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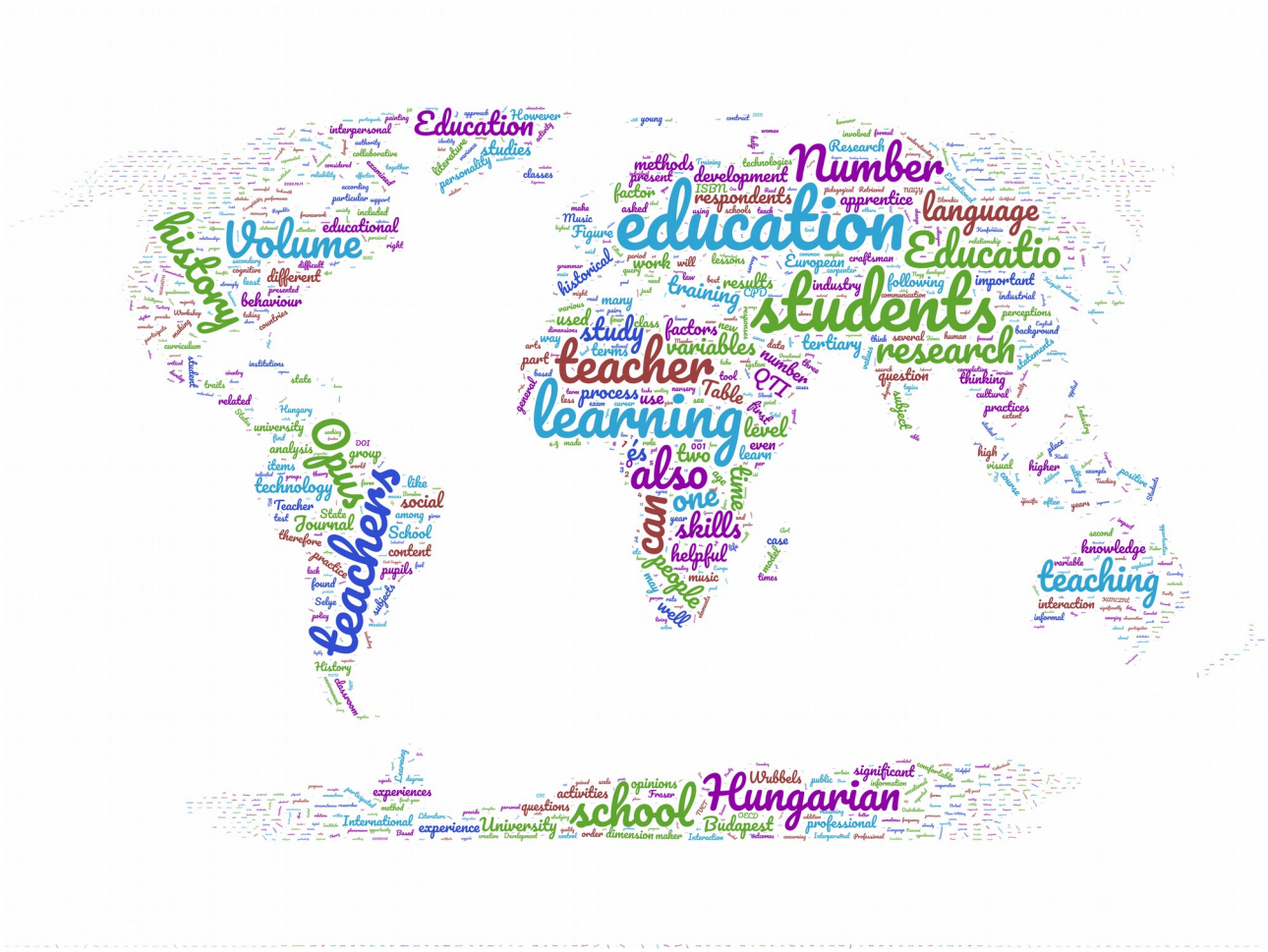

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Contents

Dear Reader,

This new decade began with a pandemic. It has shattered our everyday lives, our usual social life. A health emergency was introduced, and schools were ordered to close, and education was suddenly confronted with a new reality: it has become necessary to study and teach at home, using alternative teaching and learning forms and methods. This situation has been a giant challenge for students, teachers, researchers, and society as a whole; it took almost days to adapt to the new circumstances.

And how well it has succeeded will be the subject of many scientific articles soon. We can be sure that creative educators will develop several innovative solutions that will also offer many new opportunities for researchers. This year's first issue of the journal Opus et Educatio contains 10 research reports written just before the epidemic but do not detract from their topicality.

Studies can be categorized according to several perspectives. First, geographically. Most of the authors come from the Carpathian Basin educational space, which carries a special vision in education, including teacher training. The authors of each study are from the United States and Kenya. The latter two studies provide some framework for the structure of our present issue. The authors of the first study, Kate K. Mays, and her co-authors report the results of a representative empirical study conducted in the United States to map the acceptance of virtual reality and artificial intelligence in education. Kenyan author Moses Njenga also reports on the informal CPD practice of 40 TVET teachers in the Nairobi metropolitan area as part of an empirical study.

The paper by Katalin Kanczné Nagy guides us into the second half of the 19th century and presents the impact of the then Hungarian industrial law on vocational education and training, and Barnabás Vajda dissects the question that arises from time to time about the real purpose of history teaching.The authors of the next two studies, Agáta Csehi and Renáta Marosi describe the positive effects of the arts on education by presenting a methodological investigation and a methodological innovation.

The research group called Ratio, founded at J. Selye University, conducts pedagogical research, and two of their results have now been included in this issue. Katalin Kanczné Nagy and Agáta Csehi focus on the personality traits of pedagogical students through the use of the Sensation Seeking Scale, developed by Zuckerman, and Kinga Horváth and Péter Tóth mapped the ideal teacher interaction concerning the Wubbels model through a widely used questionnaire (QTI).

Janka Poráčová and her colleagues give a comprehensive study on tertiary education in the European Union and employment opportunities for graduates. Using the sociolinguistics and ethnography methods, Flóra Kancz examined how the linguistic identification and social integration of young students studying in Hungary living in the Western European diaspora but with a Hungarian background are influenced by the minority policy of the motherland.

Finally, the guest editor can only hope that he managed to outline a sufficiently diverse and colourful projection of useful and inspiring further research, both in the higher education space in the Carpathian Basin and in the research carried out by those involved.

Budapest March 2021

Péter Tóth
Guest Editor of this issue

Kate K. MAYS, James E. KATZ, Yiming Skylar LEI

Opening education through emerging technology: What are the prospects?

Public perceptions of Artificial Intelligence and Virtual Reality in the classroom

Education technology (Edtech) is a nine-billion-dollar market in the United States (Millward, 2019). In 2018 alone, nearly 1.5 dollars were raised for new Edtech investments (Wan, 2019), and a recent marketing research report predicts that Artificial Intelligence specifically will grow almost 50 per cent by 2022 (TechNavio, 2018). Similar optimism is seen for Virtual Reality (VR, which for our purposes also includes augmented reality technology) on the educational front (Radianti, Majchrzak, Fromm & Wohlgenannt, 2020). The booming market betrays an optimism for Edtech's potential to transform education and learning outcomes. Some look to AI's capacity for pattern recognition to more individually customize learning plans (Levesque, 2018); some predict that AI-driven initiatives can expand opportunities for underserved student populations (Allen, 2019); some even characterize the integration of emerging technologies like AI and Virtual Reality (VR) as a national imperative for remaining relevant and competitive in the 21st Century (Allen, 2019).

There is also the notion that Edtech may open up opportunities for more visual engagement with material parity across educational contexts (Allen, 2019). Research has found that school districts' socioeconomic level is a strong predictor of one academic indicator, test scores (Reardon, Kalogrides, & Shores, 2019). Some have proposed VR as one way to try to close this income-achievement gap. Experiences like field trips or museum visits – costly and rare for lower-income districts – could take place virtually for students, so they are still exposed to rich and varied ideas and cultures (Sato, 2018). AI-driven technology has also opened up "global classrooms" with an automatic translation that enables anyone's participation (Marr, 2018). VR- and AI-enabled classrooms could also improve access for those with disabilities or illnesses and allow students to take classes that otherwise aren't offered in their brick-and-mortar school (Marr, 2018).

Yet, when school systems invest in Edtech, technology is not always widely adopted by individual educators or learners (Stanhope & Rectanus, 2016). Where does this resistance come from? Perceptions of technology may play a role. As school districts and governments (and ultimately, taxpayers) invest so heavily in the next "revolution" in education (Roll & Wylie, 2016), designers, developers, innovators, creative designers, educational researchers need to better understand the public's view of these technologies and how they might encourage adoption. Procurement is one thing, but for a successful implementation, Edtech needs buy-in not just from investors and administrators but from the end-users as well: teachers, students, and their communities. The flood of investment in Edtech indicates real promise for its diffusion. Yet, less is known about the public's view of technology's role in education, which can be important information for system designers, program planners, and policymakers. This study, therefore, explores public perceptions of emerging technology – AI and VR, specifically – in education.

Perspective on Edtech: Uses emerge

AI in education

A review of research shows several trends for AI as applied to education. AI is taking on more roles and accomplishing more tasks in education; AI is expanding the scenarios of teaching, tutoring, and learning; it is making education more accessible, mitigating barriers of distance, language, cost, and physical limitations providing solutions to special needs; it is covering more domains and disciplines, all proven a certain degree of effectiveness; and it leads to more customized, personalized, and

individualized learning process. It is not yet clear what AIED's trajectory is. Roll and Wylie (2016) suggest that AIED could either evolve gradually, as it is carefully integrated into the existing teaching-learning system, or it could take a revolutionary approach and drastically transform the current landscape of education in its implementation. Public opinion, in the form of both stakeholders and the larger public, may have an influence on this process, though current research is primarily focused on AIED application and improvement.

VR in education

The conceptualization of Virtual Reality (VR) technology has changed throughout its history; what has remained consistent is the aim for experiences that transcend time, place, and physical limitations. The term "virtual reality" was first mentioned in the 60s (Freina & Ott, 2015) and has continued to evolve. With the advance of supporting hardware, VR technologies currently can be classified into immersive, semi-immersive and non-immersive, based on the degree of immersion a specific VR technology can provide (Martín-Gutiérrez, Mora, Añorbe-Díaz & González-Marrero, 2017).

VR can take many technological forms, and most studies on VR in education remain focused on specific technologies, examining them type-by-type or in some combination. Few studies have explored public opinion about employing VR in educational settings, which we also found with studies in AI in education. Thus, for both emerging technologies, which are examples of Edtech's present and future instantiations, less is known about how the public perceives or understands these technologies. Widely adopting such technologies in classrooms could lead to vastly divided or even opposite opinions on the topics that are currently being discussed and examined, mostly within confined, experimental settings.

Perspective on Edtech: Uses emerge

Given the substantial investments required for Edtech, the importance of local control of school policies and budgets in the US and the crucial role of parental involvement in education, the public's perspectives may be influential if not decisive in the ultimate trajectory of AI and VR in the classroom. Based on these and the above considerations, this study is a step in understanding how Edtech may be perceived on a broader, general level and also generating relevant research questions:

- RQ1: What are public perceptions of Virtual Reality (a) and Artificial Intelligence (b) in education?
- RQ2: What individual factors contribute to perceptions of VR and AI in education?

Method

Design and sample

This study employed an online questionnaire administered through the professional survey company Qualtrics in March - April 2019. To ensure the sample (N = 2,254) reflected U.S. census distributions, quotas were specified for gender (52.6% female), age (M = 46.5, SD = 16.44), race/ethnicity (63.2% White/Caucasian), income (61.7% made $75,000 or less), and education (44.8% had some college or less). We also included quality checks at a few points to ensure valid and reliable responses.

Measurement

The survey contained a range of questions about respondents' opinions about and comfort with Artificial Intelligence and Virtual Reality in various educational settings. We also included individual traits - demographics, personality-based, and experience-based - that might influence these perceptions. Finally, two optional and identically worded open-ended questions followed the section on AI and then the section on VR: "Hearing your opinions is very important. Please use this space to tell us anything you would like to share about the topic just presented."

AI in education

To explore AI's opinions in education, we created a 5-point Likert-type measure that asked about respondents' comfort (very uncomfortable to very comfortable) with an "AI agent" fulfilling certain education roles. First, we provided a definition: "Artificially Intelligent (AI) agents are smart computers that put into action decisions that they make by themselves." Then we asked respondents to "consider AI in educational settings such as a high school, and indicate how comfortable" they would be with an AI agent performing the following tasks: determining the types of classes that schools offer; determining the content of classes in schools; teaching classes in schools; grading students; deciding students' career paths; determining students' class schedules (a = .904, M=2.67, SD=0.98).

VR in education

The measure for opinions about VR in education was phrased differently, given the distinctions in the technological affordances of VR and AI. We again first provided a definition: "Virtual Reality (VR) is the use of computer equipment (for example, a headset or pair of goggles) to create a simulated environment." Then, after asserting that "Some have proposed that VR would be an important way to teach students," we asked the extent to which respondents agreed or disagreed with VR being used to teach the following courses in high school: Science; Math; Foreign languages; Art; Music; American history. Responses were given on a 5-point Likert-type scale (strongly disagree to strongly agree) and was highly reliable (a = .905, M=3.30, SD=0.94).

Opinions about AI and VR.

Attitudes towards AI and VR were measured differently. A scale for "robot phobia" was adapted from Katz & Halpern (2014) to gauge feelings towards AI. We conceived of "robot phobia" as the closest manifestation of AI that approximated the "AI agent" respondents were asked to imagine in different educational settings. More general opinions about and familiarity with VR were measured with two questions. Both presented five statements and asked respondents to select the option that was closest to their view. For general VR opinion, the statements increased in optimism: "VR poses major threats to society and its development should be halted", "The risks of VR are substantial and outweigh its benefits"; "I am uncertain about the risks and benefits of VR"; "The benefits of VR are substantial and outweigh the risks"; "VR offers major benefits to society, and its development should be accelerated" (M=3.31, SD=0.89). The statements for familiarity with VR were: "I am unfamiliar with the term VR"; "I have heard the term VR but only have a vague understanding of it"; "I am familiar with the term virtual reality (VR) but have never used the technology"; "I have tried virtual reality (VR) technology but have only limited experience with it"; "I have used virtual reality (VR) extensively." Those who answered that they were unfamiliar with the term VR (n=199) did not see or answer the rest of the VR-related questions described above.

Individual traits

Demographic variables were included as controls: gender (52.6% female); age (M=46.5, SD=16.44); race (63.2% White/Caucasian); income (61.7% made $75,000 or less), and education (44.8% had some college or less).

Three personality traits were measured. Extraversion and neuroticism, both 5-point Likert-type scales, were adapted from Eysenck, Eysenck, and Barrett (1985). Respondents were asked about the extent to which they agreed or disagreed with 12 statements for both scales. Extraversion (a = 0.922, M = 3.20, SD = 0.80) included items such as "I enjoy meeting new people" and "I tend to keep in the background on social occasions" (reverse-coded). Neuroticism (a = 0.937, M = 2.69, SD = 0.95) included items such as "I would call myself tense or 'highly strung'" and "I worry too much after an embarrassing experience." Rotter's (1966) original 13-item Locus of Control scale was adapted and shortened to a 6-item, 5-point Likert-type scale ("strongly disagree" to "strongly agree"). It included statements such as "When I make plans, I am almost certain I can make them work" and "I do not have enough control over the direction my life is taking" (reverse coded). Higher values corresponded to a higher internal locus of control (a = 0.764, M = 3.54, SD = 0.71).

Experience traits

Also, we included personal experience traits that may influence perceptions of technology and education. Communication apprehension (CA) has been shown to affect people's openness to technology like computers in education (Scott & Rockwell, 1997; Fuller, Vician, & Brown, 2006). Therefore, we adapted McCroskey's (1982) "Personal Report of Communication Apprehension (PRCA)" 24-item scale that comprised four 6-item subscales of communication apprehension in certain contexts: a group setting, a meeting, in a dyad (e.g., interpersonal), and giving a speech (e.g., public speaking). Respondents were asked to respond to statements on a 5-point Likert-type scale from strongly disagree to strongly agree. Group CA (a=0.887, M=2.70, SD=0.94) included the statements "I dislike participating in group discussions" and "Generally, I am comfortable while participating in group discussion" (reverse-coded). Meeting CA (a=0.917, M=2.70, SD=0.99) included statements like "Generally, I am nervous when I have to participate in a meeting" and "I am calm and relaxed when I am called upon to express an opinion at a meeting" (reverse-coded). Interpersonal CA (a=.895, M=2.54, SD=0.89) included the statements "Ordinarily I am very tense and nervous in conversations" and "I have no fear of speaking up in conversations" (reverse-coded). Speech CA (a=0.905, M=2.97, SD=1.03) included statements like "Certain parts of my body feel very tense and rigid while I am giving a speech" and "I face the prospect of giving a speech with confidence" (reverse-coded). Items were recoded so that higher values indicated higher CA.

Some studies have shown that increased familiarity with technology may mitigate the effects of CA as related to computer anxiety (Campbell, 2006). Therefore, perceived technological competence (PTC) was also measured using Katz and Halpern's (2014) 7-item scale, 5-point Likert-type scale. Respondents were asked how much they agreed or disagreed ("strongly disagree" to "strongly agree") with statements such as "I feel like technology, in general, is easy to operate" and "It is easy for me to use my computer to communicate with others" (a=0.868, M=3.59, SD=0.83).

Analysis

We used a mixed-methods approach to explore people's opinions about emerging technologies in education. A quantitative analysis first examined the respondents' opinions about AI and VR in education descriptively. For ease of interpreting the descriptive statistics, responses were reduced from a 5-point scale to three categories: uncomfortable or disagree, neutral, and comfortable or agree. We then ran first-order analyses to explore relationships between the independent and dependent variables. With significant relationships established, we further examined, through a series of hierarchical linear regressions, the factors that might predict different opinions about and comfort levels with these technologies playing a role in education. All statistical analyses were conducted using SPSS (IBM, Armonk, NY). The qualitative analysis drew from responses to the open-ended questions. The comments were culled to extract those specifically about AI or VR in educational settings and then critically interpreted.

Results

Preference for VR over AI in education

In general, respondents were pretty evenly split on these emerging technologies being used in education, with a bit more VR preference over AI. In terms of fulfilling different educational roles, respondents were most comfortable with an AI agent determining class schedules (43% comfortable vs 31% uncomfortable), types of classes (35% comfortable vs 33% uncomfortable), and acting as a grader (37% comfortable vs 36% uncomfortable) (see Figure 1). Respondents were least satisfied with AI as a career counsellor (58% uncomfortable vs 20% satisfied) and AI as a teacher (45% uncomfortable vs 28% comfortable).

The factorability of these six items was examined and found to be appropriate: each item was correlated at least .55 with the other items; the Kaiser-Meyer-Olkin measure of sampling adequacy was .875 (well above the recommended .7 value); and Bartlett's test of sphericity was significant,

X2(15) =8204.795, p < .001. A principal components analysis (PCA) was used to determine whether the six items could reasonably be combined and reduced to one factor of "AI comfort in education." A minimum Eigenvalue of 1 was set for the extracted components.

The PCA revealed that only one factor could be extracted: the initial Eigenvalue was 4.054, explaining 67.57% of the variance, and no other components reached an Eigenvalue above 1.00. The component matrix showed that all items within loadings on the factor were correlated above .790, further suggesting that the items comprised one scale. What can be seen in the factor is a pattern wherein the more mechanistic roles for AI in education (e.g., grading and scheduling) are more generally accepted than the agentic roles (e.g., teaching and advising). This suggests a value-based approach to AI's role that perceives AI as a tool and complementary force that may relieve some of the task load, but that cannot step in to perform the "tasks" fundamental to the human vocation of educating.

Conversely, perceptions of VR in education were more positive than negative. Most respondents (72%) were at least familiar with (but had never used) VR; only 28% had never heard of the term and had only a vague understanding of the technology. A majority of respondents (59%) were uncertain about VR's risks and benefits; of those remaining, more (31%) were optimistic about VR, compared to only 9% who held negative views. In the education realm, respondents were most enthusiastic about VR as a teaching tool in foreign languages (54% agree), Science (53% agree), and American History (52% agree). Math was the least favoured (42% agree), followed by Music (45% agree) and Art (46% agree) (see Figure 2).

There is a significant difference between acceptance of VR in education (M = 3.30, SD = 0.94) and comfort with AI in education (M = 2.67, SD = 0.98), t(2054) = -30.48, p < .001. This distinction supports what the PCA for AI in education shows, which is that overall there is greater acceptance of technology when it serves as a tool to support teaching. VR was described in the survey more as a kind of computer equipment, which connotes a technology aid, rather than an autonomous entity that would take over a classroom or career guidance.

Relationships between Individual traits and AI and VR perceptions

There was a significant difference between men and women's views of the technologies. For AI in education, men (M=2.73, SD=1.02) were more positive than women (M=2.61, SD=0.93). Similarly, for VR in education, men (M=3.34, SD=0.97) were more positive than women (M=3.24, SD=.92). Age was negatively correlated with both views of AI (r=-0.150, p < .001) and VR (r=-0.094, p < .001). Income was positively correlated with perceptions of AI (r=0.047, p < .05) and education was positively correlated with perceptions of VR (r=0.065, p < .01). There were no significant differences between race/ethnicity groups.

In terms of personality traits, extraversion was positively and significantly associated with AI (r=.221, p < .001) and VR (r=0.203, p < .001) in education, while locus of control was negatively related (r=-0.181, p < .001) and r=-.0.071, p < .001, respectively).

Group (r=-0.086, .001; r=-0.123, .001), Meeting (r=-0.67, .01; -0.093, .001), and Speech (r=-0.097, .001; -0.079, .001) CA were significantly (p < .001) and negatively (r=-0.067 -- -0.123) correlated with both views of AI and VR in education, while conversation CA was only significantly and negatively correlated with VR in education. Perceived technology competence was positively correlated with AI (r=0.319, p < .001)) and VR (r=0.316, p < .001) in education.

Predictors of perceptions of AI and VR in education

Two hierarchical linear regression models were constructed with three blocks: (1) demographic traits, (2) personality traits, and (3) experience traits (see Table 1). Each block was significant for both models, and overall the models explained 20.7% of the variance in AI perceptions and 21.6% of the variance in VR perceptions. For both the AI and VR outcome variables, demographics explained relatively little of the variance (3.5% and 2.0%, respectively), and among those, age was the only significant predictor for VR perceptions (β = .060, p < .05).

Personality traits were a stronger predictor for AI perceptions (explaining 8.4% of the variance, compared to 4.6% of VR perceptions): those who were more extraverted ($\beta = .197$, $p < .001$), less neurotic ($\beta = -.057$, $p < .05$), and had a lower internal locus of control ($\beta = -.263$, $p < .001$) were more comfortable with AI in education. Extraversion and locus of control were also similarly predictive of VR perceptions: extraversion was positively related ($\beta = .127$, $p < .001$) and internal locus of control was negatively related ($\beta = -.124$, $p < .001$).

Experiential traits had the most explanatory power for both models, and particularly for VR perceptions (15.7% of the variance, compared to 9.2% of the variance in AI perceptions). Higher interpersonal communication apprehension was related to more comfort with AI in education ($\beta = .141$, $p < .001$). Those who perceived themselves as more technologically competent were more comfortable with AI in education ($\beta = .228$, $p < .001$) and accepting VR as a teaching tool ($\beta = .192$, $p < .001$). Those with less robot phobia were more comfortable with AI in education ($\beta = -.203$, $p < .001$). Similarly, those with more familiarity ($\beta = .066$, $p < .01$) with and a higher opinion ($\beta = .309$, $p < .001$) of VR were more likely to perceive it as a useful teaching tool.

Qualitative analysis

As mentioned, respondents were also invited to provide open-ended responses with their thoughts on AI and VR in education. As the quantitative results suggest, there was more consensus around VR as a potentially useful educational tool, while comments around AI were more divided around its appropriateness in education. That said, a majority of responses about AI firmly asserted that it could never replace or should never substitute a human teacher in the classroom. Beyond that, the responses revealed two opposing threads about AI in education related to the specific AI traits that were salient for respondents about the technology.

AI in education

Some respondents highlighted how AI lacked human qualities like contextual thinking, nuance, empathy or compassion. Others noted the AI qualities that humans may lack, such as neutrality, objectivity, and being fact-driven. However, respondents' opinions were divided over whether these traits were positive or negative based on their conceptualizations of and values for what constitutes a good educator.

Those who emphasized AI's lack of empathy and human reasoning felt that such flexibility was vital for education because the classroom was not simply a vehicle for knowledge transfer. Rather, they saw education as an important contributor to the whole of human development:

> *I'm not averse to AI, but I think that using it to supplant classroom teachers would be disastrous for students. It seems to make the assumption that education is only about skill and knowledge acquisition. This leaves out the real work of human interaction and empathy that teachers practice with their students. That's just one example, but there is a lot of soft skills work done by educators that a pure replacement with AI would ignore.*

Some respondents also expressed concern about a perceived mechanistic decision-making process on the part of AI, which could thwart the future of individuals who perhaps progressed differently or had non-traditional strengths. An AI program would only be able to process certain kinds of data, which may leave out important signals about individual potential:

> *My husband was relegated to a low level of achievement in his high school, but four years ago, he graduated at the top of his University class. Just because someone's history indicates one thing doesn't mean it is all that clear, and AI would've kept him from college based on past performance.*

Further, as one respondent expressed, part of a teacher's role is to draw out the best in their students, to help them grow and reach their potential: "the right teacher can touch a student's spirit, inspire and motivate them through true, natural empathy."

On the other hand, some respondents spoke more to the ways in which particular human traits actually interfere with teaching and supporting students. In short, an AI teacher would have no "teacher's pet."

What AI lacks in empathy and nuance, it makes up in neutrality, emotionlessness, and even patience. One respondent commented that AI might be better equipped to help children with learning disabilities because it would not "feel the same learning frustrations" from them as a teacher might. A lack of personal bias could limit the extent to which teachers impose their views on students or mitigate "favouritism and discrimination" on school boards. In these remarks, human emotion was characterized negatively as "getting in the way" of the fairest and desirable outcomes.

To that end, AI generally was perceived as being good at generating suggestions and making plans based on data, particularly if it was able to use a lot of rich data from students themselves. There was a concern about too much prescriptive decision-making being left to AI, particularly for students' career paths or schedules – such a system would violate students' own autonomy and independence. An AI's capacity for processing large amounts of data, however, could furnish opportunities for more customized learning plans:

> *Not all students should have to learn the same subject, at the same time and at the same speed. Somehow, AI should tap into the innate qualities of each student and groom them individually for what they can contribute to society.*

Others noted they would only be comfortable with this kind of power if they were assured that AI's programming was based on factual, objective, and apolitical human reasoning.

VR in education

VR, in comparison, was mostly considered a relatively familiar and tangible tool, as opposed to an abstract concept or a distant future technology that most people have not already "seen in action." Some respondents had used VR for other purposes and could easily imagine how that experience could apply to educational settings. Most respondents recognized VR as a new and powerful tool that can bring strikingly distinct experiences to users. However, similar to comments about AI, respondents were mostly aware of what VR technology could provide while vastly disagreeing on whether the outcomes would be helpful or harmful.

VR provides experiences that are free from constraints of distance and physicality. Some respondents believed that "using VR would be a safe way for students to discover many things." The technology's ability to deliver vivid and immersive experiences to some had the potential for providing more learning opportunities (like experiencing flight into space) or making learning more engaging ("You're 'right there' and not having to listen to some boring teacher."). It could also introduce more parity for low-income students:

> *In a sense, VR is a good learning tool (i.e. excursions to museums, deep-sea diving, tours to foreign countries, etc.) for those students who cannot afford expensive excursions.*

But others stressed that VR should not replace physically travelling to new places, that students deserve to "see and discover the actual world." A virtual environment could not measure up to experiencing a real, foreign environment. For some, VR was perceived as offering more hands-on experiences, but others emphasized the artificial and inauthentic nature of a VR environment that would cheapen the learning experience:

> *Going to a place in person is so much more than just seeing the place. It's experiencing it: the culture, people, language and food. Certain things in life are learned through experiences.*

Others worried that VR might distract from learning. That the "gimmick" or game aspects of VR would outweigh the educational components. Further, some raised concerns about the costs of actually implementing VR in schools and classrooms. A "true VR" that could supplement meaningful experiential learning experiences would require such sophisticated technology that there were doubts about such an initiative's practicality.

To summarize, respondents largely viewed VR as a useful tool if appropriately implemented in the classroom while disagreeing on most aspects of how, where, who, on what, and to what extent VR should be used in educational settings.

Discussion and Conclusion

This study explored public perceptions of emerging technologies in different educational contexts. AI and VR have already been deployed to varying degrees in Edtech initiatives. Already there are prognostications of the promise of emerging technology in education. But our hopes for the panacea of technology has not always panned out. As we engage in another "revolution" – or just "evolution" – in education (Roll & Wylie, 2016), it's worthwhile to include in our considerations the likely public reaction to some of these technologies. To that end, we examined more generally the extent to which people were comfortable with AI technology in various educational roles like instruction, counselling, curriculum, scheduling, and grading. We also asked for people's perceptions of VR as a teaching tool across a range of subjects. Overall, respondents were more accepting of educational VR than they were comfortable with AI technology taking more prominent roles in young people's education. The quantitative analysis suggests that part of this resistance may be due to anxiety around giving up control to technology.

Specifically, those who had a higher internal locus of control – meaning they felt more strongly like they personally can control their fate – were less comfortable with the technologies. Those who were more extraverted and perceived themselves as more technologically competent were more open to emerging technologies. Significantly, experiential traits (e.g., perceived technology competence and familiarity with or fear of the technology) contributed the most to perceptions of AI and VR. This suggests potentially a different kind of gap that could emerge with further implementation of new technologies in the classroom, giving the more tech-savvy and outgoing people an advantage.

A concern that carried through both AI and VR in education was that the technology would replace humans or real-world experiences. Respondents seemed to be most positive about both with regards to how the technology may supplement human capabilities or, in the case of VR, provide experiences that would otherwise be unreachable for students, such as "going to outer space" or going back in time to see a different era. What respondents valued in particular about educators is their capacity to help young people grow in all aspects of their lives – not just with knowledge accrual but also with socio-emotional skills. This supports recommendations for a kind of blended model, wherein AI acts as a support to alleviate teachers and administrators of their tedious and rote tasks, thus freeing up their time for more impactful efforts (Levesque, 2018). This "human-plus-technology" approach (Christensen, 2019) appears to be what this sample's respondents are most comfortable with.

Importantly, though, our sample did not focus on the most relevant "stakeholders" for emerging technology in education (e.g., parents of students, teachers), and this is a potential limitation. Through our approach of sampling a nationally representative group, we are only able to glean in broad strokes the public's perception. Those who are currently experiencing today's educational system may have more insight and pertinent concerns. We also asked very broadly about AI and VR in education. Future studies could present more detailed, specific examples of these technologies being implemented to gauge people's perceptions more precisely. Our study suggests that maintaining a kind of human-hierarchy for decision-making and substantive guidance is important to people. Elaborating more on how these technologies would be employed could extract more nuance in people's perceptions.

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Tables and Figures

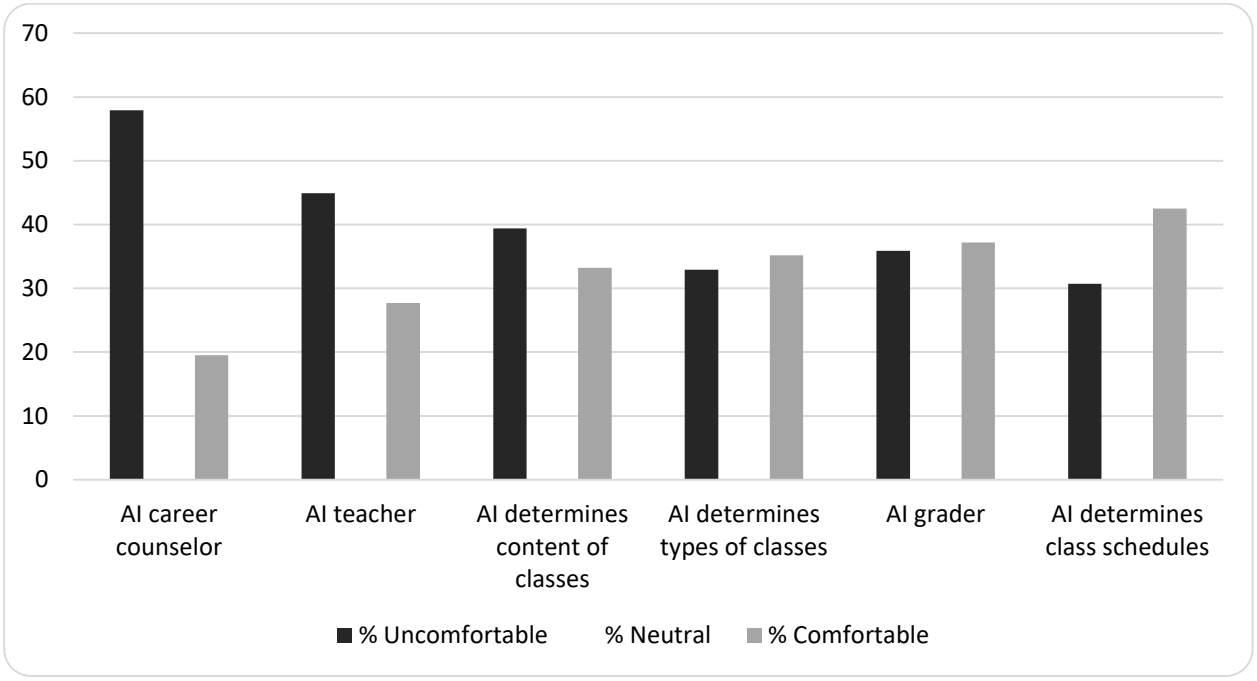

Figure 1. Comfort with AI technology in various educational roles

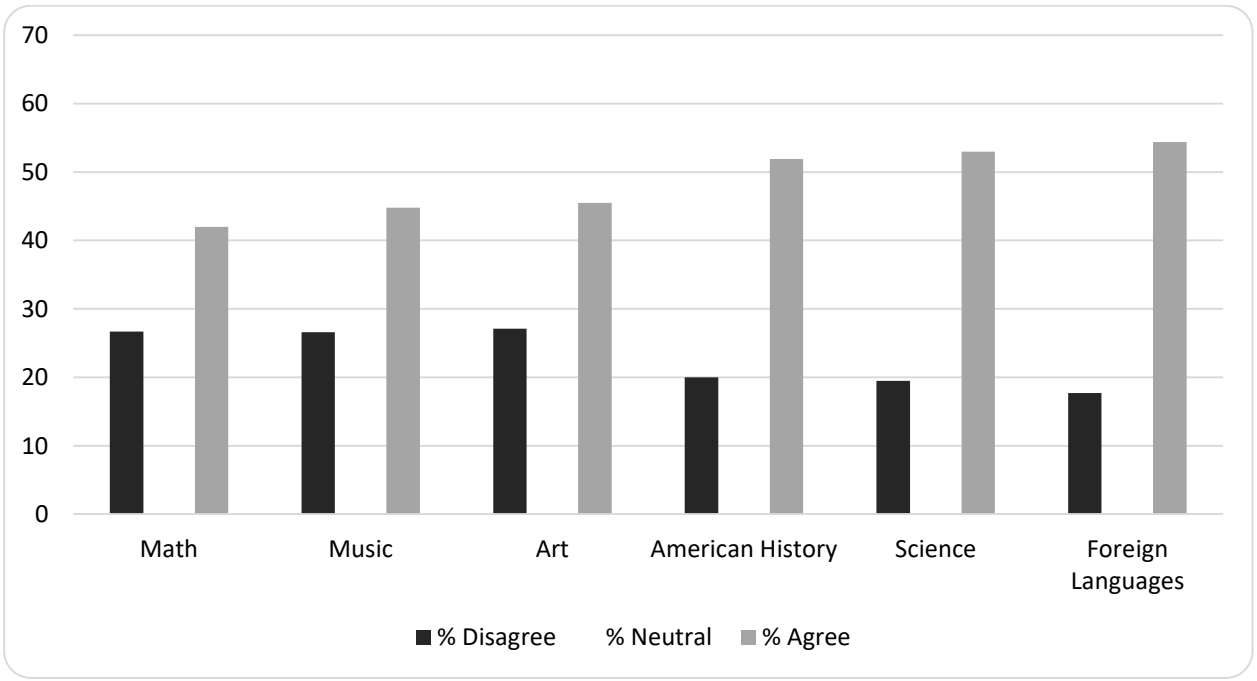

Figure 2. Agreement with VR as teaching tool in various subjects

Table 1. Factors predicting opinion of emerging technology in education

	Virtual Reality		*Artificial Intelligence*	
	B (SE)	β	*B* (SE)	β
Constant	.993 (.289)		3.056 (.282)	
Age	.003 (.001)	.060*	-.001 (.001)	-.010
Gender (1=male, 2=female)	-.022 (.042)	-.012	-.065 (.041)	-.034
Income	-.015 (.014)	-.026	.015 (.013)	.025
Education	.020 (.015)	.030	.015 (.015)	.022
R^2 change* **	**2.0%**		**3.5%**	
Extraversion	.149 (.033)	.127***	.240 (.033)	.197***
Neuroticism	.004 (.029)	.004	-.059 (.029)	-.057*
Locus of control	-.165 (.033)	-.124***	-.361 (.033)	-.263***
R^2 change* **	**4.6%**		**8.4%**	
Communication apprehension - group	-.042 (.040)	-.042	-.004 (.040)	-.003
Communication apprehension - meeting	-.023 (.045)	-.042	-.003 (.045)	-.003
Communication apprehension – interpersonal	.073 (.041)	.070	.155 (.041)	.141***
Communication apprehension – speech	.042 (.030)	.046	-.057 (.030)	-.059
Perceived technology competence	.223 (.028)	.192***	.269 (.026)	.228***
VR familiarity	.074 (.024)	.066**		
VR opinion	.332 (.023)	.309***		
Robot phobia			-.256 (.025)	-.203***
R^2 change* **	**15.7%**		**9.2%**	
Total adjusted R^2	*21.6%*		*20.7%*	

Note: *B* (SE) = unstandardized regression coefficient with the standard error presented in parentheses; β = standardized regression coefficient

*$p < .05$

**$p < .01$

***$p < .001$

Katalin Nagy KANCZNÉ

Opportunities to craftsmanship education in the late 1800s under the Industrial Code of 1884

Introduction

The XVII of 1884. An act is the amendment of the Industry Act 1872. The amendment was driven by the demand of craftsmen[1], fueled by Western trends where legislation allowed pressure from craftsmen. The petitions submitted to the Parliament affected the decline in the industry, especially in the handicraft industry. The occurrence of deteriorating conditions attributed to the article of the law of 1872: VIII. They objected to the realization of industrial freedom: "…*in our country, this law, based on industrial freedom, isolated individual industrialists from each other in the absence of the necessary conditions; in the absence of proper organization, everyone was left alone with unbridled freedom; in the absence of sufficient education, the benefits of free association were not used by anyone, so that the artisan was increasingly pushed into the background and in many cases ruined by the strength of an enterprise and capital that already enjoyed great benefits during this period."*[2] Accordingly, their expectation was to make the activities of craftsmen more organized and thus to achieve security and predictability.

However, in the explanatory memorandum, the legislator articulates his advanced philosophy of economic development in his time: *"… One who believes that any form of industrial law will immediately increase the competitiveness of the craftsman or will be fully protected or secured against the capital and large industry - is rocked by illusions. The illusion is the wish of the craftsmen that, recalling the old times, the advantages enjoyed in the age of the guild system, prosperity can still be found in our age only in guild-like conditions."*[3] He believes in development, which he sees in the ability to change. The revision of the Industrial Code, therefore, set the following objectives:

- provide an organizational framework in which craftsmen can exercise their right to have a free association,
- implementation of controls on assistants and workers,
- education of industrial apprentices,
- advanced development of industrial education.

Conditions for starting the industry

Age of majority

Adulthood was an essential condition for starting the industry. All adults, regardless of gender, were free to work in any industry. The XX. of 1877 Act on the Settlement of Custody and Custody Cases defines the age of majority, *"fullness"* at the age of 24 [4]. At the age of 18, they had the opportunity to reach the age of majority. Permission to do so was carried out by the guardianship authority, where the parents, grandparents and, in their absence, the next of kin have listened. The age of majority was granted by the authority *"if the minor has the ability and maturity to conduct his or her own affairs"*[5]. Another possibility of becoming an adult was, with the consent of the father or guardian, the young man undertook to pursue an independent industry after reaching the age of 18.

Women were subject to separate legislation[6]. According to this, by the age of 24, single people became adults and had all the rights associated with it. But regardless of their age, a marriage made them an adult. This right was retained even if they had been widowed or divorced before the age of 24.

Certificate of education

An adult who intended to pursue an unlicensed industry was required to notify the industry authority. If this craft was such that it could only be mastered with longer practice, he had to prove where and how he had acquired the necessary skills. One way to do this was to present an apprenticeship certificate or prove that he had worked in a job or factory that matched his qualifications for at least two years. Once this verification was made, the industry authority could not refuse to do business.

If someone could not present an apprenticeship certificate but was over the age of 21 and could prove that he or she had worked in a workshop or factory and practised the profession for which he or she wished to start a business for at least three years, he or she could also obtain a permit.

An adult who did not have a certificate or practice received a permit only on the condition that he or she employed a person in his or her business who met one of the previous conditions. And the employee had to be reported.

The list of qualified crafts was regulated by a decree of the Minister of Agriculture, Industry and Trade[7]. These professions were:

• carpenter • wainwright • master builder	• hat maker • cobbler • watchmaker	• knife grinder • painter and polisher • house painter
• goldsmith, silversmith, metal smith • barber, hairdresser and wig maker • lather	• stove maker • blacksmith • gunsmith	• gloves maker • butcher • furrier
• jeweler gilding • suitcase maker • braid maker	• upholsterer • bricklayer and stonemason • coppersmith and brazier	• hernia maker • gingerbread maker • tobbaco pipe carver
• joiner • shoemaker • instrument maker	• brush maker • bookbinder • tailor	• carriage maker • wax maker • tanner
• tinsmith • confectioner • bell caster	• dyer • well maker • soap maker	• basket weaver • saddler
• cooper • tile worker • butcher	• chimney sweeper • locksmith • chandler	

Permission

The commencement of the following industries was subject to a permit, and their operation was specifically regulated by the legal profession:

- the operation of inns, pubs, breweries, cafés, brandy and coffee-measuring;
- broker
- the business of employment and the acquisition of servants;
- chimney sweeping;
- regular passenger services;
- industry which provides passenger vehicles or services to the public in public places;
- master builder;
- the manufacture of and trade in toxic substances and medicinal products;
- the manufacture of and trade in explosives.[8]

If the craftsman died, his widow could continue the business without notice. However, in the case of licensed crafts, she was required to prove her personal reliability before the industrial authority. The business could also be operated for the benefit of minor children or grandchildren, but in this case a manager had to be appointed, who had to be notified to the industry authority. A manager could only be one who complied with the legal requirements for self-employment in the industry and proved his or her personal reliability before the industry authority. He was then responsible for complying with the legal rules, and any punishment imposed on him.

The process of becoming an apprentice

Every self-employed person had the opportunity to keep an apprentice. The children started apprenticeship at the age of 12. Industrial apprentices could only be younger if the craftsman had made a commitment to send the apprentice regularly to a folk school until he or she was 12 years old. Admission was an agreement between the craftsman and the apprentice's parents or guardian regarding the length of the study period, the training, and the provision of the apprentice. The training lasted at least until the apprentice turned 15 years old. The apprentice was recruited under a contract with the industry authority.

The apprentice was placed on probation for two months. However, a different time interval could be stipulated in the study contract. The probationary period had to be included in the study time. The significance of the probationary period was that if the apprentice or his parents, but even the craftsman, decided to terminate the contract, he could do so without compensation or any other difficulty.

The industry authority kept a register of apprentices, which included:

- Details of the apprentice (name, year of birth, name and address of parents or guardian).
- Details of the craftsman (name, address, occupation).
- Start, end, other conditions of the education contract.
- To whom the education contract was issued, as the contracting parties themselves determined which of them would keep the original copy of the contract.
- Data on the school certificate, broken down by year, describing the student's school performance.
- A description of the apprentice's progress in the industry.
- Date of termination of the student status.
- Certificate of issuance of the apprenticeship certificate. [9]

The record was sent to the district inspectorate two weeks before the start of the school year. School leaders reported monthly to industry authorities on the school progress of apprentices and the frequency with which they attend school. The industry authority also sent its own staff to monitor the progress of school visits and practical training. Upon completion of the apprenticeship, the industry authority issued a certificate to the apprentice. It included details of the school certificate, his progress in the industry, and the name, occupation, and address of the craftsman.

Being an apprentice

By hiring an apprentice with him, the craftsman committed himself to training his apprentice in the industry he pursues. In addition, he had to pass on moral values, he was obliged to establish a proper relationship with him in the work. He had to make sure the apprentice attended worship services on the holidays of the apprentice's religion. He was also responsible for the apprentice's school attendance. In the settlements where there was an apprenticeship school, he had to persuade him to go there regularly. If the apprentice was admitted to his house, he had to receive care in case of illness. In such cases, he was obliged to notify the parents or the guardian, and in the case of compulsory

schooling, the teacher of the apprentice's illness. He had to do the same when major changes took place in the apprentice's life.

The apprentice owed obedience to the craftsman or his deputy, and if he was housed in the craftsman's house and ate with the inmates, he was under the craftsman's house discipline until he was 18 years old. The craftsman could only oblige the apprentice to work in his industry; he could not force him into maid service. He also had to ensure that the apprentice was not abused by housemates or helpers.

Working hours were up to 10 hours, but the hours spent at this school were also included. For apprentices over the age of 14, this period could be extended to 12 hours. However, in some industries, the industry authority may set shorter working hours. In all cases, however, there was a half-hour break in the morning and afternoon and an hour at noon during work. Apprentices could only be expected to do work that matched their physical strength. Apprentices under the age of sixteen could not be employed for night work (21.00-05.00). However, in industries where work took place at night, with the permission of the industry authority, apprentices under the age of 16 but over the age of 14 were allowed to work no more than half of their working hours at night, subject to adequate physical development.

"The study time of an industrial apprentice cannot be extended by the industrial authority. An industrial apprentice cannot be punished for failing to attend school, nor can he be obliged in theory to attend school for a certain period of time afterwards.[10] However, if the apprentice is absent from work for more than three months at a time due to absence or illness but continues to study after that, the craftsman was entitled to extend the study period by the time missed.

Circumstances of termination of the student status

The student status was terminated upon the death of the apprentice, or if he had to perform military service, or if he became incapable of work for any reason. The same was true of the craftsman, but in the case he had a business manager and he could continue to operate his industry, the student status could be maintained. If the artisan did not hold a manager, his business ceased, and so did the student status. Other reasons for termination could be if one party was sentenced to more than 4 weeks in prison and if the industrialist was deprived of the right to hold an apprentice.

The contract could be terminated immediately by the craftsman if the apprentice had committed an offence arising from the desire for profit if he had regularly refused to perform his duties or had committed serious misconduct against them. Aggressive behaviour could also lead to the termination of a contract if the apprentice has committed abusive or grossly defamatory conduct against the craftsman or a member of his or her family. The craftsman could also terminate the cooperation if the apprentice suffered from a "disgusting" or contagious disease (§ 71 d).

The reason for the immediate termination of the contract on the part of the apprentice or his legal representative as if the craftsman tempted the apprentice to commit immoral or illegal acts, if the craftsman abused his home disciplinary rights, or if the apprentice's life or health was endangered during work.

The apprenticeship could be terminated by 15 days' notice on the craftsman's part if there was no doubt that the apprentice was unable to learn the industry in question. He could terminate his contract under the same conditions even if the apprentice had an illness lasting more than two months. Furthermore, the cooperation ceased under the same circumstances when the craftsman gave up his business.

The contract could be terminated with 15 days' notice on the part of the apprentice or his legal representative if the craftsman did not fulfil his legal or contractual obligation towards the apprentice. If the craftsman moved to another village and the apprentice did not want to keep up with him, he could terminate their contract. The 15-day notice could be used if the apprentice wanted to move to a different career or another industry. But this right could also be exercised in cases where the craftsman suffered from an illness lasting more than two months and did not appoint a store manager, or if he went bankrupt. Termination of the contract had to be notified to the industry authority in all cases.

If the termination of the contract was caused by the apprentice, and if the apprentice wanted to move to another industry and therefore resigned, the industrialist was entitled to the full-year tuition fee and an additional six-month tuition fee as compensation. And if the craftsman gave a reason to terminate the contract, he had to pay the compensation provided for in the contract, but at least the costs incurred by the apprentice in joining another craftsman.

If a craftsman accepted an apprentice who had escaped from another craftsman so that he knew the circumstances of his departure, he was held jointly and severally liable with the apprentice and had to pay the damage caused by the escape.

Apprentice schools between 1887 and 1895

Decree No. 64,831 of 20 December 1887 of the Minister of Agriculture, Industry and Trade and of 14 February 1888 Decree No. 1949 and of 30 March 1895 Decree No.17,698 in the context of Article 5 1884 XVII of the Act, designated the institutions where the successful completion of the training is sufficient for the pursuit of the crafts linked to the qualification. Certificates issued by the following schools and workshops entitled the graduates to pursue an independent industry.

- *József Technical University*, Budapest – training provided for obtaining a diploma suitable for the independent pursuit of all craft-related crafts, with the exception of carpentry, master builder, masonry and stone masonry;
- *School of Applied Arts, Budapest* – gold, *Budapest* silver and metal beaters, painters and polishers, copper casters, copper and bronze artists, room painters, carpenters and pipe carvers;
- *State Secondary School Budapest* – carpenter, tinsmith, wheelwright, turner, bell caster, cooper, stove maker, fabric and yarn dyer, blacksmith, well maker, locksmith, copper foundry, copper and bronze blacksmith;
- *Secondary School of Mechanical Engineering, Kassa* – carpenter, lathe, bell caster, blacksmith, well maker, locksmith, copper foundry, copper and bronze blacksmith;
- *Secondary School, Brassó* – carpenter, lathe;
- *The State Primary and Civic School Teacher Training Institute of the 1st District of Budapest* – the graduates who have been prepared to teach crafts are entitled to pursue carpentry independently.

If the graduate apprentice was still a juvenile but was 15 years old, and employment record could be issued to him. If he was still a young man but had already reached the age of 18, he could, with the consent of his parents or guardian, pursue an industry, thus becoming an adult. The required qualifications could be obtained in the following practical vocational schools:

- *Workshop connected with the Department of Wood and Iron Architecture of Kolozsvár* – carpenter, stonemason, bricklayer, carpenter, locksmith;
- *Carpenter's industrial workshop next to State Civil Boys' School, Galgócz* – carpenter;
- *State–Aided Village Upper Folk High* School, *Korpona* carpenter;
- *State Civil School Art Carpentry, Workshop, Nagyszöllős* – carpenter;
- 5.*Vocational school of artificial carving, Homonna* –carpenter, lather;
- *State–Aided Village Civic School, Miskolcz* – carpenter, lather;
- *Practical Industrial School related to the Civil Boys' School, Zalaegerszeg* – carpenter, lather;
- *Industrial Workshop connected to the Practicing Civil School of the State Elementary and Civic School Teacher Training Institute of the 1st District of Budapest* – carpenter, lather;
- *State Children's Toy Maker Workshop, Hegybánya* – children's toy maker;
- *State Children's Toy Maker Workshop, Szélakna* – children's toy maker;
- *State–Aided Children's Toy Maker Training Workshop, Nyitrafenyves* – children's toy maker;
- *State Vocational School of Iron Industry, Gölniczbánya* – locksmith and blacksmith;
- *State Vocational School of Wood and Metal Industry, Marosvásárhely* – carpenter, lathe, woodcarver, machine and art locksmith, carpenter, bricklayer, potter, stove maker;

- *State Aided Vocational School of Wood and Metal Industry, Arad* – carpenter, lathe, carver, machine and art locksmith;
- *State Vocational School of Wood and Metal Industry, Szeged* – carpenter, lathe, carver, builder, locksmith, bricklayer, carpenter, stonemason;
- *State Vocational Vocational School, Késmárk* – weaver;
- *State Aided Weaving Workshop, Bratislava* – weaver;
- *State Aided Weaving Workshop, Csíkszereda* – weaver;
- 19. *State Aided Carpet Training Workshop, Nagydisznód* – weaver;
- 20. *State Aided Carpet Industry Workshop, Nagy–Becskereke* – weaver;
- 21. *State Aided Knitting Industry Workshop Selmecbánya* – knitter;
- 22. *State Clay Industry Vocational School, Mágocs* – potter, stove maker;
- 23. *State Vocational School of Clay Industry, Ungvár* – potter, stove maker, porcelain maker;
- 24. *State Vocal and Stone Grinding Industrial Vocational School, Zalatna* – stonemason, stone grinder;
- 25. *State Vocational School of Stone and Clay Industry, Székelyudvarhely* – stonemason, stove, potter;
- 26. *State Basket Weaving Training Workshop,Bellus* – basket weaving;
- 27. *Locksmith Workshop, Alsó–Meczenzéf* – locksmith;
- 28. *Locksmith Industrial Workshop related to Kismárton* State Civil School – locksmith;
- 29. *Locksmith Industrial Workshop related to Sepsiszentgyörgy Civil Boys' School* – locksmith.[11]

Summary

The new industrial law proposal was submitted by the Minister of Agriculture, Industry and Trade, Count Pál Széchényi, at the February 7 session of the House of Representatives. A joint committee was formed from the sections of the National Association of Crafts, Commerce, Manufacturing and Industry, where the bill was commented on and supplemented with their proposals.[12] The law was approved on May 18, 1884 by the ruler, Franz Joseph I. The legislation was in force until 1948.

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Barnabás VAJDA

Why (and how) to teach sensible History?

The fear that history as a school subject may disappear from European schools seems real to me. I think that after long centuries when it used to be casual to write and learn history, we have reached a dangerous turning point. I feel the utmost need to make the main sense and purpose of European school history teaching clear: Historical education might help understand the present. Besides questions about our "present" and our "future" that we as a society face, history provides a third, a "past" dimension of the functioning of the human society.

Some studies written recently seem to agree with this. In the last five years, at least two books and two major scholarly studies were written in Slovakia and Hungary, which deal with the fundamental question "Why do we teach history"? (Kmeť 2018; Knausz, 2015; Kratochvíl, 2019; Tomka, 2018) The mutual origo for all these studies has been the scientific observation that school history education has somehow lost its way, and has shown signs of uncertainly. Some authors refer to their direct experience that pupils often see no point in learning history; i.e. they often consider it as "useless" for their future personal career. Their desperation should be understood within the frame of a general utilitarianism of our modern times: What does history give to me? Will I get rich quickly by knowing it? Will it help me to find a well-paid job? Pupils' questions are legitimate, and it is our task to give them sensible answers.

If someone asks, "Why should we teach or learn history?" then I regard it legitimate to open up a more general question. We may get closer to the core of the issue if we *do not restrict* the scope of the question to one particular school subject: Why do we learn other subjects such as maths, biology, or languages? How can we benefit from them? Pupils learn biology, but not all of them will become doctors. We learn physics, but we will not necessarily become astrophysics. Imagine European states erase history from their school curricula. How would it affect tourism where millions of tourists worldwide are attracted by visiting historical places of cultural heritage? How would it affect museums and art galleries, especially where museum pedagogy has been involved in the business model of the museums?

Further, why do we teach and learn specific historical topics while we do neglect others? To what purpose do we teach/learn the Holocaust (Shoa), the First World War, the process of colonialism, etc., while omitting other topics? Do we teach/learn history in order "to remember" or "not to forget" or in order "to learn from it"? Learning history to remember is a double-edged sword because "remembering" may be a platform both for confessing our mistakes as well as for expressing "our national pride". If we teach history to remember "our heroes" or simply the deeds of our predecessors, then where will "our villains" have a place in our cultural memory? – should they have a legitimate place in it at all? Do we teach/learn history to improve ourselves? Do we study "old stories" in order not to repeat previous mistakes? Are we able, and do we want to learn from our earlier mistakes? Let me express my personal scepticism and say that I think it was not just Winston Churchill, who believed that human mankind can not and will never learn from its own mistakes.

Why do we write and study history then? Of course, neither the question nor the problem itself is new. For Herodotus from the ancient Halicarnassus, the answer to this question was very simple. In his famous "The Histories. Book One", in the very first lines, he writes: "This is the display of the inquiry of Herodotus of Halicarnassus, so that things done by a man not be forgotten in time, and that great and marvellous deeds, some displayed by the Hellenes, some by the barbarians, not lose their glory, including among others what the cause of their waging war on each other was."

Without giving clear answers to these fundamental questions, the confusion over the "sensibility" of teaching history will stay. My own survey, which I have been conducting since 2009 on the aims and

purposes of history teaching among undergraduates at our History Department, confirms all annoying notions described above. The following answers are our undergraduates' preferences: We learn and teach history in order…

- to know the deeds of the past to know our present better;
- to gain skills of abstract thinking such as comparison and analysis;
- to gain a sense of self-identity and/or patriotism;
- to be able to research events from different perspectives;
- and to learn general human values.

These have been our undergraduates' firm top-five preferences since 2009 when they are anonymously polled about their top choices from a list of twelve options. (Some answers from the rest of the list: in order to be socially more responsible people; in order to strengthen democratic society; in order to gain skills for arguing and public debating, etc. – however, these answers are seldom selected.) And even though the exact order of our undergraduates' preferences have been altering from time to time (e.g. "identity/patriotism" in some student groups get to the very front of the list), in the last decade altogether, some 400 respondents, would-be history teachers seem to have agreed with the smart definition of Michael Oakeshott: "My first answer to the question 'What is history?', is that it is a continuous process of interaction between the historian and his facts, an unending dialogue between the present and the past." (Oakeshott, 1964, 35)

So why do we teach history today in a rather utilitarian 21-century world? What is the meaningful and socially sustainable purpose of history teaching in 21-century Europe? It seems to me that the community of historians, as well as teachers, is confused and weak to answer this fundamental question.

I personally think that the main reason why the question about the *sense of history education* was raised has been directly correlated with the increasing number of "actors" involved in the teaching process (teaching history and teaching in general). Until the early 20th century, when there was typically one single entity or dominant actor running its own school (in Europe, typically the Christian churches or the State), none doubted the meaning of history teaching. Of course, history teaching (as teaching in general) at that time was ideologically motivated, and at these schools education process based on firm, principles given and required by the needs of the founder of the specific school. Up until the 1940s, the actors, the means, and the purposes of teaching/learning had been determined, quite understandably, by the particular church, or the private entity, or the state itself – whoever the founder of a school was.

School history teaching had come under pressure when more and more "actors" became involved in the education process. Today, except for the parents, pupils and teachers, numerous other "participants" are involved, such as authorities (state, county, local, etc.), foundations, commercially oriented entrepreneurs, NGOs, and several others. All these "actors" got used to the right that they have their own way in the teaching process. Some actors have a say in the content; for instance, state or regional authorities normally possess the right to regulate the core curriculum of the schools they finance. Some actors have had their decisive share in the methodology of teaching, for instance, through being involved as schoolbook publishers or as providers of the IT hardware that schools need, while the main driving force behind them is not education per se but commercial interests. Also, some actors enter schools in order to fulfil their specific mission statement, let they be banks that are interested in spreading the "financial awareness" of young adults or NGOs pushing forward their particular social agenda. Even if their presence might be desirable occasionally and at different phases of the education process, they make the situation very complex, sometimes even extremely complicated. Further, we can mention the "instrumentalization" of history teaching in order to reinforce political or other purposes (e.g. nationalism, political or social indoctrination) for which purposes the school as an organized and "fertile" environment is an ideal terrain. Without bringing up too many details, shortly, it seems to me that the wider these different actors open the door of the school, the greater is the disorder and confusion there.

And these are just the outside factors that have had an impact on school history teaching. Heavy questions pop up at teacher training programmes when undergraduates ask me: What is the point in learning history? What does it give to me? This question is also sometimes raised during in-service teacher training programmes where the participants, active teachers, express their desperation over the purposeless of history as a school subject. They refer to several practical factors from the real school environment, such as that not only maths is a much more "important" lesson than history but often "green and environmental issues" seem to them much more important than their own beloved school subject. They often complain that for them, it is hopelessly difficult to compete with "alternative forms of history knowledge" such as "historical" computer games, or "historical films" as part of edutainment easily available on television and smartphones etc., even if they very rarely follow thoughtful educational purposes, but more often entertainment or commercial gain. Very briefly, when I speak with active teachers, the sense that they are left down in confronting everyday challenges, which at the end of the day undermine the classical school history knowledge and undermine teachers' credibility as professional representatives of historical knowledge.

On the one hand, in different places in Europe, history teaching is instrumentalized for reinforcing nationalism. For many Europeans, national identity is an integral part of their individual as well as group identification. "History is still considered the main apparatus for the social production of national identities" (Repoussi, 2009, 75) and an important tool for "social cohesion" (Haydn, 2014, 35) "Nationality is a proof of the stability of their personality, and it is a frame for their belonging to a particular group. The existing social need "to belonging somewhere"; the differentiation of "my own group" and the "different group"; the sense of the local or regional identity and so forth – all these are important aspects when we consider that cultural spaces can only be created by cultural inhabitants, i.e. by the people who create and use cultural spaces.

As far as national history curriculum is concerned, it is quite clear that many European countries, including the Slovak and the Hungarian curriculum, consider "national remembrance" to be one of the main purposes of history teaching, and that the "nation" is the overall context for the "knowledge" which representatives of the state consider the proper "glue" for national cohesion. This is our story. This is our unique history. Alea iacta est. Sola Fide, Solus Christus. William the Conqueror. Mathias Rex; Tomas Garrigue Masaryk and Dr. Beneš; The Battle of Somme; The Declaration of Right of Human and Citizens; Marshall Kutuzov, etc. History is a cultural code: Many of us know what we are speaking about. Dates, names, places, and events from history form our collective memory that might create cohesion. Two centuries ago, nationalism was unanimously a positive phenomenon. It was a mutual national feeling, a common "language". (Báthory – Falus, 1997, 572) Since human identity consists not only of cognitive/rational but from emotional/irrational elements too, therefore sometimes extra "emotions" are added to history teaching. In my understanding, this is the psychological motivation when "nationalistic" history teaching is concerned. "Our common history" presented in a "positive manner" in history schoolbooks that are subsequently distributed to all pupils free of charge (as a socially motivated gesture) is rather a well-known phenomenon in several European countries.

States (in fact, experts paid by states) in the 21 century are still aware of peoples' basic need for self-definition; they are aware of the cultural components of human identity; and the states (in fact, its schools) possess the means that may lead to desired social constructions. "Nationalistic education" may seem harmful, nevertheless it raises some aspects worth considering when we deal with an education that takes place in a nation-state environment. What is the extent of state authority over its citizens: Is it the task of the school to create links between individual pupils and their community? Is it legitimate to influence pupils as prospective citizens? "Education in national spirit" raises the question if any state has the right to pursue to educate loyal, disciplined, and cooperative pupils, its will-be-citizens. If the answers to these questions are "Yes", then I see no way how "nationalism" could be eliminated from European schools. If the answers are "No", then I wonder what are European states entitled to if comprehensive and compulsory school education is concerned?

In some West European societies, this problem over history teaching was discovered some time ago. One significant turn (or change in direction) took place in the 1960s and 1970s, especially in West

Germany, but also at other places in Western Europe, where there had been serious steps taken to shift school history from historical knowledge to historical skills. The same movement aimed at bringing in "skills" into school history by focusing on the analysis of carefully prepared multiperspective primary historical sources. In my understanding, this was an attempt (and a powerful one) to overcome the first crisis of history teaching. It was an effort to pull back school history to its roots, and it was an attempt to re-launch history teaching on a new or renewed basis.

However, the attempts concerning teaching/learning history through skills and sources did not bring a breakthrough; definitely not in Eastern Europe. And what makes the situation even messier is that recently a new phenomenon has further aggravated the prospects of history education. It is the "cultural fight" over the true or dominant interpretation of so-called "contested historical events" and "disputed historical legacies". One of the most visible and palpable results of this "cultural war over memory and history" (this phenomenon was described by, among others, Liakos, 2009, 57), mainly in the United States but in European countries too, are different "debates on historical statues and monuments" (on public debates in the UK see Dargie, 2008, 13-25) which sometimes result in removal or even in the erasure of historical monuments and statues, or end up in erection or creation of counter-statues. I think it is probably not an exaggeration to say that this "cultural fight" is causing serious confusion over the meaningfulness of history teaching. Removal of statues and erasing historical personalities is neither confronting the past nor its re-evaluation, but it is a very radical (sometimes irrational) attempt to completely overwrite and totally erase selected figures or whole sets of historical events from the "past". Is the historical re-evaluation of the slave trade, colonialism, communism, etc., legitimate? Of course, it is. Is critical thinking massively needed when dealing with challenging/problematic/conflictual historical events at a place? Of course, it is.

However, sudden and forceful overwriting and total erasure of selected historical events is inconsistent with European history teaching, based on empathic and multiperspective sources. It is incompatible with school history teaching that we have been practising and experiencing since 1989 (when Eastern Europe began to catch up with the West). Recent "cultural fights", whatever is their social goal, do undermine the core meaning of school history teaching. Putting now apart from the impact of the ICT technology on teaching (both in general and on history in particular) ("*Historical culture in passing through cyberspace* […] is an active agent in determining how historical images are going to be constructed")(Liakos, 2009, 69), it is a serious question if in "traditional" school environment is there time and space for such debates, not to mention the lack of teachers' skills to guiding skillfully such debates. Is it a wonder, under these circumstances, that "basic uncertainty concerning the aim and sense of history education" have arisen? – as Peter Gautschi and Markus Furrer put it recently. (See the Call for Papers written by P. Gautchi and M. Furrer as a call for "Why History Education?" International Workshop at the University of Teacher Education Lucerne of 4 and 5 May 2020. Du to Covid-19, the conference was postponed to Autumn 2021.)

"History should […] explore the *multiple factors* that have shaped" modern word, the American Historical Association stated in 2016, arguing further that history teaching should be fundamentally based on "*reasoned discourse*" combining elements of "mutual respect, diverse points of view, balancing fair and honest criticism with inclusive practices and openness to different ideas". (Statement of the American Historical Association from November 18, 2016.) While making a firm reflection over a very recent event, a murder of a French history teacher Samuel Paty, the Euroclio, an organization representing European history teacher associations, endorsed the freedom "to address sensitive and controversial topics", stood up against censorship while encouraged "critical thinking and multiperspective". (Statement of The Euroclio from October 21, 2020.) I do not see the point how recent "cultural fights" over the true or dominant interpretation of so-called "contested historical events" are compatible with all these above-mentioned principles. On the contrary, I am convinced that they pull us toward "[…] *grotesquely simplified and distorted forms of history* […]" as our esteemed colleague, Terry Haydn from the International Society for History Didactics argued. (Haydn, 2014, 35)

For some time, we have been observing a quantitative reduction/decrease in the number of lessons for history. Does this reduction threaten the position of our school subject? Why does history need to

be taught as a school subject of its own? Would it not make more sense to integrate history into a larger subject group, for example, into the social sciences? Is history teaching a part of political education, or is political education a part of history education?

Unfortunately, data-based research on the means and ways of history teaching on a European scale is scarce. What we have in hand shows a decreasing number of history lessons in Europe. History as an independent school subject is, in many places, about to disappear from the curricula, or if it is not, then "at the age of 17, in a growing number of countries history becomes an optional school subject". (Leeuw-Roord, 2004, 91) In an increasing number of countries, history teaching was (arbitrary) commissioned with the task of carrying the topic of civic education. (See the case of Hungary at Kaposi, 2020, 219-242)

If we look at the Slovakian case, we can discover that here history has already been part of a broader "Educational Fields" (in Slovak, Vzdelávacie oblasti) since 2008. School subject History belongs to the "Educational Field: Man and Society" (in Slovak, Človek a spoločnosť) as one of the triad of school subjects History, Geography, and Civic Education. According to the basic document that determines the purpose of history teaching in Slovakia, we read: "The main function of [*teaching*] history is to cultivate the historical consciousness of the pupil as a wholistic personality, and to preserve the continuity of the historical remembrance, i.e. handing over / passing on historical experiences from local, regional, Slovakian, European or World perspective. Part of the handing over is first and foremost gradually getting acquainted with such historical events, phenomenons and processes in [*historical time*] time and [*geographical*] space, which had fundamentally influenced the development of both the Slovak and the World societies, and which [*events, phenomenons and processes*] were reflected into the picture of our present [*times*]. (In original Slovak: "Hlavnou funkciou dejepisu je kultivovanie historického vedomia žiakov ako celistvých osobností a uchovávanie kontinuity historickej pamäti v zmysle odovzdávania historických skúseností či už z miestnej, regionálnej, celoslovenskej, európskej alebo svetovej perspektívy. Súčasťou jej odovzdávania je predovšetkým postupné poznávanie takých historických udalostí, javov a procesov v čase a priestore, ktoré zásadným spôsobom ovplyvnili vývoj slovenskej i celosvetovej spoločnosti a premietli sa do obrazu našej prítomnosti. „https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-2.stupen-zs/clovek-spolocnost/ (Accessed: 10.10.2020)"

I think that the Slovakian case is a good starting point for arguing for the sensibility and necessity of school history education as well as a good launchpad for improving the efficiency of our school subject. The description above reflects well that beyond "present" and "future", the "past" is also a very important dimension of our human consciousness of time. Several history didactics have been speaking of several aspects of "historical thinking", "historical consciousness", and "historical culture", putting stress here or there. Whichever of these we prefer, yet the most pivotal position here is that the "past" can not be omitted from our time-consciousness, neither from our private nor our collective time-consciousness.

As a history learning methodologist, in my personal conviction, we should learn and teach history in order to gain four important skills, such as: to gain the ability of deep reading of primary historical sources; to understand historical causation; to get used to the multiperspective character of historical issues, including historical figures and events; and finally to be able to get engaged in civilized argumentation when historical issues are at stake, including being engaged in contemporary public discussions.

When facing the question "Why should we learn/teach history?" it is historians' and history teachers' best mutual interest that the ultimate goal of history teaching is to educate or cultivate historical thinking (historical culture or historical consciousness, in other words). This is the best point where both our professional communities can and should depart from. And this is the definition which brings us back to the roots of our science and school subject. Our school subject trains us and equips school pupils with such vitally important skills like "judging reliability", or "taking into consideration alternating stand- and viewpoints", or the ability "to discover overt bias" – not only in historical sources but in real-life situations too. (Báthory–Falus, 1997, 571)

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Agáta CSEHI

WITH MUSIC EDUCATION AGAINST UNIVERSITY DROPOUT?

ON THE CONNECTION BETWEEN EXPERIENTIAL GROUP MUSIC SESSIONS AND THE UNIVERSITY DROPOUT PROCESS

Preliminary findings, theoretical and practical background of the research

Dropping out of school has been one of the most actual and common issues in education in recent years. It is present in practice and a well-defined concept in the literature. It is a complex and multifaceted process, the causes of which are increasingly being investigated both domestically and internationally (Kenderfi 2011, Stiburek 2017, Jungerta 2015, Frey 2014, Şahin 2014, Faria 2012, Wudu-Getahun 2009).

The analysed phenomenon entirely affects tertiary education, as well. It can be traced exponentially at the university level, both theoretically and practically. The dropout process deserves special attention in the first-year students' university education, mainly including the first term, which is considered the "most critical" period (Lukács-Sebő 2015). Beginning university studies is a big challenge compared to high school studies: it provides significant changes, new circumstances and conditions for young adults. They have to adapt to new social environments and cope with unknown situations.

Moreover, they need to develop new learning strategies. "*During the 3-4-month period, the student is in a state of readiness and is forced to prepare for classes more or less regularly, whereas the subsequent 5-6-week exam period covers a phase of intensive learning. The temporal reorganisation, forms of learning, such as participating in seminars or preparing portfolios, different methods of supervision and assessment all require more and more advanced learning management skills and also encourage the student to develop them*" (Gaskó 2006: 30).

In addition to academic life, the first-year university student also enters a changed system of social relations. Their family and friendships are undergoing both qualitative and quantitative changes. They meet new teacher personalities and have to adapt to new expectations. Appleton et al. (2006) describe students' integration as a multidimensional concept (also as one of the best predictors of learning success): *academic* (earned credits, time spent on learning), *behavioural* (class attendance, postponement, work outside school), and *psychological* factors all determine students' attachment to the institution (Koltói, 2013). The study of the adaptation and integration of university students into the social system offered by the university is, therefore, also an essential area of research, which investigates the causes of dropout (Kanczné-Tóth 2018).

To his end, the Ratio research group, founded in 2017, started its research at the Faculty of Education at J. Selye University. The longitudinal study began in the form of pilot research, which was carried out among the students of J. Selye University in Komárom. In the academic year 2018/2019, the analysis extended to three tertiary institutions in the Carpathian Basin, namely the II. Ferenc Rákóczi Hungarian University of Transcarpathia (Beregsk, Ukraine), the Christian Partium University (Oradea, Romania) and the Faculty of Hungarian Language Teacher Training at the University of Novi Sad (Subotica, Serbia).

Based on the results examined and received so far, the fears, insecurities, anxieties and doubts of the first-year students became remarkable. These are essential factors in integration into university life and relationships and in the process of successful university studies. Based on the results examined and summarised so far, it is necessary to highlight the following:

High scores were achieved by students' fears about social life: 31.20%, their worries about educators: 37.10%, about the curriculum: 44.40%, and their concern about requirements: 45.50%. Their

uncertainty about themselves are outstanding: 50.10%, but above all, their level of fears of learning is significantly high, up to 61.10% (Figure 1).

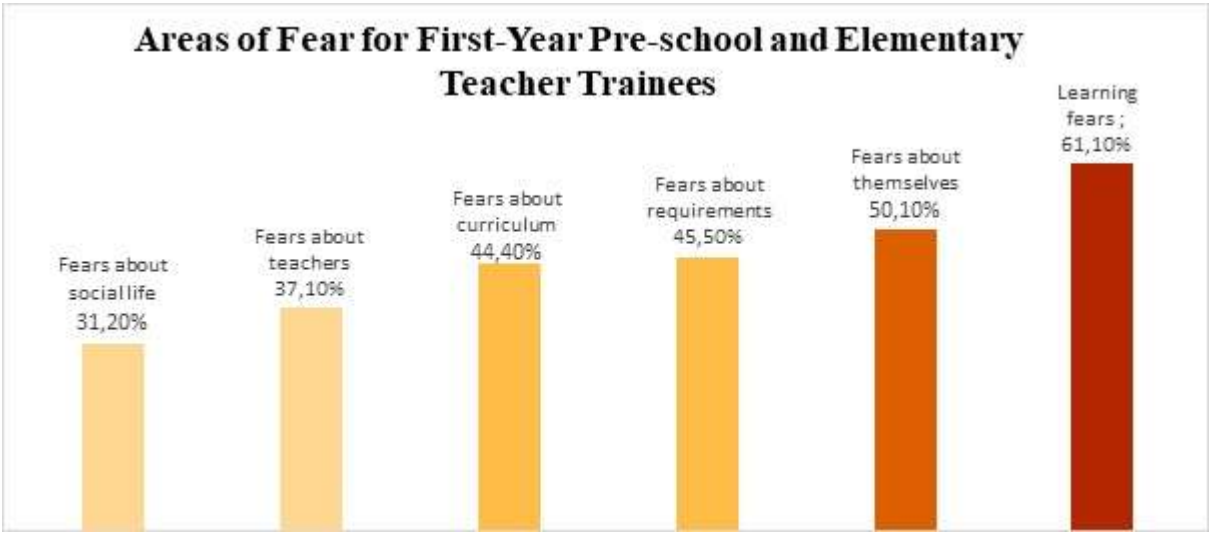

Figure 1: Areas of Fear for First-Year Pre-school and Elementary Teacher Trainees

Thus, the participants' fears in the study, which showed a significantly high percentage, were related to ***learning***, i.e. the greatest fear of first-year teacher trainees is about learning (61.1%). They are also afraid of schedules (39%) and performance (37%). They voiced the reasons for their fears as follows: "*I can't pass; I fail the exam and have to postpone.*"

Thus, the studies' results have shown so far that the fears, insecurities, worries and anxieties of first-year teacher trainees about university studies cannot be ignored. Their indicators are significantly high when it comes to considering *themselves* and especially *learning* and successful completion of their studies.[1]

Music education and teacher training

Based on the research results presented above, it can be concluded that special attention should be paid to the objective and subjective circumstances of first-year teacher trainees' study.

At the Faculty of Education of J. Selye University, music education is a crucial part of teacher training, especially in the Department of Pre-school and Elementary Education, as well as in its related study programs and individual grades. Music education starts in the first term of the first year of study within the subject called *Basics of Music Theory and Music Education.* The content and topics of the course, as its name suggests, cover all the elements of music theory and music education that are necessary for musical literacy, classes focused on perception, musical reproduction and creative activities. Consequently, its content covers the unity of affluent theoretical knowledge and demanding practical knowledge.[2] The experience of these necessary abilities and skills, both on a theoretical and practical

[1] The results of the research of the Ratio research group and the conclusions and pedagogical recommendations have been made available to the public in several scientific publications. Thus, among others: Horváth-Tóth 2018; Horváth-Tóth 2019; Horváth 2018; Kanczné Nagy 2019; Kanczné Greater Czech Republic 2018; Kanczné Nagy-Tóth 2018; Nagy-Horváth-Szabóová-Kanczné-Nagy 2018; Nagy-Horváth-Szabóová-Kanczné-Nagy-Orsovics-Strédl 2019; Nagy-Szabóová-Horváth-Kanczné-Tóth-Bakos-Orsovics-Strédl 2018; Tóth-Bakos 2018; Tóth-Bakos-Tóth 2018.

[2] *Content of the Basics of Music Theory and Music Education*: 1.) General knowledge on musical literacy. Students become familiar with the line system, master the basics of music theory and commonly used musical terms. 2.) Getting to know music literature and nursery rhyme collections suitable for pre-school children. Topics of the course: rhythm, tempo, dynamics, musical note writing and reading, accidentals-modified notes, enharmonic sounds, intervals, scales (diatonic, modal), chords,

level, is a prerequisite for completing practical music subjects (instrumental playing, intonation and rhythmic education, instrumental activity, chorus) in further terms of training. So it is one of the most demanding subjects that cause difficulties in passing the end-of-term exam and state exam, and which is a requirement for achieving the necessary number of credits and continuing university studies.

Aware of all this, first-year pre-school teacher trainees often voice their fears about successfully completing this music subject. In particular, they are worried that they will not be able to master the basics of musical literacy and that they will not have sufficient musical abilities and skills (sense of rhythm, vocal expression, musical literacy) to successfully complete the course. Therefore, they nurture some 'aversion', fear, anxiety about music education, unfortunately, immediately in the early stages of their university studies. Nevertheless, this is a paradox because:

Music is a human-forming force that affects the whole personality. Overall, it has a significant impact on the general development of an individual. It predisposes us to be more receptive to the beautiful; moreover, it shapes taste and human behaviour. Music education is only a small segment of institutional training, yet it can strongly influence the individuals' general development. It directly induces emotions, affects the development of cognitive and emotional competencies and physical and mental health. Consequently, music education is a crucial part of educational work and personality development. Last but not least, music is considered one of the central research topics in various examinations. According to their fields of expertise, music researchers, music educators, music historians, psychologists, doctors, and therapists study music's impact on ability development, talent development, concentration, socialisation and community building processes. Music aids in achieving spiritual harmony and well-being, in preserving and nurturing health, in relieving stress and rehabilitating. It is, therefore, a tool in education, personality development, therapy and prevention (Falus 2016).

Music requires twice as much brain activity as speech, and instrumental singing activates the entire pallium. As a result, the many skills that are used while music-making also aid in developing other areas. 'Musicians have a demonstrably more advanced corpus callosum – a tract which connects the two cerebral hemispheres of the brain – than ordinary people. Accordingly, there is much greater interoperability between skills related to emotional intelligence, logical thinking and speech than in general' (Marton, Janurik 2016).

Certain elements of music are important, which, according to Zoltán Kodály, are effective "educational tools." In his opinion, "*Rhythm develops attention, concentration, steadiness and ability of innervation. Melody opens up the world of feelings; it changes in intensity, tone, and it is the sharpener of our auditory organ. Singing is, after all, such a versatile bodily function that the effect of physical education is immeasurable – in case' soul education' would not be important to someone. Its health benefits are well known"* (Kodály 1974: 95). It is in this spirit that Kodály had developed and created his music-pedagogical method.

Music is, therefore, an essential condition for both general development and educational work. It evokes emotions, has a therapeutic effect and affects both the individual's intellect and physical-mental-emotional world. As a result, in the last few years or decades, the impact of music and musical activities has become a central topic of more and more research. The requirements of modern education are also met by creative activities that have a broad transfer effect, spread their impact over several areas, a multitude of skills and have a positive effect on the development of the whole personality as well.

musical instruments; nursery rhymes - classification according to their content, acquisition of their text and rhythm; Requirements for completing the course: 1.) test (theory, musical literacy); 2.) creating a collection of nursery rhymes suitable for pre-school children.

The aim, process and realisation of the research

The facts summarised above, resp. the learning fears of first-year (pre-school) teacher trainees as well as their concerns about the course *Basics of Music Theory and Music Education*, inspired the realisation of this survey. The outlined aspects justified examining the students' opinions, views and experiences, and then drawing the necessary conclusions and lessons from them – by all means, with the intention of reinforcing the students' university attachment.

Research objectives: To assess the opinions of first-year (pre-school) teacher trainees and the objective and subjective circumstances (defined by them) that have helped or hindered them in meeting the compulsory study requirements for the subject of Basics of Music Theory and Music Education. Further, the research aims at mapping out students' experiences during the study and exam period, which provided reinforcement in their relationship to their university studies.

The present study outlines details of the results of the analysis of the students' opinions.

The study was carried out in the winter term of the 2019/2020 academic year, after the first term, more exactly after writing the end-of-term tests. The study involved 76 first-year students of the Pre-School and Elementary Education study programme. This number differs from the number of students evidenced at the beginning of the academic year as a total of 86 students applied for the subject at the beginning of the year, but by the end of the 13 week study period, 10 students had dropped out. As a result, 76 pre-school teacher trainees (of which 72 are first-year and 4 are second-year students, the latter retaking the subject from the previous year) were involved in the research. The gender distribution of the participants: 72 women and 4 men (Figure 2).

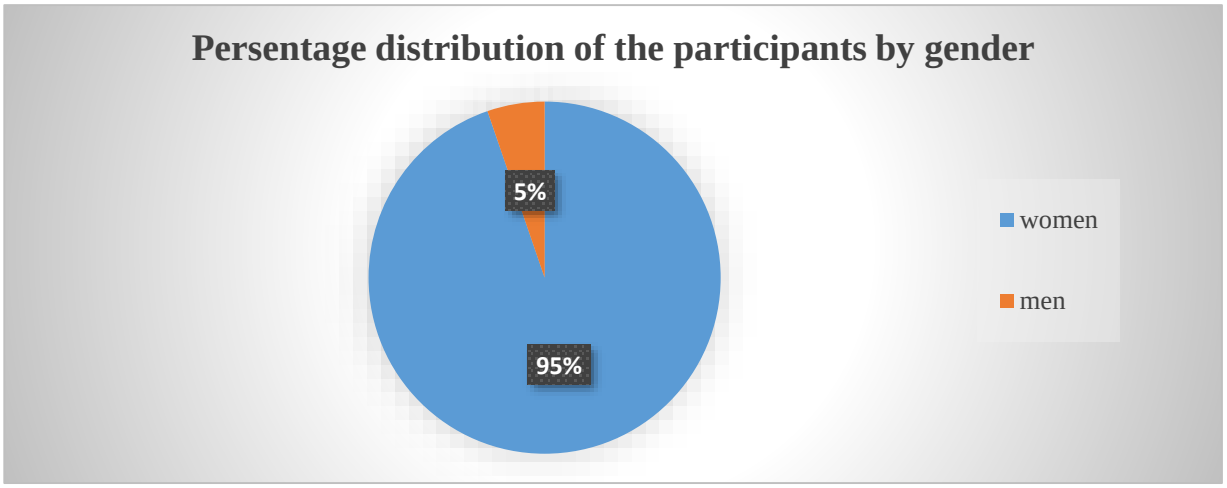

Figure 2: Percentage distribution of the students by gender

The research was conducted in writing. The students expressed their opinions, wrote their answers and shared their experiences on precisely formulated questions, which were related to the content of the subject and to the knowledge acquired during the study period. Also, the questions focused on either helpful or detrimental circumstances that affected the successful fulfilment of the requirements of the course. Students were not given any stipulations concerning the answers; they were free to express their opinions to any extent.

The questions were focusing on the following aspects:

- Which of the 11 primary topics of the course (rhythm, tempo, note writing, modifying signs, enharmonic sounds, intervals, sequences, chords, dynamics, musical instruments, rhymes) do you consider the most challenging material?
- Explain what exactly caused you difficulty (/difficulties) in the process of acquiring the named curriculum.
- Name which session/class you liked best.
- Describe the positive effects, benefits and results of this session.

Research results

1. For the first question, students identified four of the 11 topics in the subject as difficult to learn. These appeared in the following proportions: 48 of the 76 students marked intervals, scales: 42, chords: 28, accidentals-modified notes: 15 (Some students marked two curricula.) (Figure 3).

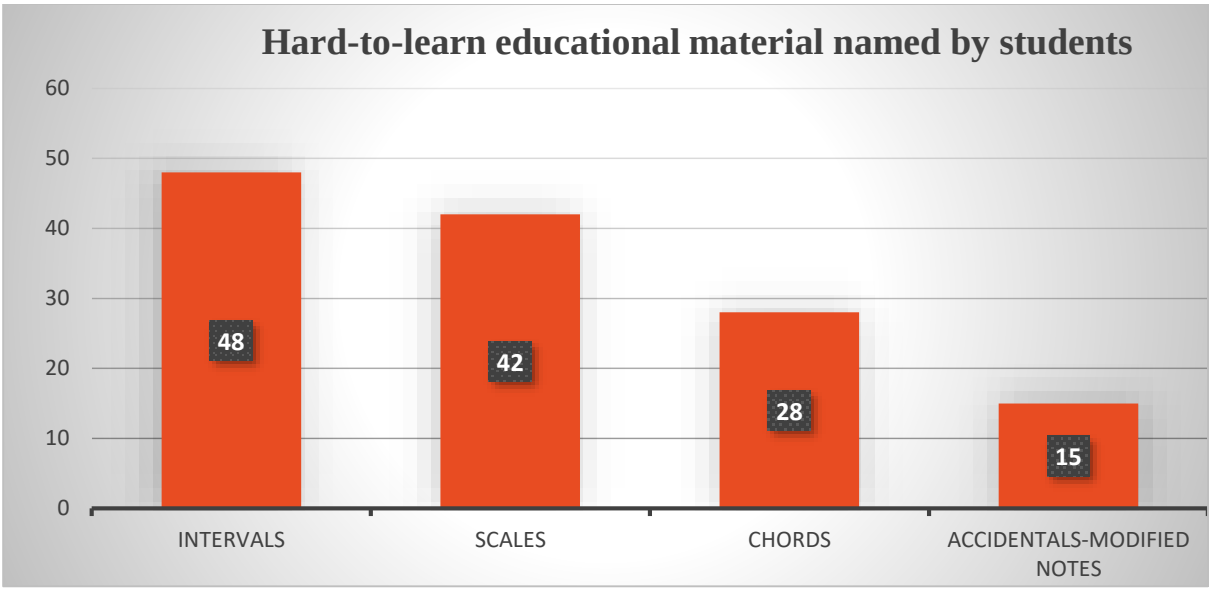

Figure 3: Hard-to-learn curricula named by first-year (pre-school) teacher trainees

2. *In the second question*, students were asked to describe the difficulties in the process of mastering the chosen curriculum. With this question, the researchers intended to identify particular difficulties and to draw conclusions to improve the situation.

Based on the students' responses and reasoning, the logical approach was clearly the problem. It is also necessary to activate logical thinking when using intervals, strings, chords and, to some extent, modifying signals. Mechanical learning is not appropriate for these topics. It is not enough to look for connections, to draw conclusions and to record information without thinking. This was clearly stated in their justifications:

> *"For me, the intervals were the hardest because I had to count a lot there."; Intervals is the most difficult material because it is difficult to recall them and calculate in the line system."; The sequences were the hardest because the logic was complicated there."; I had a hard time with the major and minor curriculum because somehow I couldn't memorise what was going on; "Intervals and sequences were the hardest for me. I know it in theory but not really in practice. I couldn't figure out its logic."; The most difficult curriculum is chords. I can't calculate the sounds. The logic for the sequences was complicated for me."*

Among the answers, however, the factor of lack of time also appeared, resp. The possibility of little practice and the lack of qualified supervision in the process of preparation and training at home.

> *"The major and minor scales were the most difficult because they require a lot of practice;" Intervals and sequences were difficult. I hadn't studied music before, and there was no one at home to practice with me;" The major and minor sequences were the most difficult because there are many of them, and it is hard to memorise. Anyway, it was clearly explained."*

Finally, the music curricula indicated by the students were ultimately raised to such a level that by the end of the exam period, 98 percent of the students met the expectations, according to the grading scale (A, B, C, D, E). Consequently, the studied course can be successfully completed with the help of regular practice, systematic learning and active participation in seminars. This is also supported by

students' opinions: *"Overall, the curriculum was not difficult, but we had to learn more than usual."; I was preparing for every class, so even as a beginner, I managed to write the test for A*."

3. *With the third and fourth questions*, our intention was to shed light on which music-pedagogical session won the students' interest the most. It is important to assess which activity (/activities) help(s) the teaching-learning process to the greatest extent; hence it is ultimately a condition for a successful teaching-learning process, for the effective and quality development of knowledge, abilities and skills.

The experiential and learning-enhancing activities highlighted by the students are the following: "*the nursery rhyme collection, making a nursery rhyme noticeboard in small groups whilst listening to music; playful practice of the rhythm of rhymes in-class work; practice in classes with teacher assistance and supervision; illustrating the intervals with an auditory demonstration of the piano.*"

The aforementioned occupations have also been proven right in quantitative terms. A particular creative group session, chosen by 67 of 76 students, gained significant popularity: *the nursery rhyme collection, resp. making a nursery rhyme noticeboard in small groups while listening to music*. In the lesson, students collected rhymes in groups of 3-4 on specific topics (holidays, seasons, nature, animal verses, counting-out rhymes, games, etc.) using noticeboards. The groups were free to choose any forms of adaptation: they could use books and their smartphones for help, and they could draw and glue for illustration. At the end of the class, the groups' works were presented and evaluated. This session was considered exciting. The most popular features of the session were: teamwork, the opportunity for creative work, the joy of learning together, the liberated atmosphere of the class. All this is clearly reflected and justified in the students' opinions:

> *"The lesson on which we were learning nursery rhymes was very cheerful and unconventional; When we collected rhymes it was fun learning"; "The best lesson was when we made nursery rhyme noticeboard because it was creative;" "For me, making the nursery rhyme noticeboard was the most exciting. We were listening to music whilst writing the rhymes. This made it easier to memorise the rhymes;" "The best experience was the nursery rhyme-lesson because we were working in teams;" "I liked making the nursery rhyme noticeboard the best because we could be creative and draw ideas freely into our collection;" "I enjoyed the nursery rhyme-lesson as we could use our creativity;" "Collecting rhymes in groups made it easier to do the same task at home;" "My favourite activity was making the nursery rhyme-book because I got to know many new rhymes, and I was able to show my creativity as well;" "The group lesson improved cooperation;" "During the term, the compilation of the rhyme collection was the best because it brought the group together;" "The biggest experience was working together whilst listening to music. It would be nice to have more of these lessons!"*

Students' opinions focused on experiences were closely followed by three additional sessions, marked as 42, 31, 29 (Figure 4):

> *rhythm practice with nursery rhymes together in class; practicing musical literacy in class with the teacher's supervision; practicing and demonstrating the intervals with audio aid, piano*. The students expressed their ideas about these activities in the following way: "*I enjoyed all the classes because I love music. But I particularly liked when we were clapping to the rhythm;" "For me, the most experiential class was practicing rhymes. Clapping to rhythm in different playful shifts. Everyone was involved and active in this;" "The most interesting thing for me was clapping to the rhythm because that way I could more easily understand and grasp the length of the rhythm values and the essence of times*;" *The biggest experience: when we were clapping to the rhymes of the verses because it made it easier for me to learn. It was learning by playing;" "For me, the best session was to practice writing in the sheet music notebook because the teacher immediately warned me of my mistakes. This is how I understood and memorised the material more effectively;" "It really helped hear the intervals as the teacher was playing the piano. I heard the sounds' going up and down'"; "Since I hadn't studied music before, it was hard for me. But teamwork, clapping and practicing together made learning very easy."*

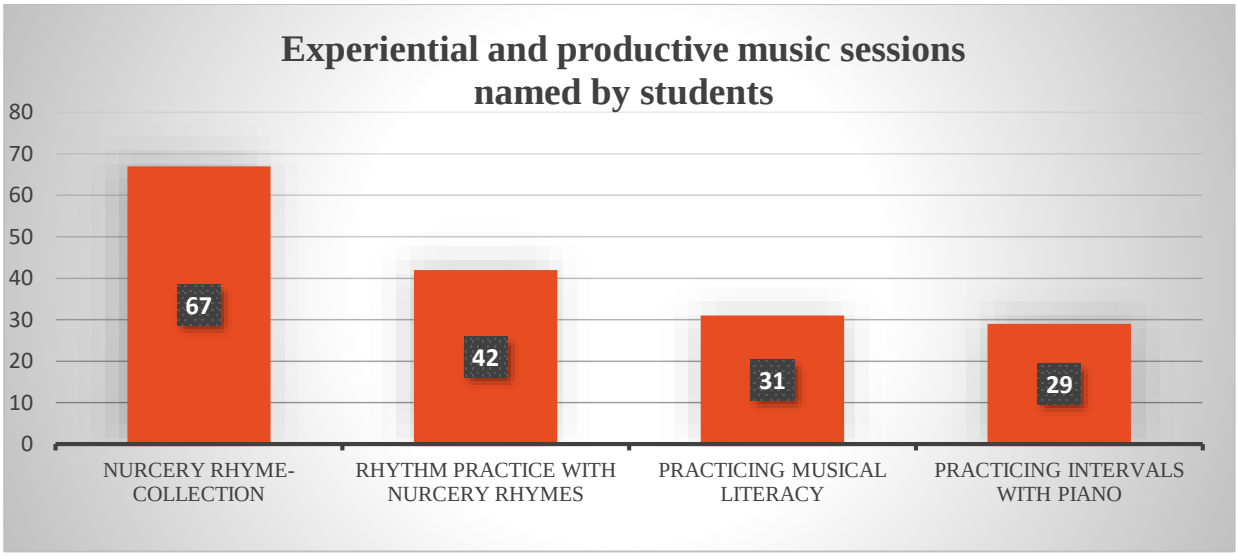

Figure 4: Experiential and productive music sessions chosen by students

Summary

Summarising the students' opinions and the content of their answers, the research was primarily focusing on the learning-enhancing factors, the acceptance and memorising of the curriculum, and on the successful completion of the study requirements during the study-and exam period.

The analysis of the overall results suggests that the following features are important for students: *experiential learning, creative activities and a creative atmosphere, interpersonal factors such as teamwork and the teacher's effective, helpful attitude and colourful illustrations.* All this is supported by the opinions of the students and their experiences they gained during the lessons. Based on the results, it can be stated that creative music sessions have a positive effect on the complex development of skills and personality, on the quality of academic performance and some psychological factors to reduce anxiety, cooperation and, last but not least, to positively affect their attitude towards university studies. The results can be explained by systematic work, regular group practice and focused attention. Music education activates students with a variety of auditory, visual and motor stimuli. "*With music, we don't only learn music. Singing liberates, encourages, heals from inhibitions and shyness. It concentrates, improves physical and mental disposition, makes you feel like working. It makes you more suitable and accustomed to attention and discipline*" (Kodály, 1974: 304).

Creative group activities as well as common creations have a rich emotional content, they evoke a series of experiences, so they also contain elements of experiential pedagogy (Csehi-Kanczné, 2018). The music-pedagogical experiences carry creative and experiential values that can be lifelong for young people. "*Even if there is only one moment, the magnitude of a life can be measured on the size of this moment"* (Kanczné 2007: 123) As a result, diverse 'stimulus effects,' experiential trainings and sessions together help memorise body of knowledge, develop skills and a complex personality.

Conclusion

The creative atmosphere of the teaching-learning process and experiential musical activities significantly contribute to the development of skills, to the acquisition and long-term memorisation of the curriculum and even have a positive impact on the development of higher psychic functions. Its influence transcends the boundaries of the content and material of music and determines the development of the whole personality.[3] Finally, all of these aspects help students integrate into

[3] See also: TÓTH-BAKOS, A.: *Mozartov efekt - môže hudba zlepšiť inteligenciu a kognitívne schopnosti?* 2015, TÓTH-BAKOS, A. – CSEHIOVÁ, A.: *Music and Brain - Music Training Transfer.* INTED 2016 Proceedings: 10th International Technology,

university life and complete their university studies successfully. "*The artistic experience is a complex content of consciousness and spiritual state, into which emotional, intellectual and wilful elements, reality and imagination, precisely expressed thoughts, feelings, desires and aspirations – that have not reached the level of consciousness – are intertwined. It is in this way that the experience captures the person so deeply and in many ways. There are huge pedagogical opportunities in this*" (Dobray 1983: 11).

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Renáta MAROSI

Developing cognitive and language skills through visual arts

Introduction

The selection of the research topic has been inspired by an informal pedagogical observation made at the Department of English Language and Literature of J. Selye University in Slovakia between 2016 and 2020. The following chapters intend to find a theoretical background of this pedagogical experience. The aforementioned observation was taking place in various first-year courses that sought to improve teacher trainees' language skills (on language seminars) and expand their knowledge on British cultural and historical studies. Two main observations have occurred. Firstly, students have difficulties in expressing themselves when they have to justify their choice of English tenses even if they are perfectly aware and certain of the proper use of grammatical structures. As it caused difficulties even to students with appropriate English language level, it cannot be stated that the reason for the students' inability to express themselves was (only) related to their language level. Secondly, in the course 'The Culture and History of Great Britain', they could hardly search for (symbolical) details and connections with regard to a particular Victorian painting, for they were not accustomed to working with exercises on visual arts. However, once the first hints and clues were revealed for the sake of interpretation, they felt motivated to continue the work.

"The use of arts in other subjects will make it possible to teach students more coherently and effectively" (Csehiová 2014, 59). Therefore, by bringing visual arts-based tasks to the EFL classroom, students' cognitive skills can be developed, and Eventually this method could contribute to successful self-expression, including both formulating students' own opinions and justifying the proper use of English grammar (e.g. Why am I using this tense? Why are both tenses acceptable in this sentence? Why is this tense incorrect here?). This pedagogical approach could even reduce students' uncertainty and increase the level of consciousness in the use of English grammar (e.g. I do not know why I chose this tense. It was just a feeling. I chose this one because it sounds better, etc.). Of course, language teachers should not forget that a successful learning process demands both cognitive and language skills; thus, both should be developed simultaneously. By the aforementioned tasks, students start intensively using not only their own imagination but also their cognitive critical thinking skills: they start seeing and making connections, asking question looking beyond' (i.e. observe painting as a coherent text including its explicit and implicit details). Undoubtedly, the ability to make connections and reasoning is essential in (second) language learning. The following chapters, on the one hand, give the reader a brief overview of how and why one can develop cognitive skills in EFL education through visual arts. On the other hand, the reader will receive information and suggestion about the possible use of paintings in EFL education by describing a visual arts-based lesson plan.

Developing Critical Thinking Skills in EFL Education

"Teaching visual culture is about students making and viewing the visual arts to understand their meanings, purposes, relationships, and influences" (Freedman 2003: 11). For the purpose of unveiling these aspects and relations, developing students' ways of thinking is a must. Working with arts requires a high(er) level of cognitive skills, of which critical thinking is an essential component. The experts include the following as being at the very core of critical thinking: "interpretation, analysis, evaluation, inference, explanation, and self-regulation" (Facione 2020: 5). L2 acquisition likewise demands the aforementioned elements: to interpret and analyze rules (e.g. tenses, syntax, morphology) and to consciously and properly use them, which process can be consistent with inference, self-regulation and evaluation. Scriven and Paul further defined critical thinking in the following way:

"Critical thinking is the intellectually disciplined process of actively and skilfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by,

observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness. To think critically entails having command of such standards." (Eutsler 2017: 34). Further, Eutsler (2017) explains that teachers' questions to students activate this skill, "which then guides them to better and better reasoning" (34–35). Among these questions enumerated in his research, the following ones might be considered beneficial from the point of view of the present study. The questions – that are proper both for the analysis of a painting and interpreting any phase of the language learning process – were adapted to a possible grammar discussion (see them is brackets): Could you give me an example? (clarity; e.g. giving an example of a sentence in the present continues); How could we find out if that is true? (accuracy; e.g. in True or False exercise); Could you be more specific? (precision; e.g. in justifying his/her choice of the selected tense); How is that connected to the question? (relevance; i.e. to understand the theory and use it in practice); How are you taking into account the problems in the question? (depth; e.g. which particular rule makes you choose the present continuous?); Is there another way to look at this question? (breadth; i.e. to recognize that more tenses are acceptable at the same time or to study homophones and homographs); Does this really make sense? (logic; e.g. to check correct word order, to choose the word that fits best in the context).

It is also worth noting that besides asking questions, "[p]rominent theories of cognitive development [e.g. Vygotsky, Luria, Gagne] would further suggest that thinking is [also] greatly influenced by instruction" (Baker 2013: 5). Therefore, giving the appropriate instruction is as important as asking relevant questions in order to guide students' way of thinking. Even Peterson suggests that teachers are able to influence students' world views through elements of behaviour such as "making comparisons, viewing things from different perspectives, looking for ways to remember information, and recalling information" (Peterson 2005; Baker 2013: 5). These elements are also highly similar to Eutsler's elements of reasoning: "purpose, question, information, inference, assumption, point of view, concepts, and implications" (Eutsler 2017: 37). It is because "most conventional instruments of cognitive and intellectual functioning have elements of reasoning, conceptual and abstract thinking, patterns and relationships, quantitative elements, vocabulary, retrieval, and/or visual-spatial recognition" (Baker 2013: 6). In a word, it can be pointed out that (second language) learning is a combined and complex process of memorizing, recalling, synthesizing, reasoning and concluding.

Visual Arts in (EFL) Education

Using visual arts in (second) language acquisition is likewise a complex process because it links the hemispheres of the brain: the left that is "specialized not only for language but also for analytical and sequential thinking" and the right that is responsible "for spatial thinking and visuomotor skills" (Silver 1989: 10). However, it is still worth making a permeable and deliberate connection between them as "[l]ike language symbols, art symbols are a way of labelling perceptions and imagining experiences. They can represent particular subjects or classes of subjects." (Silver 1989: 6) Furthermore, arts provide various competencies "in developing cognitive growth, including the perception of relationships and that problems and questions can have multiple possibilities" (Baker 2013: 2).

Generally speaking, using visual aids in education is a globally-acknowledged pedagogical method nowadays. A teacher can help students acquire and memorize new words in the following way: by using 'realia,' which means that the teacher holds up various objects or "points to it, says the word and then gets students to repeat it" (Puskás 2018: 56); bringing pictures into the classroom; using digital technology and portable devices such as "the Internet, the interactive whiteboard, tablets and smartphones" (Puskás 2018: 57); describing pictures; etc. Of course, when using visual aids, many factors must be considered in order to use them effectively and successfully: their relevance in connection with the curriculum, the student's age and language level, the students' learning abilities, the classroom equipment and technical background, etc. Interestingly, "[s]ince materials which are based on multimedia seem to attract students' attention more than the conventional materials used

in the traditional teaching methods (printed handouts, realia, flashcards), using audiovisual media might be a fruitful approach" (Zolczer 2016: 117).

As far as the further relevance of using visual materials in education is concerned, "[w]e all communicate visually in the many social situations of our everyday lives […] Given the importance of visual communication in real life, discussing the role of the visual in educating the next generation is a task that needs to be confronted by teachers" (Havé 2013: 7). As for its importance in TEFL, "[b]eing able to describe what one sees is one of the basic skills one has to train when learning a language" (Havé 2013: 8). Indeed, for example, picture description is one of the most common exercises to practice the present continues, and it is one of the tasks of the school-leaving English exam and in language exams (at least in Slovakia and Hungary). More to the point, "[t]he requirements of modern education are met by subjects that which have a multifaceted effect" (Csehiová 2014, 67). In this sense, as Gower et al. (2005) state, visuals "attract the students' attention and aid concentration", and they "add variety and interest to a lesson" but also "help to make the associated language memorable" (70-71). Furthermore, as far as possible use of (English) video-game, as audio-visual aids, in EFL education is concerned, a story-based (or "fictional narrative-"based) video game "not only raises the intrinsic motivation," but also "the player is exposed to the language not only in written form (in the form of subtitles and captions on the screen) but also in audio form; therefore the listening and pronunciation skills can also be engaged and improved throughout gaming (as opposed to reading)" (Zolczer 2019: 233, 234). In other words, using audio-visual materials, students break with regular reading, writing and listening exercises to turn to something else that, although likewise requires their attention and concentration, also aids in maintaining their interest in the given curriculum and keep their attention and motivation.

As for the legitimacy of visual arts in improving cognitive skills, "[m]usic, the visual arts, and dance can be used to develop critical thinking, which includes the ability to use logic and reasoning in problem-solving. Critical thinking is an active, purposeful, organized, and *cognitive* [emphasis is mine] process that … can be explicitly taught" (Eutsler 2017: 86). It is also "a great routine for students to learn how to reason with evidence. And it promotes independence." They work on their own while relying on the teacher for a clue. "It is a routine that can be adapted to any topic" (Brock 2018). Furthermore, well-prepared interactive visual arts-based task "makes space for their voice, makes space for their thinking" (Kullberg 2018). Arts helps students "express how they feel and think about the world […] express the feelings and ideas that they don't have the words to talk about" (Mincemoyer 2016: 1).

An Example of a Visual Arts-Based Activity

Based on the aforementioned theoretical formulations, I assume that with regular and systematic use of visual arts-based tasks, the students' cognitive skills can be developed, which they can use in their (second) language learning process. The following part functions as an inspiration for teachers to bring paintings into (EFL) classroom. The constant use of brackets with the term 'EFL' is not a coincidence; hence the use of visual arts should not be limited to second language teaching-learning only and is highly recommended to be included in the curriculum of other subjects as well. The following lesson plan is not only meant to improve language skills but also cognitive skills; the exercises below already presuppose a B1/B2 language level. Taking into account the message of the chosen painting, the recommended age of students is between 17-19.

Topic: Augustus Leopold Egg's Past and Present – Misfortune
Age of students: 17-19
Language level of students: B1/B2
Time: 45 minutes
Aims:

- to recall and practice the proper use of the present continuous (painting description),
- to recall and practice the proper use of the present simple (expressing opinions),
- to be able to express their own opinions about the topic of the painting,
- to be able to see explicit and implicit connections in the painting (symbolic references),

- to active cognitive skills: to reinforce concentration, critical thinking, reasoning, caution, connection making skills,
- to improve imagination and creativity.

Aids: worksheet that includes the painting (to each student), overhead projector and whiteboard
Classroom management: group work; class work.
Process:

1. administration and organization (2 minutes),
2. students are given a worksheet including the selected painting along with exercises (1 min.),
3. students are given the following instruction: read a short description of the socio-historical background of the painting (1 min.),
4. students are divided into groups of 3/4/5 (1 min.),
5. each group is asked to answer the questions of the painting (20 min.). They are also asked to note their thoughts down and to carefully choose tenses.

Note: teacher should ensure them not to feel embarrassed and disappointed if they cannot answer every question. The teacher also shows the painting in big size – hence the overhead projector and the whiteboard.

6. The whole class discusses the answers with teacher's guidance (20 min.)

Note: the teacher should approach the last question very carefully and warn the students that it is not compulsory to join this part of discussion if they find it uneasy.

Picture 1: Augustus Leopold Egg's Past and Present – Misfortune

The painting above is Augustus Leopold Egg's work or art, who painted in the nineteenth-century Victorian England, when British people were living according to strict social norms and conventions, and when women had only a few rights. Men and women were not equally hold responsible. As Caroline Norton, an early feminist, wrote, "the faults of women are visited as sins, the sins of men are not even visited as faults." Many women and also man started fighting for more political and social rights of women. As a result, for example, by the end of the century, under particular circumstances, they were given the right to become official charges of their own children.

Study the painting carefully. Then, answer the following questions.
Basic data:
1) In which century was the artwork painted?
2) How many people can you see in the painting?
3) What is the relationship between the people in the paining?
Content:
4) What is the woman doing?
5) What is the man doing?
6) What are the girls doing?

Emotions:
7) Look at each person's facial expression (at least whose you can see!) and describe how they might be feeling.
the man:
the older girl:
the younger girl:
8) What do their facial expression mean to you?

Symbols:
9) What family problems do you think Egg wanted to depict here? Study the title.
10) What is the husband holding in his hand?
11) Look at the women's arms. What does she want?
12) Which fruit can you recognize in the painting?
13) What does it mean that the fruit is cut in two?
14) What does the fallen apple symbolize?
15) What does the apple with a knife in it symbolize?
16) Find other scenes, clues from the painting which imply their broken marriage. Find at least three of such symbols. The pictures below might help you.

Picture 2: The Fall

Picture 3: Clarkson Stanfield's Abandoned

17) Find symbols that prefigure the wife's future.
18) Please, explain what do you feel about the woman?
19) Please, explain what do you feel about the man?
20) Please, explain what do you feel about the children?
21) How does this situation and problem apply to our century?

Answers: 1) 19th century; 2) four people; 3) they are family; 4) the woman is lying on the floor; 5) the man is sitting on a chair and staring into the distance; 6) the girls are playing with cards; 7) the man: is disillusioned, disappointed, heartbroken, serious, sad; we cannot see the woman's face; the older sister is shocked and surprised; the younger sister is ignorant; 8) something bad has happened to the family, something has changed; 9) possible guess: they have got bad news; the woman did something

improper; true answer: the woman betrayed her husband and her infidelity had been revealed; 10) he is holding a love letter that another man wrote to his wife; 11) the woman is begging for forgiveness; 12) apple; 13) two halves symbolize the husband and wife; 14) the fallen apple stands for the fallen woman = an expression for an immoral woman; 15) the second half of the apple symbolizes the husband whose heart hurts (as if he were stabbed); 16) two paintings hanging above the couple's portraits: one illustrates the first men's banishment from the Paradise after the Fall, the second depicts a ship in storm (Clarkson Stanfield's *Abandoned*; the marriage is in danger); bracelets round her wrists (give the impression that she is shackled); the cards are collapsing (breakdown of their marriage) 17) we can see the mirror reflection of the open door and a suitcase in the foreground = the woman has to leave her family. 18) possible student answers: I think it is unfair; she should have given one more chance; she should have been listened to; she should have stayed for a bit longer to decide what to do next; she deserves this because she betrayed her husband, etc. 19) I feel sorry for the man; I think the husband was too strict and hard-hearted; he should have thought about his children who need their mother, etc.20) I feel sorry about the children; the loss of their mother will change her whole life and affect them both mentally and emotionally; etc. 21) possible topics for further discussion: marriage – rules (what can we do and cannot do in a marriage), divorce: pro vs contra; the most common reasons of divorce; possible ways of avoiding divorce; possible way of caring about marriage; cohabitation; causes of infidelity; copying with infidelity; trust; etc.

Conclusion

Visual aids have become a common and essential part of pedagogy in the last few decades: PowerPoint/Prezi presentations, videos, word cards and pictures each reinforce and help student's learning and pedagogics' teaching process. They serve as a bridge between the curriculum and the data processing of the learners' brain. Their multiple impact on particular areas of the brain has been proven scientifically: visual materials enhance social skills and learning and thinking skills such as: problem-solving, decision-making, imagination, creativity and language acquisition. As for learning English as a second language, the process of comprehending, memorizing and consciously using grammar rules require complex brainwork and cognitive skills, critical thinking, reasoning and skills of making connections. Various research has pointed out that working with visual arts is a proper and effective method of acquiring an appropriate level of cognitive skills and critical thinking. For example, Ives and Pond assert that the arts "contribute cognitive development" (Ives–Pond 1980: 335). Moreover, students decipher codes in both 'loci': symbolic references and connections in paintings and grammar symbols and links between rules in language. By getting accustomed to unveiling connections and thinking deeper, beyond and care with regard to paintings, students can become more conscious and critical of receiving and decoding grammar rules, reconsidering and justifying their proper use. In selecting visual arts, besides paintings, the teacher should select even among graffiti, photographs and advertisements. The selection of artwork should be relevant to the curriculum, age, language level and learning abilities of students. Also, as "[d]eep change takes time, patience, perseverance, understanding, and commitment" (Eutsler 2017: 41), in the future it should be one of the foci of pedagogical researches to include working with visual arts in the curriculum of English and other subjects in Slovakia. Thus, students' general knowledge and appreciation of arts would increase, and at the same time, their perspective would be widened, which would positively affect their way of thinking and learning. Due to the lack of official research results, the present paper did not purport to draw general and convincing conclusions about the effectivity of such a method in EFL education. Rather it intended to raise questions and initiate an effective discussion about the possible use of arts in (second language) education in Slovakia.

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SENSATION SEEKING SCALE – RESULTS OF A TEACHER RESEARCH

The antecedents of the research

The Ratio Research Group started its research work in 2017, which was established at the Faculty of Teacher Education of János Selye University with the aim of examining the circumstances and background of university students related to dropout. We carry out our longitudinal research with the help of eleven, partly self-developed and partly adapted measuring instruments, which we carry out in four Hungarian-language higher education institutions.[1]

The most important feature of our research strategy is that we examine dropout in a broader context, in addition to getting to know the students' personalities, we also analyze the characteristics of the social environment. We look for connections between background factors, logical thinking, emotional intelligence, attitudes (teacher career, teacher role), teacher competencies, stress tolerance, and learning style, among others.

We continuously compare our results with the relevant indicators of the latest domestic and international studies. (Kanczné Nagy, K. - Csehi, A. 2018, Kanczné Nagy, K. - Tóth, P. 2018, Horváth, K. - Tóth, P. 2019, Nagy, Melinda et al 2019, Tóth-Bakos, A. - Tóth, P. 2018, Faria, C. et al 2012, Frey, A. et al 2014, Jungerta, T. et al 2015, Robinson K. - Aronica L. 2018, Şahin, M. 2014, Stiburek Š et al 2017, Twenge 2018, Wudu M., Getahun F. 2009)

The insecurities and fears of the students

From our preliminary research results, the present study focuses on our findings on students' personality and mental state, which, in line with international results, show that students have significant mental and emotional problems (Twenge 2018; Robinson – Aronica 2018). They are insecure in themselves, they have fears about learning, their lack of abilities, they are anxious about the failure to complete their studies and their physical-mental-emotional-spiritual world is full of contradictions.

As a result of our efforts to resolve the situation, we have included a personality development pedagogy course in the training of our students, which is an optional subject for the would-be kindergarten teacher and teacher students. The course uses the possibilities of activity- and experience-focused and experiential pedagogy that can be adapted in many ways. Our goal is to strengthen students' attachments to university and university studies, to help build different relationships (peer-to-peer and student-teacher), to help overcome learning insecurities and fears, and thus to contribute to the positive development of their personalities.

In order to increase the efficiency of the course, in the academic year 2019/2020, we included the Sensation Seeking Scale as one of our measurement tools. The psychometric features of the questionnaire allow us to obtain data on the personality traits of the participants in the study aimed at gaining intense experiences and new, varied experiences.

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Presentation of the test or measuring device

"Sensory search for experience is one of countless personality traits. Yet its presence or absence is not negligible, as it affects many areas of our lives. It affects what activities we prefer, what sports we choose, what foods we prefer, how we dress, or what kind of people we feel comfortable with" (Mayer et al. 2012, p. 298.) Sensory search for experience is a personality trait from which the risk of problematic behaviours such as excessive alcohol and other pleasure consumption, illegal substance use, unrestricted sexual behaviour, uncontrolled gambling etc (Andó et al. 2009).

Our research team used the most commonly used 40-item Sensation Seeking Scale, which has excellent reliability and validity indicators (Zuckerman 1978).

The questionnaire consists of 40 pairs of statements. For each statement pair, the person completing the questionnaire should decide which member of the statement pair he or she can best agree with.

The study was conducted along 4 dimensions:

- Excitement and adventure, namely the extent to which the respondent is looking for fast and dangerous sports and activities.
- Searching for experience, namely the degree of openness to new experiences that excite the senses or the mind, travel and non-conformal lifestyle.
- The strongest factor in the dimension of unbridledness is immersion in drug and sex adventures.
- And the boredom tolerance dimension examines the extent to which repetition, routine, the presence of boring people, and invariance create tension in the person.

Thus, determining the extent of the search for experience can provide important information for a more thorough understanding of the students' personality profile and the realization of our objectives outlined above.

THE TEST SAMPLE

161 students from János Selye University took part in the research (Table 1).
(N = 161, Cronbach's Alpha: 0.754).

Distribution by specialties (%)	kindergarten teacher 67.7 teacher major 21.1 public education 11.2
Distribution by department (%)	full time student 73 correspondent 27
Distribution by place of passing the final exam(%)	Slovakia 60.9 Hungary 38.5
Distribution of graduates in Slovakia by department (%)	full time student 76.5 correspondent 23.5
Distribution of high school graduates in Hungary by department (%)	full time student 67.7 correspondent 32.3
Gender distribution (%)	men 15 women 85
Distribution by higher education (%)	no 97.5 BA 1.2 MA 1.2
Distribution by type of secondary school (%)	vocational high school 60.9 four-grade grammar school 28.6 eight-grade grammar school 5.6 adult education leading to graduation 4.3 high school for the disabled 0.6
Distribution by number of own child(ren) (%)	none 82.6

	1 child 7.5 2 children 6.8 3 children 2.5 4 children 0.6
Distribution by parents (Father) by highest level of education %	vocational training 41 vocational secondary school 37.3 grammar school 6.8 primary school 5.6 BA 4.3 MA 4.3 PhD 0.6
Distribution by parents (Mother) by highest education (%)	vocational secondary school 40.4 vocational training 24.8 grammar school 13 primary school 7.5 BA 7.5 MA 6.2 PhD 0.6

Table 1: Background data on the study participants

Research questions

- Which dimension experiences are the most common to be searched for among students?
- Are there any significant differences in relation to each dimension?

Frequency of experiences in the four dimensions

We began to examine the frequency of experience search in dimensions by summarizing students' responses. We then percentage the students' choices per dimension in each of the 10-10 statement pairs. In the following, we examined the choice rates of the experience-seeking statements. Quantitative categories of experience search frequency were determined in the following based on research methodological considerations. If the respondents chose the statement of the pair of statements expressing the search for a sensory experience to be less than 20%, the degree of search for experience is low, if the choice was more than 60%, the degree of search for experience is high.

The distribution of the selection rate of 10-10 pairs of statements measured in four dimensions is illustrated in Figure 1.

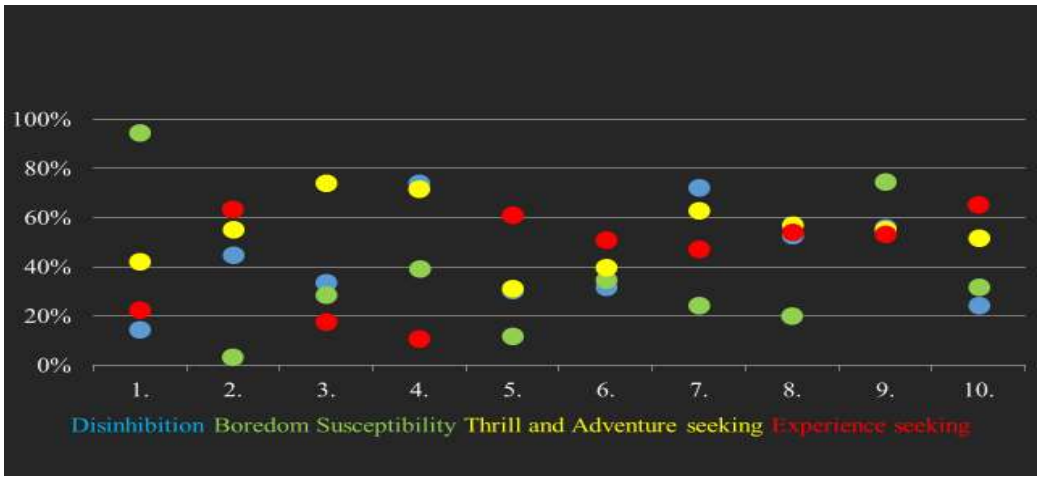

Figure 1: Distribution of the choice rates of the 10 question pairs belonging to each dimension

Based on the responses, it can be concluded that high frequency is present in a higher proportion among students than low frequency. High-frequency responses occur in all four dimensions, while low-

frequency responses occur only in the Boredom Susceptibility and Experience seeking dimensions. Table 2 illustrates the percentages of high-frequency statements and their remarkable content.

Statements:	**Dimension:**	**Choice rate:**
For the sake of the God, i would not even watch a movie I have seen before.	Boredom tolerance	94,4%
I love people who honestly state what they think even when it's sometimes hurtful.	Boredom tolerance	74,50%
I love having new, exciting experiences, even if they're a little scary, unusual, or illegal.	Unbridledness	73,90%
I would love to learn to water ski.	Excitement and adventure	73,90%
It would be advisable for everyone to have the right amount of sexual experience before marriage.	Unbridledness	72%
I would love to try wind sailing.	Excitement and adventure	71,40%
Everyone has to dress in their own way, even if it sometimes makes a special impact.	Experience search	65,20%
I am happy to embark on a journey of discovery alone in a foreign city or part of town, even if I get lost.	Experience search	63,40%
I would love to try sky diving.	Excitement and adventure	62,70%
I like trying foods I have never tasted before.	Experience search	60,90%

Table 2: Incidence rate of high frequency responses

Comparison of dimensions

To examine each dimension, we revealed the differences in the choice rates between the members of the statement pairs (referring to experience search or refusing to search for experience). For each pair of statements, we calculated the difference between the members of the pairs in terms of the choice rate. The closer the difference is to zero, the more divided the respondents in judging the statement pairs, as this means that 50% of the respondents chose one member of the statement pair and 50% the other. The closer the difference is to 100, the greater the consensus among respondents, as this means that one member of the statement pair was chosen by no or very few, while the other member was (almost) chosen by everyone. The differences in the selection rate of the 40 pairs of statements in the four dimensions are illustrated in Figure 2. The figure shows well that students are most divided in the Thrill and Adventure seeking, and the greatest agreement among them is in the Boredom Susceptibility.

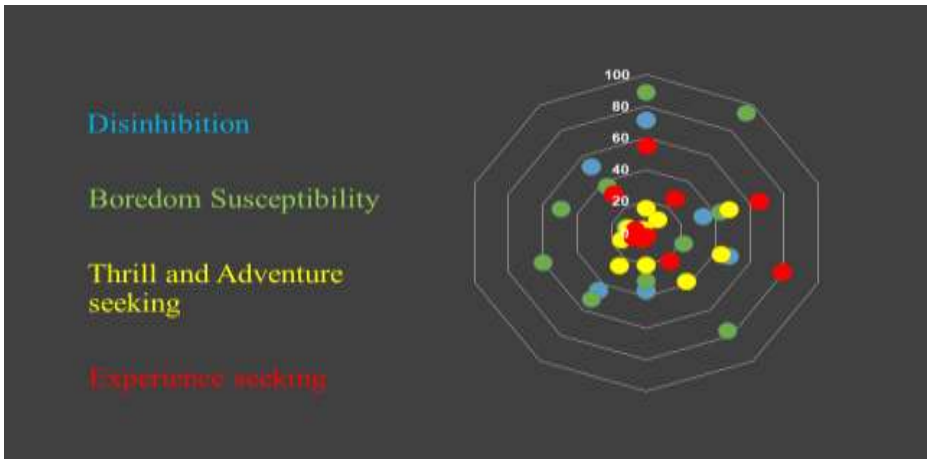

Figure 2: Differences in the choice rate of question pairs in the four dimensions examined

The degree of division and agreement was determined as follows: in the case of a difference of 0-15 percentage points, the division is strong, and between 50-100 percentage points there is an agreement, the strength of which increases to 100. We revealed the greatest division in the Thrill and Adventure seeking, as here 5 statements are below 15 percentage points, or around. (Figure 3)

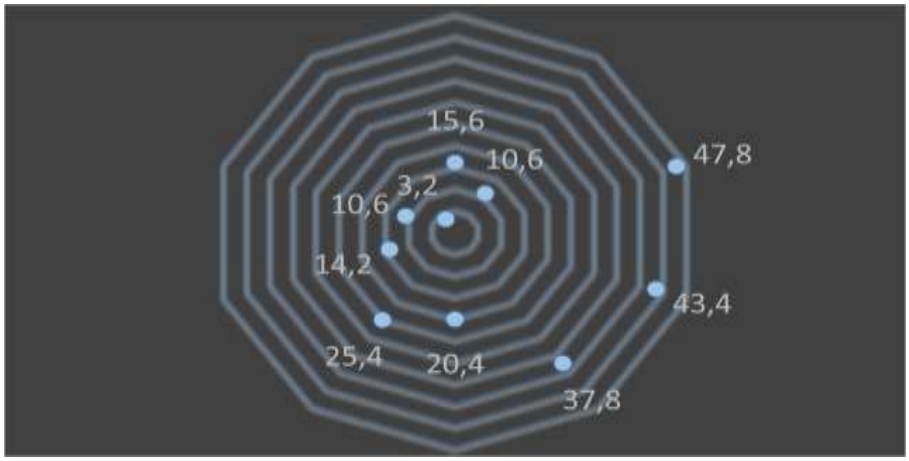

Figure 3: Differences in the choice rate of the 10 question pairs in the Thrill and Adventure seeking dimension

The statements of the statement pairs sharing the students are summarized in Table 3.

Statement pairs:	**Choice rate:**
o I would love to try bungee jumping. o It repels the feeling of me jumping from a height. I don't even approach places like this.	57,1% 42,9%
o Sensible people avoid dangerous activities. o Sometimes I like doing things that are a little scary.	44,7% 55,3%
o Downhill skiing on a steep mountain slope is a great way to find yourself in plaster. o I think I could really enjoy a quick descent down a steep mountain slope.	48,4% 51,6%
o I would love to be a climber. o I can't understand why some risk their lives climbing	42,2% 57,8%
o It is reckless to sail far with a light small sailboat. o I would like to sail far into the sea with a light but well- built sailboat.	44,7% 55,3%

Table 3: Strongly divided pairs of statements in the Thrill and Adventure seeking dimension

We found the greatest degree of agreement among respondents in the Boredom Susceptibility dimension. Here 6 statements are above 50 percentage points. (Figure 4)

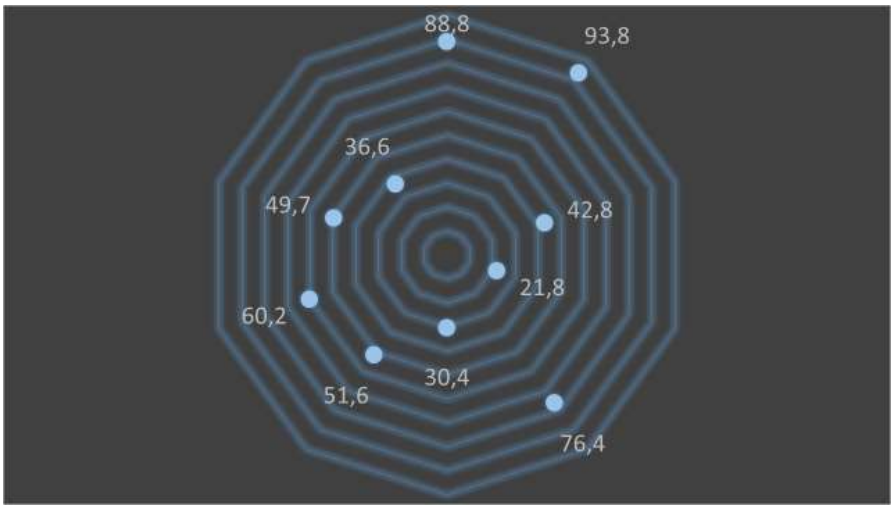

Figure 4: Differences in the choice rate of the 10 question pairs in the Boredom Susceptibility dimension

In the dimension of Boredom Susceptibility, consensus there was not always in the sensory experience search. (Table 4)

Statement pairs:	**Choice rate:**
○ **I get bored when I have to see the same old faces.**	***3.1%***
○ I like the comfortable acquaintance of old friends.	*96.9%*
○ There are movies that I like to watch twice or even three times.	*5.6%*
○ **For the sake of the world, I wouldn't even watch a movie I've seen before.**	***94.4%***
○ I enjoy watching photos or movies of my trip at home on Facebook or Instagram.	*88.2%*
○ **It is terribly boring when the hosts show travel pictures or movies to their guests.**	***11.8%***
○ The main sin in social contact is rudeness.	*80,1%*
○ **The main sin in social contact is when someone is bored.**	***19,9%***
○ I like spending my time at home in a familiar environment.	*75,8%*
○ **I will be restless if I have to sit at home for a long time.**	***24,2%***
○ **I like people who honestly state what they think even when it is sometimes hurtful.**	***74,5%***
○ I don't like people who take pleasure in hurting others.	*24,8%*

Table 4: Agreed statement pairs in the Boredom Susceptibility dimension
(highlighted in bold: statements concerning sensory experience)

Summary

Our research team used the most commonly used 40-item Sensation Seeking Scale.

The study was conducted along 4 dimensions:

1. Thrill and Adventure seeking (SSS-TAS), namely the extent to which the respondent is looking for fast and dangerous sports and activities.
2. Experience seeking (SSS-ES), namely the degree of openness to new experiences that excite the senses or the mind, travel and non-conformal lifestyle.
3. The strongest factor in the dimension of Disinhibition (SSS-DIS) is immersion in drug and sex adventures.
4. And the Boredom Susceptibility (SSS-BS) dimension examines the extent to which repetition, routine, the presence of boring people, and invariance create tension in the person.

The Research questions:

- Which dimension experiences are the most common to be searched for among teacher candidates?
- Are there any significant differences in relation to each dimension?

The Test sample: 161 students from J. Selye University took part in the research.

Based on the responses, it can be stated that high-frequency responses occur in all four dimensions, while low-frequency responses occur only in the Boredom Susceptibility and Experience seeking dimensions. The statements with the highest frequency are: 1."I would not watch a movie I have ever seen for the world. 2.˝I love people who honestly say what they think ever when it is sometimes hurtful" 3."I love having new, exciting experiences, even if they are a little scary, unusual, or illegal. "Students are most divided in the Thrill and Adventure seeking dimension. The greatest agreement is in the Boredom Susceptibility dimension. The enjoyment of extreme sports mostly shares their opinions (average rate: 55% ; 45%) In the dimension of Boredom Susceptibility, consensus there was not always in the sensory experience search. The security of the usual old friendly environment is important and not boring for 96,9% of the respondents. 80.1% like to spend time with friends.

The main motivation of our study presented here was to obtain information about the personality traits of teacher candidates seeking sensory experience. Based on the obtained results, it can be stated that we have obtained informative data on the personality traits of our students, and that the percentage of students seeking and demanding experiences with significant intensity can be demonstrated.

We continue our study in the framework of a comparative study, where we intend to examine the emotional intelligence of pedagogical students and compare its results with the results of the present study. By intending to explore the personalities and professional needs of students, we intend to apply procedures that help them to successfully complete their university studies, on the one hand, and to train properly trained personalities to the labor market, on the other.

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TERTIARY EDUCATION IN EU COUNTRIES

Increasing the number of people who complete tertiary (higher) education and improving its quality are important for sustainable and inclusive growth. Higher rates of tertiary education attainment, combined with better quality and relevance, can attenuate skills shortages in knowledge-intensive economic sectors. This in turn promotes productivity growth, innovation and competitiveness. Given the fast pace of technological progress and the intensity of global competition, with labour markets requiring ever-increasing skill levels, high tertiary education attainment levels can sustain smart, sustainable growth. Education, together with health, is considered one of the most important priorities in which many countries invest the most money. Education has a significant potential to stimulate socio-economic development. In today's globalized world, there is a need for a highly-skilled workforce in terms of competitiveness, labour productivity and innovation trends (European Commission 2015).

Education, vocational training and lifelong learning play a key role in the European Union's (EU) economic and social strategies. Education and Training 2020 (ET 2020) provides a strategic framework for European cooperation in these areas of education. It pursues four common goals: to implement lifelong learning and mobility a reality; improve the quality and efficiency of education and training; to promote equality, social cohesion and active citizenship; increase creativity and innovation, including entrepreneurship. International standard classification of education (ISCED 2015; Rektořík et al. 2007).

As national education systems vary in terms of structure and curricular content, it can be difficult to make spatial or temporal comparisons when assessing their performance. In order to interpret the inputs, processes and outcomes of education systems, official statistics on education are compiled according to the International Standard Classification of Education (ISCED 2015). It is used to collect a variety of statistics covering topics such as enrollment and attendance, educational attainment or human or financial investment. Table 1. shows the EU regions with the highest proportion of people with a university degree.

The term tertiary education is used to refer to higher levels of education (ISCED levels 5-8). In 2018, there were almost 92 million children, pupils, and students enrolled across the EU in all levels of education from early childhood through to doctoral studies. Tertiary education (ISCED levels 5-8) builds on secondary education, providing learning activities at a higher level of complexity. It is offered by universities, vocational establishments, institutes of technology, as well as other institutions awarding academic degrees and/or professional certificates (OECD 2017; NESET 2013).

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Table 1. **Percentage of people aged 30-34 years with the highest proportion of people with a university degree**

Order	Community/ Region	Percentage (%)	Country
	EU	**40.3**	**European Union**
1.	Sostinés regionas	70.4	Lithuania
2.	Warszawski stoleczny	69.2	Poland
3.	Hovedstaden	64.2	Denmark
4.	Utrecht	64.1	Netherlands
5.	Stockholm	63.4	Sweden
6.	Ile-de-France	63.2	France
7.	Noord Holland	62.1	North Holland
8.	Bratislavský kraj	62.1	Slovak Republic
9.	Praha	60.9	Czech Republic
10.	Pais Vasco	59.0	Spain, Basque Country

(Source: Own processing according to Eurostat 2019 data)

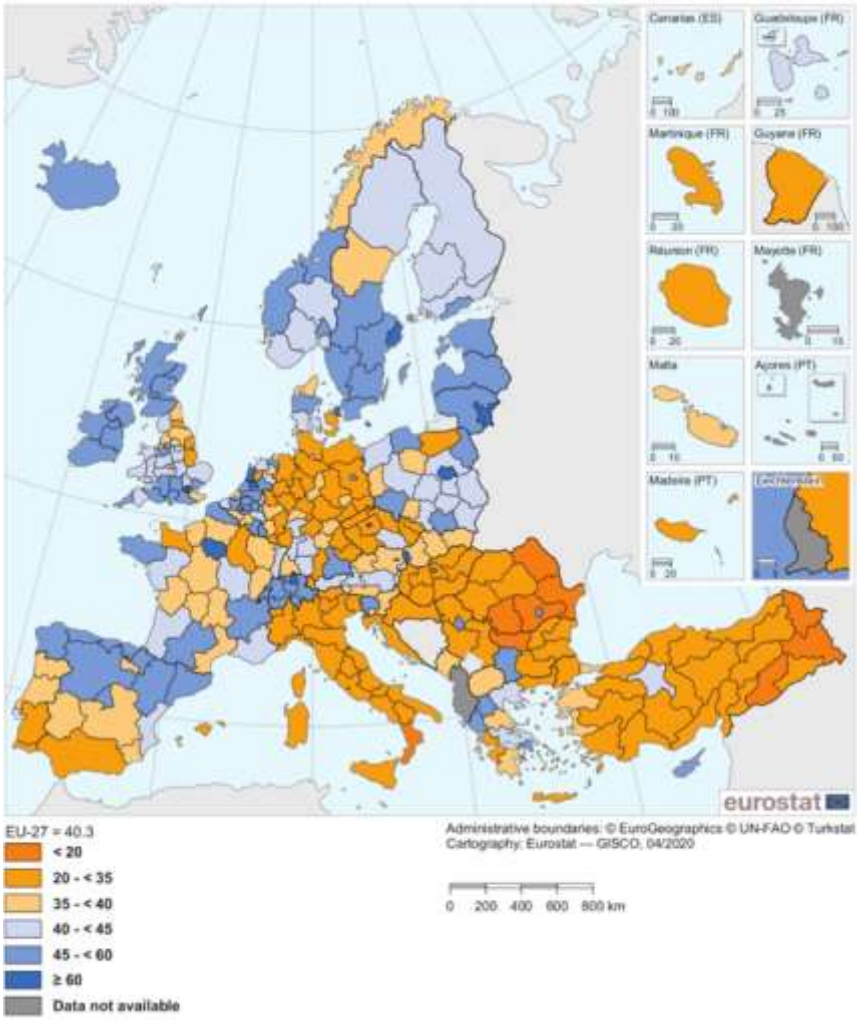
Less than half of all EU regions have achieved the policy goal they have set for tertiary education.

Within the EU, information was collected on the proportion of the population aged 30-34 who successfully completed the tertiary education program. This age group was chosen because most students completed tertiary education during their twenties (even if they completed a master's or postgraduate course). This indicator is part of the scoreboard used to monitor the European Pillar of Social Rights and is also the ET 2020 reference indicator. The goal is to increase tertiary education attainment in the EU to at least 40% by 2020. In 2019, more than two-fifths (40.3%) of the EU-27 population aged 30-34 had a tertiary education; the ET 2020 reference value has been reached. A more detailed regional analysis pointed to significant territorial differences – both within and between EU Member States. In 101 NUTS level 2 regions (out of 237 for which data are available), at least 40.0% of people aged 30-34 with tertiary education were in 2019. The highest number of university graduates was achieved in nine regions with a share of at least 60.0%. These are the regions of the capital of the Czech Republic, Denmark, France, Lithuania, the Netherlands, Poland, Slovak Republic and Sweden. Utrecht also belongs to this group, where there is a research centre with one of the largest universities in the Netherlands. In most of the remaining multi-region of the EU Member States, the capital region recorded the highest share of tertiary education attained (European Commission 2019; Eurostat 2019).

The only exceptions where the highest share was recorded in the non-capital region were the provinces of Vlaams-Brabant (Belgium), País Vasco (Spain), Adriatic Croatia (Croatia), Emilia-Romagna (Italy) and Utrecht. The regions of the capital attract highly qualified people, offering them various opportunities for education, employment, social contacts, lifestyle. Data from 2019 show the share of people aged 30-34 with tertiary education, which remained below the ET 2020 reference value of 40.0% in more than half of the regions (Picture 1.).

Many of them are rural or sparsely populated regions with a relatively large agricultural sector with a low level of highly skilled employment. In the eastern parts of many countries (Germany, Italy, Portugal, and several eastern EU Member States), every region, except the capital region, has experienced a relatively low take-up of tertiary education; opportunities reflects a traditional practice of following vocational programs instead.

Picture 1.: Tertiary educational attainment of people aged 30.34 years, 2019 (%, by NUTS 2 regions



(Source: Eurostat, 2019)

Application of tertiary education graduates in practice

Many different terms have been used in the higher education literature to describe the generic skills of graduates, and these commonly include the following: graduate attributes, competencies, qualities or outcomes; generic attributes; transferable, employability or soft skills; and core capabilities (Hill et al. 2016). The hierarchy develops from graduate attributes as specific knowledge, skills and values, through graduate profiles that refer to the summation of attributes at either programme or institutional level, culminating in the term graduate outcome, which is used to encompass both graduate attributes and graduate profiles. Graduate attributes are broader and more encompassing than employability, helping to develop academic, citizenship and career competencies. After graduation, there may be certain obstacles that reduce graduates' ability to enter the labour market. This is, in particular, the lack of relevant work experience, lack of skills, new technologies and globalization affecting industries. The overall shortage of jobs (during the economic crisis) is also an obstacle.

Each of the EU Member States is responsible for its own education and training policy. However, the EU supports national actions and helps Member States to address common education and training challenges through what is known as the open method of coordination: indeed, the EU provides a policy forum for discussing topical issues (for example, ageing societies, the skills deficits, or global competition) and also allows Member States an opportunity to exchange best practices (European Commission 2019).

The ET 2020 framework supports the EU Member States through policy cooperation and funding instruments: these include the Erasmus+ programme and European structural and investment funds. In 2015, there was a stocktaking exercise in relation to the implementation of the ET 2020, which resulted in six new priority areas for European cooperation, namely: promoting lifelong learning with a focus on learning outcomes for employability, innovation, active citizenship and well-being; inclusive education and the promotion of civic competences; open and innovative education and training; support for teachers, trainers, school leaders and other educational staff; transparency and recognition of skills and qualifications to facilitate learning and labour mobility; sustainable investment, quality and efficiency of education and training systems. The EU is in the process of building a European learning area aimed at enhancing learning outcomes and learning mobility, promoting common values and facilitating the mutual recognition of diplomas across borders. Since 2018, the European Commission has presented a number of initiatives aimed at improving the development of key competences (such as literacy, languages, digital skills and entrepreneurship); to make better use of digital technologies for teaching and learning, and to develop mutual recognition of diplomas (European Commission 2014).

In his policy guidelines, the President of the European Commission pointed to the need to create a European learning area by 2025. In this learning area, it is important to remove barriers to learning; improving access to education; to enable students to move more freely between education systems in different countries; enriching life chances by promoting lifelong learning; and promoting investment in digital skills for both young people and adults (European Commission 2020; OECD 2017).

In the EU-28, there were 19.8 million tertiary education students in 2017, of which 61% were studying for bachelor's degrees. In 2017, women accounted for 54% of all tertiary students in the EU-28; however, a majority of the students following doctoral studies were men. In 2017, nearly one-quarter of tertiary education students in the EU-28 were studying business, administration or law (Eurostat 2017).

Tertiary education, which is provided by universities and other higher education institutions, is very important in society, encourages innovation, increases economic development and growth, and significantly improves the living standards of citizens. Some European universities are among the most prestigious in the world. In the coming period, the demand for highly qualified workers will increase. Qualifications already exist in some EU Member States (OECD 2014).

Thanks to digital technologies, the supply of jobs is more flexible, but also more difficult for education and subsequently for work performance. The development of digital technologies has resulted in a growing number of employers looking for employees with the necessary capacity to manage complex information, creativity, independent thinking, intelligent and efficient use of resources and effective communication. In the present time, a relatively large number of students in tertiary education are internationally mobile and study abroad (Mager and Spronken-Smith 2014).

In 2017, there were 19.8 million tertiary students in the EU-28 (Table 2.), of which 7.4% studied in short-cycle tertiary courses, 61.0% in bachelor's studies, 27.7% in master's studies and 3, 8% for doctoral degree degrees. In 2017, Germany, the most populous EU Member State, had 3.1 million tertiary students, the highest number in the EU, accounting for 15.6% of the total EU-28. The next largest populations of tertiary students were France (12.8% of the total), the United Kingdom (12.3%), Spain (10.2%), Italy (9.3%) and Poland (7.8%), followed by the Netherlands, where 4.4% studied EU-28 tertiary students (OECD 2017, Eurostat 2017).

Table 2.: **Tertiary education in the countries of EU – Bachelor and Master degree of female and male**

Country	Tertiary total			Bachelor´s			Master´s		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Belgium	526.8	233.7	293.0	384.2	169.0	215.2	102.1	46.8	55.3
Bulgaria	249.9	115.6	134.3	165.6	79.5	85.1	77.6	32.9	44.7
Czech Rep.	352.9	150.4	202.5	206.1	88.2	117.9	122.3	48.8	73.5
Denmark	312.4	136.1	176.3	196.0	81.2	114.8	71.2	31.4	39.8
Germany	3,091.7	1,592.0	1,499.7	1,859.8	997.2	862.6	1,033.3	484.2	549.0
Estonia	47.8	19.6	28.1	30.3	12.9	17.4	14.9	5.6	9.3
Ireland	225.0	109.0	116.1	166.9	8.3	84.6	30.2	13.4	16.8
Greece	735.0	378.1	357.0	634.0	333.8	302.2	72.3	29.2	43.1
Spain	2,010.2	938.4	1,071.8	1,211.6	555.2	656.4	334.5	141.9	192.6
France	2,532.8	1,153.5	1,379.3	1,041.8	431.8	610.0	922.9	429.4	493.4
Croatia	165.2	71.4	93.8	99.1	46.3	52.8	62.7	23.6	39.1
Italy	1,837.1	815.1	1,022.0	1,102.1	509.3	592.0	696.2	284.0	412.2
Latvia	82.9	34.9	48.0	48.3	21.5	26.9	17.7	6.4	11.3
Lithuania	125.9	54.7	71.2	95.5	43.4	52.1	27.6	10.1	17.5
Luxembourg	7.1	3.5	3.6	3.2	1.6	1.6	2.5	1.2	1.3
Hungary	287.0	131.3	155.7	187.3	88.8	98.6	79.0	33.0	45.1
Netherlands	875.5	417.7	457.8	659.6	319.8	339.8	176.9	79.4	97.5
Austria	430.4	202.9	227.5	196.0	92.0	103.1	135.6	62.2	73.3
Poland	1,550.2	634.8	915.4	1,027.2	448.5	578.7	479.6	166.9	312.7
Portugal	347.0	162.3	184.7	200.6	91.5	109.1	15.8	54.6	61.2
Romania	531.6	245.0	286.6	347.9	168.5	179.4	164.5	66.6	98.0
Slovenia	79.5	33.8	45.7	44.1	18.1	26.0	21.9	7.9	13.0
Slovakia	156.0	63.6	92.5	85.3	35.5	49.8	60.5	23.1	37.4
Finland	295.5	138.5	157.0	211.1	101.8	109.3	65.6	27.8	37.8
Sweden	426.4	172.5	253.0	240.7	87.9	152.8	140.7	61.2	79.6
EU-28	19,773.2	9,088.9	10,684.4	12,071.6	5,628.6	6,442.9	5,484.8	2,355.0	3,129.8

(Source: Own processing according to Eurostat 2019 data)

In 2017, more students studied at the bachelor's degree level than at any other level of tertiary education in each of the EU Member States. France, Luxembourg, Austria and Cyprus were the only Member States where less than 50% of all tertiary students studied for bachelor's degrees. In the Netherlands (75.3%) and Lithuania (75.9%), more than three quarters of university students studied at the bachelor's level, and this share increased to almost nine-tenths in Greece (86.3%). Less than one fifth of all tertiary students was studying for a master's degrees in 2017 in Belgium, the United Kingdom, Spain and Ireland (as well as Serbia among the candidate countries), with this share falling below one-tenth in Greece (as well as in Turkey, Montenegro and North Macedonia). More than one-third of tertiary students were studying for master's degrees in Portugal, Germany, Czech Republic, Luxembourg, France, Italy, Croatia, Slovak Republic and Cyprus (Eurostat 2017).

In 2017, women accounted for 54.0% of all tertiary students in the EU-28. The share of women among tertiary students was slightly higher among those studying for master's degrees (57.1%), somewhat lower for those studying for bachelor's degrees (53.4%). In 2017, close to three-fifths of all tertiary students in Sweden, Slovakia, Poland, and Estonia were women. Women were also in a majority among tertiary students in all other EU Member States except for Greece (where they accounted for 48.6% of tertiary students) and Germany (48.5%). Across the EU-28, more than one fifth (22.2%) of all students in tertiary education were studying business, administration or law in 2017. Women accounted for a majority of the total number of students within this field of education. The second most common field of education was engineering, manufacturing and construction-related studies, which accounted for

15.3% of all tertiary education students. In this field, almost three-quarters of all students were male. The third-largest field of study was health and welfare, with a 13.6% share of all tertiary education students (Eurostat 2017).

Conclusion

Tertiary education provided by universities and other higher education institutions play an essential role in society by fostering innovation, increasing economic development and growth, and improving more generally the well-being of citizens. Some European universities are among the most prestigious in the world. Many commentators predict that in the coming years, there will be increased demand for highly skilled people. Driven by digital technology, jobs are becoming more flexible and complex. This has resulted in a growing number of employers seeking staff with the necessary capacities to manage complex information, think autonomously, be creative, use resources in a smart and efficient manner, as well as communicate effectively. Education is an essential part of any modern, successful and rich country. EU countries are no exception. The need for a university-educated workforce is increasing every year by employers. Educated graduates and workers are also needed in other areas of society, e.g. in healthcare, in the economic, social, legal, education, etc. One of the EU's main challenges is to ensure that policy developments are monitored to take account of the considerable geographical diversity in the EU. The territorial dimension of EU policy is increasingly recognized, as growth and job creation depend on making the best use of all resources while ensuring the coordinated and sustainable use of shared resources. This section provides an overview of some of the main EU policy developments that have a territorial impact.

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Kinga HORVÁTH, Péter TÓTH

Application of QTI query to explore the opinions of teacher students of the Carpathian Basin about ideal teacher interaction

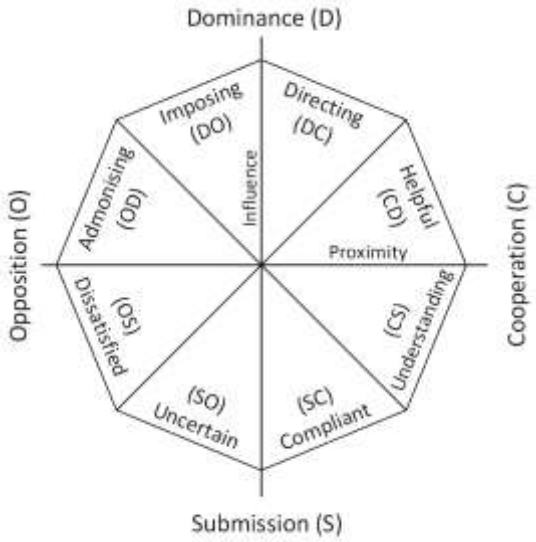
Applying Leary's model in education

The examination of the impact exerted by teacher behaviour on pupils' performance in a classroom environment is built on two early research fields. One is teacher effectiveness, and the other one is the examination of the interaction between individuals and their environment (Moos, 1979; Walberg, 1979). The most important finding of the latest 35-40 years of classroom researches is that the learning environment does have a decisive impact on learning (Dorman, 2003; Fraser, 1994). For example, in a study conducted in Singapore, Gohn and Fraser (1998) succeeded to find connections between the learning results and the patterns of teacher-pupil interactions. They organized a research series that was focused on classroom communication to explore the interpersonal relations between the teacher and the students (Wubbels – Brekelmans, 1998). The model developed by Watzlawick et al. (1967) gives a system-level approach to communication; this is the model that was used by Wubbels et al. when analyzing the interactions of pupil groups and their teachers. As a result of the system approach, the emphasis is put on the effects exerted by communication on the persons concerned. To get the pupils to form their evaluation of their teacher's activity, Wubbels et al. (1987) applied the general model of interpersonal communication that served as the starting point for Leary's (1957) work, as well. Even though the two dimensions were sometimes named in two different ways, they are apt to give a general description and evaluation of human interaction.

Thus, Wubbels et al. (1987) adapted Leary's model in the educational context, so the horizontal axis presents the level of cooperation between the teacher and the students (closeness, proximity), while the vertical axis shows who directs the teacher-pupil relationship (influence, impact). The excessive values of the previous one are teacher cooperation (C) and teacher opposition or rejection (O). At the same time, that of the latter one are teacher dominance (D) and teacher subjection or submission (S).

Based on all this, Wubbels et al. (1987), similarly to Leary, described the eight personality variables of interpersonal behaviour. Following the circumplex logic, they arranged the variables along the circle's circumference; this way, the model for interpersonal teacher behaviour was made (Model for Interpersonal Teacher Behavior, MITB, Figure 1).

Figure 1: ***The MITB model***



Source: Own figure after Wubbels et al. (1985), Fisher et al. (1995), Fraser et al. (2010) and Mareš – Gavora (2004)

Wubbels et al. (1985) found that there were two different aspects of characterizing teachers' behaviour: methodological-educational and relationship. The methodological-educational aspect manifests in selecting, organizing and implementing the educational methods. The relationship aspect supports and ends in the creation of the classroom learning environment. The relation between the teacher and the pupils was found to be extremely important in the teaching-learning process.

The methodological-teaching aspect reflects the teacher's vocational skills and professionalism, while the relationship aspect refers instead to his/her personality. In general, one of the factors is more dominant in the teacher's behaviour towards the pupils. However, they are not independent of each other since the chosen methods, in most cases, influence the relationship with the pupils and may change its quality. According to all this, we can infer two things from the MITB model: the relationship between the teacher and the pupil and the assumption that the interaction style is influenced by the teacher's personality. Based on the MITB and following Leary's example, a measurement tool, a query was elaborated (Questionnaire on Teacher Interaction, QTI) to examine interpersonal teacher behaviour.

The results of the pilot research implemented at the Faculty for Teacher Training of János Selye University are in line with Wubbels et al.'s findings. The interviews made with the students showed it clear that each of them held in mind the good relations with their teachers, the teachers' personality, communication and helpfulness as positive facts and experiences (Tóth-Bakos – Tóth, 2018). To develop teacher training at János Selye University, some researches are underway, in the framework of which we want to explore the individual characteristics of students (Zahatňanská – Nagy, 2020; Csehi – Kanczné Nagy – Tóth-Bakos, 2020).

Measuring interaction styles

The teacher's interaction style can be described by various methods. One of these is the QTI (Questionnaire on Teacher Interaction) measuring tool, the predecessor of which was the Questionnaire for Interactional Teacher Behaviour, QUIT query created by Wubbels et al. (1985). The original QUIT query, which was based on the ICL (Interpersonal Check List) prepared by Leary (Demetrovics, 2007), consisted of 77 questions and was developed for Dutch secondary school students (Wubbels – Brekelmans, 1998; Wubbels et al., 1991; Wubbels et al., 1985; Wubbels – Levy, 1991).

Some surveys examine interpersonal behaviour in terms of attitudes towards school subjects. In Australian secondary schools, most of the QTI variables were found to be an insignificant correlation with the learning attitudes in terms of classroom lessons in biology (Fisher et al., 1995) and mathematics (Fisher – Rickard, 1998). The pupils' attitudes towards the subjects were significantly positive in the classes where they felt that their teachers' behaviour was more strong-minded, helpful and understanding. The interrelations between interpersonal teacher behaviour and pupils' learning results were explored by den Brok, Brekelmans and Wubbels' (2004) research.

Kövérová (2015) examined whether the secondary school students' interpersonal behaviour was related to the emotions they experienced during the classroom lessons. She found that the strength of the pupils' negative feelings could be related to the "imposingness" (DO) variable of interpersonal behaviour. The more imposing (dominant, unsatisfied) they perceived their teachers of mathematics and Slovakian language, the more often they felt anger, fear, sadness, guilt and shame. The positive perception of the lessons was related to the directing and helpful variables of interpersonal behaviour.

Fisher, Fraser and Creswell (1995) proved that the QTI query was apt to describe what picture the teachers had of the ideal teacher, of themselves and of how they were assessed by the pupils. In general, we can state that the teachers evaluated their behaviour statistically more positive than the pupils did. Examining the teachers' interpersonal behaviour, a research conducted in Turkey (Telli et al., 2007) separated various interpersonal profiles.

The teacher-pupil relationship in terms of their attitudes concerning the subject (chemistry), their sex and skills (talent) was researched by Lang, Wong and Fraser (2005). They found that the behaviour of

the teachers of chemistry was assessed significantly more optimistic concerning the helpful, friendly variable (CD) by the talented girls than by the boys with average endowments.

Other authors also assert that the gender of the research participants does have an effect on the evaluation of the teacher's interpersonal behaviour. For example, according to research by Gavora, Mareš and den Brok (2003), female teachers seemed more persistent and determined and less unsure than their male colleagues. Examining the interaction style of teachers and class teachers teaching mathematics, Slovakian language and literature with the involvement of secondary school and 9th-grade pupils, Vašíčková (2015) refuted the above findings, saying that the pupils assessed the male teachers more helpful and less unsure than the female teachers, and were also more contented with them. She also found that the girls considered the teachers more positive than the boys did in terms of each variable. These findings lead to the conclusion that the teacher's behaviour has a significant contribution to the creation of the right relationship in the class (Wubbels, 2014).

Several scientific papers and publications have been written about the translation and the adaption of the QTI measurement tool to various school levels. Den Brok et al. (2003) report on the comparative validity and reliability survey of the QTI measurement tools in multiple languages used in six countries (Netherlands, United States, Australia, Brunei Sultanate, Singapore and Slovakia). The adaption of the QTI to the Indonesian language and the needs of higher education were presented by Fraser, Aldridge and Soerjaningsih (2010) in their study. Bacete, Ferrá, Monjas and Marande's (2014) study presents the adaption process to Spanish and the lower classes of primary school. The Slovakian version was prepared by Gavora, Mareš and den Brok (2003). The QTI was adapted to the Czech language by Mareš and Gavora in 2000; the peculiarity of this adaption was that the measuring tools consisted of 116 items (Mareš – Gavora, 2004). After a measurement implemented in the upper classes of primary schools, this query was modified to have 64 items by Lukas and Šerek (2009). The query indicated a high value in terms of reliability; the Cronbach-alpha value exceeded 0.9 in each sector, which could be considered an outstanding result. However, the construction validity (concept validity) of the test was low, which did mean a problem. During the construction validity test, the content relations of the measurement tool or scale are tried to be explored by defining teacher interaction as a psychological concept. The developers of the tool strive to turn the semantic information of the teacher interaction as a concept to be measured into an operational definition. The validity, in this case, means the extent to which the applied operational report covers the conceptual one. In case the two meanings overlap each other significantly, we speak of high-level construction validity. The correlation between the spesific sectors was only in partial accordance with the theory. As a result of further tests, a 59-item query was prepared (Lukas, 2010) and applied in the Czech Republic.

Researching interpersonal behaviour is a very exciting topic. The researches mentioned above point to and explore several correlations within the teaching-learning process that make sure that the teaching-learning process will be explained in the light of new elements and applying a holistic perspective. It is an exciting research field also because it has proved to be an adequate screening method that contributes to the immediate feedback of the teacher-pupil relationship and the self-reflection of teacher behaviour (Lukas, 2005) and the qualitative improvement of the teacher-pupil relationship or the teacher's professional development (Fisher – Fraser – Creswell 1995; Fisher – Rickards 1998).

Process of the Hungarian adaption of the QTI

Similarly to Leary' model, Wubbels et al. (1985, 1987) filled the area between the two axes with different personality characteristics according to how they appear in interactions and placed them in a circular diagram. The octagonal figure generated this way is made of eight triangle-shaped parts that are called sectors. These sectors or variables represent the teacher's interaction behaviour (Figure 2).

The order of the sectors is not random; the expressions of behaviour defined by the sectors next to each other stand closer than those being farther. The sectors that are taking place opposite each other bear reverse personality characteristics. And the industries that take the right angle (orthogonal) position compared to each other have no relationship (Mareš – Gavora, 2004).

Table 1: ***Explanation of the variables in the Hungarian version of the QTI***

Name of the variable	**Description of the variable**
Resolute, decided, directing (DC)	Warns what will happen; directs; organizes; assigns tasks; proposes solutions; explains; raises attention
Helpful, unreserved, friendly (CD)	Helps; shows interest; gets involved in processes; has a friendly and polite manner; has a sense of humour
Understanding, benevolent, striving to make consent (CS)	Listens carefully; behaves empathetically; shows trusts and understanding; is forgiving; urges to solve the conflicts; is patient and open
Permissive, soft-hearted (SC)	Offers space for independent work; waits until the class calms down; gives freedom together with responsibility; takes the pupils' proposals into account
Uncertain, undecided (SO)	Does not intrude in processes; gets pushed into the background; apologizes; waits to see how things will go; admits to be the faulty one
Dissatisfied, doubtful (OS)	Waits until the class calms down; ponders and demands calmness; expresses his/her dissatisfaction; has an angry and sullen sight; always puts questions; criticizes
Unconcerned, rebuking, warning (OD)	Often angry and hot-tempered; likes to prohibit and to point to mistakes, scolds; punishes
Strict, imperious (DO)	Controls, tests strictly and evaluates the pupils; demands silence; disciplines the class; insists that the rules and regulations are observed
Name of the variable	Description of the variable
Resolute, decided, directing (DC)	Warns what will happen; directs; organizes; assigns tasks; proposes solutions; explains; raises attention
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Source: own table after Fraser, Aldridge and Soerjaningsih (2010)

While making the Hungarian translation of the text, we strived to give the precise interpretation of the content of the words, so we applied double translation there and back and also involved practising teachers to check the terminology.

The names of the sectors indicated in Figure 1 refer to their content; however, to be more expressive, we also present more details in a table (Table 1).

Finally, we introduce the process of adapting the Hungarian version of the QTI and the relevant results of the pilot research.

Research objective, measuring tool and subjects of research

The question we searched to answer during our pilot research was: *What do teacher-to-be think about the ideal teacher interaction manner?*

In this study, we present the details of the process of adapting the Hungarian version of the QTI.

Interaction is considered an inevitable element and manifestation of social connection from a communication theoretical, psychological and sociological aspect, as well. Looking at the question

from an educational point of view, we can state that the teaching-learning process is an interaction chain between persons. In the classroom, most of the interactions happen between the teacher and the pupil(s) (teacher-focused education). However, the interference between the pupils must be of great importance, as well (pupil focused education). The means of implementing interaction at school is classroom communication both in the verbal and the non-verbal dimension.

Table 2: ***Persons involved in the research***

Institution	nursery school teacher	teacher of lower classes	teacher	nursery school teacher and teacher of lower classes	*Total*
János Selye University, Komarno (JSU)	130	0	67	0	*197*
Ferenc Rakoczi II Transcarpathian Hungarian College of Hungarian Education, Berezhany (FRTHC)	6	12	41	0	*59*
Partium Christian University, Oradea, (PCU)	0	0	20	17	*37*
University of Novi Sad, Hungarian Language Teacher Training Faculty, Subotica, (UNS HLTTF)	10	33	0	0	*43*
Total	*146*	*45*	*128*	*17*	***336***

The QTI measuring tool lays the stress on the complex examination of the teacher-pupil interaction, and it does so in three evaluation dimensions:

- judgement of the ideal teacher interaction,
- pupils' opinions about the interaction of the given teacher,
- the opinion of the given teacher about his/her own interaction.

In our research, we put the first dimension into the limelight, and applied the Hungarian version of the measuring tool published by Darrell Fisher, Barry Fraser and John Cresswell (1995). During the adaption, we paid special attention to having the tool translated by two experts there and back, to testing it several times and to having it critically examined.

In our research, we applied the 48-item version of the QTI.

The research involved 336 students of four Hungarian speaking teacher training institutions in four countries (Slovakia, Ukraine, Romania and Serbia) (Table 2).

The students' demographical data were as follows:

- *Grade*: 1 – 69.6%; 2 – 26.8%; 3 – 3.6%
- *Type of training*: full-time – 84.5%; correspondence – 15.5%
- *Sex*: female – 82.4%; male – 17.6%
- *Type of residency*: village – 61.6%; small town – 32.1%; city – 6.3%
- *Country of secondary school leaving exam*: Hungary – 21.7%; Slovakia – 37.8%; Romania – 10.4%; Ukraine – 17.6%; Serbia – 12.5%
- *Language of secondary school education*: Hungarian – 89.0%; Slovakian – 3.0%; Ukrainian 2.7%; Serbian – 0.3%; bilingual, one of the Hungarian – 5.1%
- *Type of secondary school*: technical school – 51.8%; grammar school – 48.2%

- *Own child*: none – 88.4%; 1-2 children – 10.8%; 3 or more – 0.9%
- *Existing higher grade qualification*: none – 96.4%; BA – 1.8%; MA – 1.8%
- *Place of stay during the studies:* parents' – 46.7%; sublet – 7.7%; hostel – 44.6%; relatives or friends' – 0.9%
- *Distance of residency from university*: 0-10 km – 17.0%; 11-100 km – 64.9%; 101-200 km – 7.1%; 201-300 km – 6.8%; 301+ km – 4.2%.

The research had a double concrete objective. On one hand, *to prepare and adapt the Hungarian version of the 48-item QTI query, and to map the opinions students attending teacher training had about the ideal interpersonal teacher behaviour* on the other.

During the examination, we searched the answers to the following questions:

- *How reliable can the measuring tool be considered in terms of certain sub-samples? Do the research results confirm the eight variables of the model?*
- *Can the results of the factor analysis be generalized?*

Reliability of the measuring instrument

We took the reliability of the measuring instrument as a highlighted issue. This problem was faced by Fisher, Fraser and Cresswell already at the beginning of the 1990s. They compared the reliability of the 77-item query applied by Wubbels, Brekelmans and Hooymayers (1992) in the Netherlands and by Wubbels and Levy (1991; 1993) in the United States to their own 48-item version applied in Australia (Fisher – Fraser – Cresswell, 1995). The Cronbach-alpha values determined in the certain dimensions proved to be lower than 0.7 in two cases: in terms of the variable imposing, strict (DO) and its opposite: compliant, soft-hearted (SC). Reliability was 0.63 and 0.66 in these cases. The first two of the referred three types of research were focused on the assessment of the pupil-teacher interaction and the teachers' self-evaluation, while the third one examined interactions only between the pupils. It can also be seen that, except for one case, the reliability of the Australian research was lower than the first two but exceeded the 0.7 level. There were 1105 pupils and 66 teachers involved in the Dutch research, 1606 pupils and 66 teachers in the American one and 489 pupils in Australia. These researches did not publish any data in terms of the third dimension.

The Cronbach-alpha reliability indicator is perfectly apt to be used for the examination of the inner consistency of the items constituting the given variables since it is defined as the arithmetical average of all of the inter-item correlation coefficients gained by split-half testing.

The professional literature takes the values 0.5 (Horváth, 1997) and 0.7 (Takács-Kárász, 2014) as the lower limit value of reliability or stability. A Cronbach-alpha above 0.9 can be considered a very high value that indicates that the values connecting to the variable are redundant, i.e. the same phenomena has been asked about several times. In our research, we took the domain between 0.6 and 0.9 as values acceptable from a reliability aspect.

Taking all this into consideration, we thought it was important to check the Hungarian version.

Each of the 8 octants in the 48-item QTI query included 6 items that were mixed up in the query. The examined person did not know which item belonged to which prototype of interpersonal teacher behaviour.

Table 3: ***The Cronbach-alpha values of the QTI octants***

Prototypes of interpersonal teacher behaviour	Full sample	Sex male/female	Training full time/correspondence	Type of secondary school technical/grammar
Directing, leading (DC)	0.711	0.717/0.706	0.684/0.821	0.721/0.704
Helpful, friendly (CD)	0.757	0.756/0.758	0.741/0.807	0.768/0.737
Understanding, open (CS)	0.736	0.817/0.674	0.731/0.752	0.732/0.742
Transferring responsibility to pupils, giving freedom (SC)	0.676	0.623/0.686	0.675/0.683	0.644/0.706
Uncertain, undecided (SO)	0.768	0.857/0.712	0.765/0.787	0.804/0.679
Dissatisfied, doubtful (OS)	0.756	0.795/0.739	0.742/0.817	0.770/0.733
Unconcerned, rebuking, confrontational (OD)	0.688	0.778/0.634	0.709/0.641	0.740/0.675
Strict, imposing (DO)	0.804	0.758/0.809	0.803/0.813	0.794/0.813

It is important to mention that reliability is strongly influenced by three factors: the homogeneity of the measured population, the number of the items and their scale. In this case, the population was made of students attending Hungarian speaking teacher training in the Carpathian Basin, most of them in the first grade. We used a five-grade Likert scale, and the number of the items belonging to one variable was 6 for all of the variables.

We presented the Cronbach-alpha reliability indicators in Table 3, and also presented the results by sub-samples. The variables that are opposite to each other in the QTI model have been put one under the other (Figure 2). In case we take only the nursery school teachers, the reliability of the variables of the query shift to the right in terms of almost each variable.

Based on the above, we can state that *the Hungarian version of the 48-item QTI measuring tool can reliably assess the opinions formed about the ideal teacher interaction by the students taking part in teacher training in the Carpathian Basin*.

Reliability test of the items by QTI variables

The 48-item QTI includes 8 variables, and each variable is connected to 6 items. By factor analysis, we checked *whether the research results verified the assignment of the items to the variables*.

First of all, we checked whether the variables were apt to be tested by factor analysis. The Kaiser – Meyer – Olkin number was 0.867, which could be considered as a very good result. The Bartlett test proved the aptness for factor analysis, as well (Khí-square= 5811.045; $p<0.05$).

We faced a serious dilemma when we wanted to determine the number of the factors. There were several methods to calculate it.

According to the Kaiser criterion, the number of the factor variables depends on the at least 1 eigenvalue limit. In our case, this means 12 factor variables. According to the professional literature (Sajtos – Mitev, 2007), it is reasonable to apply this method if the item number is between 20 and 50. In our case, this applies.

According to the proportion of variance method, one should select as many factors as needed to reach the minimum of the explained variance. For social scientific researches, this is 60 percent. By applying this method, we will gain 12 factors (explained variance 60.044%, eigenvalue 1.009).

The Scree Plot figure, too, helps to determine the number of factors. According to the elbow rule, the number of factors can be read from the curve where its gradient changes radically to become horizontal. In our case, this means a number between 6 and 10.

Finally, we applied the maximum-likelihood method, which, taking the correlation between the items into consideration, defines an insertion indicator. In our case, the number of factors is 14 (Table 4). This method is limited in that it is highly sensitive in terms of the deviation of the variables from multivariate normality. In our case, this applies strongly.

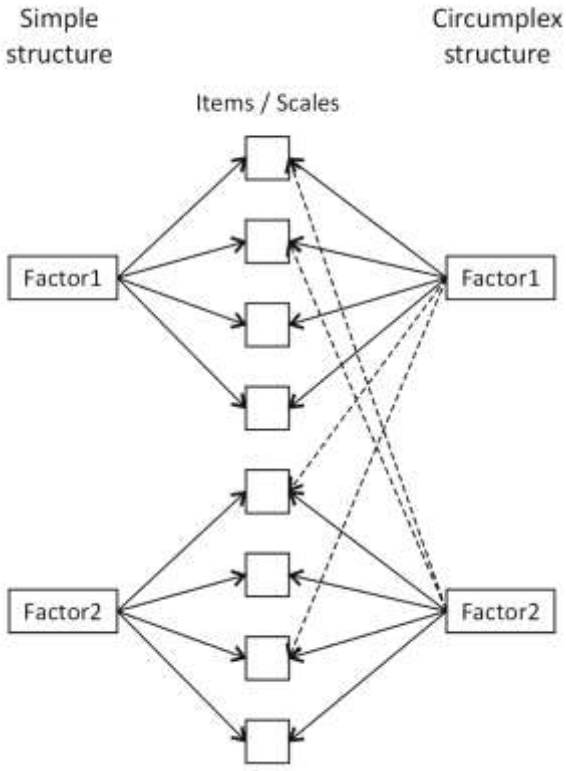
Table 4: ***The insertion indicators determined by the maximum-likelihood method***

	12 factors	13 factors	14 factors
Khí-square	721.318	653.279	583.338
Degree of freedom (df)	618	582	547
Significance	0.002	0.021	0.137

So, according to the above, it is not very easy for us to determine the number of factors, also with special respect to the fact that the MITB model counts with 8 variables (Figure 2), and all the data above stipulate much higher numbers of factors. However, we must not forget about the essence of the circumplex model, i.e. that one item can belong to several factors (Figure 2). This is also confirmed by Table 5.

Finally, we decided to apply the principal component analysis; when determining the principal components (factors), we used an a priori method and decided that the number of factors would be 8, but we also strived so that the cumulated variance proportion would approach the 60 per cent minimum level expected in social scientific researches; it was finally 51.203 percent. For variable compression, we applied the principal component analysis and then used the well-tried Varimax process (Table 5).

Figure 2: ***The circumplex approach***



Source: Own figure

Table 5: ***Rotated Component Matrix***

	Component							
	F1	F2	F3	F4	F5	F6	F7	F8
CS10	,727							
CS14	,663							
CD25	,647							,281
CD45	,621			,215	-,209			
CD33	,587				-,350		,216	
DC5	,569	-,304						
DC1	*,565*							
CS22	,564	-,271						,246
DC21	,558	-,271						
CS18	,550					-,406		
DC9	,548	-,302						-,367
DC13	*,545*							
DC17	,532				,233			
CD29	,500			,331	-,267			
CS6	,494				-,233		,322	
CS2	*,468*			*,242*			*-,206*	
SO7		,748						
SO3		,728						
OD20		,701						
OD16		,650						
SO23		,638						
OD8		,620	,224					
OD4		,610						-,279
SO15		*,540*						
SO19		,511			,290			,252
SO11		,491			,256			,320
SC30		,361		,338			,360	,359
DO44			,782					
DO40			,743					
DO28			,739					
DO36			,670					
DO48			,600		,268			
DO32			,593				-,202	

SC46		,330	-,447	,251			,213	
CD41	,227			,743				
CD37	,276			,709				
SC42				,556	-,201		,319	
OS39		,359			,669			
OS31		,353	,213		,534			
OS47		,331			,432	,401		
OS43					*,382*	*,348*		
OS27						,720		
OD12						,583	-,275	,226
OS35			,226		,246	,530		
SC26		,211					,644	
SC34				,414			,607	
OD24	-,217	,409						-,499
SC38		,333		,272	,328			,361

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

In terms of five items (DC13, SO15, DC1, CS2, OS43), the gained communality values were low, which raised the question of excluding them from the survey; however, these did not have a significant influence on the final results. This was also proved by the fact that the explained variance increased only slightly (53.821%).

Taking the number of elements in the sample into consideration, as well, when explaining the factors, we determined 0.35 as the minimum value of factor weight. Considering the rotated component matrix, the relation of the items to the factor variable was really interesting. Some factors, like F3, for example, confirmed a QTI variable fully since the same items were assigned to them as the developers of the query thought to assign (factor weights fell between 0.593 and 0.782).

There are some factor variables in which the items of several original variables appear (e.g. F1 and F2), but some of the factor variables are difficult to be identified (like F6 and F7) because the factor weights of the items belonging to them distribute between several factor variables.

The certain factors are explained according to this (N= 336 persons):

- F1: This is the most important factor variable. It contains the variables understanding, searching consent (CS), helpful, friendly (CD) and directing, leading (DC) almost fully. Behind these three variables, we can find positive opinions about teachers' willingness to cooperate.
- F2: Fully includes the QTI variables uncertain, undecided (SO) and rebuking, confrontational (OD). These two variables, although to a different extent, reflect the negative attitudes concerning the lack of teacher cooperation.
- F3: Consists almost fully of the items of the original variable imposing, strict (DO).
- F5: 4 items of the dissatisfied, doubtful (OS) variable appear in this factor, while 2 items have lower factor weights here and have higher weight in F6.

- F7: The factor variable can be connected to the QTI variable compliant (SC) as 2 items with high factor weight belong here. At the same time, it can be stated that two other items (42 and 46) belong or can be assigned to the factor variables F3 and F4.
- F4, F5, F8: Although to a various extent, these factors contribute to the explanation of the variance of several items, but by only low factor weights in most cases. According to the facts presented in terms of Figure 3, there is nothing to be surprised about this because it is a characteristic of the circumplex items that, unlike the classical factor approach, they may belong to several factor variables at the same time.

Summarizing all the above, we can state that *the factor analysis of the results gained during the pilot survey does not fully reflect the QTI variables*. We explain the gained factors from the teacher interaction aspect like this:

- Teacher interaction built on cooperation (F1 – CS, CD, DC)
- Teacher interaction lacking the effort to cooperate (F2 – SO, OD)
- Interaction based on strict teacher dominance (F3 – DO)
- Interaction based on distrust (F5 – OS)
- Teacher interaction based on uncertainty (F7 – SC)

From all this one can see that *the five identified factor variables rather verify the poles of the two dimensions: willingness (F1 and F7) and reluctance (F2, F3 and F5) to cooperate*.

Generalization of factor variables

During research, the question of how much the gained factors can be generalized in terms of the basic population always arises. This question can be answered by the cross-validation test of the factors. We divided the sample into two random parts and then compared the gained results. In both cases, we applied the principal component analysis and the varimax method for factor rotation and a priori took 8 as the number of factors.

The survey results of the two samples are presented in Table 6; the variables are apt for factor analysis in both part samples.

Table 6: ***Adequacy test results of the two sub-samples***

	Sub-sample A	Sub-sample B
KMO value	0.789	0.804
Bartlett test – Khí-square	3301.629	3671.983
Bartlett test – Degree of freedom (df)	1128	1128
Bartlett test – Significance (p)	0.000	0.000

The eigenvalue belonging to the 8 factors is 1.402 for the first subsample and the explained variance is 52.401% here, while these numbers are 1.321 and 52.559% for the second sub-sample.

Concerning the two subsamples, there is no significant difference in terms of assigning the variables to the factors; the rotated factor weights are similar (Table 7).

Table 7: ***Rotated factor weights of the two subsamples (detail)***

	Subsample A	Subsample B
DO44	0.756	0.834
DO40	0.742	0.742
DO28	0.737	0.730
DO36	0.661	0.659
DO32	0.642	0.552
DO48	0.579	0.652

The factors were saved into variables in terms of both subsamples, and the values gained this way were examined by correlation analysis. The correlation values between the factors are indicated in Table 8. As for the first three factors, we found a strong correlation between the subsamples, and the same applies to F7. There are some permuted factors, as well, like F4A – F5B, F5A – F6B and F8A – F4B. Factor F6A has the most complex system of connections.

Table 8: ***The Pearson correlation coefficients between two subsamples***

	$F1_B$	$F2_B$	$F3_B$	$F4_B$	$F5_B$	$F6_B$	$F7_B$	$F8_B$
$F1_A$	0.881**			-0.286**				
$F2_A$		0.878**						
$F3_A$			0.984**					
$F4_A$				0.353**	0.956**			
$F5_A$						0.894**	-0.248*	
$F6_A$	-0.334**	0.526**		-0.305**				0.576**
$F7_A$		-0.362**					0.803**	
$F8_A$				0.573**				

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Considering all the above, we can state that *the 48-item version of the QTI can be accepted as valid*.

Descriptive statistical indicators of the QTI variables and their comparison by background variables

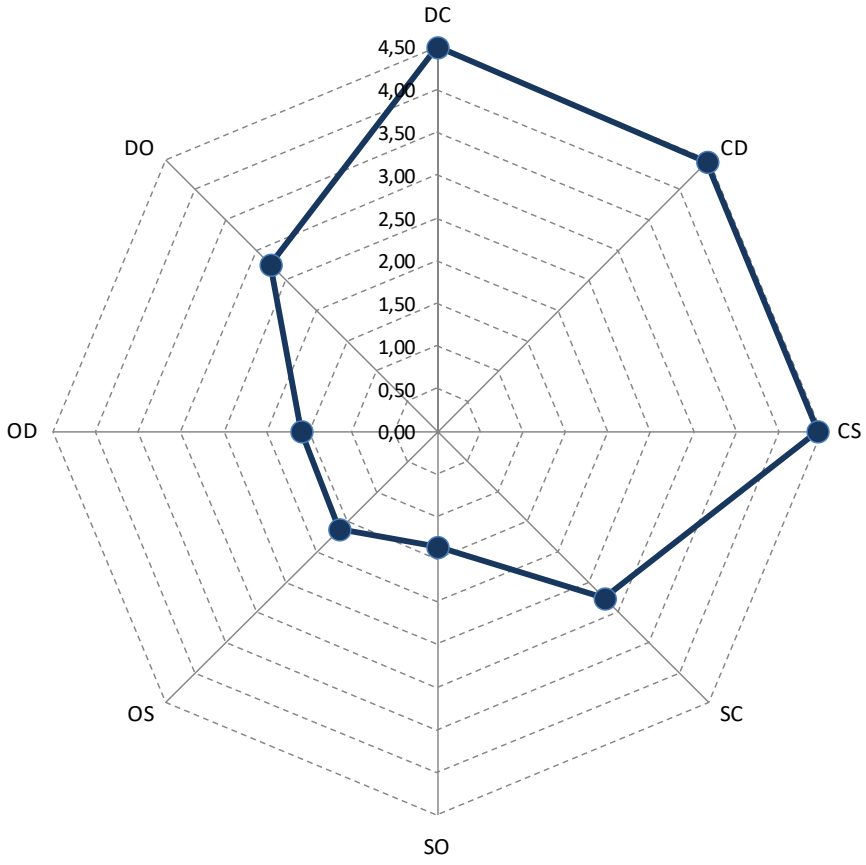
Finally, we present in brief the descriptive statistical indicators of the QTI variables gained in terms of the 336 students. These are summarized in Table 9 and depicted in Figure 3. Based on these, it can be asserted that according to the opinions of the teacher students of the Carpathian Basin, ideal teacher interactions are characterized by high values of directing, resolute, helpful, friendly and understanding, open-to-consent attitudes and low values of uncertain, undecided, dissatisfied, doubtful and rebuking and warning attitudes. It is only the imposing (DO) – permissive (SC) dimension where opinions are distributed (deviation is the highest in these two cases) concerning the ideal teacher interaction. It is not by chance that we can see normal distribution regarding these two variables.

The certain QTI variables were also examined in terms of the following background variables: sex (bv1), type of training (bv2) and type of school (bv3). As for the variables DC, SO, CS, OD, CD and OS, we used the Mann-Whitney test, while for DO and SC, we applied the ANOVA test. Table 10 presents the averages and deviation of the subsamples by background variables.

Table 9: ***Descriptive statistical indicators of QTI variables***

	DC	CD	CS	SC	SO	OS	OD	DO
M	4.4985	4.4648	4.4469	2.7688	1.3557	1.6235	1.5918	2.7604
SD	0.4142	0.4452	0.4389	0.5531	0.4987	0.5242	0.4828	0.6627
95% CI lower	4.4541	4.4170	4.3998	2.7095	13021	1.5673	1.5400	2.6893
95% CI upper	4.5430	4.5126	4.4940	2.8282	1.4092	1.6798	1.6436	2.8315
5 percentile	3.6667	3.6667	3.6667	1.8083	1.0000	1.0000	1.0000	1.6667
10 percentile	3.8333	3.8333	3.8333	2.0000	1.0000	1.0000	1.1667	1.9500
25 percentile	4.1667	4.1667	4.1667	2.5000	1.0000	1.1667	1.3333	2.3333
50 percentile	4.6667	4.6667	4.6667	2.8333	1.1667	1.5000	1.5000	2.7500
75 percentile	4.8333	4.8333	4.8333	3.1667	1.5000	1.8333	1.8333	3.1667
90 percentile	5.0000	5.0000	5.0000	3.3333	1.8333	2.3333	2.1667	3.5500
95 percentile	5.0000	5.0000	5.0000	3.6667	2.5000	2.6667	2.5250	4.0000
Normal distribution	-	-	-	+	-	-	-	+

Figure 3: ***The circumplex perspective***



Source: Own figure

Table 10: ***The averages and deviation of the QTI octants by background variables***

	DC	CD	CS	SC	SO	OS	OD	DO
Whole sample M	4,4985	4,4648	4,4469	2,7688	1,3557	1,6235	1,5918	2,7604
Whole sample SD	0,4142	0,4452	0,4389	0,5531	0,4987	0,5242	0,4828	0,6627
Male M	4,4010	4,2881	4,1864	2,7994	1,5113	1,7966	1,8051	3,0028
Male SD	0,4422	0,5008	0,5450	0,5403	0,7077	0,6026	0,6782	0,6503
Female M	4,5193	4,5024	4,5024	2,7623	1,3225	1,5866	1,5463	2,7088
Female SD	0,4058	0,4240	0,3921	0,5566	0,4362	0,4995	0,4177	0,6550
Full-time M	4.4888	4,4319	4,4190	2,7553	1,3515	1,6121	1,5833	2,7412
Full-time SD	0,4041	0,4425	0,4441	0,5460	0,4845	0,5103	0,4974	0,6602
Correspondence M	4,5513	4,6442	4.5994	2,8429	1,3782	1,6859	1,6378	2,8654
Correspondence SD	0,4662	0,4201	0,3781	0,5908	0,5746	0,5965	0,3943	0,6732
Technical school M	4,5038	4,4234	4,4473	2,7500	1,4071	1,6734	1,6149	2,7328
Technical school SD	0,4199	0,4651	0,4490	0,5354	0,5747	0,5591	0,5452	0,6373
Grammar school M	4,4928	4,5093	4,4465	2,7891	1,3004	1,5700	1,5669	2,7901
Grammar school SD	0,4092	0,4196	0,4291	0,5725	0,3957	0,4800	0,4055	0,6897

While making comparisons in terms of the students' genders, we found that, except for the variables SC and SO, there were significant differences concerning the sexes (DC: Mann-Whitney U=6761.000; p=0.035; CD: Mann-Whitney U=6140.000; p=0.002; CS: Mann-Whitney U=5303.000; p=0.000; OS: Mann-Whitney U=6482.500; p=0.012; OD: Mann-Whitney U=6533.500; p=0.014; DO: Levene Stat.=0.107; p=0.743; F=9.828; p=0.002).

We compared the students' preferences in terms of the type of training (full-time, correspondence), as well. We found that there were only two variables, CD and CS, that bore significant differences (CD: Mann-Whitney U=5207.500; p=0.001; CS: Mann-Whitney U=5549.500; p=0.004). As for the type of the students' secondary schools, we found no significant differences.

Summing up all of the above, we can state that from the three presented background variables, *variance can be best explained by the students' sexes*. Concerning the DO variable, explained variance rate is h2=16.9%.

Table 11 presents the correlation system of the QTI variables in our research (right from the diagonal) comparing it to the results gained in a research done with the involvement of the students (of informatics and management) of a private university in Jakarta (Indonesia) (left from the diagonal) (Fraser et al., 2010). The biggest divergences are shown in italics.

Table 11: ***The Spearman correlation between the QTI octants***

	DC	CD	CS	SC	SO	OS	OD	DO
DC		0.489**	0.645**	*-0.077*	-0.326**	-0.180**	*-0.258***	*0.110*
CD	0.60**		0.579**	*0.273***	*0.203***	-0.277**	-0.165**	-0.067
CS	0.49**	0.51**		0.039	-0.276**	-0.372**	-0.324**	*-0.102*
SC	-0.25**	-0.17**	-0.06		0.327**	*0.088*	*0.199***	-0.168**
SO	-0.42**	-0.33**	-0.40**	0.69**		0.279**	0.444**	-0.045
OS	-0.26**	-0.41**	-0.62**	0.35**	0.75**		0.459**	0.321**
OD	-0.04	-0.34**	-0.83**	-0.31**	0.20**	0.68**		0.183**
DO	0.34**	0.17**	0.18**	-0.21**	-0.11*	0.12*	0.25**	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Within the MITB model presented in Figure 1, the octants or prototypes next to each other have, in theory, negative correlation while those opposite to each other are in strongly negative correlative relation, and the prototypes taking an orthogonal position to each other have, in theory, no correlative relation. (Wubbels et al., 2012; Wubbels, 2014). Regarding our results, the variables opposite to each other have medium-strong negative relation with one exception (DO-CS: r=-0,168), while those next to each other have strong positive relation with one or two exceptions (DO-DC: r=0,11; CS-SC: r=0,039; DO-OD: r=0,183). As for the octants taking orthogonal positions, the picture gained has been rather mixed both in terms of our own research and the one implemented in Indonesia: there have been hardly any cases of correlation coefficients taking a value around zero. Our research found a correlation coefficient close to zero only in terms of DO – CD and SC – OS, while the Indonesian research did so in terms of OD – DC.

We checked up on this issue in two other researches, as well. The researches done by Stefano Passini et al (2015) with Italian secondary school pupils and by Zainun Misbah et al (2015) with students in agrarian vocational training found similar outcomes. The latter one provided weirdly similar results in this dimension. Table 12 presents the correlation values of the variables taking orthogonal positions from the four researches mentioned above.

Table 12: ***Correlation between the QTI octants taking orthogonal positions***

	Own research	Research by Fraser et al.	Research by Passini et al.	Research by Misbah et al.
DO – CD	-0.067	0.17**	-0.22**	-0.03
DC – CS	0.645**	0.49**	0.69*	0.52**
CD – SC	0.273**	-0.17**	0.48*	0.20**
CS – SO	-0.276**	-0.40**	-0.30*	-0.14**
SC – OS	0.088	0.35**	-0.31*	0.02
SO – OD	0.444**	0.20**	0.11**	0.40**
OS – DO	0.321**	0.12	0.37*	0.47**
OD – DC	-0.258**	-0.04	-0.26*	-0.12**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.001 level (2-tailed).

All in all, we can declare that both our research and those implemented abroad *give only partial proof of the correlation contact system between the variables of the MITB model developed by Wubbles*, and this particularly applies for the variables taking right angle positions to each other.

Summary

Our research aimed to develop the Hungarian version of the QTI query. The original version of the query was elaborated by Wubbles et al. in the middle of the 1980s in order to examine interpersonal teacher behaviour. This query has been used in several types of research all over the world.

In the background of the QTI we find the MITB model developed by Wubbels et al. that was based on Leary's circumplex model on the one hand and Watzlawick – Beavin – Jackson's communication model on the other.

Leary (2004) explained five levels of the social-interpersonal behaviour of personality. He elaborated 128-item queries (ICL) only for levels I., II. and V. These also served as a base for compiling the original QTI.

In the second part of our study, we presented the results we had achieved during the adaption of the QTI query to the Hungarian language. Our research involved students from Hungarian speaking teacher training in the Carpathian Basin. We asked them about the ideal teacher interaction that corresponds to level V. of the original Wubbels model (self-ideal) during the survey.

In our paper, we found that the Hungarian version of *the QTI query was valid, reliable and verified the circumplex model well*.

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Moses NJENGA

Informal CPD practices by TVET teachers in Kenya

Introduction

As a developing country, Kenya needs high quality and effective TVET for its development. However, quality TVET depends on competent TVET teachers, who are, in turn, the outcome of quality initial teacher education as well as effective Continuing Professional Development. Therefore, Kenya must develop mechanisms to provide high quality and effective CPD to its TVET teachers. While this is obvious, resource constraints have often limited the professional development available to TVET teachers. However, part of the challenge in availing CPD is rooted in a narrow conception of what legitimate and effective CPD is.

The literature on Kenya's TVET teachers' paints a depressing picture of teachers who infrequently participate in Continuing Professional Development. The literature mainly focuses on formal and non-formal CPD as the only viable forms of teacher CPD. Given that existing professional guidelines only recognise and reward formal learning, it appears that TVET teachers have a preference for formal CPD. However, traditional education is expensive and inflexible, and consequently, only a few teachers can participate in it. Non-formal CPD, on the other hand, requires external facilitators and financiers, who, due to resource constraints, are rare. If researchers, therefore, seek evidence of CPD by focusing only on formal and non-formal learning, they are likely to report low participation in CPD.

Adult learning literature, however, suggests that due to the demands of their work, teachers will seek to learn to meet the needs of their work (Henschke, 2009). TVET teachers may therefore have been engaging in informal CPD because it is more flexible and less expensive. Unfortunately, the literature on informal CPD in Kenya is scant. Everyday learning practices may, therefore, be standard but simply unsearched and un-documented. This possibility presented the rationale guiding this study. It was hypothesised that informal learning might be typical but simply under-researched and, therefore, undocumented.

Accordingly, and owing to the limited prior research on the topic, the study sought to profile the informal leaning practices by TVET teachers in Kenya in terms of frequently used learning methods and the reasons for choosing those methods. The study further sought to identify what challenges teachers face as they learn informally and seek their views on improving informal learning.

Literature Review

Adult learning literature identifies an even broader set of learning practices. Foley G. (1999) identified four specific forms of adult learning, namely, formal education, non-formal education, in-formal education and incidental learning. Formal and non-formal education entails systematic instruction, but while formal education follows a formally defined curriculum leading to some form of recognised qualification, non-formal education may be one-off or sporadic and often does not lead to formal qualifications. Informal learning, on the other hand, lacks formal instruction. But unlike incidental learning, the learner or learners are conscious of their need to learn, consciously engage in learning and reflect on their learning processes and outcomes. This typology of leaning practices enables us to focus on in-formal learning practices as an alternative to formal and non-formal learning practices where no external facilitators who organise and provide systematic instruction can be identified.

The literature on teacher CPD similarly adopts an expansive conception of teacher learning and the methods teachers can use to learn. In their classification of learning methods, Richter et al. (2010) group Foley's (1999) formal and informal education as traditional learning. Learning methods specific to teacher CPD in this category include graduate course, workshops, and seminars in which experts disseminate information relevant to teachers' work. Again, the criteria for formality is structured

learning following a specified curricular and facilitation by experts. These have also been termed as traditional methods, or discrete learning methods (Boyle, Lamprianou, & Boyle, 2005; Boyle, While, & Boyle, 2004; Desimone, 2009; Kennedy, 2014; Postholm, 2012).

On the other hand, informal learning lacks a specified curricular and participation is by the initiative and self-direction of the teacher. Leaning methods identified in this category are reading books and other professional literature, classroom observation and collaborative learning. Others are mentoring and action research. Owing to their close interaction with the context of teachers' work, the methods are termed as embedded and have the advantage of relating directly to teachers' daily and routine tasks. They further enable continuous reflection on practice and its outcomes (Desimone, 2009; Kennedy, 2005; Richter et al., 2010).

As expected, the value of learning does not depend on the type of knowledge, but the learning process's characteristics. This was confirmed by Desimone's (2009)review of literature on the features of CPD that lead to sustained learning outcomes. Desimone and later OECD (2013)found that CPD is sufficient if the learning it entails is focused on relevant content, and the learnt content is coherent. Further, professional development must involve active learning and be of sufficient duration. Finally, education should be collaborative. This is the case whether the CPD is formal, non-formal or informal. Thus, CPD need not be traditional to be effective; instead, informal CPD may be sufficient while being easier to organise and drawing more significant commitment from teachers. It is, therefore, justifiable to investigate everyday learning practices as a first step in seeking to enhance their effectiveness.

The criteria for effective CPD closely mirrors and is, in fact, a restatement of the general principles of adult education. Knowles (1970) and Henschke (2009) summarised adults learn best when they are actively involved in their learning and accordingly prefer teaching processes that are active and interactive. Further, due to their time perspective, they seek understanding that is of immediate application, and that relates to their current needs and social roles. It, therefore, follows that CPD, as a form of adult education, is useful only if it aligns with these principles by being relevant to the needs of teachers, being coherent, involves active and collaborative learning and is of sufficient duration of time.

Methodology

The study adopted a mixed-methods design involving a survey questionnaire and semi-structured interviews. Both the questionnaire and the semi-structured interviews focused on the informal learning practices of TVET teachers in Kenya. The questionnaire listed standard everyday learning practices and asked respondents to indicate how frequently they used the methods. Respondents were further asked to rate how helpful they find the ways to be. To profile the informal learning practices according to the characteristics of the teachers, the questionnaire also collected data on the personal and professional attributes that were expected to influence informal learning.

During the oral interviews, respondents were briefly asked to provide similar data. However, the talks focused more on the reasons underlying the existing practices at the individual and group level. For example, interviewees were asked how often they had seen their colleagues learn collaboratively and the reasons that might explain the observed frequency.

Participants were randomly selected from three TVET institutions in Kenya's Nairobi Metropolitan area. The institutions were selected based on location, one in an industrial town, one in the centre of the capital and one in the less urbanised area of the metro.

Hypotheses

It had been hypothesised that teachers would participate in the informal learning practices that they found most helpful. Literature has suggested that the career stage of a teacher influences the learning practices of teachers. Accordingly, it had been hypothesised that early career stage teachers would wish to participate in all the various informal learning opportunities. Early career stage teachers were

also expected to desire all forms of teacher knowledge (content knowledge, pedagogical knowledge and pedagogical content knowledge) owing to their limited exposure to all facets of teaching. Middle career stage teachers who often lack time due to additional duties were expected to report lower participation rates. Late career stages were, on the other hand, expected to have similarly low participation rates, with their learning focused more on content knowledge rather than pedagogical experience and pedagogical content knowledge. Other attributes, such as gender and family status, were not expected to play a role.

Informal CPD practices had been grouped into three categories, namely, collaborative learning practices, practice-based learning activities and self-paced learning activities. Besides, teachers were asked how often they read professional literature. Reading professional literature was evaluated separately from other self-paced learning activities to get a more detailed view of the reading habits of the teachers.

Findings

Description of the respondents

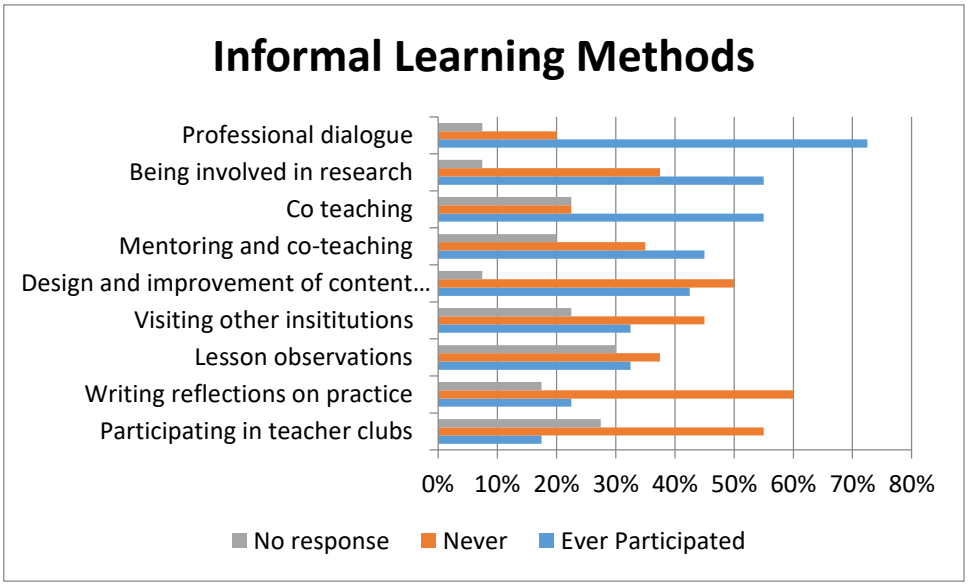
Data collection took place during the months of July and September from the three selected technical training institutes. In total, forty validly filled questionnaires were obtained, and from each institute, a volunteer teacher was chosen to participate in the oral interviews. The majority of the respondents were male, 22 of who filled the questionnaires and two who participated in the oral interviews. All the respondents had received some form of formal pedagogical training; three had a PhD degree, eleven had a Masters degree, nineteen had a Bachelors degree, and seven had a Diploma. The majority of the respondents were middle career stage teachers, having worked form more than five years but less than twenty, while eight were early career stage teachers who had worked as a teacher for less than five years. Only three teachers were in their late-career stage.

Use of Informal Learning Methods

From the survey data, informal learning methods appear not to be very common. Only five per cent of the teachers said they allow their colleagues to observe them teach. This response agrees with responses from the oral interviewees. Interviewed teachers indicated that lesson observation and team teaching rarely happens. Co-teaching, as practised in the TTIs, was revealed not be the classical form where the teacher teaches a lesson together in the same class. Instead, a subject is split up into topics, and each teacher introduces an issue on his own. Thus the other teacher does not get to learn from his or her colleague. The chart below shows collaborative methods and their reported use frequencies by teachers who reported having participated in collaborative learning practices at least once in the past year.

Similar to collaborative learning activities, teachers rarely engage in embedded and practice-based learning activities. More than half of the teachers said they had never participated in the design and improvement of content, materials and learning practices. At the same time, two-thirds indicated that they never write reflections on their way and outcomes. However, a higher number said they had participated in some research, but the proportion of those who said they had not attended was still high at 40 per cent.

Figure 1**: Informal Learning Methods**



From the chart, it is clear that professional dialogue with colleagues is the most common collaborative learning method. More than half the teachers said they had never participated in mentoring other teachers, visiting other institutions, observing others teach or participated in teacher clubs. These learning methods are, therefore, very rare.

The responses from the interviews supported the survey data and gave the impression that they are even rarer than what the survey data showed.

From the interviews, it was clear that the teachers appreciate the value of collaborative learning activities. However, and in agreement with the survey, they said such collaborative learning activities rarely take place. The first interviewee was enthusiastic about team teaching, arguing that it helps both the learners and the teacher:

> *"Learners benefit from the better-placed person; I also learn from a better-placed person".*

However, these activities are rare. Interviewee-Two was specific when asked about collaborative learning practices.

> *"Well…for some time, we have rarely done that..... what we have done has been very formal".*

The same teacher went on to explain:

> *".....the aspect of team teaching has become a challenge. Getting two people to one place at the same time is a bit difficult. ....you can maybe share some knowledge, but not real practical collaboration whereby you have two or three people at the same time, complementing what the other is doing... it is a bit difficult."*

The reasons given for the lack of collaborative learning were the lack of time and the lack of a framework to guide collaborative and other informal learning practices. Interviewee-One put it blankly: *"Not particularly, time does not allow*".

Interviewee-Two gave a more detailed response, noting that the student population has increased and the demand for teachers time. As such, teachers do not have the time to do anything else other than attending their classes and teach. There is simply not enough time to learn.

The widespread lack of collaborative learning practices was also deemed a cultural issue. Interviewee-Three was emphatic that the organisational culture at present did not support collaborative teaching practices. In her opinion, teachers in her institution lack the openness and collegiality that promotes

collaborative learning. She blamed this on the competitive nature of the evaluation system, where student performance is seen as a teacher's performance.

Where culture is absent, it may not develop spontaneously. Thus, Interviewee-Two indicated that teachers tend to follow what has been going on in their institutions.

"…it is a cultural issue. At times we go as per what has been going on".

However, the teacher then emphasised that this may also be because of the lack of time owing to the large number of students that the teachers are expected to handle.

Interviewee-Two and Interviewee-Three indicated that institutions sometimes carry out benchmarking where they visit other institutions to see what happens there and what their institution may learn from the visited institution. But this does not normally involve teachers per se, but the Heads of Departments often look at benchmarking as a management learning activity. The benchmarking exercises, therefore, take an administrative sense and focus on management challenges rather than pedagogy. Benchmarking, as practised, therefore, fails to support teachers develop and improve their teaching skills.

As Interviewee-Three indicated, benchmarking activities fail to benefit teachers because learning is not shared with other teachers.

"Benchmarking? Yes, it happens. But not me. They just pick the HODs only to go, and just check what is happening in other institutions in terms of administration, how they are dealing with just that. But when they came……they did not talk with the staff... how it went or what we are supposed to be changing, or what are we adopting…..there is nothing that was discussed."

Self-paced learning

As a self-paced learning activity, reading about teaching had the highest participation rate, with 93.1 per cent of all the teachers saying they engage in self-paced reading about teaching. It was also the activity that teachers found most useful, with 93.8 per cent of the respondents saying they found it helpful and only 3.1 per cent saying they did not find it helpful. The self-paced learning activity with the lowest participation rate was reading general educational theory, with only 58 per cent of the respondents saying they read educational theory more than rarely. It also had the highest percentage of teachers who felt that it was unhelpful to their work as teachers. The responses are shown in Table 1. below.

Teachers likely read about teaching as they seek to address the specific problems they face. They, therefore, find it useful because it addresses real concerns that they are dealing with.

Table 1: **Self-Paced Learning Methods**

	Read about teaching methods and practices (%)	Watch videos about teaching methods and practices (%)	Read about my teaching subjects (%)	Watch videos about my subjects (%)	Read about theory (%)	Read Primary Literature (%)	Read Secondary Literature (%)	Read Tertiary Literature (%)	Read Grey Literature (%)
Frequently	82.4	78.8	77.8	64.7	58.1	72.7	66.7	81.1	67.6
Rarely	11.8	12.1	13.9	20.6	22.6	15.2	18.2	13.5	11.8
Never	5.9	9.1	8.3	14.7	19.4	12.1	15.2	5.4	20.6
Helpful	93.8	83.9	85.3	80.6	71.4	74.2	80	89.2	74.2
A little helpful	3.1	6.5	8.8	9.7	10.7	9.7	10	5.4	9.7
Not helpful	3.1	9.7	5.9	9.7	17.9	16.1	10	5.4	16.1

From the interviews, the teachers prefer self-paced learning activities because of the control over one's learning that is inherent in self-paced learning activities. Interviewee-One said this about the use of You-tube and other free learning resources available online:

"Because you now able without having to interact with the person directly, get to hear what they are doing, how they are doing it, what kind of results they got,……so in away it is just like reading a book or some journal somewhere. You are able to pick up some additional information. Indeed you can stop it and watch it later... unlike a session where you have to go for one hour, and you have to sit and listen to it from the beginning to the end and... if you miss out on something, you have missed out. With this one ...you can rewind, you can interact with this one in your own way."

Sources of information

To evaluate their sources of information, participants were asked to indicate how frequently they used particular sources.

Respondent teachers mostly obtain information from and prefer to read tertiary literature as opposed to primary literature and secondary literary. A significant number, 20 per cent of the respondents, also do not read grey literature related to teaching, such as educational policy documents. Teachers mainly read literature to keep their content knowledge up to date, with 84.6 per cent of the respondents giving this as the reason for reading literature. Only 10.3 per cent read literature as part of their masters and PhD studies, and the only one said they read literature because they are involved in the research. It is likely that respondents rarely participate in any research apart from desk research related to their teaching activities. It is also interesting that they choose to keep their knowledge up to date by reading tertiary literature rather than primary literature. More research needs to be conducted to explore why this is the case.

The patterns are represented in the charts below. The expectation that teachers who find a particular practice helpful will report participating in them more frequently is met.

Choice of method

The teachers were further asked to state how helpful they found various informal learning activities to be. To simplify the analysis, responses were categorised as useful, not helpful and not participated. Helpful consisted of those who stated that the methods were beneficial, fairly beneficial, helpful and a little helpful. Many teachers chose not to evaluate how practical the methods are, choosing instead to indicate that they had not had the opportunity to participate. The responses are shown in the chart below.

A close-tabulation of the participation in professional dialogue and teacher's evaluation of how helpful the methods are perceived to be shows that teachers who had participated more than twice rated professional dialogue as very helpful. Twenty-two respondents indicated that they had participated more than two times, and seventeen of these (77 per cent) felt that professional dialogue is constructive. This finding supports the expectation that teachers participate more frequently in the learning activities that they find useful.

The cross-tabulation is shown in the table below.

Similar patterns were observed with the rest of the collaborative learning activities.

Figure 2: **Choice of Learning Methods**

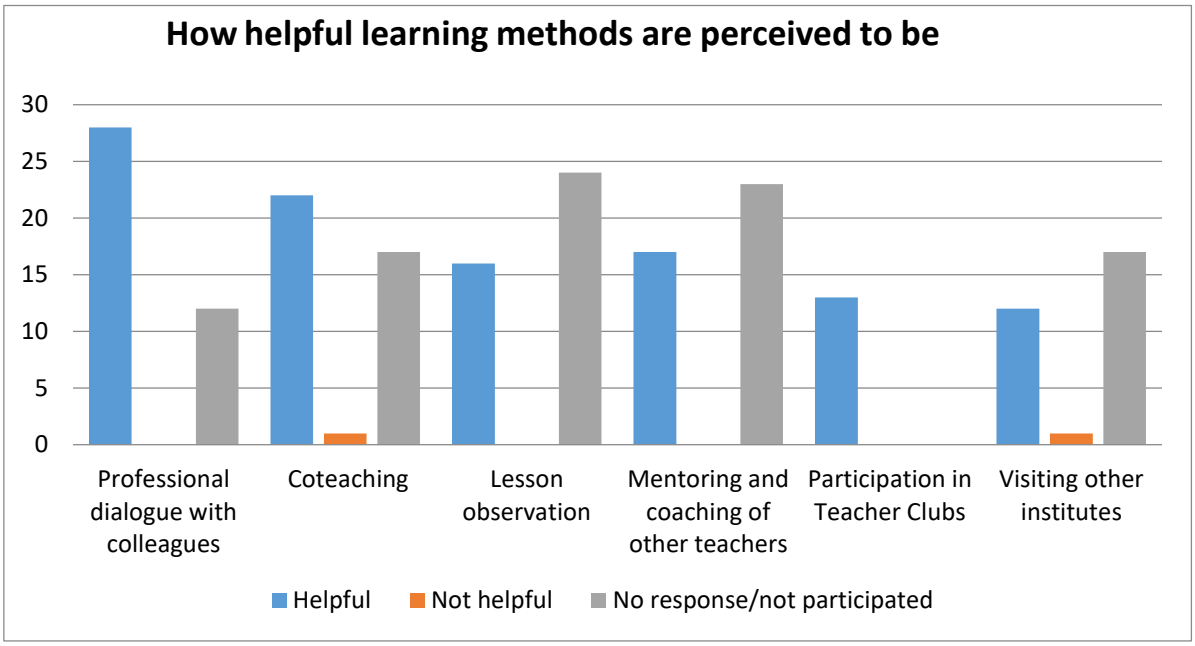


Table 2: **Cross tabulation of helpfulness and frequency of using professional dialogue**

		How helpful is Professional dialogue with colleagues?				Total
		Very helpful	Fairly helpful	Helpful	A Little helpful	
How many times have you participated in professional dialogue with colleagues?	At least twice	17	1	3	1	22
	Once	3	1	1	0	5
	Never	0	0	1	0	1
Total		20	2	5	1	28

As expected, teachers who had participated more frequently in the design of content and learning materials found this activity helpful to their work as teachers. None of those who indicated having participated in this activity felt that it was unhelpful. Some of the respondents who said they had never participated in the design of content and learning materials still evaluated the activity as helpful to their work.

Table 3: **Cross tabulation of designing content and finding it helpful**

		How helpful do you find "Design and improvement of teaching content, materials and practices"				Total
		Very helpful	Fairly helpful	Helpful	Not helpful	
How many times have you participated in "Design and improvement of content, materials and practices"	Twice or more	11	1	0	0	12
	Once	1	1	2	0	4
	Never	2	1	0	1	4
Total		14	3	2	1	20

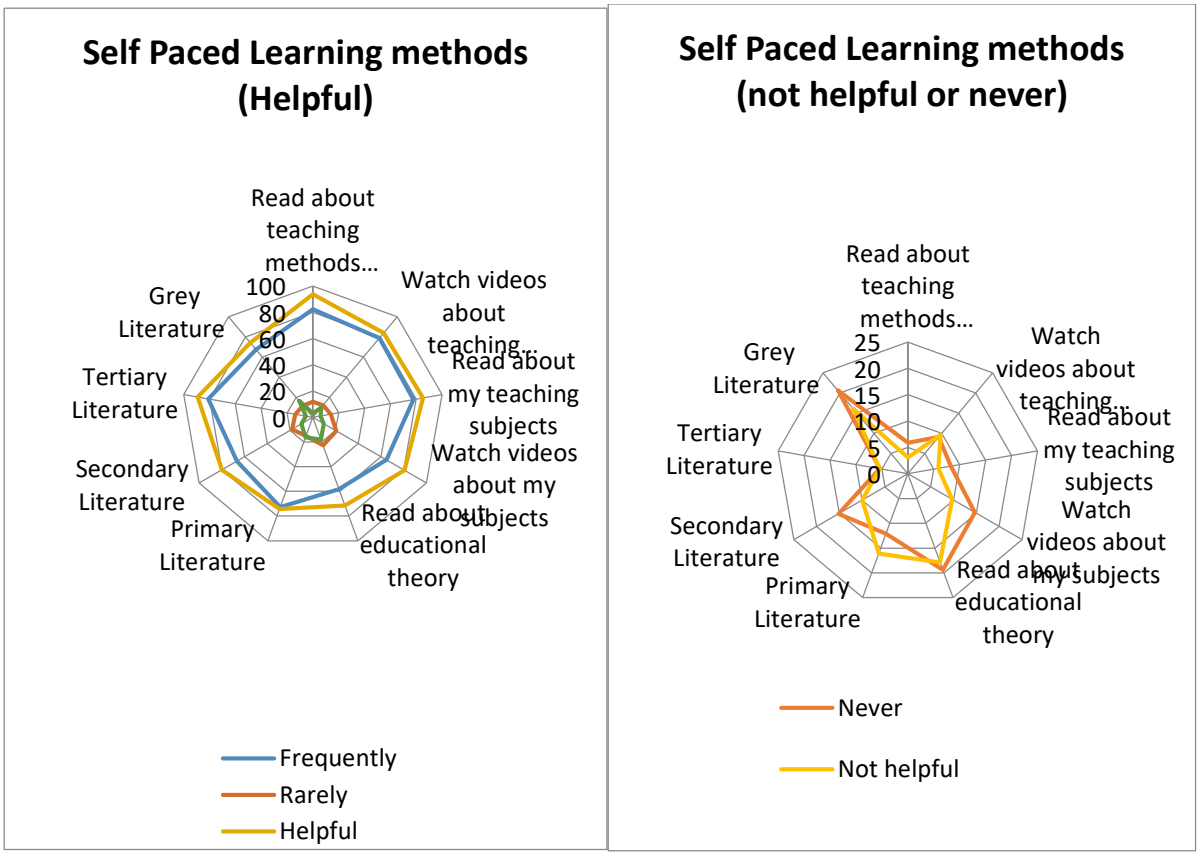
This observation was repeated from the cross-tabulation of the frequency of writing reflections and evaluating the writing of reflections as helpful. None of the teachers evaluated writing reflections as unhelpful. Many simply skipped this question because they have not had prior experience with this learning activity. See the table below.

Table 4: **Cross tabulation of writing reflections and finding it helpful**

		How helpful do you find "Writing reflections on practices and their outcomes"			Total
		Very helpful	Fairly helpful	Helpful	
How many times have you participated in "Writing reflections on practice and their outcomes"	Twice or more	4	0	1	5
	Once	1	3	0	4
	Never	1	1	1	3
Total		6	4	2	12

It can therefore be concluded that nosomebody'sesitive correlation between how helpful teachers find a particular learning activity to be and how frequently they participate in that activity. However, the data set is too small to evaluate this with a stronger statistical test.

Figure 3: **Comparison of the use self paced learning method based on how helpful they are perceived to be**



Forms of support

Equally rare as a form of learning and as way to support others learn is the use of mentorship. While it is logical to expect a higher percentage of middle and late career stage teachers to report having mentored their colleagues owing to their many years of practice, mentorship does not correlate with age or with the number of years worked as a teacher. The interviewees gave an insight into the low rates of mentorship stating that is no framework to guide mentorship. Mentorship is therefore ad hoc.

With respect to mentorship, Interviewee-One said that teachers mentor one another out of their own goodwill. There is simply no framework to guide mentorship. In the teacher's view, mentorship take the form of guiding junior teachers improve how they work. He further explained that there is no framework to guide and institutionalize mentorship in the institutions.

> *"To some extent, but it is not something that is very formalized..... that one is out of somebody's heart.....out of my heart. You want to point out something to somebody who has come in but not because it is expected or that there are guidelines for it."*

Table 5: **How teachers support other teachers learn**

	Frequency	Percentage of total sample
Mentor new/junior teachers	24	60
Participate in discussions about practice	22	55
Teach lessons for other teachers when they attend professional learning activities	9	22.5
Allow other teachers to observe my lessons	2	5
Participate in co-teaching	12	30

From the interviews, it was apparent that there is also no framework to support teachers go out of school for professional learning activities. This observation agrees with the survey data, where only a small proportion of the respondent teachers said they support their colleagues to learn by teaching their lessons while their colleagues are away on professional learning activities.

Conclusion and Recommendations

This study found that teachers are desirous of having control over their learning and seek methods that give them that control. The finding agrees with the general principles of adult learning. Adults generally prefer learning methods that give them control to pace their learning and select the content to focus on. They further prefer to focus on content that relates to their immediate needs and social roles (Henschke, 2009; Knowles, 1970; Thompson & Deis, 2004). Informal CPD, therefore, finds acceptance among teachers because it always them to exercise their agency. However, the full expression of general principles is often limited by context (Collier 2005). In this case, the strong demand for formal learning by the existing professional and career guidelines that TVET teachers in Kenya are subject to force teachers to focus prefer formal learning methods. Further, the organisational culture does not appear to support collaborative learning methods. Teachers, therefore, are therefore unable to obtain the full benefits of learning collaboratively with their colleagues. Informal learning methods, and in particular self-paced learning methods, should therefore be recognised and supported. Accurate methods of reporting self-paced learning should be developed to provide the evidence needed for rewarding teacher learning, such as of Teachers'arnings.

It is likely that an increase in collegiality could encourage collaborative learning and therefore produce a virtuous cycle of ever-increasing collegiality and learning. It is therefore further recommended that avenues to both encourage collegiality and collaborative learning be sought as a way to support either outcome.

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Flóra KANCZ

As a Foreign Student of Hungarian Descent in Hungary

Introduction

The cultural complexity of our world is extremely diverse. Meetings of people from different backgrounds can shape, transform, and add to the individual's social and personal attitude and way of life. In our country, especially in the capital, which is very popular in terms of tourism, we can observe this phenomenon the best. We can meet many foreigners on the streets of Budapest, but in many cases, we do not have the opportunity or need to find out about their personal life history and background. Since many visitors come to our country only for tourism purposes, most people do not even think that some of them who speak a foreign language return home to Hungary somehow. In my research, I examined Western young people from abroad with a Hungarian language background. However, the students participating in my study do not stay in Budapest to tour: they participate in a one-year training aimed at developing their Hungarian language and identity. I examined four students studying in the same class of the same institution in more detail. The study of their personal history, their attachment and relationship to our country, their social integration, and the change in their identity came into my research focus. In my study, I gained a deeper insight into the everyday lives of these young people from different cultures, with different backgrounds, with different mother tongues, but studying in the same facility. During these students' studies, the main goal was to improve their Hungarian language skills and strengthen their identity. Still, in addition to all this, friendships were formed through the professional college and the joint cultural programmes provided to them. The central question of my research is the following: How does the linguistic identity of young people of Hungarian descent living in the diaspora change as a result of the institutional impact of Hungarian minority policy during their stay in Hungary? I conducted my research by combining the methods of ethnographic analysis and sociolinguistics.

An Overview of History

Throughout history, Hungary has tried to help its neighbouring countries. In recent decades, however, they have been open to overseas nations, providing several essential opportunities that support minorities with a Hungarian background across the border. These second-and third-generation students all grew up in Western countries where their Hungarian ancestors moved out. The subjects of my research came from mainly South America, Australia, Canada, and European countries not neighbouring us. The diaspora has historically developed in these nations. At the 2006 Canadian Census, 315,510 people considered themselves to be of Hungarian descent, and in 2011, 69,160 people in Australia. In Latin America, the census does not discuss ethnicity, so there are various estimates that there are about 12,000 people of Hungarian descent in Argentina, 8-10,000 in Brazil, 4,000 in Venezuela, and 2,000 in Chile (Tolcsvai 2017). Living under the conditions of bilingualism, life is characterized by constant vulnerability; the use of the Hungarian language is increasingly being pushed into the background as with their own educational institutions, they use it only in fragments (Bartha 2000). The other term typically used in relation to Western Scattered Hungarians in the diaspora. This term refers to those geographically fragmented communities of migratory origin that have integrated into the society around them. Still, assimilation has not taken place completely, so they interact

symbolically or objectively with related communities living in other areas but of the same origin (Gazsó 2019). After the regime change, Hungary began to deal more seriously with Hungarian communities living abroad. Initially, however, these steps were directed only at neighbouring countries. Laws and programs supporting diaspora communities not neighbouring Hungary only came into being after 2010. This year, the Hungarian Parliament passed the law on dual citizenship, which allowed foreign Hungarians living in the Carpathian Basin or beyond to acquire Hungarian citizenship. A year later, these citizens also received the right to vote, and the Hungarian Diaspora Council was formed, and at their annual meetings, they deal with Hungarians who lived abroad. In the following years, several programs were launched which aimed at the diaspora, such as Julianus, Sándor Kőrösi Csoma and Kelemen Mikes Programs (Gazsó 2019).

An Introduction to the Research Context

Balassi Institute

The students I examined are students of the Balassi Institute in Budapest. The institution of the international relations system of Hungarian culture plays a central role in learning and teaching Hungarian as a 'language of origin'. Its main task is to spread and popularize Hungarian culture. There are similar facilities in 21 countries, which also aim to strengthen our culture throughout the world like Bálint Balassi spread the good reputation of Hungarians in contemporary times with his humanist education and poetry. The young people who studied in my paper are members of the group living in the Western scattering. All of the students who studied in our country is part of a scholarship program. Students also include Chilean, Dutch, Australian, Canadian and Argentine nationalities. Each of the students is studying in our country through a scholarship program. The Ministry of Foreign Affairs and Trade announced an application called the Áron Márton Scholarship for a period of 10 months. Young people of Hungarian origin, aged 18-35 living in a diaspora, can apply for the training. Applicants must have foreign citizenship but may also have Hungarian citizenship. When assessing students' applications, it is an advantage to carry out community work, to submit a university recommendation, or to participate in an activity related to culture and art in social circles (Ministry of Foreign Affairs and Trade 2019).

The students studied

Most of the students I observed were scouts in their homelands. According to the Argentine participants, this is due to a large percentage of their knowledge of the Hungarian language. Although only their grandparents spoke Hungarian, they still acquired a significant part of their language skills in scouting. In the institution, therefore, the refinement of grammatical knowledge plays a greater role for them. During our time spent together, the subjects recalled their scout years countless times. They sang Hungarian folk songs, which were performed with precise pronunciation, knowing all the verses of the song, and this period left a strong imprint on their vocabulary: they often used archaic words, such as mondottam, ostor or frequent use of the conjunction s. Mária Aldea, a former lecturer at the Balassi Institute, puts it this way: 'Whether a young person has joined a scouting community is also very important in terms of language level and awareness. Scouts can only speak Hungarian in camps and weekend classes, learn many folk songs, learn about the most important figures in Hungarian history and literature, and commemorate our national holidays. All this shape and enrich their vocabulary, especially their verbal expressiveness. In the Zrínyi Circle in Argentina, grammar and spelling are taught as well. However, students who do not join the Scout community or other Hungarian cultural communities often do not even familiar with a single rhyme or folk song, cannot

read a single Hungarian poem and have no knowledge of Hungarian history before participating in the training' (Aldea 2005: 133). Among the young people I observed, there were several who performed other cultural tasks: a Dutch girl whose native language is Dutch was an assistant teacher at a folk university. He taught the Hungarian language to the adults studying there and later assisted in a similar job in the classes of the local Hungarian primary school. Moreover, a girl from Chile served as an event organizer at the Hungarian House there.

Description of the studies carried out by the students studied

Students who are admitted receive an extensive educational program. The Institute provides useful knowledge from language school teaching methods to the acquisition of Hungarian and translator skills. The young people living in the Western scattering I examined took part in the Hungarian knowledge training in 2019/2020. Its purpose was to strengthen the identity of young people with a Hungarian background living in the diaspora, their attachment to our country and culture, and their preparation for cultural organizing work in various ways among the scattered Hungarians. We achieved this by greatly improving language skills and passing on modern knowledge about Hungarian culture. At the end of the 2020 semester, an internationally recognized, intermediate or advanced ECL language exam was taken from Hungarian. Our education follows two different curricula, adapting to the different language skills of the students admitted:

	Type A training	**Type B training**
language skills	beginner	advanced
grammar lessons	high number of lessons	lower number of lessons
first semester	grammar lessons only	Hungarology lessons
second semester	Hungarology lessons	Hungarology lessons
classes starting in the 2019 semester	level A1: 1 class level A2: not started	level B1: 1 class level A2: 1 class
language exam at the end of the year	B2	C1

As there is a transition between groups B1 and B2, students have the opportunity to learn Hungarian at a level appropriate to their language skills, concerning their teachers and fellow students, without the need for compliance. This passage was justified by the case of one of the boys, who needed to pass the intermediate level exam in order to achieve a higher rank as a scout. He felt that he was not doing well enough to take a higher-level exam at the end of the year, so he attended Group B1 classes in the second semester. In general, instructors try to make sure that everyone takes the exam according to their abilities, so at the end of the school year, the level and type of the language exam is decided by the language level assessment committee. The students I examined, except for the abovementioned boy, all performed at C1 level.

Although the subjects of my analysis were the members of the second group, the students of the other group also played an important role in my study, as most of the times, I did my research when they were also present. A close friendship developed between the classes 'in different hierarchies'; they helped and supported each other in terms of both language skills and social relationships. In many cases, I was also expected to receive confirmation and help, especially from students in type A training. The members of this class came to our country in such a way that they barely spoke our language, so the first semester was all about learning Hungarian. While at first they hardly dared to speak in public at all, by the second half of the year, they were expressing themselves more and more boldly in Hungarian. Based on my observations, the positive change was clearly seen in Canadian and South American girls over time. They acted more and more in Hungarian communities and made more and more efforts to use our language as many times as possible. During a board game, the Hungarian members of the company were asked to have a conversation between them in Hungarian. When Hungarian native speakers had to paraphrase a word, students from abroad said when to speak more slowly, perhaps to articulate better, or to express themselves in other words. In the turns where they had to explain, students in the advanced group helped them translate the words. The process of paraphrasing happened in English, but everyone guessed in Hungarian. The development of their knowledge of the Hungarian language was also due to the folk dance practised and liked by both girls. They took part in dance events created several times a week in order to nurture Hungarian folk culture.

Content elements of the training

The curriculum included the topics of the following compulsory lectures and seminars:

- history,
- fiction,
- linguistics,
- folk traditions,
- history of art and music,
- natural geography,
- society,
- economy,
- culture,
- political system.

In order that the students can successfully master the Hungarian language, they take part in 14-28 language lessons a week. Hungarian' language of origin'-education takes place in groups of 5-10 people, and the language level calculated on the basis of the results of the grammar test written at the beginning of the year determines the depth at which they start their studies (Ministry of Foreign Affairs and Trade 2019). The concept of the language of origin' in the present case means the minority migrant language, as Hungarian cannot be called a mother tongue in their case according to the general interpretation of the mother tongue, so it is not the dominant language we speak best' (Csire-Laakso 2014: 20). Five of the students in my research started the semester, but after a few months, there were only four left because a Brazilian girl could not meet the language requirements that would have

corresponded to the group level, so she agreed with the instructors to continue her studies one level lower thus she dropped out of the subjects.

During the Hungarian language lessons, the checking of the students' language competence is continuous: the test is written in modules in order to realistically assess the students' current knowledge. They also make written and/or oral presentations that require independent work. They only have to lecture one or two of them within a semester on different topics related to the subject of 'Hungarianness'. The members of the group also spoke about the poetry of folk customs (regölés in Hungarian), today's health care, as well as Hungarian athletes of the past and present. In addition, students write two papers during the lessons. The title to be submitted in the first semester was My Cultural Identity. Depending on the language level, the training ends with a final exam. Students can choose from any topic related to Hungarianness. There are people from group B2 who studied the phenomenon of migration in our country, and there are those who made researches on midwives or mental illnesses, others studied the Hungarian worldview after the 1956 revolution. To conclude the course, students take a written and/or oral exam from each course.

Experiences of class visits

During my research, I was given the opportunity to attend classes at the institution. In addition to the lessons related to the Hungarian language, culture and history reminiscent of high school education, the teachers place great emphasis on strengthening the students' Hungarian identity. This phenomenon is more noticeable in the second semester, when, in addition to the development of the foundations acquired in the first semester, philosophical, psychological and cultural issues come to the fore. The professional seminars are held with a lot of conversations, expressing the opinions of the students. At a seminar on Hungarology at the beginning of March, for example, the lesson got the title Personal. Fates in the history of the XX. Century. The lesson was interactive, the atmosphere was 'relaxed' and cheerful. The exercise began with a quiz to repeat the previous material, and then, in the context of a fictional story, the situation of the Jews living in the contemporary ghetto was the subject of the lesson. The instructor brought in various old items, including personal (a photo, a poem volume, a medal) and other 'necessities' (a coffee grinder, sugar). The task of the students was to fit these things into the different life situations of the young Jewish boy, invented by the teacher. In conclusion, they finally formulated together with the role that these otherwise insignificant objects could play in difficult times and that how many private objects could have been helpful in the bitter periods of the past. This was followed by recent interviews in which an elderly Jewish man recounted situations that the instructor had previously described to the students and whose solutions the students could come up with, thus confronting them with the real story behind the objects. After the video recording, however, the educator did not ask about the content but about the interviewee's behaviour. Emotions, moods, ways of recalling lived moments came to the fore. Concepts such as discrimination, stereotypes or exclusion have emerged. The students had to find a definition for them, and their suggestions were clarified in a joint discussion. In another class on Hungarian studies, the teaching material was entitled Lyric and Philosophy. Students could read excerpts from Sándor Márai's Füves Könyv and Sándor Weöres's Towards Completeness. It was about the universe, faith and getting to know ourselves. The instructor was curious about the opinions of young foreigners, and they analyzed and discussed various texts, which are often difficult for even a native speaker to interpret. The readings evoked thoughts from students about the importance of experiencing love, positivity, and pain and shared them meaningfully and honestly with each other and with the instructor. Nor did the history lesson took

place regularly within the walls of a grammar school. Although the Hungarian War of Independence and Revolution came to the fore, the emphasis was on the instructor's understanding of the state of mind of the Hungarian warriors and the people suffering the battles at that time. He asked many times what they could go through, what emotions they could evoke from people in the state, and repeatedly highlighted the moments that could be sore points for the people, making students better understand them and more easily put together the war of independence processes.

Educators try to pay attention to each student; this is also helped by the small size of the group; they return to and revise together the most/more difficult and complex words several times during the lessons. Seminars are interactive, so there are often video screenings that are subtitled in cases where the recordings do not have good acoustics or contain difficult words. Texts used in the class are usually read by students, but if the text is in a more strenuous language, teachers try to present it slowly, well-articulated, and clearly. Although the Hungarian language skills of the students participating in the study were extensive when they arrived here, they greatly improved during their studies at the institution; in addition to vocabulary development, proficiency in speaking genres is also taught in the classes. Students gain practice in argumentation, discussion, lecture, etc., in Hungarian. Overall, the teaching style can be said to be practical, the language of teaching is mundane, yet students have to master many technical words. The atmosphere is intimate and calm, and the methods do not match the patterns experienced by the average Hungarian student during their secondary and tertiary studies. In addition to the application of modern pedagogy, the teachers try to emphasize the strengthening of the students' Hungarian identity, as well as provide assistance in integrating into Hungarian communities.

Strengthening the attachment to Hungarian culture in training

In addition to education, students have the opportunity accompanied by their teachers to participate in various pre-organized cultural events, exhibitions and dance houses. The themes of each program are related to what has just been learned and, of course, to the Hungarian people. The students I interviewed first approached these cultural programmes with ambivalent feelings, as mandatory events organized in educational institutions are generally not very exciting for students.

Exhibitions

Nevertheless, the exhibitions were explicitly enjoyed. The only negative case that occurred was the guided tour, which was conducted in Hungarian, so comprehension was difficult for beginner students, who signalled this to the museologist, who, however, did not comply with their request and did not change her pace and wording.

Theatrical plays

Of the theatrical pieces, the more modern ones were preferred, but they also liked the classic Stephen the King. One of the students of the Hungarian knowledge group also made a shocking remark to the actor. In her native country (the Netherlands), theatrical performances are often interactive, dealing with current social problems interwoven with personal stories, and after the drama, questions can be asked of the playwright and director countless times. Knowing all this, it is understandable why the conservative, more puritanical pieces were less enjoyable for her. At the end of the performance, however, she became aware of a certain phenomenon unusual to her, along with her groupmates. As the audience began to applaud, they observed that the process changed from slow to fast and then slow again, with everyone doing it at once. On the first piece, they thought it was just a coincidence,

but the second time they found the phenomenon strange, they told me their observation. The theatrical applause that was clear and unquestionable to us filled them with shock. The Dutch girl said there is no such kind of applause in their country, they are simply pounding their palms together fast, and they do not understand why people do not do that here. At the third performance, however, they already knew that this event was not accidental, so they could already consciously apply the' Hungarian applause custom'.

Excursions

However, according to the program concept, a domestic and a 'foreign' trip are part of the school year. In the year studied, the destination of the former trip was Eger, which was attended by all students of the grade. In the historic city, students could visit the castle, churches, caves, baths, participate in wine tastings, and spend a lot of time in nature. In addition to all this, they were involved in continuous team-building games, during which they had the opportunity to get to know each other's personality and culture better. The students really enjoyed this multi-day trip. Based on their accounts, after the return, their relationship had even been strengthened with each other.

College

The Institute also provides a professional college for students from abroad, thus participating in the implementation of the international mobility programs of the European integration process (Ministry of Foreign Affairs and Trade 2019). In addition to the public specialist library, the college provides a number of community rooms for those coming from abroad. Most of the classrooms are on the same level as the living rooms, so students can feel more at home in class.

Summary

The subjects of my research within the framework of this institutional system included residents of the professional college as well as the participants of the advanced level B2 Hungarian language training. As Hungary provides more and more opportunities for teaching students with a Hungarian background from abroad, more and more students are being informed and taking advantage of the forms of education provided by the country. Also, this learning process shapes and strengthens both their identity and their language, and the Balassi Institute plays a significant role in this. The students studying there all have positive attitudes towards the institution. The facility, which brings together different cultures and forms them together, has enriched the lives of students with unforgettable experiences.

Teachers' disciplined but attentive style positively influences the course of lessons as well as students' behaviour and skills. The lessons give a comprehensive picture of Hungary, its history, culture and language. In addition, the various school programs and the time spent in the dormitory strengthen both their Hungarian linguistic and social identity.

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