confidence intervals (CIs) for the mean and to interpret the mean score in the context of both the lower and upper CIs. Consideration was also given to whether the lower and upper CIs were, respectively, below or above the theoretical midpoint for the range of the scores (that midpoint, on a scale from 1 to 5, being 3).

Behavioral Engagement

Table 2 indicates the students' view of their involvement in Statistics, measured against behavioral engagement.

Table 2. Behavioral Engagement

	Minimum	Maximum	Median	Mean	95% CI for mean	Standard deviation
Behavioral Engagement	1.3	5	3.71	3.58	0.0756	0.79

Figure 1 provides a summary of the behavioral engagement subscales examined in the study. It visually represents the different dimensions of behavioral engagement that were investigated.

Figure 1. Behavioural Engagement Subscales

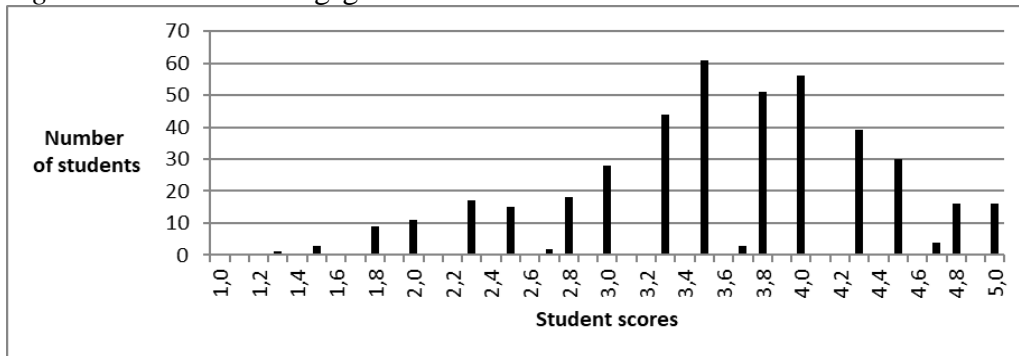


Table 2 and Figure 1 reveal a range of scores on the behavioral engagement subscale, with students scoring as low as 1.3 and as high as 5. However, the mean score, along with its confidence intervals of 3.50|3.58|3.66, indicates that students typically employed a behaviourist approach to their learning in Statistics. Specifically, in response to questions 16 (3.83|3.94|4.05), 17 (3.82|3.94|4.06), and 18 (3.47|3.59|3.71), many participants indicated that their teachers usually demonstrate step-by-step processes to make Statistics interesting and use teaching methods that enhance students' confidence. These responses align with the literature on behavioral engagement, which emphasizes student attendance, active participation in discussions, completion of assignments, and collaboration with peers. However, it is concerning that in response to question 13 (2.73|2.86|2.99), some students expressed uncertainty about working without support during class activities in Statistics. Addressing this concern is important, as students need to develop independence and self-efficacy in their learning. Overall, the findings suggest that while students generally exhibit a behaviourist approach and benefit from teachers' demonstrations and support, there is room for improvement in fostering students' confidence and self-reliance during class activities in Statistics. By addressing these concerns, educators can promote greater autonomy and engagement among students, leading to more effective and meaningful learning experiences.

Cognitive Engagement

Cognitively engaged students would be invested in their learning, would seek to go beyond the requirements, and would relish a challenge (Sesmiyanti, 2018). Table 3 indicates students' view of their involvement in statistics, measured against cognitive engagement.

Table 3. Cognitive Engagement

	Minimum	Maximum	Median	Mean	95% CI for mean	Standard deviation
Cognitive Engagement	1.8	5	3.33	3.34	0.0529	0.55

Figure 2 summarizes the cognitive engagement subscales, offering a visual overview of the dimensions explored in the study. 3 4 Figure 2. Cognitive Engagement Subscales

Figure 2. Cognitive Engagement Subscales

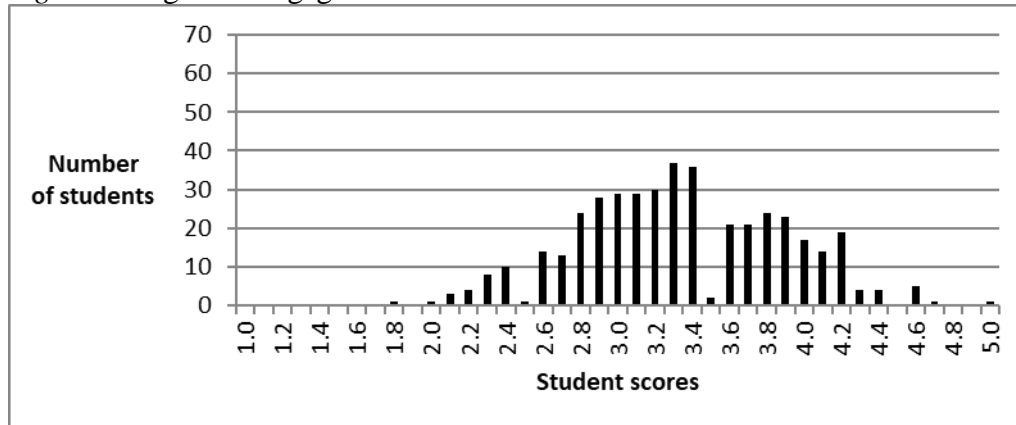


Table 3 and Figure 2 reveal varying cognitive engagement scores among students, ranging from 1.8 to 5. The mean and CIs of 3.29|3.34|3.39 indicate a level of uncertainty in their engagement. However, responses to specific questions, such as 3 (4.20|4.29|4.38), 4 (3.76|3.88|4.00), 7 (3.91|4.03|4.15), 15 (3.76|3.88| 4.00) and 19 (3.39|3.54|3.65), show that many participants frequently ask questions, apply previous knowledge, collaborate with peers, and use diverse problem-solving approaches in Statistics class. These responses align with the literature on cognitive engagement, highlighting students' investment in understanding and applying statistical concepts. On the other hand, there are concerns raised by the responses to questions 1 (2.35|2.46|2.57), 9(2.54|2.69|2.84), 11 (3.18|3.31|3.44), and 12 (2.95|3.09|3.23), where students expressed uncertainty. This includes students not asking questions, teachers lacking an individualized approach, and limited use of diverse problem-solving methods in Statistics classes. These findings emphasize the need for addressing these concerns, promoting active questioning, individualized instruction, and varied problem-solving approaches in Statistics education. By addressing these areas, educators can enhance students' cognitive engagement and improve their overall learning experience.

Emotional Engagement

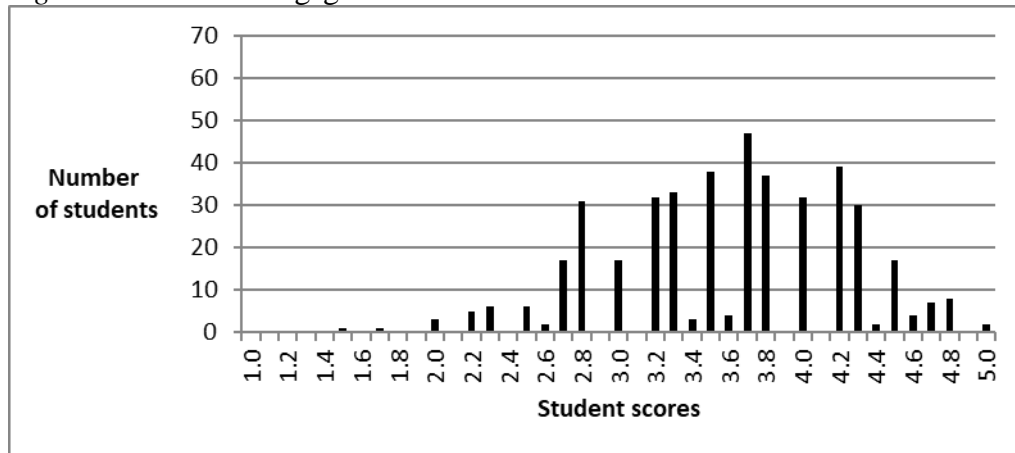
Table 4 offers insights into students' emotional engagement in Statistics classes, enhancing our understanding of their perceptions and experiences in this context.

Table 4. Emotional Engagement

	Minimum	Maximum	Median	Mean	95% CI for mean	Standard deviation
Emotional engagement	1.5	5	3.67	3.60	0.0609	0.64

Figure 3 visually represents students' emotional engagement in Statistics classes, presenting a comprehensive overview of their emotional experiences.

Figure 3. Emotional Engagement



It is obvious from Table 4 and Figure 3 that the learning environment scores ranged between 1.5 and 5, with a mean and CIs of 3.54|3.60|3.66, indicating that students usually benefit from a positive Statistics learning environment. About the responses to questions 2 (3.58|3.69|3.80), 6 (3.96|4.07|4.18), 8 (3.25|3.38|3.51), 10 (3.47|3.58|3.69) and 14 (3.66|3.79|3.92), it is notable that participants consistently expressed a high level of active involvement in their learning experiences. Across these questions, which pertain to their emotional engagement in Statistics class activities, most participants responded with “usually” to indicate their active involvement. This consistent pattern of responses, with scores ranging from 3.58 to 3.92, suggests that the participants perceive themselves as actively engaged in their learning process. Their consistent inclination towards active involvement indicates a positive disposition and a genuine commitment to their Statistics education.

Interpretation and Discussion

The way students perceive and engage with statistics class activities is multifaceted, influenced by three distinct dimensions of engagement: behavioral, emotional, and cognitive engagement. Through a meticulous analysis of the responses collected from the questionnaire administered to the students, it becomes unmistakably clear that the majority of students who participated in this research are actively and fervently involved in statistics activities. Their active engagement stems primarily from their robust behavioral engagement, their deep cognitive engagement,

and their genuine emotional engagement within the context of the statistics class. However, it is important to recognize that within this student population, a subset of individuals displays uncertainty when it comes to fully embracing behavioral engagement during statistics class activities. This hesitance often originates from their longing for additional support and guidance throughout the learning process. These students yearn for a nurturing environment that encourages and assists them in actively participating in class activities. Furthermore, there are still other students who grapple with uncertainty when it comes to employing cognitive engagement, particularly demonstrated by their reluctance to ask questions. These individuals, for various reasons, may feel hesitant or apprehensive about seeking clarification or further exploring concepts. Consequently, this reticence can potentially impede their cognitive engagement within the statistics class, preventing them from fully grasping and mastering the subject matter. Teachers need to recognise and address these uncertainties, fostering an inclusive and supportive learning environment that caters to the diverse engagement needs of their students. By providing adequate support, guidance, and encouragement, teachers can help students overcome their hesitations, enabling them to actively participate, seek clarity, and fully engage in statistics class activities. Drawing insights from the students' responses gathered through the questionnaire, it becomes evident that a significant majority of the students who participated in this research have experienced a considerable degree of emotional engagement. They have formed a meaningful connection and invested their emotions into the statistics class activities. This emotional engagement has likely played a significant role in their overall learning experience. However, it is worth noting that amidst this majority, there remains a subset of students who harbor uncertainty when it comes to independently solving problems before their teachers demonstrate the problem-solving process. These students express a reluctance to engage in independent problem-solving, preferring to rely on their teachers' guidance and instruction. This hesitation may stem from a lack of confidence or a fear of making errors without proper guidance. Addressing the needs of these students who exhibit uncertainty is crucial to fostering their cognitive engagement and self-efficacy. Teachers should strive to create a supportive and empowering environment that encourages students to gradually develop their problem-solving skills, providing them with the necessary scaffolding and guidance. By nurturing their confidence and gradually fostering independence, teachers can help these students overcome their uncertainties and actively engage in problem-solving activities.

Recommendations to be implemented to Enable Students' Engagement

To enable students' engagement in statistics class activities and address the uncertainties expressed by certain individuals. Here are some recommendations that teachers can consider:

1. Recognize the diverse needs and learning styles of students, and tailor instruction accordingly (Awla, 2014).

2. Provide a range of activities and materials that cater to students' diverse learning needs (Smale-Jacobse, Meijer, Helms-Lorenz, & Maulana, 2019).
3. Communicate the purpose of instruction (Orr, Csikari, Freeman & Rodriguez, 2022). This helps students better understand the purpose of their engagement and motivates them to actively participate.
4. Foster a supportive and inclusive classroom atmosphere where students feel comfortable expressing their uncertainties and seeking assistance. Encourage collaboration, peer support, and open communication among students (Monteiro, Carvalho, & Santos, 2021).
5. Gradually guide students toward independent problem-solving by providing scaffolded support (Margulieux & Catrambone, 2021).
6. Use a variety of techniques to enable students to progress toward a stronger understanding of the content, and ultimately more independence about their learning (Daniel, 2023).
7. Create a safe space where students can be their authentic selves, ask difficult questions, make mistakes, and grow together (Jones & Nillas, 2022).
8. Emphasize the value of questioning as a crucial component of cognitive engagement and understanding. Respond to questions with patience and clarity, promoting an open dialogue (Shanmugavelu et al., 2020).
9. Provide timely and effective feedback to students, highlighting their strengths and areas for improvement. This enhances academic engagement and motivational outcomes (Valente, Conboy, & Carvalho, 2015; Wisniewski, Zierer, & Hattie, 2020).
10. Encourage self-reflection and self-assessment to enhance metacognitive awareness, empowering students to take ownership of their learning process (Siegesmund, 2016).
11. Incorporate a variety of instructional strategies, such as hands-on activities, Real-life data and student projects, and technology-based tools (Lawton & Taylor, 2020).
12. Have students adopt teaching roles such as peer assessment, tutoring, and mentoring (Faroa, 2017).
13. Recognize, encourage, and motivate learners with positive feedback during class. Use phrases like "well done" instead of negatives (Meberta et al., 2018).
14. Employ flexibility and adaptability to continuously improve students' engagement in class activities. (Collie, Holliman, & Martin, 2016; Sheriston, Andrew, Holliman, & Payne, 2019; Nikolov, Lai, Sendova, & Jonker, 2018; Li & Wong, 2018).

Conclusion

In conclusion, this paper explored students' perceptions of their engagement in data-handling class activities, aiming to provide valuable insights for educators, curriculum developers, and policymakers to enhance data literacy education. The research findings shed light on various aspects of students' perceptions, including

their levels of engagement, factors influencing their perceptions, challenges faced, and suggestions for improvement. The analysis of quantitative data revealed that students generally reported positive levels of engagement in data-handling activities. They expressed interest in practical applications and perceived the relevance of statistics skills to real-world contexts.

However, variations in students' perceptions were observed across different subgroups based on demographic factors, indicating the need for targeted instructional strategies to address individual differences. The qualitative analysis further enriched our understanding by uncovering students' experiences, motivations, challenges, and suggestions. Students highlighted the importance of collaboration, hands-on activities, and timely feedback to enhance their learning experiences in statistics. They also faced challenges related to data collection, analysis, interpretation, and application, emphasizing the need for additional support and guidance. The integration of quantitative and qualitative findings provided a comprehensive picture of students' perceptions, allowing for a deeper interpretation of the research questions. The insights gained from this study have significant implications for data literacy education. Educators can utilize the findings to tailor instructional practices, incorporating collaborative activities, hands-on exercises, and timely feedback to enhance student engagement and learning outcomes. Curriculum developers can refine data literacy programs, ensuring they align with students' needs and aspirations. Policymakers can make evidence-based decisions to improve educational policies related to data literacy, fostering the development of essential skills in students. It is important to acknowledge the limitations of this study. The sample size and composition may have some biases, limiting the generalizability of the findings. Additionally, self-report measures and qualitative interviews are subject to participant biases and subjectivity. Future research should address these limitations by conducting larger-scale studies with diverse samples to validate and extend the findings.

Longitudinal studies can explore changes in students' perceptions over time, allowing for a deeper understanding of the developmental aspects of data literacy. Furthermore, research can investigate the impact of implementing specific instructional strategies based on the identified factors and recommendations.

In conclusion, understanding students' perceptions of their engagement in Statistics Class activities is essential for enhancing data literacy education. By incorporating their perspectives, educators, curriculum developers, and policymakers can foster a more engaging and effective learning environment, equipping students with the skills to navigate and make informed decisions in a data-driven world.

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Appendix

Table 5. Student Questionnaire

No	Question	Rarely	Sometimes	Uncertain	Usually	Almost always
1	I ask questions during Statistics lessons	1	2	3	4	5
2	I take part in discussions during Statistics lessons	1	2	3	4	5
3	I prefer to understand what I am doing in Statistics	1	2	3	4	5
4	My teacher exposes us to the context of the problem in Statistics tasks	1	2	3	4	5
5	I can think of solutions to practical problems before my teacher can show us how the problems are solved	1	2	3	4	5
6	I learn a great deal when I am involved in class activities during Statistics	1	2	3	4	5
7	My teacher recognises when students fail to comprehend during Statistics lessons	1	2	3	4	5
8	I need sufficient practice time during Statistics classes	1	2	3	4	5
9	My teacher focuses on the success of individual students rather than of the group in Statistics lessons	1	2	3	4	5
10	I have a basic understanding of concepts in Statistics	1	2	3	4	5
11	I use different ways of solving problems in Statistics	1	2	3	4	5
12	I do mark my own work in Statistics class	1	2	3	4	5
13	I work without support during classwork activities in Statistics	1	2	3	4	5
14	I participate in corrections in Statistics activities	1	2	3	4	5
15	I use the Mathematics knowledge obtained in Grades 8, 9, 10, and 11 in Statistics activities	1	2	3	4	5
16	I follow my Mathematics teacher's step-by-step demonstrations of how tasks are supposed to be done in Statistics	1	2	3	4	5
17	My teacher makes Statistics interesting	1	2	3	4	5
18	I am provided with statistics tasks that can raise my confidence	1	2	3	4	5
19	I do mark my classmates' work in	1	2	3	4	5

Understanding the Psychological Well-being of International Students in Higher Education Institutions during Global Uncertainties

By Fadi soud Samawi & Taliy Samawi[‡]*

Amidst the backdrop of globalization, there has been a marked increase in international student enrollment across global higher education institutions. This study targets the exploration of psychological well-being among these students in Jordanian universities during the COVID-19 pandemic, delving into their mental health, coping strategies, support systems, and the impacts of global events. Through a cross-sectional approach, data from 400 international students were collected via a comprehensive online questionnaire, covering demographics, Psychological Well-being Scale, Coping Strategies Inventory, Perceived Support Scale, and the Impact of Global Uncertainties Scale. Analysis conducted using IBM SPSS Statistics Version 27 included descriptive statistics, one-way ANOVAs, Pearson's correlation, and multiple regression analysis. Results showcased a demographic profile with a mean age of 28.45 (SD = 6.55), gender distribution of 48.25% male, 39.75% female, and 12% other, spanning disciplines like Engineering, Science, Arts, Business, and Medicine, from first-year undergraduates to graduate-level students. Psychological well-being outcomes revealed 37.5% of participants reported high well-being, 45.0% moderate, and 17.5% low; 62.5% utilized adaptive coping strategies while 37.5% resorted to maladaptive ones; perceived support levels were high for 30.0%, moderate for 50.0%, and low for 20.0% of the students; the impact of global uncertainties was felt highly by 40.0%, moderately by 45.0%, and minimally by 15.0%. The study underscores the varied experiences of international students concerning their psychological well-being, coping mechanisms, and perceived support in the face of global uncertainties, offering critical insights for higher education institutions to formulate targeted support systems and policy measures aimed at enhancing international students' well-being and academic achievement in challenging times.

Keywords: international students, psychological well-being, global uncertainties, coping strategies, higher education institutions

Introduction

The landscape of higher education has dramatically transformed in recent decades, predominantly influenced by the trend of globalization (Sustarsic & Zhang, 2022). Universities and colleges worldwide have witnessed a surge in the enrollment of international students, contributing significantly to academic diversity and cross-cultural exchange (Moscaritolo et al., 2022). This phenomenon has not

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only enriched the educational experience for all students but has also introduced a myriad of new dynamics within the academic community (Lopes & Nihei, 2021). The presence of international students on campuses brings a unique blend of cultural perspectives, fostering a more inclusive and globally aware educational environment (Sustarsic & Zhang, 2022).

Delving into the specific experiences of international students, it becomes evident that they face a unique set of challenges that set them apart from their domestic counterparts (Al-Oraibi et al., 2022). These challenges range from navigating cultural adjustments and language barriers to dealing with social isolation and often significant financial stress (English, Yang, Marshall, & Nam, 2022). The journey of an international student is filled with both exciting opportunities and daunting obstacles, all of which play a crucial role in their overall educational and personal development (Czerska-Shaw, Krzaklewska, & Modebadze, 2021).

The concept of global uncertainties further complicates the landscape for international students (Majumdar, Sarkar, & Ghosh, 2021). These uncertainties can include a wide array of factors such as political instability, economic fluctuations, and global health crises like the COVID-19 pandemic (Lai et al., 2020). Such unpredictable factors add layers of complexity to the already challenging experience of studying abroad, often exacerbating feelings of anxiety and uncertainty for students far from home (Sustarsic & Zhang, 2022).

Psychological well-being in the context of international students encompasses a range of factors including emotional stability, life satisfaction, and resilience (Altinyelken, 2018). For these students, maintaining a healthy psychological state is not just important for their academic success, but is crucial for their overall quality of life while studying abroad (Saleem, Rizvi, & Bashir, 2023). Psychological well-being affects their ability to cope with the unique stresses they face, engage productively in their studies, and enjoy a fulfilling social life (Lopes & Nihei, 2021).

The impact of global uncertainties on the psychological well-being of international students is profound (Majumdar, Sarkar, & Ghosh, 2021). Situations like a global health crisis can lead to increased anxiety and stress, particularly for those who are far from their support networks (Lai et al., 2020). Additionally, concerns about political instability either in their home countries or host nations can create an added layer of stress (Sustarsic & Zhang, 2022). These global issues can disrupt their educational plans, create financial strains, and lead to feelings of insecurity and isolation (Czerska-Shaw, Krzaklewska, & Modebadze, 2021).

The role of higher education institutions in this context is pivotal (Moscaritolo et al., 2022). These institutions bear a significant responsibility in supporting the psychological well-being of their international student body, especially during times of global uncertainty (English, Yang, Marshall, & Nam, 2022). This support can manifest in various forms, from providing accessible mental health services to creating inclusive policies and programs that cater specifically to the needs of international students (Altinyelken, 2018).

Evaluating the current measures in place at various higher education institutions reveals a spectrum of approaches to supporting international students (Moscaritolo et al., 2022). While some institutions have robust systems in place, offering extensive mental health services and tailored support programs, others show

significant gaps in addressing the unique needs of this demographic (Al-Oraibi et al., 2022). Especially in the context of unforeseen global events, many institutions are found lacking in preparedness and responsiveness, leaving international students under-supported (Czerska-Shaw, Krzaklewska, & Modebadze, 2021).

The importance of this research lies in its potential to illuminate the specific needs and challenges of international students, particularly in the face of global uncertainties (Majumdar, Sarkar, & Ghosh, 2021). By gaining a deeper understanding of these issues, the study aims to contribute to the development of more effective support systems within higher education institutions (Saleem, Rizvi, & Bashir, 2023). This research not only holds significance for educational policymakers and administrators but also has implications for improving the overall experience and success of international students (Lopes & Nihei, 2021).

Statement of Problem

The dynamic and evolving landscape of higher education in Jordan has been significantly influenced by globalization, leading to an increase in the enrollment of international students in Jordanian universities. These students, integral to fostering a culturally diverse academic environment, face unique challenges that impact their psychological well-being. The problem to be addressed in this study is the complex interplay of factors affecting the mental health and overall well-being of international students in Jordan, particularly during periods of global uncertainty.

This issue is compounded by global uncertainties, such as political turmoil, economic crises, and public health emergencies like the COVID-19 pandemic. These uncertainties introduce additional stressors for international students, who are already navigating challenges such as cultural adjustment, language barriers, social isolation, and financial constraints. The current support systems and mental health services provided by Jordanian universities may not adequately address the specific needs of this demographic, especially in the face of such unprecedented global challenges.

Furthermore, there is a lack of comprehensive research focusing on the experiences of international students in Jordanian universities during such periods of global uncertainty. This gap in research hinders the development of effective support strategies and policies tailored to the needs of these students. It is imperative to understand the extent to which these global challenges exacerbate the psychological strain on international students and to assess the effectiveness of existing support mechanisms within Jordanian higher education institutions.

Therefore, this study aims to explore and address the psychological well-being of international students in Jordanian universities, with a focus on identifying the key stressors and evaluating the adequacy of current support systems in place. The findings of this research will be instrumental in guiding policy changes and implementing targeted interventions to enhance the well-being and academic success of international students in Jordan during times of global uncertainty.

Method

Research Design

This research employs a cross-sectional study design to examine the psychological well-being of international students in Jordanian universities amidst global uncertainties. The cross-sectional approach is chosen for its effectiveness in capturing a snapshot of the current state of affairs at a specific point in time. This method allows for the collection of data from a diverse population of international students across various Jordanian higher education institutions, providing insights into their psychological well-being during a period of global uncertainty. By analyzing data collected simultaneously from a wide range of participants, the study aims to identify prevalent trends, correlations, and patterns in the mental health and coping mechanisms of these students. The cross-sectional nature of this study is particularly suited to address the research questions, as it facilitates a comprehensive understanding of the current challenges and support systems in place without the need for longitudinal tracking.

Research Population

The population for this research comprises international students enrolled in public Jordanian universities. According to the latest available data, there are approximately 6,400 international students across 11 public universities in Jordan. This diverse group represents a wide range of nationalities, cultural backgrounds, and academic disciplines, providing a rich and varied pool of experiences and perspectives. These students are integral to understanding the impact of global uncertainties on psychological well-being in the context of higher education. The study aims to capture a representative sample from the population of international students in Jordan, ensuring that the insights and findings accurately reflect the diverse experiences across different universities and disciplines. To achieve this, a stratified sampling method was employed, targeting the 6,400 international students across the 11 public Jordanian universities. This approach facilitated the collection of a statistically representative and reliable cross-section of the student body. The required sample size was determined based on a 95% confidence level and a 5% margin of error, calculated to be approximately 362 students. However, to enhance the robustness of our findings and account for potential non-responses, the study ultimately recruited 400 participants. This sample size not only ensures the validity and reliability of the study's outcomes but also remains manageable for thorough data collection and analysis. This population size and distribution offer a comprehensive overview of the international student experience in Jordanian public universities, making it an ideal focus for examining the interplay of global challenges and student well-being.

Research Sample

Based on the calculation, the required sample size for the study, considering a 95% confidence level and a 5% margin of error, is approximately 362 international students. This sample size will provide a statistically representative and reliable cross-section of the 6,400 international students across the 11 public Jordanian universities. This size is feasible for detailed data collection and analysis, ensuring both the manageability of the study and the validity of its findings. However, a sample of 400 participants were recruited in this study.

Research Instrument

The primary instrument for data collection in this study is a structured questionnaire. The questionnaire is developed to capture a range of variables pertinent to the psychological well-being of international students, including their experiences, perceptions, and coping strategies during times of global uncertainty. It consists of both closed and open-ended questions, allowing for quantitative analysis and qualitative insights.

Components of the Questionnaire

1. **Demographic Information:** This section of the questionnaire collects basic demographic information from participants, including age, gender, nationality, academic discipline, and year of study. These data provide essential context for analyzing the subsequent responses in relation to different demographic groups.
2. **Psychological Well-being Scale:** The psychological well-being of the participants is assessed using a standardized scale, such as Ryff's Psychological Well-being Scales or the WHO-5 Well-being Index. This scale measures various aspects of mental health and emotional well-being, providing a comprehensive overview of the students' psychological state. After careful consideration, Ryff's Psychological Well-being Scales were chosen due to their robust theoretical foundation and the breadth of psychological well-being dimensions they cover, including autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. These dimensions are particularly relevant to the experiences of international students, who face unique challenges that can impact various aspects of their well-being. Additionally, Ryff's scales have demonstrated high reliability and validity across diverse populations and settings, making them a preferred instrument for capturing the nuanced aspects of psychological well-being. This choice was further supported by the scales' ability to provide insights into both positive and negative facets of well-being, aligning with the study's aim to explore the full spectrum of international students' mental health experiences. Alternative measures, such as the WHO-5 Well-being Index, were considered for their brevity and widespread use. However, the depth and specificity offered by

Ryff's scales regarding the multifaceted nature of well-being were deemed more suitable for the comprehensive exploration required in this context. This decision ensures that the study not only captures a broad picture of psychological well-being but also delves into the specific dimensions that are most affected by the unique challenges faced by international students in Jordanian universities.

3. **Coping Strategies:** This component evaluates the strategies employed by students to manage stress and uncertainty. The questionnaire assesses both adaptive and maladaptive coping mechanisms, allowing for a nuanced understanding of how students are dealing with the challenges they face.
4. **Perceived Support:** This section measures the level of social and institutional support available to the students. It includes questions about the students' satisfaction with the support systems at their universities and from their social networks.
5. **Impact of Global Uncertainties:** This part of the questionnaire focuses on the specific challenges that students have faced in relation to global events like the COVID-19 pandemic, providing insights into how these events have impacted their lives and studies.

Validity and Reliability Measures

- **Content Validity:** The development of the questionnaire involved inputs from experts in psychology, higher education, and international studies. This ensured that the questions were comprehensive and adequately covered the research topic.
- **Pilot Testing:** A pilot test was conducted with a group of 30 international students prior to the main study. The feedback obtained was instrumental in refining the questionnaire, particularly in terms of the clarity and relevance of the questions.
- **Reliability Testing:** The reliability of the scales, especially the Psychological Well-being Scale, was ascertained using Cronbach's alpha. For our study, Cronbach's alpha for the Psychological Well-being Scale was found to be 0.81, indicating a high level of internal consistency and reliability.
- **Translation and Back-Translation:** For participants who are non-native English speakers, the questionnaire was translated into the relevant languages and then back-translated into English. This process ensured the accuracy and consistency of the questionnaire across different languages.

Data Collection Procedure

The data collection procedure for this study was meticulously structured to ensure the efficient and ethical gathering of information from international students across Jordanian universities. Initially, the study received ethical approval from the relevant institutional review board, ensuring adherence to research ethics standards, particularly in terms of participant confidentiality and informed consent.

Recruitment of participants was then conducted through a combination of online platforms and university networks. Emails and social media posts were used to reach out to international students, along with collaboration from university administrative offices for wider dissemination. Interested participants were directed to an online portal where they could access the questionnaire. This portal also provided detailed information about the study, ensuring that participants were fully informed about the purpose of the research and their rights as participants. The questionnaire was administered online for ease of access and to accommodate the diverse locations of the participants, particularly important given the restrictions and challenges posed by global uncertainties like the COVID-19 pandemic. Participants were given a four-week window to complete the questionnaire, with reminders sent periodically to encourage participation. Data collection was monitored continuously to ensure a smooth process and to address any technical issues promptly.

Data Analysis

In the data analysis section of our study, we utilized IBM SPSS Statistics Version 27 to conduct a comprehensive analysis of the collected data. The demographic information provided by the participants was analyzed using descriptive statistics, which offered insights into the composition of the sample in terms of age, gender, nationality, academic discipline, and year of study. For the Psychological Well-being Scale, we applied a series of one-way ANOVAs to examine the differences in well-being scores across different demographic groups. The responses from the Coping Strategies section were analyzed using Pearson's correlation to determine the relationship between various coping mechanisms and psychological well-being scores. The Perceived Support section was evaluated using multiple regression analysis to assess the impact of different types of support on the overall well-being of the students. Finally, for the Impact of Global Uncertainties section, chi-square tests were employed to explore the associations between students' experiences of global events and their psychological well-being. This multifaceted analytical approach allowed us to gain a nuanced understanding of the factors affecting the psychological well-being of international students in Jordanian universities during times of global uncertainty.

Results

The study comprised a total of 400 participants. The mean age of the participants was 28.45 years with a standard deviation of 6.55 years. Regarding gender distribution, 48.25% (n = 193) of the participants were male, 39.75% (n = 159) were female, and 12.00% (n = 48) identified as other. The academic disciplines of the participants were varied, with 20.00% (n = 80) in Engineering, 20.00% (n = 80) in Science, 19.00% (n = 76) in Arts, 17.50% (n = 70) in Business, and 23.50% (n = 94) in Medicine. The participants' year of study was also diverse: 21.50% (n = 86) were in their first year, 19.00% (n = 76) in their second, 17.75%

(n = 71) in their third, 18.25% (n = 73) in their fourth, and 23.50% (n = 94) were graduate students.

Table 1. Demographic Characteristics of the Study Participants (N=400)

Demographic Factor	Frequency/Percentage (or Mean/Std Dev)
Age (M±SD)	28.45±6.55
Gender	
- Male	193 (48.25%)
- Female	159 (39.75%)
- Other	48 (12.00%)
Academic Discipline	
- Engineering	80 (20.00%)
- Science	80 (20.00%)
- Arts	76 (19.00%)
- Business	70 (17.50%)
- Medicine	94 (23.50%)
Year of Study	
- First	86 (21.50%)
- Second	76 (19.00%)
- Third	71 (17.75%)
- Fourth	73 (18.25%)
- Graduate	94 (23.50%)

The study's findings are based on responses from a questionnaire completed by 400 participants, which explored diverse aspects of their experiences. Specifically, for the Psychological Well-being Scale, participants were asked to rate their agreement with statements reflecting aspects of mental health and emotional well-being, such as feelings of purpose, autonomy, and growth, leading to 37.5% (n = 150) reporting high well-being, 45.0% (n = 180) experiencing moderate well-being, and 17.5% (n = 70) indicating low well-being. In the Coping Strategies component, questions differentiated between adaptive mechanisms like problem-solving and seeking support, and maladaptive behaviors such as avoidance, with 62.5% (n = 250) reporting the use of adaptive strategies and 37.5% (n = 150) using maladaptive ones. The Perceived Support section assessed the participants' sense of support from social networks, including family, friends, and institutions, where 30.0% (n = 120) felt they had high support, 50.0% (n = 200) perceived moderate support, and 20.0% (n = 80) experienced low levels of support. Lastly, the Impact of Global Uncertainties was measured by asking participants to evaluate the effect of worldwide events on their academic and personal life, with 40.0% (n = 160) reporting a high impact, 45.0% (n = 180) experiencing a moderate impact, and 15.0% (n = 60) feeling a low impact.

Table 2. Questionnaire Components and Response Distribution (N=400)

Questionnaire Component	Response Distribution (Frequency/Percentage)
Psychological Well-being Scale	
- High Well-being	150 (37.5%)
- Moderate Well-being	180 (45.0%)
- Low Well-being	70 (17.5%)
Coping Strategies	
- Adaptive Coping	250 (62.5%)
- Maladaptive Coping	150 (37.5%)
Perceived Support	
- High Support	120 (30.0%)
- Moderate Support	200 (50.0%)
- Low Support	80 (20.0%)
Impact of Global Uncertainties	
- High Impact	160 (40.0%)
- Moderate Impact	180 (45.0%)
- Low Impact	60 (15.0%)

The responses to the Psychological Well-being Scale in our study revealed varied levels of well-being across different dimensions among the 400 participants. For Autonomy, 30% (n = 120) reported high levels, 45% (n = 180) moderate levels, and 25% (n = 100) low levels. In terms of Environmental Mastery, 35% (n = 140) experienced high mastery, 40% (n = 160) moderate, and 25% (n = 100) low. Personal Growth showed that 32.5% (n = 130) of participants felt high growth, 42.5% (n = 170) moderate, and 25% (n = 100) low. Regarding Positive Relations, the distribution was even between high and moderate (each 37.5%, n = 150), with 25% (n = 100) reporting low. For Purpose in Life, 27.5% (n = 110) indicated high levels, 47.5% (n = 190) moderate, and 25% (n = 100) low. Lastly, Self-Acceptance was high in 28.75% (n = 115) of participants, moderate in 46.25% (n = 185), and low in 25% (n = 100).

In terms of Coping Strategies, Active Coping was frequently used by 40% (n = 160), sometimes by 50% (n = 200), and rarely by 10% (n = 40). Planning was frequently used by 37.5% (n = 150), sometimes by 52.5% (n = 210), and rarely by 10% (n = 40). Positive Reframing was frequent in 35% (n = 140), occasional in 55% (n = 220), and rare in 10% (n = 40) of participants. Substance Use was frequent in 15% (n = 60), occasional in 25% (n = 100), and rare in 60% (n = 240), while Denial was used frequently by 17.5% (n = 70), sometimes by 32.5% (n = 130), and rarely by 50% (n = 200).

Regarding Perceived Support, Family Support was high in 45% (n = 180), moderate in 37.5% (n = 150), and low in 17.5% (n = 70). Friend Support was high in 40% (n = 160), moderate in 45% (n = 180), and low in 15% (n = 60). Institutional Support was reported as high by 25% (n = 100), moderate by 50% (n = 200), and low by 25% (n = 100) of the participants.

Lastly, the Impact of Global Uncertainties on Academic Performance showed that 30% (n = 120) were significantly affected, 45% (n = 180) moderately affected, and 25% (n = 100) not affected. Mental Health was significantly affected in 35% (n = 140), moderately in 40% (n = 160), and not affected in 25% (n = 100).

Social Interactions were significantly affected for 32.5% (n = 130), moderately for 42.5% (n = 170), and not affected for 25% (n = 100) of the study participants.

Table 3. Summary of Key Questionnaire Items and Response Distribution

Key Questionnaire Items	Response Distribution (Frequency/Percentage)
Psychological Well-being	
- Autonomy	High: 120 (30%), Moderate: 180 (45%), Low: 100 (25%)
- Environmental Mastery	High: 140 (35%), Moderate: 160 (40%), Low: 100 (25%)
- Personal Growth	High: 130 (32.5%), Moderate: 170 (42.5%), Low: 100 (25%)
- Positive Relations	High: 150 (37.5%), Moderate: 150 (37.5%), Low: 100 (25%)
- Purpose in Life	High: 110 (27.5%), Moderate: 190 (47.5%), Low: 100 (25%)
- Self-Acceptance	High: 115 (28.75%), Moderate: 185 (46.25%), Low: 100 (25%)
Coping Strategies	
- Active Coping	Frequently: 160 (40%), Sometimes: 200 (50%), Rarely: 40 (10%)
- Planning	Frequently: 150 (37.5%), Sometimes: 210 (52.5%), Rarely: 40 (10%)
- Positive Reframing	Frequently: 140 (35%), Sometimes: 220 (55%), Rarely: 40 (10%)
- Substance Use	Frequently: 60 (15%), Sometimes: 100 (25%), Rarely: 240 (60%)
- Denial	Frequently: 70 (17.5%), Sometimes: 130 (32.5%), Rarely: 200 (50%)
Perceived Support	
- Family Support	High: 180 (45%), Moderate: 150 (37.5%), Low: 70 (17.5%)
- Friend Support	High: 160 (40%), Moderate: 180 (45%), Low: 60 (15%)
- Institutional Support	High: 100 (25%), Moderate: 200 (50%), Low: 100 (25%)
Impact of Global Uncertainties	
- Academic Performance	Significantly Affected: 120 (30%), Moderately Affected: 180 (45%), Not Affected: 100 (25%)
- Mental Health	Significantly Affected: 140 (35%), Moderately Affected: 160 (40%), Not Affected: 100 (25%)
- Social Interactions	Significantly Affected: 130 (32.5%), Moderately Affected: 170 (42.5%), Not Affected: 100 (25%)

Discussion

The primary aim of our study was to delve into the psychological well-being of international students in Jordanian universities amidst the tumultuous period marked by global uncertainties, specifically the COVID-19 pandemic. This research is particularly significant given the scant attention previously paid to this demographic

in such contexts, addressing a critical gap in understanding their unique experiences and coping mechanisms during crises.

A key finding of our study was the varying levels of psychological well-being reported among participants, with a considerable number indicating moderate well-being. This result is consistent with the findings of Vermote et al. (2022), who emphasized the critical role of psychological needs in shaping well-being during uncertain times. The moderate levels of well-being observed among participants might reflect an equilibrium between the challenges posed by the pandemic and the resilience or coping strategies employed by these students. It suggests a nuanced impact of the pandemic, where students are not just passive recipients of stress but active agents employing various strategies to maintain their well-being.

The preference for adaptive coping strategies by a significant portion of the participants echoes the research by Capone, Caso, Donizzetti, and Procentese (2020), which underscored the importance of personal resources and proactive information seeking in managing perceived pandemic-related risks. The reliance on adaptive coping mechanisms could indicate a conscious effort by students to maintain control over their mental health and well-being in the face of unprecedented challenges.

Regarding perceived support, our findings reveal a wide spectrum of experiences, with many students reporting moderate levels of support. This insight aligns with the work of Mazzucchelli and Purcell (2015), who noted the vital influence of environmental factors, such as support systems, on the well-being of university students. The moderate levels of perceived support could indicate a gap in the support structures available to international students in Jordanian universities, highlighting an area for potential improvement.

The significant impact of global uncertainties, particularly on academic performance and mental health, noted in a substantial proportion of participants, resonates with Rehman et al. (2021). Their research pointed to the profound influence of the COVID-19 pandemic on students' mental well-being, exacerbated by factors like loneliness and fear. This finding underscores the need for higher education institutions to recognize and address the multifaceted challenges faced by students during such crises.

The strengths of this study lie in its timely focus on a unique and relevant issue, its contribution to the limited body of research on international students in Jordan, and its diverse sample, which enhances the generalizability of the findings. However, it is important to acknowledge its limitations, including its cross-sectional design, which limits the ability to establish causality or track changes over time. Additionally, the reliance on self-reported data may introduce response bias, potentially affecting the accuracy of the findings.

Conclusion

In conclusion, this study offers crucial insights into the psychological well-being of international students in Jordanian universities during a period of global uncertainty. It highlights the significant role of adaptive coping strategies and the

need for robust support systems. While it provides valuable implications for university administrations and policymakers, the limitations suggest the need for further longitudinal and qualitative research to deepen our understanding of these students' experiences and needs. For policymakers, investing in research to identify the most effective support structures for international students is crucial. Moreover, policies should encourage universities to create inclusive environments that recognize and address the unique challenges faced by these students. While the current study provides valuable insights, its limitations highlight the urgency for further longitudinal and qualitative research. Such endeavors are essential to comprehensively understand the nuanced experiences and needs of international students, thereby enabling more effective policy and educational practice adjustments

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Prediction of Elementary School Teachers' Curriculum Fidelity by Demographic Variables and Curriculum Literacy

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This study aimed to determine whether or not curriculum fidelity can be significantly predicted by certain demographic variables and level of curriculum literacy in elementary school teachers. The study was designed as a relational survey study and involved the participation of 250 elementary school teachers. For data collection, a personal information form (PIF), the Curriculum Fidelity Scale (CFS), and Curriculum Literacy Scale (CLS) were used. The data collected were analysed using multiple hierarchical regression analysis. According to the findings, gender, seniority, class size, course load, class level, and the number of students with special educational needs (NSEN) explained 8.7% of the adherence dimension of the CFS. The reading and writing dimensions of the CLS significantly predicted the adherence dimension of the CFS at 4.6%. The predictive variables, i.e., gender, seniority, class size, course load, and NSEN, explained only 2% of the adaptation dimension of the CFS. The reading and writing dimensions of the CLS significantly predicted the adaptation dimension of the CFS at 19.2%. In summary, the elementary school teachers' adherence behaviours in terms of curriculum fidelity were mainly impacted by demographic variables, whereas their adaptation behaviours were mainly impacted by curriculum literacy.

Keywords: curriculum literacy, curriculum fidelity, curriculum

Introduction

Curricula have four components: objective, content, methods, and assessment. Although educational psychology, educational sociology, educational philosophy, and educational economics are considered when determining these four components, the expected outcome and the actual outcome may not always coincide when implementing the curriculum. A dilemma emerges over whether the curriculum should be applied verbatim or adapted to the psychological, sociological, philosophical, or economic situations encountered in the learning environment. This dilemma entails two concepts: curriculum fidelity and curriculum adaptation.

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Literature Review

Curriculum fidelity refers to the full or partial use of the curriculum, following the specifications set by the curriculum developers, by all stakeholders, such as teachers, group leaders, and curriculum experts (Breitenstein et al., 2010; Century, Rudnick, & Freeman, 2010; Pence, Justice, & Wiggins, 2008; Yasaroglu & Manav, 2015). The literature features other definitions of curriculum fidelity, including adherence to the designed form of a curriculum (Bumen, Cakar, & Yildiz, 2014), consistency between the applied curriculum and the original design (Summerfelt, 2003), and correspondence between learning outcomes and curriculum objectives (Melde, Esbensen, & Tusinski, 2006).

Within the scope of the discussions on curriculum fidelity and curriculum adaptation, some researchers have proposed a balancing third option that involves a commitment to the fundamental structure of the curriculum and the option of making adaptations to it together with all stakeholders (Daele et al., 2012). Cho (1998), who put forward positivist fidelity tendencies and post-positivist adaptation practices as the two traditional approaches, presented a third way that involved teachers and students following a constructive understanding of curriculum in the classroom. Durlak and DuPre (2008) argued that adaptation in some circumstances could improve curriculum outcomes, while in other circumstances it can hinder the success of the curriculum.

Apart from those researchers who suggest a third way and those who oppose it, there are also researchers who advocate either strict adaptation or strict fidelity. Hill, Maucione, and Hood (2007) argued that the content and structure of curricula developed for regions with different cultural characteristics can be adapted to the cultural characteristics of the students, their language, and their family structures. Similarly, Perrin et al. (2006) found better student participation in adaptation practices conducted with multicultural and low-income samples. In contrast, Larsen and Samdal (2007) reported that teachers' adaptation of a curriculum to the conditions they are in can jeopardize its outcomes, as it changes the primary purpose of the curriculum and the way it is implemented. Melde, Esbensen, and Tusinski (2006) similarly argued that some practitioners might overestimate the freedom of adaptation and thereby undervalue the merits of adherence to the original form or curriculum fidelity.

The curriculum fidelity concept consists of five main components: adherence, exposure, quality of curriculum delivery, participant responsiveness, and curriculum differentiation. Adherence refers to the implementation of curriculum elements as specified by the guide; exposure refers to the amount, frequency, and duration of the curriculum content delivered to program participants (chapter, unit, module, etc.); quality of curriculum delivery refers to an evaluation of the degree to which curriculum practitioners achieve the theoretical ideal of the curriculum in terms of their willingness to apply the curriculum, their preparation, their attitude, their competency, and their continuing education efforts when it comes to delivering the curriculum content to the program participants; participant responsiveness refers to the program participants' responsiveness to curriculum activities, in terms of their attendance and willingness to learn the curriculum content; and lastly, curriculum differentiation refers to the curriculum being clearly distinct from other curricula

with its unique features and the implementation of the curriculum in a consistent and planned way (Dane & Schneider, 1998; Dusenbury, Brannigan, Falco, & Hanse, 2003; Miller & Miller, 2015). When examining curriculum fidelity, in addition to these dimensions, "curriculum access," which means delivering the curriculum according to the conditions of the groups to whom it will be applied, "curriculum size," which means the target group size, and "adaptation components," which refers to the changes made in the original design during implementation, should also be considered (Durlak & DuPre, 2008).

There are several important reasons to pay close attention to curriculum fidelity. First, after the implementation of curricula, monitoring curriculum fidelity allows for the determination of whether or not the curriculum yielded desired or undesired, expected or unexpected, and intended or unintended outcomes (Barker, Nugent, & Grandgenett, 2014; Durlak & DuPre, 2008) or for the identification of other elements, like developmental changes and preferences (Haataja et al., 2014). In other words, with curriculum fidelity, the success or failure of a curriculum can be determined (Sánchez et al., 2007). Moreover, curriculum fidelity can explain why the same curricula lead to different outcomes (Carroll et al., 2007) and can guide whether or not making changes to a curriculum is necessary (McKenna, Flower, & Ciullo, 2014). It can also be used in experimental studies to interpret findings, obtain data on external validity, and make inferences about statistical power (Maynard, Peters, Vaughn, & Sarteschi, 2013). On the whole, curriculum fidelity can shed light on the circumstances under which a curriculum is applicable (Dusenbury, Brannigan, Falco, & Hanse, 2003). Especially in the early stages of the process, the evaluation of curriculum fidelity can prevent wasting valuable teaching time (Harn, Parisi, & Stoolmiller, 2013).

Current Study

As can be understood from the literature review, curriculum fidelity is an important concept. To comprehend this concept better, it is necessary to determine the variables that can predict curriculum fidelity in terms of the dimensions of adherence and adaptation. Curriculum literacy is believed to be one of these variables. According to the different definitions of curriculum literacy (Akyildiz, 2020; Cetinkaya & Tabak, 2019; Kahramanoglu, 2019; Sarigoz & Bolat, 2018; Yar Yildirim, 2020; Yildirim, 2019), it involves the recommendations made on the implementation of a curriculum, the components of that curriculum, and the knowledge, skills, and attitudes teachers need to possess for designing, applying and evaluating the results of the curriculum implementation after understanding, interpreting and analyzing the relationships between the components. For teachers to use curricula effectively and efficiently, they should be curriculum literate (Erdem & Egmir, 2018). Aslan and Gurlen (2019) stated that higher curriculum literacy helps to reduce the gap between original and applied curricula, while Akyildiz (2020) reported that the complete curriculum implementation is related to curriculum literacy. When these views are interpreted within this framework of curriculum fidelity, it is believed that curriculum literacy facilitates implementation of the original curriculum word for word. Therefore, this

study hypothesized that the skills related to curriculum literacy would significantly predict the adherence dimension of curriculum fidelity.

According to some experts, curriculum literacy does not necessarily involve applying a curriculum word for word. Nsibande and Modiba (2012), for example, argued that curriculum literacy means having the capacity to question the applicability of the official curriculum, an idea supported by the studies conducted by Steiner (2018) and Karagulle, Varki, and Hekimoglu (2019), the former of whom suggested that curriculum literacy is a skill that can be used to determine and eliminate deficiencies in a curriculum, and the latter of whom put forward that the applicability and functionality of a curriculum could be increased by building curriculum literacy. Kahramanoglu (2019) noted that curriculum-literate teachers could adjust the original curriculum according to their students' needs, and Karagulle, Varki, and Hekimoglu (2019) suggested that the applicability and functionality of a curriculum could be increased by building curriculum literacy. Ryu (2015), on the other hand, argued that a curriculum was a resource that teachers needed to reconstruct to achieve the best outcomes from it and that curriculum literacy equipped them to do this. All these views serve to demonstrate that curriculum literacy can be related to adapting a curriculum rather than to strictly adhering to it. From this point of view, the present study hypothesized that curriculum literacy skills would predict the adaptation dimension of curriculum fidelity in a meaningful and positive direction.

Within the framework of the related literature, the factors affecting curriculum fidelity include teacher, student, institution, and the curriculum. The teacher-related factors that can affect curriculum fidelity include the teacher's branch of study, self-competence perception, educational philosophy, experience, motivation, and perceptions of the curriculum; the student-related factors include the student's academic achievement, learning styles, satisfaction with the curriculum, academic attitude, and learning outcomes; the institutional factors include the institution's administrative or facilitator support, management stability, and educational support about curricula provided to teachers; and lastly, the curriculum-related factors include sufficiency of textbooks, material and manual support, level of difficulty and complexity, time use, suitability to the target group, and characteristics of the culture. In addition to these factors, regional-socio-economic and cultural characteristics, centralized educational systems, exams that shape students' future, and observations and supervision of the implementation of curricula can be included among the factors that affect curriculum fidelity (Barker, Nugent, & Grandgenett, 2014; Bay, Kahramanoglu, Dos, & Turan Ozpolat, 2017; Bumen, Cakar, & Yildiz, 2014; Carroll et al., 2007; Clements, Sarama, Wolfe, & Spitler, 2015; Dikbayir & Bumen, 2016; Harn, Parisi, & Stoolmiller, 2013; LaChausse, Clark, & Chapple, 2014; Larsen & Samdal, 2007; Little, Sussman, Sun, & Rohrbach, 2013; Mihalic, Fagan, & Argamaso, 2008; Rohrbach et al., 2006; Stahmer et al., 2015; Ruiz-Primo, 2005). The main focuses of the present study are the teacher, institution, and student factors, where under the teacher factor, gender and seniority are examined, under the student factor, grade level and the number of students with special educational needs are examined, and under the institution factor, class size and course load are examined. Regarding gender, this study hypothesized that females would tend to

have lower levels of adherence behavior, considering that they have been shown to be more innovative (Yilmaz et al., 2014). In terms of seniority, it was hypothesized that senior teachers, compared to newer teachers, would have higher levels of both adherence and adaptation behaviors. For the student- and institution-related factors, it was hypothesized that challenging situations would correspond to greater tendency to adopt adherence behavior, while non-challenging situations would correspond to greater tendency to adopt adaptation behavior. This can be interpreted to mean that challenging situations, such as teaching first-graders, teaching in crowded classrooms, teaching students with special educational needs, and having a heavy course load, would tire teachers and prompt them to avoid taking on another burden, like adaptation of the curriculum.

Method

Model of the Study

This study was designed as a relational survey study, a type of research conducted to identify the relationships between variables and the relative strength of these relationships (Karasar, 2012). The present study applied this design to determine the predictive relationships between adherence and adaptation behaviors in terms of curriculum fidelity and various independent variables.

Participants

A total of 250 elementary school teachers from the central districts of the province of Diyarbakir, Turkey participated in the study. Of these participants, 40% were males, and 60% were females. The professional teaching experience of the teachers (i.e., seniority) ranged from one to 44 years. In terms of the distribution of the grade levels at which the teachers taught, 34% were teaching first-graders, 18% were teaching second-graders, 22% were teaching third-graders, and 26% were teaching fourth-graders.

Data Collection Tools

For data collection, this study used a personal information form (PIF), the Curriculum Fidelity Scale (CFS), and the Curriculum Literacy Scale (CLS). The PIF consists of questions on the elementary teachers' gender, seniority, class size, course load, grade level, and the number of students with special educational needs they have. Among these variables, seniority (years), class size (number of students), course load (number of hours), and NSSEN (number of students with special educational needs) are quantitative and discreet variables, and teachers provided numeric responses for inquiries pertaining to these factors. Meanwhile, gender and grade level serve as categorical variables, and teachers indicated their responses by selecting the relevant options.

The CFS was developed by the researchers of the present study. This scale aims to measure teachers' level of curriculum fidelity in two dimensions: adherence and adaptation. The adherence dimension includes 11 items, while the adaptation dimension includes 14 items. An overall score is not calculated for the scale. Some of the items included in the adherence dimension are: "I do not make any changes to the curriculum's content." "I allot the time specified in the program for each learning outcome." "I teach the curriculum at the level of difficulty it has." Some items in the adaptation dimension are as follows: "I adapt the curriculum to the traditions and customs of the students." "I adapt the curriculum to the family structure of the students" and "I adapt the program to technological environments (EBA [Educational Informatics Network], smart/interactive board, mobile applications, etc.)"

In the design process of the scale, a pool of 30 items expressing the adherence and adaptation behaviors in terms of curriculum fidelity was created based on the relevant literature. The items were submitted to 10 experts –four faculty members from the Department of Curriculum and Instruction and six faculty members from the Department of Elementary Education– for their opinions using the Davis' (1992) technique. Four items that at least 20% of the experts found to be of little relevance and/or irrelevant were excluded from the analysis. Corrections were made to the statements associated with three items, and a new item, "I adapt the curriculum to the decisions made by my branch's board", was added to the draft scale upon the recommendation of nine experts. To conduct an exploratory factor analysis, the 27-item draft scale was administered to 224 elementary school teachers. As part of this analysis, first, the normality values of each item were investigated. Based on the examination of extreme values of items, meaning those with a skewness value outside the range of -1 to + 1 (Buyukozturk, 2010), using box-plots, it was determined that the data of 16 participants should not be included in the EFA. Next, the Mahalanobis distance values were obtained for 27 variables using SPSS software. From the "1-CDF.CHISQ(MAH_1,27)" calculation made by considering these values, the data of five participants who had a value below .01 were also excluded from the EFA. Based on the EFA performed with the data of 203 participants, the number of factors was set to two (adherence and adaptation). The varimax rotation technique was used since a relationship was not expected between the variables. As a result of the initial analysis, one item that was determined to be cross-loading according to factor loads (Akbulut, 2010), and another item that was found not to be included in the dimension to which it theoretically belonged were excluded from the draft scale. The Kaiser-Meyer-Olkin value (KMO) was calculated as .89 according to a repeated EFA, and the result of the Bartlett sphericity test was found to be significant ($p < .001$). All these values indicated that the data were suitable for factor analysis, and that the number of participants was sufficient (Secer, 2013). The sub-dimensions of the CFS, the factor loads (FL) of the items in these dimensions, and the Common Factor Variance (CFV) values are presented in Table 1:

Table 1. EFA Results for the CFS

Adherence	FL	CFV	Adaptation	FL	CFV
i1	.61	.40	i12	.64	.45
i2	.80	.64	i13	.72	.52
i3	.84	.70	i14	.75	.56
i4	.75	.57	i15	.72	.52
i5	.78	.61	i16	.76	.58
i6	.82	.68	i17	.79	.63
i7	.70	.49	i18	.79	.65
i8	.54	.30	i19	.80	.64
i9	.52	.31	i20	.79	.63
i10	.59	.37	i21	.85	.73
i11	.58	.41	i22	.61	.45
			i23	.80	.64
			i24	.63	.42
			i25	.78	.61

As seen in Table 1, most of the items in both the adherence and adaptation dimensions of the CFS have a CFV value of above .40, with only three items in the adherence dimension having a CFV value of between .30 and .37. Since the factor loads of these items were above .40 and a value of .20 or above is accepted in social sciences (Sencan, 2005), these items were not excluded from the scale. The factor loads of the items on the scale were between .52 and .84 in the adherence dimension and between .61 and .85 in the adaptation dimension, values considered to be quite good in social sciences. The two-factor structure of adherence and adaptation explained 53.96 of the total variance of the CFS, which is considered suitable for multi-dimensional scales, as it is above the rate of the variance that could not be explained (46.04%) (Buyukozturk, 2010).

The CLS was developed by Bolat (2017) and has two sub-dimensions: reading and writing. In the reading dimension, there are items such as "I can detect the consistency of learning goals with each other." and "I can interpret the results of the measurement-evaluation process". In the writing dimension, there are items such as "I can design educational material suitable for learning-teaching processes." and "I can design educational activities suitable for learning-teaching processes." The scale was originally developed for use on preservice teachers. Therefore, the data collected from the teachers in the present study were subjected to EFA. According to the EFA performed after testing the normality assumption, the KMO value was .95, which indicated that the Bartlett test had significant results. The CFV value was found to be at least .43 for the reading dimension and .53 for the writing dimension. The factor loads ranged between .47 and .85 in the reading dimension and between .46 and .87 in the writing dimension. None of the items were cross-loading. As such, the scale was able to explain 59.77% of the total variance. All these values showed that the CLS, which was originally developed for preservice teachers, could also be used (Buyukozturk, 2010; Secer, 2013) as a valid data collection tool for elementary school teachers.

The reliability of the measures made within the scope of the study was determined with Cronbach's alpha coefficients. These coefficients were .89 for the

adherence dimension of the scale and .94 for the adaptation dimension, and .94 for the reading dimension of the CLS and .96 for the writing dimension. Considering that the lower value required for measurement reliability of a scale is .70 (Sipahi, Yurtkoru, & Cinko, 2010), the measurements made within the scope of the present study were accepted as reliable.

Data Analysis

Two different hierarchical multi-regression analyses were used to analyze the data obtained in the present study. The first analysis tested the adherence dimension of the CFS, while the second tested the adaptation dimension of the CFS. In both analyses, gender, seniority, class size, course load, NSSEN, CL reading and CL writing dimensions were used as the predictive variables. Before presenting the findings of these analyses, necessary assumptions were tested according to the suggestions in the literature (Buyukozturk, 2010; Pallant, 2016; Secer, 2013; Tabachnick & Fidell, 2006; Stevens, 2002). Here, extreme values of the predictive and predicted variables, that is, those that deviated from the normal distribution, were first investigated with box-plots and excluded from the study one by one. Next, Mahalanobis distance values were calculated, and it was found that eight predictive variables were above 26.13, and therefore these were excluded from the dataset. As a result, the highest Mahalanobis distance value was 23.000 in the adherence dimension and 22.854 in the adaptation dimension. As such, the required assumptions about extreme values were met. After excluding the extreme values from the data set, the data from 212 teachers remained for the analyses of the adherence dimension and from 213 teachers for the analyses of the adaptation dimension. Since these numbers were more than fifteen times higher than the number of predictive variables (eight) included in the analysis, the sample size assumption of hierarchical multi-regression analyses was also met. As seen in Table 2 and Table 3, the tolerance values were above .10 in both the adherence and adaptation dimensions, the VIF (Variance Inflation Factor) values were below 10, and the relationships between the predictive variables were not .90 or above, which indicate that the present study did not have a multicollinearity problem; therefore, the study aligned with the related assumption.

Table 2. Correlation, Tolerance, and VIF Values Predicting the Adherence Dimension of the CFS

	1	2	3	4	5	6	7	Tolerance	VIF
1. Gender								.96	1.04
2. Seniority	-.04							.74	1.36
3. Class size	-.04	.46**						.72	1.39
4. Course load	.05	-.12*	-.19**					.79	1.26
5. Grade level	.01	-.13	-.07	.41**				.81	1.23
6. NSSEN	-.11	.03	.19**	-.07	-.11*			.94	1.06
7. CLS-Reading	-.11	.02	-.12*	.02	.03	-.01		.39	2.56
8. CLS-Writing	-.01	-.12*	-.13*	-.04	.03	.02	.76**	.39	2.55

*p<.05; **p<.01

Table 3. Correlation, Tolerance, and VIF Values Predicting the Adaptation Dimension of the CFS

	1	2	3	4	5	6	7	Tolerance	VIF ₂
1. Gender								.96	1.04
2. Seniority	-.05							.76	1.31
3. Class size	-.03	.43**						.74	1.35
4. Course load	.05	-.11	-.19**					.79	1.26
5. Grade level	.02	-.14	-.06	.41**				.81	1.23
6. NSSEN	-.10	.02	.19**	-.07	-.10*			.94	1.07
7. CLS-Reading	-.11	.03	-.12*	.03	.03	-.02		.39	2.54
8. CLS-Writing	-.01	-.11	-.13*	-.04	.03	.02	.76**	.40	2.52

*p<.05; **p<.01

In the present study, the histogram graphs depicted in Figures 1 and 2 were used to determine whether or not there were any problems regarding the normality and linearity assumptions. Since all the scores depicted in the histogram graphs for predicting both the adherence and adaptation dimensions of the CFS fell within the boundaries of a symmetrical bell-shaped curve, with high scores clustered around the center and low ones around the tails, it was concluded that the assumptions of normality and linearity were met.

Figure 1. Histogram for the Prediction of Adherence

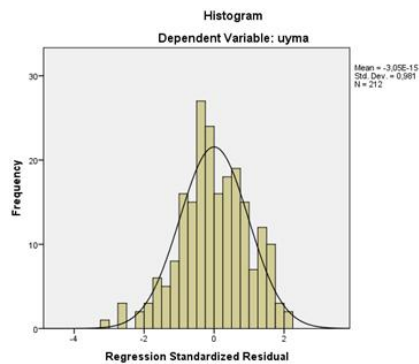
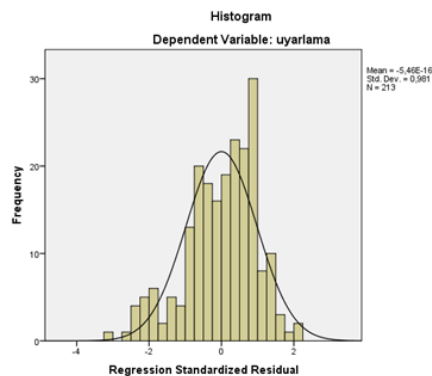


Figure 2. Histogram for the Prediction of Adaptation



After testing the assumptions of hierarchical multi-regression analysis, related analyses were conducted. In these analyses that were applied for both adherence and adaptation behaviors, first the demographic variables (gender, seniority, class size,

course load, grade level, and NSSEN) were included, followed by the CL reading and writing skill variables. Since the variables of gender and grade level are categorical variables (Grotenhuis & Thijs, 2015), they have been used as dummy variables. Being female (gender) and teaching 2nd-4th graders (grade level) were used as reference categories (left out categories) and analyses were conducted based on being male and teaching 1st grade.

Findings

Findings on the Prediction of the Adherence Dimension of the Curriculum Fidelity Scale

Table 4 presents the extent to which the adherence dimension of the CFS was predicted by the reading and writing dimensions of the CLS after controlling for the variables of gender, seniority, class size, course load, grade level, and NSSEN.

Table 4. Summary of the Model

Model	Predictive Variables	R	R ²	Variation statistics			
				ΔR^2	F	Sd _{1/2}	p
1	Gender, seniority, class size, course load, grade level, NSSEN	.295	.087	.087	3.27	6/205	.004
2	Gender, seniority, class size, course load, grade level, NSSEN, reading, writing	.365	.133	.046	5.38	2/203	.005

As seen in the first model presented in Table 4, the predictive variables, consisting of gender, seniority, class size, course load, grade level, and NSSEN, explained 8.7% of the adherence dimension of the CFS. The second model, which included the addition of the reading and writing dimensions of the CLS to the same variables as the first model, explained 13.3% of the adherence dimension of the CFS. When gender, seniority, class size, course load, grade level, and NSSEN were controlled for, the CLS reading and writing dimensions significantly explained 4.6% of the adherence dimension of the CFS ($p < 0.01$).

The results of the ANOVA test conducted to assess the overall significance of the models obtained for the prediction of the adherence dimension of the CFS are presented in Table 5.

Table 5. ANOVA Test Results of the Models on the Prediction of the Adherence Dimension of the CFS

Model		Sum of Squares	sd	Mean of Squares	F	p
1	Regression	11.30	6	1.88	3.27	0.004
	Residual	118.08	205	.58		
	Total	129.38	211			
2	Regression	17.24	8	2.16	3.90	0.000
	Residual	112.14	203	.55		
	Total	129.38	211			

According to Table 5, both the first model, consisting of gender, seniority, class size, course load, grade level, and NSSEN [$F(6, 205)=3.27, p < .01$], and the second

model, in which the reading and writing dimensions of the CLS were added to the variables included in the first model, $[F(8, 203)=3.90 \text{ } p<.001]$ could significantly predict the adherence dimension of the CFS as a whole. Findings related to the unique contribution of each variable to the prediction of the adherence dimension of the CFS are presented in Table 6.

Table 6. Unique Contribution of the Predictive Variables to the Prediction of the Adherence Dimension of the CFS

	B	Standard Error	β	t	p
1. Gender	.36	.11	.22	3.34	.001
2. Seniority	.02	.01	.18	2.36	.019
3. Class size	-.02	.01	-.17	-2.19	.030
4. Course load	-.05	.05	-.08	-1.03	.303
5. Grade level	.16	.12	.10	1.38	.168
6. NSEN	.02	.08	.02	.26	.795
7. CLS-Reading	.09	.19	.05	.47	.636
8. CLS-Writing	.23	.14	.18	1.70	.091

As seen in Table 6, course load, grade level, NSEN, CLS-reading, and CLS-writing were each found to have no significant unique contribution to the prediction of the adherence dimension of the CFS ($p>.05$). However, the variables of gender ($\beta=.22$; $p<.01$) and seniority ($\beta=.18$; $p<.05$) significantly predicted the adherence dimension of the CFS in a positive way, while the class size variable ($\beta= -.17$; $p<.05$) significantly predicted the adherence dimension of the CFS in a negative way. According to the β values, the contribution of the related variables to the prediction of the adherence dimension of the CFS in order of greatest to lowest was gender, seniority, and class size.

The findings related to the adherence dimension of the CFS show that adherence behavior in terms of curriculum fidelity can be better explained by demographic variables than by the reading and writing dimensions of the CLS. Adherence behavior regarding curriculum fidelity increased in line with being male (gender) and having more years of teaching experience (seniority). However, when class size increased, this trend reversed; that is, adherence behavior decreased.

Findings on the Prediction of the Adaptation Dimension of the Curriculum Fidelity Scale

Table 7 presents the extent to which the adaptation dimension of the CFS was predicted by the reading and writing dimension of the CLS after controlling for the variables of gender, seniority, class size, course load, grade level, and NSEN.

Table 7. Summary of the Model

Model	Predictive Variables	R	R²	ΔR^2	F	Sd_{1/2}	p
1	Gender, seniority, class size, course load, grade level, NSEN	.140	.020	.020	.69	6/206	.662
2	Gender, seniority, class size, course load, grade level, NSEN, reading, writing	.460	.212	.192	24.87	2/204	.000

As seen in the first model presented in Table 7, the predictive variables of gender, seniority, class size, course load, grade level, and NSEEN explained 2% of the adaptation dimension of the CFS. The second model, in which the reading and writing dimensions of the CLS were added to those variables, explained 21.2% of the adaptation dimension of the CFS. When gender, seniority, class size, course load, grade level, and NSEEN were controlled for, the CLS reading and writing dimensions significantly explained 19.2% of the adaptation dimension of the CFS ($p < 0.01$).

The results of the ANOVA test conducted to assess the overall significance of the models obtained for the prediction of the adaptation dimension of the CFS are presented in Table 8.

Table 8. ANOVA Test Results of the Models on the Prediction of the Adaptation Dimension of the CFS

Model		Sum of Squares	sd	Mean of Squares	F	p
1	Regression	1.38	6	.23	.69	.662
	Residual	69.36	206	.34		
	Total	70.74	212			
2	Regression	15.00	8	1.87	6.85	.000
	Residual	55.76	204	.27		
	Total	70.74	212			

According to Table 8, the first model, in which gender, seniority, class size, course load, grade level, and NSEEN were assigned as the predictive variables, was not a significant model for predicting the adaptation dimension of the CFS [$F(6, 206) = .69, p > .05$]. However, the second model, in which the reading and writing dimensions of the CLS were added to these variables, was significant [$F(8, 204) = 6.85, p < .001$]. The findings related to the unique contribution of each variable to the prediction of the adaptation dimension of the CFS are presented in Table 9.

Table 9. Unique Contribution of the Predictive Variables to the Prediction of the Adaptation Dimension of the CFS

	B	Standard Error	β	t	p
1. Gender	.13	.08	.11	1.69	.093
2. Seniority	.00	.01	-.02	-.26	.795
3. Class size	.01	.01	.12	1.64	.102
4. Course load	-.04	.03	-.09	-1.30	.195
5. Grade level	.03	.09	.02	.31	.583
6. NSEEN	-.03	.06	-.04	-.55	.754
7. CLS-Reading	.34	.13	.26	2.60	.010
8. CLS-Writing	.21	.10	.22	2.19	.030

According to Table 9, none of the demographic variables significantly predicted the adaptation dimension of the CFS ($p > .05$). The reading ($\beta = .26; p < .05$) and writing ($\beta = .22; p < .05$) dimensions of the CLS, however, significantly predicted the adaptation dimension of the CFS in a positive direction. According to the β values, the reading dimension of the CLS, as compared to the writing dimension, was slightly more effective in predicting the adaptation dimension of the CFS.

The findings related to the adaptation dimension of the CFS revealed that the adaptation behavior in terms of curriculum fidelity had a stronger relationship to the

reading and writing dimensions of the CLS than that of demographic variables. This suggests that as elementary teachers' reading and writing skills increase in terms of the CLS, they show a greater tendency to adapt the curriculum.

Discussion and Conclusion

This study, which aimed to determine the variables that predict the adherence and adaptation dimensions of curriculum fidelity, showed that the gender of the teacher could significantly predict curriculum adherence behavior. More specifically, male teachers tended to apply curriculum word for word. This could stem from the fact that male teachers have been less open-minded in terms of reflective thinking skills than female teachers (Kaf Hasirci & Sadik, 2011). Teachers who cannot reflect on their curriculum experiences in an open-minded way are less likely to carry out changes to improve the curriculum. This finding coincides with that of another study reporting that male teachers were more traditionalist than that of female teachers (Kirkic & Topal, 2019). Furthermore, the literature shows that males tend not to apply questioning skills when managing information (Tuncer, Yanpar Yelken, & Tanriseven, 2018). Therefore, it can be argued that male teachers, who have been shown to often refrain from adjusting curriculum in terms of student level and cultural characteristics, are more inclined to apply this curriculum word for word. While in the present study, the gender variable significantly predicted the adherence behavior related to the curriculum, in the study by Little, Sussman, Sun, and Rohrbach (2013), it was reported that gender did not predict curriculum fidelity.

Burul (2018) reported that seniority did not have a significant effect on curriculum fidelity. However, the present study found that seniority, a teacher characteristic, significantly predicted adherence behavior in curriculum fidelity; that is, as the teachers' seniority increased, their tendency to show more adherence to the curriculum increased. In contrast to this, Larsen and Samdal (2007) found that as teachers' seniority increased, their tendency to strictly adhere to curriculum fidelity decreased.

In the present study's findings related to institutional characteristics, course load was found not to be a significant predictor of adherence behavior. Karakuyu and Oguz (2021), however, observed that course load could create a significant difference in curriculum fidelity in favor of teachers with a heavy course load. The present study's findings further revealed that class size could significantly predict adherence behavior. As the class size increased, the teachers' adherence behavior decreased. This conflicts with the study by Cobanoglu and Capa-Aydin (2015), who reported that class size did not affect curriculum fidelity. Gelmez-Burakgazi (2020) determined that while class size did affect curriculum fidelity, it did hinder adherence behavior. Therefore, the present study obtained different findings on the effect of institutional characteristics on curriculum fidelity than those reported in the literature.

The variables of grade level and NSSEN, which are student characteristics, did not predict curriculum adherence behaviors in the present study. However, this does not mean that other student characteristics do not predict curriculum fidelity. For

example, a study by Mihalic, Fagan, and Argamaso (2008) showed that better student behavior could be related to higher levels of adherence behavior.

The finding from the present study showing that curriculum literacy did not predict the adherence dimension contradicts the literature and the related hypothesis put forward within the scope of this research. The literature indicates that as curriculum literacy increases, the gap between the original curriculum and the one put into practice diminishes (Aslan & Gurlen, 2019); in other words, the probability of applying the original program word for word increases in line with higher curriculum literacy (Akyildiz, 2020). While curriculum literacy did not significantly explain curriculum adherence, it did explain curriculum adaptation. This finding showed, in agreement with that reported by Nsibande and Mobida (2012), that curriculum literacy is more related to teachers making curriculum appropriate and adaptable than to sticking to the routine of applying curriculum word for word.

According to the present study results, adaptation behavior was significantly explained by curriculum literacy, as hypothesized. As the teachers' reading and writing skills improved, their tendency to adapt the curriculum became greater. Therefore, as Karagulle et al. (2019) reported, teachers with curriculum literacy can adapt ready-made curricula designed by the ministry to students and educational environments more effectively and functionally. This finding corroborates the idea that curriculum literacy is necessary for interpreting and designing a curriculum, both aspects of adaptation behavior, and for customizing it to meet student needs (Sarigoz & Bolat, 2018). Similarly, Steiner (2018) mentioned the necessity of curriculum literacy for making changes to a curriculum that is weak in practice.

Bumen, Cakar, and Yildiz (2014), in their study, stated that students' learning characteristics are one of the factors that affect curriculum fidelity. On the issue of the unique learning characteristic that students with special educational needs have, the present study's findings differ from the aforementioned study, as it showed that curriculum fidelity, in terms of adherence and adaptation dimensions, was not affected by the number of students with special education needs.

Studies have shown a correspondence between changes in student (Bumen, Cakar, & Yildiz, 2014), teacher (Larsen & Samdal, 2007), and institution (Dikbayir & Bumen, 2016) characteristics and the expectation of curriculum adaptation. However, the present study's findings revealed that adaptation behavior, which was shown to be largely explained by curriculum literacy, was not significantly explained by the aforementioned demographic variables, which suggests that even in cases where teacher and institution characteristics change, teachers' adaptation behaviors do not necessarily change in response; rather, this behavior changes in line with curriculum literacy. In other words, only teachers with curriculum literacy can adapt a curriculum according to their students and educational environments, regardless of the conditions and characteristics of that curriculum.

According to Erdem and Egmir (2018), while the curriculum reading skills are related to understanding a curriculum, the curriculum writing skills are related to adapting and creating original products. Within this framework, it could be argued that curriculum writing skills are more effective than curriculum reading skills in the curriculum adaptation dimension. However, the present study found different results in this regard, as they showed that the CLS reading dimension was slightly more

effective in predicting the adaptation dimension of the CFS than that of the CLS writing dimension. These findings align with the thoughts of Ryu (2015), who argued that to take adaptive actions that can transform a curriculum, it is necessary first to understand that curriculum, that is, to read it. Sarigoz and Bolat (2018) also highlighted the importance of understanding a curriculum to design learning processes and create learning environments suitable to student needs.

According to the present study results, the class size variable significantly predicted the teachers' adherence behaviors in terms of curriculum fidelity, as hypothesized. In other words, as the class size increased, teachers' adherence behaviors decreased. This could result in the original curriculum failing to meet the needs and thereby direct teachers to adopt behaviors other than adherence. Based on this, it was hypothesized that the class size variable would predict the adaptation behavior in terms of curriculum fidelity in a positive direction. However, the findings did not reveal this, as the class size variable did not significantly predict the adaptation behavior. Instead, an increase in class size decreased the adherence behavior and failed to direct teachers to adapt the curriculum. This result suggests that there could be a third way, outside of adherence and adaptation behavior in terms of curriculum fidelity, to which teachers have recourse, such as "doing nothing" or "ignoring the curriculum completely" in crowded classes.

The results obtained in the study can be summarized as follows:

- Adherence behavior in terms of curriculum fidelity is mainly explained by demographic variables, while adaptation behavior is mainly explained by curriculum literacy.
- Student characteristics variables do not predict the adherence behavior; rather, teachers' gender, seniority, and class size can significantly predict this behavior.
- Male teachers and senior teachers have higher tendencies toward curriculum adherence.
- Curriculum adherence decreases in crowded classes.
- Demographic variables do not predict the adaptation dimension of curriculum fidelity.
- Compared to curriculum writing skills, curriculum reading skills are more effective predictors of curriculum adaptation.

Limitations and Recommendations

According to the findings and limitations of the study, the following suggestions are presented:

- Regardless of the conditions, all teachers should be equipped with curriculum literacy skills so that they can adapt their curricula if necessary. To this end, curriculum design courses in undergraduate elementary education programs in Turkey should be switched from being elective to being compulsory.

- Other preferred methods apart from adherence and adaptation behaviors in challenging circumstances like crowded classes should be identified through qualitative processes.
- This study was restricted to only elementary school teachers. Future studies examining curriculum fidelity in terms of adherence and adaptation can be conducted with teachers from other disciplines and at different educational levels.
- In this study, only class size and course load were used as the variables related to institutions. Future studies on this subject can involve using different variables related to institutional characteristics, such as school climate and the location of schools.
- This study examined the prediction power of teacher characteristics, which were limited to gender and seniority. Future studies can investigate whether teachers' educational background (e.g., received graduate education in the curriculum design department or completed a curriculum design course at the undergraduate level) predicts their curriculum fidelity.
- The study addressed grade level and the number of students with special educational needs as student characteristics. Future studies can focus on different student characteristics, such as language, religion, and ethnicity.

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Social Work Education in Türkiye: Opinions of Students, Academics, and Social Workers

*By Mehmet Can Aktan**

Social work practices around the world began to take root in the West from the second half of the 19th century. Social work started to be institutionalized from the beginning of the 20th century and social work education spread throughout the world following the opening of the first social work schools in Western countries. In Türkiye, university education, which was organized under the name of Social Work Academy in 1961, continued to be conducted within the Social Work Department of Hacettepe University. As of today, social work undergraduate education is given in seventy universities in Türkiye. In this study, it is aimed to look at the current situation and future of social work education from the perspective of students, academics, and social workers. The participants of the research, which was designed in a qualitative method, consist of four students, four academics, and four social workers. It was planned to conduct interviews with the participants using semi-structured questionnaires. The data obtained were subjected to content analysis and thematic coding was done first, and then main and sub-themes were created. The findings of the study were discussed in the light of current literature.

Keywords: social work, undergraduate, education, strengths, and weaknesses qualitative method

Introduction

Education is one of the most important aspects of human life. It encompasses more than just learning, which refers to permanent behavioural changes resulting from experience. The philosophy and methods of education have evolved from traditional to modern approaches. Regardless of its content and scope, the process called education always maintains its critical importance, starting with the function of preparing the individual for life from an early age and extending to the function of providing a profession during youth. There are several dimensions to the educational process that leads to professional competence. At this point, university education is undoubtedly the first to come to mind. In order to be able to practise a profession that requires a certain level of competence, both in the world and in Turkey, it is necessary to be educated at university level. The profession of social work, which is the main subject of this study, and professions such as medicine, teaching and engineering require a minimum of undergraduate education. After undergraduate education, more advanced levels of education, such as master's and doctorates, may also be possible.

The emergence of social work in the world is related to poverty on the sociopolitical axis and is based on the goal of ensuring that everyone equally benefits from services and opportunities in society. Social work, which is closely

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related to social policies, ultimately aims to establish social justice by reducing social and economic inequalities. The West was a pioneer in the emergence of social work as both a profession and an academic discipline. Therefore, it is possible to see traces of the West in social work education all over the world. When we look at the historical development of social work, it is seen that England and the USA take the lead, and then there is a trend that spreads to Europe. Over time, this development was followed by the Soviet bloc countries and then the Asia-Pacific region (Austin, 1970). The discipline and profession of social work, like many branches of social sciences, is a younger field compared to the sciences. The beginning of social work education, which has been based in the West, especially in England and the USA since the last quarter of the 1800s, corresponds to 1961 in Türkiye (Alptekin, 2016; Onat, 2005). Social work education, which gained an institutional identity with the opening of the first social work schools in the West, today provides the training of many social workers from all over the world (Austin, 1997). Educational activities aimed at meeting the need for professional training in the field of social work were first put forward by Anna L. Daves at the International Congress of Charitable, Relief and Relief Societies held in Chicago in 1893. This idea was implemented as a six-week training course by the New York Benevolent Society in 1898, later the duration of this course was increased to six months and developed into the New York School of Social Work. This school was affiliated with Columbia University in 1940. In Europe, the first social work school was opened in Amsterdam in 1899. In 1904 and the following years, new social work schools were opened in Germany, Switzerland and England, and in 1910 the total number of schools in the five countries reached fourteen (Kut, 1968; Kut, 1983; Türkeri, 2023). In Türkiye, the Social Services Academy affiliated with the Social Services Institute, which was established in 1959, became operational and the General Directorate of Social Services was organized in 1963. In parallel with the educational needs in social services, Hacettepe University started social work education in 1967 (Kongar, 1972). As of today, the number of universities providing social work education in Türkiye is over sixty, including formal and non-formal education.

With the impact of digitalization, education processes have also begun to change. Digitalization of education means becoming independent of time and space by using technology and the internet. Especially with the widespread use of the Internet and the use of personal computers, educational activities can now be carried out in digital environments. This situation has spread rapidly in the last few decades and has become even more important with the Covid-19 epidemic. Due to the epidemic, many schools and universities had to resort to distance education methods. While digital education provides students with more flexible learning opportunities, it also offers teachers different teaching materials and interactive tools. However, digitalization also brings some difficulties. Factors such as access problems, technology skills, and internet speed may cause some students to be at a disadvantage in this new educational environment. Digitalization is transforming the understanding and methods of education, and this trend is expected to continue in the coming years. The phenomenon of digitalization inevitably directly affects social work education. Some methods or techniques that can be considered inherent in digital education, such as online education, distance education, hybrid education,

have started to become a part of social work education in many countries around the world. It is possible to say that social work education in Türkiye is just at the beginning of the digitalization process. In this study, it was tried to reveal the perspectives of students, social workers, and academics regarding social work education in Türkiye. In this respect, it is thought that concrete programs and practices for the relevant country will guide the education processes in Türkiye.

Literature Review

When the literature on the subject is examined, it is possible to come across studies at international and national levels. Gray and Fook (2004), in their work discussing the search for a universal social work (and of course the reflections of this search on education), focused on the distinction of "globalisation-localisation", Westernisation-indigenisation", "multicultural-universalisation" and "universal-local" based on the concept of "universal". Reisch (2013) discussed the future of social work based on the changing social work education and practices on the axis of neoliberalism. In his work, Lorenz (2107) prompts us to think about the crisis phenomenon that accompanies the 'modernity project' in a historical context, in the context of the critical role of social work education. The current study by Dali and Caidi (2023), in which they discuss the role and effects of information and technology education on social work curricula, based on Canada and the USA, is also important. In another recent study, Zengin, Alptekin, and Topuz (2023) investigated the status of social work education, bottlenecks, and expectations in education. When we look at the Turkish literature, some studies come forward. Two studies that focus on the history of social work education stand out. One of them was made by Tuncay and Tufan (2011), and the other was made by Kalaycı (2021). It is possible to come across two studies on social work education and practice courses. Sehman and Yolcuoğlu (2020) evaluated the functionality of social work education in Turkey from the perspective of open education social work department graduates. Yılmaz, Koçak, and İçağasioğlu-Çoban (2022) analysed the practices in the curricula of departments providing social work education. The study conducted by Tuncay (2020) on the opportunities and obstacles of online social work education is also important.

In this study, it is aimed to reveal the opinions of students, academics, and social workers about social work education in Türkiye for more than fifty years. In this context, the sub-objectives expected to contribute to the research are as follows:

- How do social work students, academics, and social workers see the current status of social work education in Türkiye?
- What are the strengths and weaknesses of social work education in Türkiye according to social work students, academics, and social workers?
- How do social work students, academics, and social workers evaluate the proficiency level of social work education in Türkiye?
- What are the aspects of social work education that need to be improved according to social work students, academics, and social workers?

- What do social work students, academics, and social workers think about the future of social work education in Türkiye?

Methodology

This section contains general information about the methodology of the study.

Research Design

This research, which aims to look at the current situation and future of social work education in Türkiye from the perspective of students, academics, and social workers, was designed with a qualitative method. Phenomenological research is a research design originating from philosophy and psychology, in which the researcher describes the lived experiences of individuals regarding a phenomenon as defined by the participants. These descriptions result in capturing the essence of the experiences of individuals who have various experiences with the phenomenon in question. This design has solid philosophical foundations and often requires conducting interviews (Giorgi, 2009; Moustakas, 1994; cited in Creswell, 2017). For these reasons, the phenomenological approach was preferred in this research.

Selection of Participants

The participants of the research, designed with a qualitative method, consist of four students, four academics, and four social workers. All participants reside in Ankara. There are four universities with social work departments in Ankara. One student was selected from each university to ensure representation. It was also taken into account that the students belonged to different grade levels (1st, 2nd, 3rd and 4th grade). Similarly, the same criteria were considered in the selection of academics. In the selection of social workers, attention was paid to the representation of different social work fields. Students, social workers, and academics were included in the study to address the issue from different dimensions. When it was thought that the answers obtained from the participants started to repeat, the interviews were completed. Some basic information about the participants is included in Table 1.

Table 1. Basic Information about the Study Participants

Study Group	Age	Gender	School/Institution	Field
Student 1	18	Female	Başkent University	Social Work
Student 2	19	Male	Hacettepe University	Social Work
Student 3	20	Female	Ankara University	Social Work
Student 4	21	Male	University of Health Sciences	Social Work
Social Worker 1	33	Male	Social Service Centre	Child Welfare
Social Worker 2	73	Male	Social Service Centre	Gerontological Social Work

Social Worker 3	28	Female	Courthouse	Family Court
Social Worker 4	50	Female	Hospital	Medical Social Work
Academician 1	43	Female	Başkent University	Family Welfare
Academician 2	40	Female	University of Health Sciences	Social Work with Children
Academician 3	36	Male	Hacettepe University	Disability
Academician 4	54	Male	Ankara University	Psychiatric Social Work

Data Collection Process

The researcher prepared a semi-structured interview form to collect data within the scope of the research. The data of the research was collected in the three-month period between January 2023 and March 2023. The interviews lasted approximately 60-90 minutes and were audio recorded with the consent of the participants.

Analysis of Data

During the data analysis process, firstly the data obtained from the participants were deciphered. The resulting transcripts were combined into a single file. Considering the combined transcript, it was seen that the transcription contained a total of 135 pages and 45021 words in Arial 10-point font. After this process, Nvivo program was used to analyse the data. Thematic coding was done within the scope of qualitative analysis, and in this context, first the relevant codes were determined, and then sub-themes and themes were created through interrelated codes. The findings were discussed in the light of current literature.

Results

Thematic analysis of the data obtained from the participants in line with the design of the research is included in this part of the study. In parallel with the questionnaires used in the interviews, the opinions of the participants were revealed within five main themes.

Theme 1: Current Status of Social Work Education

In the introduction part of the study, it was mentioned that social work education in Türkiye has been around for more than sixty years. In the past period, the political, economic, and cyclical processes in the country have inevitably affected social work education. Considering this process, participants were asked to evaluate the status of social work education.

Looking at the responses received from the participants, it can be seen that the current situation of social work education has both positive and negative aspects. The opinions of the participants who think that the education has “positive aspects” are as follows:

“This had a positive aspect: since we were few in number, we could easily find jobs as graduates.” (Academician 1)

“Regardless of qualifications, the number of people receiving master’s and doctoral education in the field of social work has increased significantly. Besides, the publications produced by young academics have increased in number, quality and quantity and have become more visible.” (Academician 4)

“It has been seen that there is a great need for social workers in terms of the social work profession, both in the public sector and in projects supported by civil society. The training and experience that social workers have in subjects such as community organizing skills, risk assessment, identifying urgent needs and creating interventions accordingly, and crisis intervention have become more visible.” (Social Worker 4)

“In the beginning, there was an interview system in social work education and there were few students and qualified education.” (Social Worker 1)

“Social work education is carried out from a multidisciplinary perspective on the basis of knowledge-skills-value.” (Student 4)

Three of the students participating in the study talk about the benefits of the application and research courses given in the current education:

“I believe that making theoretical knowledge concrete through applications and research is an important opportunity to gain professional skills.” (Student 1)

“I think it is a great advantage that students can gain experience in many areas of social work before starting their professional lives, thanks to practice courses.” (Student 2)

“In addition, I would like to point out that the compulsory internship practices carried out in many different fields and institutions throughout the education process have a great contribution to the field.” (Student 3)

The opinions of the participants who think that the education has “negative aspects” are as follows:

“When we evaluate the current situation, unfortunately we witnessed an uncontrolled growth, and we could not stop it.” (Academician 1)

“In the current period, as a result of the uncontrolled growth, the qualitative increase is not compatible with the quantitative increase.” (Academician 4)

“Even in formal education, there is no standard undergraduate education. This was the part that we constantly noticed and were disturbed by. So, think about it, even in the exams of the most basic courses, you cannot even use an equal level measurement tool to measure the situation of the students.” (Social Worker 2)

Majority of participants emphasize that the current open education social work education is a fundamental problem. Two of them are as follows:

“I can state that the weakness of social work education in Türkiye is that social work education can be received through open education. I think that people who receive open education social work education are quite inadequate in matters such as interview techniques, writing social investigation reports, and in-depth case analysis.” (Student 2)

“I can say that the opening of open education and the decreasing quality of the existing education.” (Social Worker 3)

As can be understood from the participants' opinions, the current situation of social work education has both positive and negative aspects. On the positive side, application and research courses come to the fore, while on the negative side, there is the issue of open education.

Theme 2: Strengths and Weaknesses of Social Work Education

When evaluating social work education in Türkiye, it is necessary to consider the strengths and weaknesses together. In this context, the second main theme focuses on strengths and weaknesses. Participant views on the "strengths" of the education can be exemplified as follows:

"A strong point of social workers in Türkiye is that, although there is no systematic supervision, they have somehow developed the supervision system among their colleagues." (Academician 1)

"I see young academics. After more productive hands and the number of young people began to increase, the number of translated books, book chapters, books and research began to increase in the academy." (Academician 4)

"I thought I could give examples of the increasing number of departments as well as the increasing number of academics." (Academician 3)

"Universities have accreditation processes. For this reason, there are some standards they must comply with. This also improves education." (Social Worker 2)

"Another prominent issue that I see emphasized in my social work education is the emphasis on unconditional acceptance and the uniqueness of the human being. In each course, from first year to senior year, it is emphasized that each person's needs will be different, and students' professional perspectives are drawn within this framework." (Student 3)

"There is also a significant increase in the number of students who deliberately choose social work. I think this is an important thing. Maybe that can be mentioned as a strength." (Academician 2)

Participant views on the "weaknesses" of the education can be exemplified as follows:

"Currently, no matter which public institution you go to, unfortunately we do not have a system or a supervision process. This is a huge deficiency." (Academician 1)

"For its weakest aspects, this is the proliferation of education, the proliferation of training programs... Is the aim really to provide social work education or to open a department at a university? This raises the question." (Academician 3)

"Not all social service institutions are suitable for students to practice social work. We tell students to work in a group, but that is not the nature of the institution. So maybe a student does not do any groups, does not collaborate with any individuals, maybe doesn't do any community work at all." (Academician 2)

"I can point out that social work education is not offered in English as a weakness. Including academic English could have contributed to students continuing their professional development with a broader perspective." (Student 2)

"We see that our professional boundaries cannot be drawn because we do not have a professional law. For example, although a field such as school social work should exist

in Türkiye, we are still trying to explain the duties and responsibilities of the social worker.” (Student 3)

It is widely reflected in the opinions of students, academics, and social workers that the fact that social work education is given at the open education faculty is a weakness.

“There is a social work department in open education faculties, but I see it as a disadvantage that it is limited to theoretical knowledge and does not allow the acquisition of practical skills, and I think that it will directly affect the practice negatively.” (Student 1)

“I see that there are two particularly critical turning points here. The first is open education and the second is undergraduate completion.” (Academician 1)

“The opening of open education and the decreasing quality of education that currently exists.” (Social Worker 3)

Theme 3: Proficiency Level of Social Work Education

Another question asked to the participants within the study was about the adequacy of social work education in Türkiye. As can be understood from the answers, the inadequate aspects outweigh the sufficient aspects.

“When I evaluate the social work education in Türkiye from the perspective of my own university, I find it sufficient in many subjects. These are accompanied by reasons such as the high number of internships and the fact that each academician’s major is social work.” (Student 3)

“If we go specifically to the research course, while there is a finding such as big data in the world, and there is such an opportunity and new methods have emerged that can analyse big data, we see that traditional research methods and traditional analysis tools are still used in social work education.” (Academician 3)

“We say that social work is an applied discipline and profession, so this practice needs to be seen much more in the curriculum. But as you said, in most schools and departments, students start practicing late. This may cause anxiety in the student or delay the preparation for the application.” (Academician 4)

“There is a group of academics who do not follow current events, do not speak English, do not follow publications in English, and do not know new research methods. On the other hand, there are many academics who know all of these and are really trying to produce something new, and because they are trying to produce something new, they are blocked, unwanted, or not financially supported, even though they know these things and want to do them.” (Academician 2)

“I find it inadequate because there is no well-equipped training staff, and the quality of education has decreased.” (Social Worker 3)

“I think it would be more satisfying for me to be provided with the opportunity to do more case analysis and participate more in individual interviews and group studies.” (Student 1)

“I think social work education is inadequate. Basically, I think that the fact that there are many universities providing social work education has a negative impact in terms of the quality of education and selectivity among students.” (Student 2)

“I can consider the fact that there are people who have not received social work education before among the faculty members who provide social work education, as another factor that makes social work education insufficient in Türkiye.” (Student 4)

“For a professional group that basically conducts studies directly related to humans, I think that the quality and number of courses focusing on psychology, interviewing techniques, and traumas are insufficient.” (Student 3)

As can be seen, although social work education in Türkiye has lasted more than half a century, deficiencies in education and therefore in the field continue.

Theme 4: Aspects of Social Work Education that Need to be improved

It is not possible to expect both basic education and higher education to be perfect in a country. Especially a relatively new and developing discipline has many aspects that need improvement. In this context, opinions were received from the participants regarding the aspects in which social work education might need to be improved.

“For example, if the core education program were to spread throughout Türkiye. You know, they were studied meticulously, one by one, filtered through examples from different countries. Here is a program prepared with significant effort by social work academics, and as such, students in the east and the west will go through a similar process.” (Academician 2)

“You know, clear job descriptions and clear hour plans can be made. So, you still do it all, but what is the only clear thing right now? The minimum number of hours we are obliged to teach. But besides this, devoting so many hours to research, devoting so many hours to practice, supervision, administration, duties, etc. It would be better if there were clearer job descriptions.” (Academician 4)

“There should be standard education. Internship, practice hours, supervision hours... There should be equal levels of practice and supervision. All sections should be standard. All departments must have standards.” (Social Worker 2)

“I wish all students could see different internship areas, experience different educators, and get to know themselves and give direction regarding this...” (Social Worker 4)

“Social work education methods should be changed with an approach evolving towards universality.” (Social Worker 1)

“More efforts should be made to draw our professional boundaries and ensure that theoretical lessons match the experiences gained in practice. The perspective on social work in Türkiye should be examined and lessons should be shaped more according to practice.” (Student 3)

“A more equipped educational staff should be trained, and the professional definition should be clearly defined. Additionally, I find this aspect lacking as what needs to happen is explained but what needs to be done under the current conditions is not explained.” (Social Worker 3)

Updating social work education in terms of both curriculum and course content is reflected in the opinions of academics, students, and social workers:

“The point that is missing or needs improvement is curriculum design and education. I say education. So, first, I think that educators who will design the curriculum should have a new vision, knowledge, and skills.” (Academician 3)

“There are some overly critical lessons, one of which I think is gender and one of which is poverty. Courses such as human rights must be compulsory courses, not left to the student’s choice. Since these are issues that will fundamentally affect a social worker’s perspective, I think that all of these should be compulsory courses and should be taught in all universities.” (Social Worker 4)

“I believe that there are deficiencies in course content within the scope of social work education in Türkiye. I think the content of many courses is like each other. However, I believe that the courses have deficiencies in terms of the field of psychology. Adding course content such as personality theories and social psychology may be beneficial in order to be able to evaluate a case in depth, gain different perspectives, produce different solutions, and learn the source of problems.” (Student 2)

The opinions exemplified above show that social work education has many aspects that are lacking and need to be improved. Among these, issues such as curriculum, course contents, educational standards, and professional boundaries stand out.

Theme 5: The Future of Social Work Education

As mentioned in the introduction, the century we live in brings about some very rapid changes. It is obvious that many professions, whether old or new, will transform significantly in the near future. Within this main theme, participants’ expectations for the future of social work education were revealed.

It is stated by two academics that artificial intelligence, one of the most important and exciting developments of the 21st century, will affect social work education:

“Maybe it will be artificial intelligence and social work, or education and social work. It may be possible to provide education remotely and with the help of artificial intelligence, for example. Something like this may be needed.” (Academician 1)

“I am afraid whether other disciplines can play a role in social work or even take the leading role in designing the future. I think it is inappropriate to speak with a populist discourse such as some professions will die. Because we can now easily say that artificial intelligence can be used in machine learning, that is, in collaborating with the client.” (Academician 3)

Although it is difficult to predict the future of the social work profession today, some participants think that the profession will gain even more importance and value:

“I am sure that when the profession is valued more, this will of course be reflected in the academy. Because we will be expected to do more in the field, our clinical skills and macro skills will also need to be better. This is therefore something that will feed the academy.” (Social Worker 2)

“In fact, the most principal factors that will shape the answer to this question will be the policies to be implemented in the future and the atmosphere of the social structure. However, if I were to make a comment based on the course and transformation of

Türkiye's social and political structure from past to present, the need for social work professionals and therefore social work education will continue.” (Student 1)

“I believe that the presentation of social work education will be updated depending on the innovations and changes taking place in the world. At the same time, I believe that the value given to social service will increase as the need for social service increases day by day.” (Student 2)

In addition to these positive change expectations, there are also opinions that, considering the general conjuncture, the quality of education will decrease further and even the risk of closure of social work departments will increase:

“I think that the quality of education will gradually decrease and for this reason, students will turn to places where the profession is developed, that is, abroad, if they meet the language conditions.” (Social Worker 3)

“I do not think that the future of social work and social work education will be good for Türkiye. Because if there is work, students come, if there is no work, students do not come.” (Academician 2)

In addition to the aforementioned views, two academics suggest that the skill dimension will be more prominent than knowledge in the future of social work education:

“Information is okay, but how can we do it? This is what education will turn into. For example, I will not go and give lectures anymore. But I will try to provide that skill part to the student. Perhaps such software will come out that will interview the student as a client and develop that skill.” (Academician 1)

“But the important thing is to invest in the skill and value base, maybe a little more here, I guess. How the acquired knowledge can be blended with skill, what values it is related to, that is, requires a little more emphasis on the integration of knowledge with skills and values.” (Academician 3)

Based on all these views, it is possible to say that digitalization will become even more important for the future of social work education. We can predict that the political, economic, and other aspects of the country will affect the future of social work education positively or negatively.

Discussion

As a result of the questions asked to the participants in line with the purposes of the study, social work education in Türkiye was tried to be discussed from different dimensions. These views, gathered around five main themes, are discussed in the light of current literature in this section.

Although it is difficult to predict the future of not only social work but also other professions, it is possible to come across some theory and practice-based content on this subject in the literature. To illustrate, Council on Social Work Education (CSWE) focuses on different scenarios for the future of social work, and four different scenarios stand out. These include (1) Adopting technology to

improve practice; (2) Building on our successes; (3) Social workers are leaders everywhere and (4) Social work leadership for a high-tech world (CSWE, 2018). Within the scenarios in question, if we think specifically about education, it can be said that the leadership of social work issues can come to the fore with the adaptation of technology to social work theories and practices. As included among the participants' answers, the following question is important for social work education in a technology-intensive future: "How might social work education prepare students for the use of technology in teaching, learning, and practise?" In terms of social work leadership, it is useful to consider the following question: "How might social work education integrate professional and interdisciplinary leadership into the curriculum to better prepare graduates for leadership roles in addressing the critical issues facing our communities and society?" The answers to these questions will be decisive for the future of social work education both locally and globally.

Reisch (2013) highlights the following characteristic situations in terms of the present and future of social work: A structural analysis of society; recognition of the significance of history, culture, and context; a synthetic and adaptive rather than rigid ideological perspective; an understanding of the interconnectedness between domestic and international issues; awareness of the role of race, gender, ethnicity and sexual orientation in the marginalisation of certain population. In this context, the analysis of social structure is of immense importance in terms of social work education, and it is deemed necessary to establish connections about national and international issues.

Ferguson (2017) focuses on three possible scenarios for the future of social work and social work education. The first and worst of these is the extinction of social work as a profession. The reason for this can be given as the danger of social work, which has grown especially within the welfare state, disappearing within the neoliberal system. A second and positive scenario is that the role of social work will increase, especially in providing care and shaping social policies. At this point, the increasing aging of the global population and the increasing need for more equality and social justice among the dilemmas of neoliberalism can be given as examples. The third and final scenario is that it is accepted that social work has moved away from its essence, but its role in society will be reconsidered and new practice models will be put forward. Lorenz (2017) on the other hand, argues that social work education, especially in Europe, will face a test in the next decade on the concepts of equality and extreme individualism in the face of totalitarianism, which has increased its influence after postmodernism. Considering the opinions of the participants in this study, there are opinions that social work will gradually lose its importance and that its value will increase further. Therefore, it is possible to say that the future of social work education depends on changes in social needs and the construction of new models for practice.

One of the most fundamental issues for today and the future of social work education is undoubtedly the digitalization process. At this point, participants emphasized focusing on skill training rather than knowledge, especially with artificial intelligence. Gencer and Aktan (2021) argue that the need for change in the digital age and society will also affect social work, and they discuss this process

through the concept of Social Work 2.0. In this context, the question of where social work is in digitalization becomes important, and the ability of social work education to adapt to digital environments is decisive in terms of the answer. Tuncay (2020) focuses on opportunities and obstacles in online social work education. According to him, in terms of opportunities, especially the topics of contribution to equality of opportunity and accessibility come to the fore, while in terms of obstacles, the economic context, globalization of education and technical obstacles come to mind.

Alptekin, Topuz, and Zengin (2017) in their study on the current situation of social work education in Türkiye, revealed the weaknesses and strengths of education. In the study, while the abundance of weaknesses comes to the fore, attention is drawn to problems such as the opening of too many departments in a short period, the existence of open education social work programs, and the excess of educators and students outside the field. In this study, while the issue of open education was emphasized especially by the academic participants, the issues of uncontrolled growth and extraterritoriality were also brought to the agenda. In the study of Alptekin et al., the strengths of the study are given as the potential of the increasing number of departments to provide different perspectives and the increase in the number of graduates and academic publications (2017). Sehman and Yolcuoğlu (2020) evaluated social work education in Türkiye from the perspective of open education graduates. According to the results, it was revealed that the participants felt professionally inadequate and found the supervision support inadequate. Considering that one of the prominent issues in this study is the lack of supervision in undergraduate education, this issue is seen as a common problem area in terms of both formal and distance education. Yılmaz, Koçak, and İçağasıoğlu-Çoban (2022) conducted a study that included the analysis of practice courses in social work departments. One of the most important results revealed is the lack of standard among departments in terms of practice courses. In addition, the fact that there are few or no social workers in some practice institutions is among the results revealed. In this study, social work practice is one of the topics discussed, and the participants focused mostly on the content of the practices. However, as can be seen, quality and standardization are issues that need to be emphasized as much as content.

Zengin, Alptekin, and Topuz (2023), in their study on the current situation, bottlenecks and expectations of social work education in Türkiye, focussed on the following: Overview of departments; student and alumni status; academic personnel status; curriculum and the need for indigenous knowledge; international connections and accreditation of the departments; social work education with the open education model and field practice challenges. According to the results of the research, while the negative aspects of education predominate in the current situation, the need for local knowledge and the situation of open education come to the fore. In addition, the lack of educators with a social work background, the scarcity of accredited departments, and the difficulties encountered in field applications were emphasized. Considering the results of the relevant study and the responses of the participants in this study, one of the most significant problems in terms of the current situation and near future of social work education in Türkiye seems to be the existence of open education programs. At the same time, the existence of departments that have

opened uncontrollably recently and the insufficient number of educators is also remarkable in terms of the current situation.

Conclusion

The process called education consists of different stages, and the last stage of this is the higher education level. In Türkiye, as in the rest of the world, social work education is given at the undergraduate level in universities. Social work education, which has a history of approximately sixty years, has gone through different milestones and is now offered in many universities. The results of this research, which aims to capture a general picture of the current situation of social work education in Türkiye, are briefly included in this section.

Although it is considered controversial by some, today's university students are considered Generation Z. As introduced to the literature by Marc Prensky (2012), this generation is also called "digital native". Generation Z – in other words, digital natives – was born into a technology-intensive world and has been introduced to digitalization since early childhood. This being the case, they need content that uses technology intensively in their education and training processes, from pre-school education to university. A similar situation applies when it comes to social work education. Therefore, the use of digital opportunities and content for an education curriculum that keeps up to date both globally and in Türkiye is more than a necessity. In fact, it is possible to say that digitalization in education has increased after the period that started with COVID-19 pandemic. As can be understood from the relevant literature (Davis, Greenaway, Moore, & Cooper, 2019; Littlefield, 2019; NASW, ASWB, CSWE, & CSWA 2017; Kurzman, 2013; Reamer, 2013) and the results of this study, it is necessary to benefit from the driving force of artificial intelligence in social work education. It seems that not only artificial intelligence but also skill training will become more important than knowledge transfer in this century.

To summarize the points reached through the main themes within the aims of the research and research questions:

- Negative aspects and deficiencies stand out in the current situation of social work education in Türkiye. In particular, the existence of open education programs, the uncontrolled growth of departments and the shortage of qualified instructors come to the fore.
- When we look at the strengths and weaknesses of social work education, the increase in young academics and Turkish publications stand out in terms of strengths, while the lack of a supervision system and the lack of standardization of social work practices stand out in terms of weaknesses.
- Inadequacies predominate in terms of the adequacy level of social work education. While some of the student participants emphasize competence in their own universities, most participants point out the inadequacy of education in terms of both the curriculum, keeping up to date, and the teaching staff and quality.

- When we look at the aspects of social work education that need to be improved, the need for standardization in education prevails in many aspects. There is also an emphasis on making the curriculum and content more universal.
- When looking at the results for the future of social work education in Türkiye, it can be seen that there are both positive and negative expectations. On the positive side, there is the idea that the need for the profession will increase, while on the negative side, there is concern that the quality of education will decrease and even the risk of closure of departments is expressed.

This study shows that education is a phenomenon that should be evaluated multidimensionally and holistically. It should be noted that this study, in which the current situation and the future of social work education in Türkiye is evaluated from the perspectives of academics, students, and social workers, is limited to the opinions of the participants. In future studies on the subject, the opinions of participants who teach in social work departments but do not have a social work background can be obtained. It is thought that a study based on the experiences of educators and students teaching in open education programs will make a significant contribution to the literature.

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Exploring the Efficacy of Online Synchronous Debate as a Tool for Teaching Ethics

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Ethical dilemmas are multifaceted and complex, comprising a diverse set of viewpoints, values, beliefs, and attitudes. They rarely have a purely right or wrong answer. Not everyone will have the same answer to an ethical dilemma. Hence, teaching ethics is about helping students build critical thinking skills so that they can consider contradictory viewpoints to come out with the best course of action in the face of conflicting choices. Post pandemic, online teaching is now a norm. This study aims to explore the effectiveness of online debate in teaching ethics. Using Kialo Edu's free argument mapping and debate web tools in a synchronous online workshop, we conducted an undergraduate Ethics and Laboratory Safety module, where the students engaged in collaborative and real-time debates on an ethical statement. Feedback was collected through an anonymous online survey to evaluate the impact on student learning. The results showed a positive impact on their learning experience. This study highlights the potential of online synchronous debate in promoting active student participation and critical thinking in ethical dilemmas.

Keywords: online learning, ethics, online debate, critical thinking, Kialo

Introduction

Ethics can be interpreted as the discipline of dealing with good and bad with commitment and moral duty. Ethics impacts the behavior and permit an individual to make the right options. The significance of ethics cannot be disregard in any level of life. Thus, ethics plays a very important role in the education of students, and learning ethics is often an important component in any undergraduate curriculum. For example, the American Chemical Society Committee on Professional Training recommends that instruction in professional ethics be part of the undergraduate chemistry curriculum (The American Chemical Society, 2016), while the degree programmes accredited by the Royal Society of Chemistry require ethics to be touched on in undergraduate chemistry courses under transferrable skills (The Royal Society of Chemistry, 2023).

However, ethical dilemmas are complex and multifaceted issues that require a deep understanding of various viewpoints, values, beliefs, and attitudes. They rarely have a straightforward answer, and individuals may have differing opinions on how to approach a particular ethical issue. Thus, the motive of ethics education is not directly learning ethics for its purpose. It's objective to deploy this body of

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knowledge for two motives. The first motive is to grow intellectual dimensions that will authorize students to recognize ethical dimensions of issues and address the ethical issues. The second purpose of ethics education is important to develop critical thinking skills that enable them to analyse and evaluate multiple perspectives, consider contradictory viewpoints, and make sound decisions in the face of conflicting choices.

In this regard, debate has been shown to be an effective method to teach ethics (Hawkins, Fulford, & Phan, 2019). A debate can be defined as a thoughtful and reasoned presentation of opposing persuasive arguments. These arguments can be presented in situations such as a competition, a classroom, or a legislative group attempting to make decisions (Wasilewsky, 2023). Recently, the global pandemic has significantly changed the landscape of education, leading to the widespread adoption of online teaching as a norm. Hence, online debate may be a promising pedagogical tool in current times of ethics education.

This study aims to investigate the effectiveness of using online synchronous debate as a tool for ethics education. Specifically, this study explored the use of Kialo Edu, a free web-based tool designed for argument mapping and debate, in an undergraduate Ethics and Laboratory Safety module. By conducting a synchronous online workshop, students engaged in collaborative and real-time debate on an ethical statement. The impact on students learning was evaluated through collection of feedback via an anonymous survey. The results of this study will shed light on the positive effects of online synchronous debate on student learning experiences and highlight its potential as a pedagogical tool in ethics education.

Literature Review

Debate as an Instructional Tool

Ethics education focused solely on knowledge transfer through lecture-based approaches may be inadequate in developing students' ethical reasoning and judgment, particularly in complex ethical dilemmas. Instead of relying on rote memorization and mechanical learning, ethics education should prioritize the cultivation of critical thinking and reflective skills that can be applied to real-life scenarios. Therefore, a more multifaceted approach is required to achieve meaningful and practical learning outcomes in ethics education.

One way to achieve this is through the use of debate, which has long been recognized as an effective learning method in the classroom (Settlage, 2020). Debate requires students to take a stance on a given topic, make judgments according to their own values to defend their position, and persuade students with opposite views. This process allows students to explore and gain understanding of alternative viewpoints, thus developing critical thinking, communication, and argumentation skills (Ait Hattani, 2021; Lampkin, Collins, Danison, & Lewis, 2015; Malone & Michael, 2018; Mimouni, 2022), which are essential for ethical decision-making. Engaging in debate can also reduce students' fear of confrontation (Jouini,

2019), deepening student knowledge (Gulnaz, 2020), and developing student empathy and open-mindedness (Ait Hattani, 2021).

Furthermore, there is evidence to suggest that debate can serve as an effective instructional approach for ethics. Hogan et. al conducted a study in 2018 to assess the impact of debating on the development of ethical reasoning skills in pharmacy technician students. The results showed that students had an improved understanding of ethical dilemmas after engaging in debate (Hogan & Dunne, 2018). Similarly, in an interprofessional education (IPE) debate on ethics and professionalism as a teaching modality for first-year pharmacy and physiotherapy students, students agreed that debating ethics through IPE was a valid teaching modality. The students found the debates challenging and stimulating, and it benefited them to work as a team (Strawbridge, Barrett, & Barlow, 2014). Also in the field of pharmacy, pharmacy students were able to enhance their teamwork, peer assessment, communication, and critical evaluation skills through a series of workshops that effectively delivered course content on ethical issues, using debates as a teaching method (Hanna et al., 2014; Lampkin et al., 2015). Debate-based ethics education has also shown to improve idealistic and realistic moral judgement among undergraduate nursing students (Kim & Park, 2019).

Online Debate

The coronavirus pandemic has significantly transformed the landscape of education worldwide, necessitating a shift to online learning. Online classes have become the cornerstone of modern higher education, prompting colleges and universities to explore ways to expand their online programs. It is widely recognized that online courses can be as effective as traditional instruction, provided that appropriate methods and technologies are employed, student-to-student interaction is present, and timely feedback is provided (Gray & Diloreto, 2016). The learning outcome is primarily dependent on the teaching methods, rather than the media (Clark, 1994). Given these conditions, it stands to reason that online debates can play a role in encouraging student participation and fostering critical thinking skills in a manner similar to a face-to-face debates.

To assess the efficacy of online debates, Richardson and Ice (2010) conducted a study comparing different types of online discussions. Their research involved open-ended discussions, debates, and case-based discussions, utilizing the Practical Inquiry Model (Garrison, Anderson, & Archer, 2001) to evaluate their impact on students' critical thinking abilities. Findings revealed that debates were more effective than open-ended discussions in improving students' critical thinking achievement levels, although slightly less effective than case-based discussions. These results suggest that online debates hold promise as a valuable instructional tool for enhancing critical thinking skills in students.

Moreover, several studies have reported positive outcomes associated with the use of online debates in higher education. Mitchell (2019) investigated the effectiveness of debates in an online asynchronous social policy course. The study involved 36 participants, and a combination of qualitative and quantitative data was collected to evaluate the impact of the debate assignment. The majority of

students reported that the debate assignment helped gain a better understanding of course concepts, improve their critical thinking skills, and enhance collaboration with fellow students. Similarly, in another study by Mutiaraningrum, Kalimantan, Bambang, and Cahyono (2015), asynchronous online debates were found to have the potential to enhance critical thinking skills and promote learning autonomy among Indonesian EFL students in an argumentative writing course. Deliberate planning of debates, including assigned roles and clear expectations, facilitated students in presenting thoughtful and critical arguments. The flexibility of online debates allowed both students and instructors to engage with the material and reflect upon it. However, it is important to note that these studies also highlighted challenges in implementing online debates, such as delayed responses, student confusion, and technical issues.

By considering the aforementioned studies, it becomes evident that online debates offer valuable opportunities for enhancing critical thinking skills, promoting collaboration, and improving student engagement in online learning environments. However, there are limited studies examining the role of online synchronous debate in ethics education. Hence, further research is needed to explore the role of online synchronous debate in ethics education.

Methods

This study utilized a case study approach to explore the efficacy of online synchronous debate as a tool for teaching ethics. The research was conducted during a synchronous online workshop in the Ethics and Laboratory Safety module with a class of 25 students.

The online focused debate was selected as the teaching methodology for this study. The students were presented with a statement to debate: "Society is obliged to fund or provide medical care for individuals born with defects and disabilities, or those with special needs, regardless of cost." To facilitate the debate, we utilized Kialo Edu, a custom version of Kialo (kialo.com), which is a widely used argument mapping and debate platform specifically designed for classroom use. This platform is accessible for free and can be accessed from any internet-connected device.

In the same session prior to the debate, the students were given a briefing on how to navigate the debate site and were provided with instructions on how to contribute their arguments in real-time. The students were allowed to support or challenge the statement by contributing their pro and con claims without any limitations on the number of posts. The Kialo Edu platform also facilitated collaboration, allowing students to write counterarguments, comment on each other's claims, ask questions, give feedback, and vote on the impact of each other's contributions.

Following the online synchronous debate, a debriefing session was conducted by the facilitator to discuss the debate thread with the students. This session provided an opportunity for reflection and clarification on the arguments presented during the debate.

To evaluate the impact of the online synchronous debate on student learning, an anonymous online survey was administered using Google Forms. The survey

consisted of nine questions, including two yes or no questions, five Likert scale questions, and two open-ended questions. The survey aimed to gather feedback from the students on their experience with the debate and to assess the achievement of the project objectives. The students were given a week to complete the online survey. Table 1 presents the questions included in the survey, along with the corresponding question number, question type, and response options. The collected survey data was analyzed to gain insights into the effectiveness of the online synchronous debate as a teaching tool and its impact on student learning in the Ethics and Laboratory Safety module.

Table 1. The Questions Posted to the Students in the Survey

Question no	Question	Type of Question
Q1	Did you find the online debate site easy to use and navigate.	Yes/No
Q2	The online debate format was interesting.	Likert scale
Q3	The use of the tool encouraged my participation in the online discussion	Likert scale
Q4	Participating in the online debate sharpened my critical reasoning skills.	Likert scale
Q5	The debate tool allowed me the space to explore the arguments at my own pace.	Likert scale
Q6	Following the debate, I have better understanding of the ethical dilemma in this workshop.	Likert scale
Q7	Would you recommend the use of this method to teach science ethics again?	Yes/No
Q8	What is the best aspect of the online debate?	Open ended
Q9	Please give any other feedback/comment here (if any).	Open ended

Results

Out of the 25 number of students in the class, 11 students responded to the survey. To ensure unbiased feedback, the identity of the students remained anonymous. This anonymity was intended to encourage the students to provide honest and candid feedback without any fear of repercussions or judgment. Table 2 provides a summary of the main characteristics of the class.

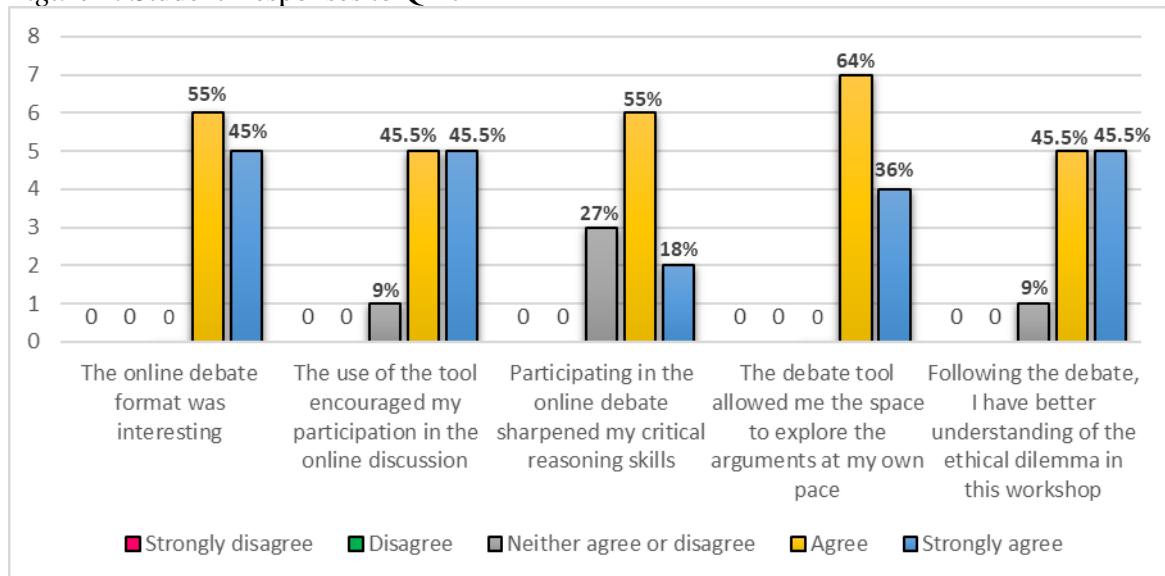
Table 2. Summary of the Main Characteristics of the Class

Characteristics	n (%)
Gender	
Female	20 (80%)
Male	5 (20%)
Programme	
BSc (Hons.) Pharmaceutical Chemistry	11 (100%)
Programme mode	
Part-time	0 (0%)
Full-time	11 (100%)

Based on the survey results, it can be concluded that the use of online debate in this study to teach ethics was well received by the students. In the yes and no questions (Q1- Did you find the online debate site easy to use and navigate, and

Q7- Would you recommend the use of this method to teach science ethics again?), 100% of the respondents replied yes for both questions. In the likert scale questions (Q2-6), 100% of respondents either agreed or strongly agreed that the online debate format was interesting, 91% of respondents either agreed or strongly agreed that the use of the tool encouraged their participation in the online discussion, 73% of respondents either agreed or strongly agreed that participating in the online debate sharpened their critical reasoning skill, 100% of respondents either agreed or strongly agreed that the debate tool allowed them the space to explore the arguments at their own pace, and 91% of respondents either agreed or strongly agreed that following the debate, they had a better understanding of the ethical dilemma (Figure 1).

Figure 1. Student Responses to Q1-7



The responses to the open-ended questions (Q8-9) are as follow:

Question	Responses
What is the best aspect of the online debate (Q8)	<p>Easy and no one will be getting mad about it.</p> <p>We can agree or disagree any statement given.</p> <p>It stimulates critical thinking and reasoning skills as well as provides a clearer picture regarding the arguments as it's displayed on the board simultaneously meanwhile it also allows multi-user.</p> <p>I dont have to voice out, i can type it out instead and i think everyone can take part in it as we don't need to voice out fast like real debate.</p> <p>Can speak out own opinion.</p> <p>Able to understand and learn different aspects of the same topic from other students.</p>

	<p>It opens up different perspectives for opposing teams to give them new ideas on what could be possible.</p> <p>It covers the overall learning outcome which made understanding the information faster and better.</p> <p>We can see each other opinion.</p> <p>Students can post up their opinions and everyone can participate in the discussion.</p> <p>Everyone was given the platform to express their opinion in a situation thats comfortable for them.</p>
Please give any other feedback/comment here (if any) (Q9)	<p>Better if don't share our names and opinion on screen.</p> <p>It's good to use.</p> <p>None, everything was great!!</p> <p>The name can be anonymous.</p>

Discussion

Kialo.edu Online Debate Site

The efficacy of online synchronous debate as a teaching tool for ethics was explored in this research study. One of the survey questions asked students about their experience with the online debate site, Kialo.edu, specifically focusing on its ease of use and navigation. All students who responded to the survey answered positively, indicating that they found the platform easy to use and navigate. This suggests that students quickly adapted to the site's features and functionality, positively contributing to their overall learning experience. However, it is important to note that this question only covers one aspect of the site's usability, and there are other areas, such as accessibility and user satisfaction, that could be further explored.

Accessibility plays a critical role in ensuring that the online debate platform is inclusive and can accommodate users with disabilities or special needs. Evaluating accessibility provides insights into meeting diverse student needs. User satisfaction is also important, indicating that students find the platform enjoyable, intuitive, and user-friendly. It also suggests that the platform meets their expectations and enhances their overall learning experience. Factors such as the platform's interface, functionality, responsiveness, and ease of interaction contribute to user satisfaction. Improving accessibility and user satisfaction enhances equal access and positive learning experiences. While this study focused primarily on the ease of use and navigation of Kialo.edu, future research could expand on these findings by conducting more comprehensive evaluations that explore the platform's accessibility

and user satisfaction. By considering these important aspects, educators can make informed decisions about selection of online debate tools for effective ethics education.

Additionally, a comparison with other online debate tools was not made. Despite these limitations, the positive response to Kialo.edu supports its use as an online debate platform for teaching ethics. This finding aligns with previous research that has highlighted the positive outcomes of using Kialo.edu in teaching and learning (Mahoney, 2022; Mora-López, 2019). Therefore, the platform's ease of use and navigation make it an attractive option for educators looking to incorporate online debates into their teaching practices.

While Kialo.edu offers several benefits for online debates, it is important to note that there are other online tools for conducting debates. Online platforms like Zoom, Google Docs, Debategraph, and Slack also be used in teaching and learning for conducting online debates. When selecting an online tool for debates, factors such as ease of use, accessibility, and the ability to support collaborative and structured debate should be considered.

Online Debate as a Learning Tool

Online debate has proven to be an effective learning tool in promoting student engagement and interaction in the online learning environment. By utilizing online synchronous debates, peer-to-peer interaction is encouraged, and platforms for dialogue are created, sparking interest among students.

Compared to traditional face-to-face debates, online debate offers several advantages, including increased flexibility in scheduling and location. Students can participate in debates from anywhere with an internet connection, making it particularly beneficial for those with conflicting schedules or residing in different time zones. Additionally, online debate enhances student engagement by providing an inclusive platform where all students can actively participate, regardless of class size, eliminating the passive spectator role often observed in face-to-face debates. Moreover, the recorded history of online debate discussions can be shared with those who were not present during the debate, allowing for further engagement and learning. Finally, online debate is more accessible for students with disabilities or those who may feel uncomfortable participating in traditional face-to-face debates, fostering a more inclusive learning environment and providing equal opportunities for all students to contribute.

The survey results from our study indicate that the use of online debate to teach ethics in this study was well received by the students. A majority of respondents agreed or strongly agreed that the online debate format was interesting, encouraged their participation in the online discussion, allowed them to explore arguments at their own pace, and helped them gain a better understanding of the ethical dilemma presented in the workshop. It is worth noting that online teaching often faces challenges in engaging students and promoting active participation, particularly in larger class sizes (Na & Jung, 2021). However, the implementation of online debate appears to address this problem by fostering student engagement and encouraging active involvement in the learning process.

These findings are consistent with previous studies that have explored the effectiveness of incorporating online debate into classroom learning (Tur & Marín, 2014). For example, Tur et al. conducted a study investigating the impact of using Twitter in debate activities on students' educational experience. The findings revealed that 71.7% of students reported being motivated to participate in debates due to the use of Twitter, and almost 80% of them believed that the activity aided their comprehension of the debate topics. Additionally, 84.9% of students expressed enjoyment and learning from the activity.

Regarding the impact of participating in online debate on critical reasoning skills, the survey results showed some divergence among the participants. While a considerable percentage of participants agreed or strongly agreed that participating in the online debate sharpened their critical reasoning skills, 27% neither agreed nor disagreed. This suggests that the impact of online debate on critical reasoning skills may vary among individual students. Further research is necessary to gain a comprehensive understanding of this aspect. Additionally, the lack of consensus among participants may be attributed to the use of only one scenario for the debate, with the complexity of this scenario potentially not stimulating critical thinking for all students.

In response to the open survey question (Q9), where students were asked for additional feedback or comments, several students expressed a preference for anonymity in online debates. Several possible reasons may explain this preference. Some students may feel uncomfortable sharing their honest opinions due to fear of judgment or retaliation, particularly if their opinions or beliefs differ from their peers. Furthermore, students may choose to remain anonymous to avoid potential consequences in professional settings, where their opinions expressed in a public forum could be seen by future employers or colleagues. Additionally, personal preference or comfort may drive some students to prefer anonymity, as they feel more at ease expressing themselves online without revealing their identity.

However, while anonymity provides students with a sense of comfort and safety to express their honest opinions, it can also have drawbacks. Allowing students to participate anonymously may lead some to hide behind their keyboards, inhibiting constructive dialogue and resulting in a lack of engagement and missed opportunities for learning and growth. Anonymity may also enable the posting of inappropriate or offensive content without accountability. To address this issue, it is crucial to establish clear guidelines and expectations for online behavior and etiquette. Instructors should emphasize the importance of respectful and professional communication and set standards for appropriate language and conduct during the debate. The teacher also plays an important moderating role during these discussions, and to oversee the content. By establishing these guidelines, students will be aware of the expectations and the potential consequences for violating them, thereby fostering a constructive and inclusive online debate environment.

Apart from the privacy and anonymity highlighted by some students, one of the prominent themes that emerged from Q9 was the flexibility and ease of participation. Students appreciated the convenience of expressing their opinions through typing rather than voicing them out in real-time, allowing them to contribute at their own pace. They also valued the inclusive nature of the online debate,

where everyone had the opportunity to participate and share their thoughts. Another key theme was that the online debate format stimulated critical thinking and reasoning skills. Students mentioned that the visual display of arguments on the board simultaneously provided a clearer understanding of the topic and encouraged them to analyze different perspectives. They also appreciated the collaborative nature of the platform, as it allowed them to learn from other students and gain new ideas from opposing teams.

Limitation and Future Study

The present study has several limitations that should be acknowledged, highlighting the need for further research to enhance our understanding of the efficacy of online synchronous debate as a tool for teaching ethics. Firstly, the study's small sample size limited the consideration of demographic differences among participants, potentially impacting the generalizability of the findings to other populations or contexts. Therefore, future research should aim to include larger and more diverse samples, considering demographic factors such as gender.

Secondly, the study solely relied on self-reported feedback from students through an online survey, introducing potential subjectivity and response biases. The Likert scale used in the survey may not fully capture the complexity of students' learning outcomes, and the limited scope of the survey with only two open-ended questions restricted students from providing in-depth feedback. Students may have also answered in a way they thought would please the facilitator. To overcome these limitations, future studies could adopt a mixed-methods approach, incorporating qualitative interviews or focus groups, to gather more nuanced and comprehensive insights into students' experiences and perceptions of online debate as a teaching tool for ethics.

Furthermore, the study did not assess the long-term impact of online debate on students' learning outcomes beyond the immediate workshop. It is essential to examine whether the effects of online debate are sustained over time and whether they lead to significant changes in students' attitudes and behaviors towards ethical issues. Future research should employ longitudinal designs and evaluate learning outcomes at multiple time points to gain a better understanding of the sustained impact of online debate as a teaching methodology for ethics.

Conclusion

The findings of this study suggest that online synchronous debate can be an effective teaching tool for ethics education. The survey results indicate that the use of online debate was well received by the students, with 100% of the respondents finding the online debate site easy to use and navigate and recommending the use of this method to teach science ethics again. The majority of the students agreed or strongly agreed that the online debate format was interesting, encouraged their participation, sharpened their critical reasoning skills, allowed them to explore

arguments at their own pace, and helped them gain a better understanding of the ethical dilemma.

The open-ended responses further support the positive aspects of online debate, highlighting the opportunities for students to express their opinions comfortably, engage in critical thinking and reasoning, and learn from different perspectives. However, it is worth noting that some students expressed a preference for anonymity during the online debate, emphasizing the need for a safe and judgment-free environment for open discussions. While anonymity can provide students with a sense of safety and comfort, it is important to balance this with the need for responsibility to take ownership of their comments.

While this study provides valuable insights into the effectiveness of online debate in teaching ethics, there are limitations that need to be addressed. The small sample size and reliance on subjective feedback through an online survey limit the generalizability of the findings. Additionally, the study did not assess the long-term impact of online debate on students' learning outcomes and attitudes towards ethical issues.

In conclusion, while this study highlights the positive reception and benefits of online synchronous debate for ethics education, further research is warranted to fully explore its potential and address the limitations identified. By continuing to investigate and refine the use of online debate, educators can leverage this interactive and inclusive tool to foster critical thinking, enhance student engagement, and promote a deeper understanding of ethical dilemmas.

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