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Foreign Language Learning in a Digital Environment - Results from a Primary Research

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Abstract: Education is a priority for all national economies. The current rapid changes are taking place in all areas of our lives. In today's globalised world, language skills, their development and their use at a skill level are essential. We all feel the need for renewal. Over the last two decades, technological factors such as computers, the games industry and the internet, as well as social factors like family, friends and society, have influenced the way children think and behave. Education is an area where innovation is needed for a number of reasons. It provides solutions to the challenges of the new age. For the digital natives of Generation Z, digital tools and methods have become part of everyday life. However, the introduction of innovation-related initiatives and methods is a complex and difficult process. Education professionals are still divided on digital education and digitally-enabled learning materials. The present study aims to present a picture of present student and teacher attitudes towards digital education.

Keywords: Digitalisation, Digital education, Innovation, Technology

Introduction

Teaching in virtual spaces is a phenomenon that affects and can impact all subjects. In this study, the learning and teaching of English is a particular area of focus. In different roles, we are confronted every day with the fact that students are more enthusiastic and have higher success factors in lessons based on digital learning materials. Digital learning materials, the various achievements of computing, provide users with an activity-based, mobile learning method. The study focuses on the teaching materials and methods used in foreign language learning.

Literature Review

Of these factors, rapidly evolving technology is the most dominant and effective (Varga, 2021). Technology-enhanced learning is seen by many as a potential and most relevant form of pedagogical innovation (Balanskat et al., 2006; Condie & Munro, 2007; Józsa & Steklács, 2009; Kozma & Anderson, 2002; Pelgrum & Anderson, 1999; Pelgrum & Voogt, 2007; OECD, 2006; Westera, 2004). This has made it inevitable that education and training also benefit from the potential of technology (Csiszarik Kocsir & Varga, 2017). Classical teaching methods and techniques are not enough for today's students, who are also known as digital natives. It is important to transfer and apply innovative teaching approaches and techniques to educational activities (Savaş et al., 2021; Savas et al., 2022). The role and purpose of the integral integration of technology in education is to facilitate the learning process and achieve efficiency (Smeets & Walraven, 2015; Buda, 2017). Digital competence and closely related digital intelligence (DI) are increasingly important in the education process (Drent & Meelissen, 2008). This kind of innovative change is indeed a complex process. Its complexity has led to a series of advantages and disadvantages (Coohalan, 2007). Two important components of education are

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learners and teachers. The latter certainly need a change of attitude. The use of innovative methods and tools requires a flexible and open-minded approach (Lakatosné Torok & Kárpáti, 2009). Changes in students' attitudes towards learning, higher levels of motivation and improved concentration (Fegyverneki, 2017) can also be among the results of using digital tools. This generational transformation was contributed to by the unexpected change in the COVID situation in spring 2020, almost from one day to the next, with the introduction of digital education replacing face-to-face teaching. This extraordinary crisis has rewritten the history of education not only in our country, but worldwide. Although there had already been significant efforts in the US towards the introduction of an online space in education, in most countries it was a huge challenge for students and educators alike. In my view, this has been one of the main reasons for the now daily emergence of the topic of educational reform, also known as the latest stage of digitalisation.

Material and Methods

The problem tree drawn up prior to the study identified the significant difficulties currently encountered in the process of teaching a foreign language.

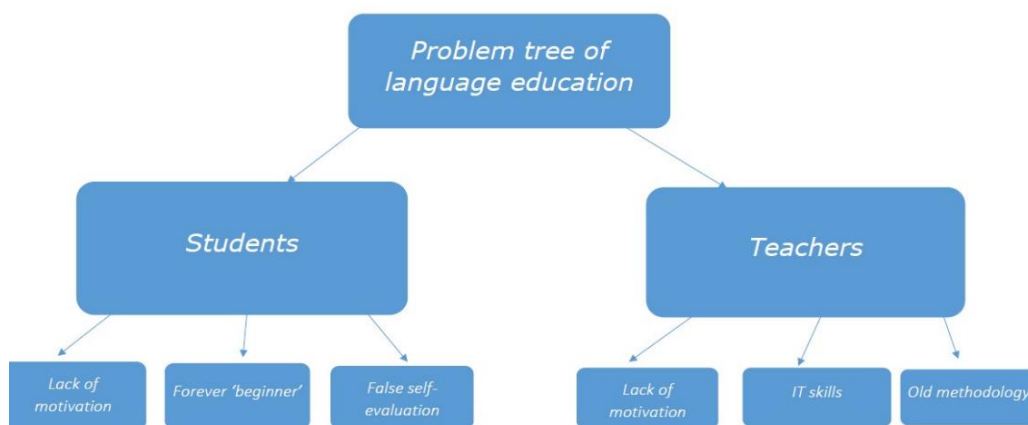


Figure 1. Problem tree for foreign language teaching

The main problems and weaknesses are related to the needs of Generation Z. In a rushing world, the need to be activity-oriented and immediately success-focused is no longer satisfied by long-established teaching methods. The pedagogical methods that teachers have been using to create the characteristics that the student community needs are no longer able to meet these needs. The hypothesis of this study is that the necessity and positive returns of digitalisation in education and the related reform of pedagogical methodology are relevant and urgent. Online questionnaires for students were used as a survey tool. The questions were structured around their learning attitudes, expectations and satisfaction with the foreign language. They were closed-ended questions. The aim was to find out what the students consider important in their foreign language learning, whether they prefer traditional language learning methods to new ones. Moreover to what extent they enjoy learning a language. A particular focus of the survey was to get an idea of their satisfaction with their language competences and their views on the use of ICT tools in the classroom. It was also important to know whether they have mobile devices and how familiar they are with their use and functions. The questionnaire also includes a question on their experience of online learning so far. Since the hypothesis of the study also relies on the attitudes of the educational actors, a survey questionnaire was also designed for teachers. In this, the questionnaire aims to shed light on the pedagogical methods currently used, their effectiveness and future possibilities. The analysis took place in January 2023 in three secondary schools in Germany, two in Turkey and one in Germany. The international and national research aims to shed light on the potential of digital education. There is a global consensus on the importance of foreign language learning and the need to adapt the way it is taught to the needs of the next generation of learners.

The study at international level is a priority, as the added value of the transnational dimension is indisputable. The target age group for the study is secondary school pupils in grades 9-13. All of them are members of Generation Z, so their answers are certainly usable and constructive. A total of 408 students participated in completing the questionnaires. The teachers participating in the survey, 21 in total, all teach a foreign language.

By analysing students' responses, their needs can be identified and made relevant. The use of new and "student-friendly" methods, digital literacy development should be part of our everyday work. 54.2% of respondents

expressed a need for this. We must be open to trying anything that can make our work with students more effective. Generation Z are all regular users of the digital space. They are integrating a variety of IT tools and virtual spaces into their lives at a very high level of proficiency. They have a demand for their everyday use. Their way of thinking makes it easier and more transparent for them to access learning materials through these tools and methods. Charts based on the responses are attached. Some prominent and inspiring results; 61.1% would like to learn a foreign language in a different kind of environment. Concerning the possibility of changing the method, 39.5% answered in the affirmative. It makes you wonder whether this is due to the fact that they have not encountered other methodological solutions? As the results of previous studies have already shown, a high percentage of Generation Z members own and regularly use an IT device, 69.4% also for learning purposes. It is interesting to note that when asked about the type of information they receive, the number of responses for ICT tools and paper-based resources was exactly the same - 39.5%. The question arises again, is this based on a lack of knowledge?

The questionnaires completed by teachers examined the frequency of ICT tools in their daily work and their level of skill in using them. 66.7% of respondents said they like using these tools and are happy to incorporate them into their daily work (61.9%). 81% agree that students are motivated and open to innovation. Regarding the questions on the effectiveness of digital tools, it can be seen that the teachers in the study consider them to be effective and definitely positive. They recognise (66.7%) that they are closest to the needs of Generation Z students. 71.4% believe that virtual space and digitalisation make lessons more colourful and enjoyable for students. Finally, I would like to highlight the 85.7% supportive opinion that the 'anywhere-anytime learning' opportunities provided by digital education are a given.

Results

The qualitative indicators include an increase in students' motivation to learn. In addition, there has been an improvement in teachers' motivation towards LLL (lifelong learning) as a methodological innovation and in their commitment to teaching. For a generation of students, the ability to use mobile applications is a source of pleasure and a sense of achievement. It is a well-known fact that our students enjoy playing games, especially with their mobile devices. This is an opportunity to achieve quality results.

Table 1. Results of the student questionnaire

STUDENT questionnaire	Yes %	I don't know%	No %
Is learning a foreign language important for your goals?	80,9	12,5	6,6
Do you enjoy learning English?	71,8	13,5	15,4
Do you expect learning a foreign language to be fun?	60,5	16	23,5
Do you think you could learn any foreign language under the right conditions?	61,5	23	15,5
Is there another way of learning English that is more effective than the one you are currently using?	47,8	39,5	12,7
Are you happy and satisfied with your speaking skills?	42,9	15	42,1
Do you like classes that focus on learning grammar?	37,7	15,5	46,8
Do you have a mobile phone?	96,3	0	3,7
Do you know how to use the features of your mobile device?	88,2	73,5	4,4
Do you use your phone to learn a foreign language?	69,4	7,8	22,8
Are you comfortable using technology in foreign language lessons?	74,3	15	10,7
Do you think it is better to get information through ICT than using printed materials?	39,5	39,5	21
Do you use ICT to communicate with international people on topics of personal interest?	54,2	20,3	25,5
Would you like to use ICT more often in language learning?	54,9	27,9	17,2
Do you like to learn/use foreign languages in your free time?	64,5	15,9	19,6

As a quantitative indicator, we can emphasise the mobile applications developed and the digitised learning materials. Incorporating this into everyday teaching and, from the students' point of view, into the everyday learning process, we can certainly expect results. By comparing the performance of groups of learners using digital applications and those working in a traditional framework, we will also be able to measure the results of the newly developed applications with quantitative indicators. As qualitative indicators, we can focus on the atmosphere and positive change in attitudes towards learning in a digital environment. All these will contribute

to our main goal of developing new innovative teaching environments and methods for learning. The quality of the new pedagogical methodological elements is demonstrated by the fact that users enjoy learning through play, while developing their different competences. Technical innovation is part of education, including English language teaching. Blended learning, virtual learning, gamification, extended language learning are all leading to innovations in the traditional teaching method. The responses from teachers show that there is an improvement in the opportunities offered by technological innovation. It is true that some of them are still in the adaptation phase according to the typology of Mioduser et al. (2003), but there is already a visible change in the practice used, as some of them are already at the assimilation stage (Forkosh Baruch et al., 2005). Indeed, there are even counter-examples. Curricula, teaching materials, teaching objectives and learning environments should be reformed. The earlier assertion that for some teachers only the so-called transition stage is visible, where ICT tools are used within the old traditional framework, seems to be refuted.

Previously, a number of Hungarian and international studies have confirmed that Hungarian teachers' work is characterised by a higher proportion of traditional methodological elements and tools (Kozma & McGhee, 2003; Mioduser et al., 2003; Law et al., 2003; Forkosh Baruch et al., 2005). In reviewing and analysing the results of the current study, we can see that, contrary to this assumption, many teachers are moving away from traditional pedagogical methods and are keen to incorporate new, innovative tools and methods into their everyday work. It is also important to note that the motivation and open-mindedness of teachers is clearly reflected in the results obtained. As the innovation of teaching methods is an integral part of the learning process, the link with the methodological training and innovation of teachers is also an integral part of digitalisation. Moving across the broader spectrum of education also opens up more opportunities for synergies between subjects. The quality of new, innovative practices and support for learning and teaching activities leads to a kind of mutual synergy in education.

Table 2. Results of the teachers' questionnaire (N=21)

TEACHER questionnaire	Agree %	Partly agree %	Don't agree %
Engaging in communicative activities is the best way to learn to use English more accurately.	76,2	23,8	0
I am comfortable using technology in English lessons.	66,6	33,3	0
I integrate mobile technologies to improve the teaching process.	61,9	23,8	14,3
I do not use the computer effectively in my teaching.	23,8	23,8	52,4
Students learn better and more easily in classes using computers.	23,8	66,6	9,6
Students learn less with computer-assisted learning than with other methods and techniques.	9,6	42,8	47,6
Computer-assisted learning is enjoyable.	71,4	23,8	4,8
I would like to use the computer in my lessons.	76,2	19	4,8
Children are motivated to use ICT.	52,4	42,8	4,8
ICT allows pupils to be more creative and imaginative.	81	19	0
Using ICT encourages pupils to communicate more.	52,4	38	9,6
Mobile learning provides immediate support for foreign language learning.	19	66,6	14,4
Mobile learning provides immediate support for foreign language learning.	52,4	42,8	4,8
Mobile devices enable students to learn anytime, anywhere.	85,7	9,5	4,8
I would install a foreign language learning app on my mobile phone	85,7	9,5	4,8

The main quality indicator of digital learning materials is the innovative curriculum itself and the innovative methodology that goes with it. Learner motivation, which comes from a curriculum that is closer to their thinking and interests, also falls into this category. If we look at how successfully learners and teachers work with a gamified curriculum, we can certainly identify another quality indicator. In fact, quality indicators reflect the declared objectives of renewal. The qualitative improvement in productive processes achieved through gamified learning also adds to the group of quality indicators. In any case, it should be stressed that the most important thing when creating digital curricula is to depart from the methodological elements used in traditional curricula. The characteristics of this new innovative method, as well as the tools and theories that help to make it effective, must be known by all those involved in the curriculum development process. Knowledge of methodological and technical tools is essential. It is very essential that digital rather than traditional teaching materials are used. The traditional role of the teacher is in practice completely transformed. The digital curriculum is an application that mediates learning content, as opposed to the programmed content of textbooks.

It uses mainly auditory and visual elements instead of written text. It is very necessary to take advantage of the opportunities offered by media integration. Changes include students working on screen instead of paper.

The results of digitalisation in education, both already existing and foreseen for the future, can clearly be seen as creative and innovative. Combined with older methodological elements used in the past, we can provide more enjoyable and effective learning for our students. As we can see from the results of the completed questionnaires, there is a generational problem in teaching with old methodological elements. Thus, we can build on innovative developments to solve these problems with digital applications. Innovative and effective teaching and learning is a key priority for schools and institutions. It is certainly a strength of the work of institutions to engage in processes that meet the needs of society and deliver results. The end product of this efficiency is indirectly produced in the labour market. Certainly for them, the methodological innovation that comes with the integration of digital tools is important and decisive.

The SWOT matrix illustrates the sustainability of the digitalisation process, showing strengths, weaknesses, opportunities and threats based on internal and external values. Strengths include our internal values that support and enhance the sustainability of our results. As in all sectors, our own institutions have weaknesses that need to be improved. This requires objectivity and critical thinking.

Table 3. Sustainability of digitalisation, Swot Matrix

	Positive factors	Negative factors
	STRENGTHS	WEAKNESSES
Internal values	Experienced teachers	Internet connection in schools
	Supportive school leadership	Colleagues stick to older methods
	Cross-sectoral and horizontal cooperation	Outdated technical tools
	Environmentally friendly implementation methods	Workload
	Realistic targets	
	OPPORTUNITIES	THREATS
External values	Training courses, conferences	Potential risks arising from parents' more
	Creation of digital databases	Difficult circumstances or unsupportive attitudes
	Digital supplementary material for textbook tenders	External and internal variables
	Contact with parents using digital tools	Difficult acquisition of equipment security

Conclusion

Digitalisation aims to modernise classrooms and innovative teaching methods. We need to integrate good practices and knowledge into teaching. In addition to these, the development of emotional intelligence, motivation, ICT, creativity, teamwork and cooperation, as well as tolerance, are given a prominent role. By creating an environment that supports learning, we can make the learning process attractive and effective. By complementing subject development, we can encourage learner autonomy and self-evaluation. Digitalisation places the curriculum in a new, youthful, creative and environmentally friendly environment. Our students can use their everyday IT devices such as mobile phones and tablets. All these tools are already being used at a skill level. So they are familiar with the experience of apps and learning materials embedded in games. In summary, one of the most important outcomes of digitalisation is the creation of an experiential learning process in an innovative environment, using new methods. Teachers' attitudes towards the use of new tools have shifted in a positive direction. For students, this can certainly ensure a more effective and efficient learning process.

Scientific Ethics Declaration

The authors declare that the scientific ethical and legal responsibility of this article published in EPESS journal belongs to the authors.

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