

DIGITAL LEARNING SUPPORT ELEMENTS IN THE ONLINE TEACHING OF GERMAN AS A FOREIGN LANGUAGE

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Received: 03/07/2023 **Accepted:** 26/02/2024

ABSTRACT

In recent years, pedagogical design and practice have undergone a forced transformation that has brought many innovative methods and tools to the implementation process. The transition to online education has demanded new infrastructural solutions that have temporarily replaced traditional classroom practices. Most teachers seem to have adapted well to these new challenges. Learning support platforms and online teaching elements had to be harnessed by teachers who, in many cases, acquired this knowledge on their own, in awareness of their importance. Our study examines the need for digital learning support elements in primary schools of the German national minority in Hungary. Our research tools comprised an online questionnaire survey conducted in 2022. The goal of our study was to identify the problems that teachers faced in the transition to online teaching during the period of distance learning introduced due to the COVID pandemic in 2020 and since; the forms of support teachers received nationwide; and the measure of success in their work as language teachers. We also looked at the factors that influenced the digital elements being used. Finally, we examined whether teachers are still willing to use online learning support tools when returning to face-to-face teaching.

Keywords: Online teaching, distance education, primary school, German language, ICT, Hungary.

INTRODUCTION

In our literature review, we looked for research projects and findings that would be of interest to our own study. Although different target groups (teachers, students, parents) were interviewed, we limited ourselves to those in which the focus is on teachers. All the studies were conducted in European countries (Italy, Croatia, Germany), including one neighboring country (Austria), but in order to receive a more comprehensive view, we added a country that happens to be geographically and culturally distant from Hungary (India).

Hassan et al. (2020) explored the challenges faced by Indian teachers in an online survey. In their article "A Critical Review by Teachers on the Online Teaching-Learning during the COVID-19", Hassan et al. conclude that in India, teachers were not prepared for the online transition (Hassan et al., 2020, p. 21)

The slight majority of teachers, 55%, agreed that they lacked sufficient computer knowledge and skills to deliver online lectures or create e-content, and only 45% considered themselves competent enough to deliver online lessons or create e-content (Hassan et al., 2020). The authors also made recommendations, namely they considered it important to include content for online/digital education in teacher training (Hassan et al, 2020, p. 25).

A study conducted in Italy by Ferri et al. (2020), entitled “Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations”, aimed at analysing the opportunities and challenges, technical/technological, pedagogical and social issues presented by emergency remote teaching due to COVID. One of the main difficulties faced by teachers was their lack of digital skills/competences and the confusing variety of online platforms they had to navigate through and familiarise themselves with (Ferri et al., 2020, p. 1). They underline that the technical conditions (internet connection, electronic devices) were not equally accessible to all teachers and students, leading to inequalities of opportunity, for example when several children in a family were supposed to participate in online education at the same time, or the different urban and rural locations (Ferri et al., 2020).

Teachers’ methods also had to change and become innovative if they wanted to keep students’ attention, active participation, and motivation in the online space. In many countries, distance learning was particularly problematic at lower secondary level, as this age group had no experience in digital/remote learning. In relation to technical problems, Ferri et al. point out that in Italy, for example, many children in 2020 could only follow lessons on their mobile phones because they did not have laptops or computers. In Italy, training courses were organised for teachers to familiarise themselves with innovative learning and teaching methods (Ferri et al, 2020, p. 13).

Ivancan interviewed Croatian language teachers in primary education for her MA dissertation (Ivancan, 2022, p. 21). She states that Croatian teachers were also completely unprepared for online teaching because of the lack of digital competences (Ivancan, 2022, p. 25). The teachers tried to fill this gap by researching different platforms and digital tools, seeking advice from colleagues, continuing their education via internet tutorials or participating in online courses (Ivancan, 2022, p. 26).

In Germany, Austria and Switzerland, the School Barometer in March/April 2020 drew an initial picture of the mood among 7100 respondents (school administrators, teachers, pupils, parents, representatives of school administrations) (Huber et al., 2020). Regarding the digital competence of teachers, it was found that there were great differences in the competences of teachers in dealing with digital media. Teachers perceived the use of digital media as a challenge and demanded a stronger engagement with digital media in the context of initial and in-service training. Porsch & Porsch (cited in JanBen et al., 2022, p. 246) also point to the low importance of digital media for learning in primary schools, which presented this target group or the teachers teaching them with greater challenges during the pandemic.

A smaller qualitative study (n=30) in Austria is relevant for our research because of its research setting (primary school) and the fact that it conducted sample interviews with school administrators, teachers, and parents and also included the children’s perspective. Regarding teachers, it is stated that the school closures posed a particular challenge because one of the most important elements in early education – daily personal exchange with pupils – was lost (Kampf-Winetzhammer, 2020, p. 5). The authors also point out that the actual use of digital media for learning purposes in primary education was extremely limited before COVID (Kampf-Winetzhammer, 2020, p. 8). Teachers felt that the shift to distance learning forced them to engage with new digital media. This, in turn, proved difficult due to the lack of time in regular teaching hours (Kampf-Winetzhammer, 2020, p. 14).

PURPOSE OF THE STUDY

The rapid transition to online education in 2020 due to the COVID-19 pandemic and the related difficulties have been investigated by several researchers/studies worldwide – from the perspective of children, teachers/educators, and parents. The Hungarian Government ordered the transition to digital distance learning in public education on 13 March, 2020. In the primary school sector, this affected around 700,000 pupils throughout the country (https://www.parlament.hu/documents/10181/4464848/Infojegyzet_2020_10_

oktatas_COVID-19.pdf). As in many other countries, the sudden switch to online education in Hungary was unexpected and caught the vast majority of teachers unprepared. Early on, small and medium-sized studies in Hungary examined the switch to digital teaching from several perspectives; Thekes (2021), for example, conducted a survey of school leaders just two weeks after the switch to digital teaching. One year later, Herman et al. (2022) collected data through a telephone survey among primary and secondary school pupils and their parents, asking about their experiences with online teaching in the wake of the school lockdowns. Our study explores the transition to distance learning from the perspective of foreign language learning and teaching. In our questionnaire survey, we interviewed teachers who teach foreign languages in Hungarian primary schools. This paper presents the results concerning the teaching of German in national minority schools.

In our research, we would like to verify the following hypotheses:

1. The greatest difficulty in distance education in nationality schools of the German minority in Hungary was the use of technical tools and digital platforms.
2. The use of a variety of learning support applications depends on the teaching experience, the type of locality, and the grade level at which the teacher teaches.
3. The level of support clearly determines the use of a variety of learning support applications.
4. Those who have experienced online education as an improvement will continue to prefer to use online elements after returning to face-to-face education.

METHOD AND MEASUREMENT TOOL

To achieve the research objective, we chose the questionnaire survey method for data collection. The questionnaire could be completed online during the spring and summer of 2022. We also disseminated the link to the questionnaire on our social media platforms, and national pedagogical organisations helped us to reach as many respondents as possible. As English is the most popular foreign language in Hungary, most of the responses were related to the teaching of English. 67 teachers of German filled in the questionnaire, most of them teaching in German nationality schools, among children aged 6-10 years. The responses were processed using a SPSS 26 data processing software. The results were presented in graphs and charts.

The development process of the questionnaire is shown below:



Figure 1. The development process of the questionnaire

The questionnaire was structured as shown in the following:

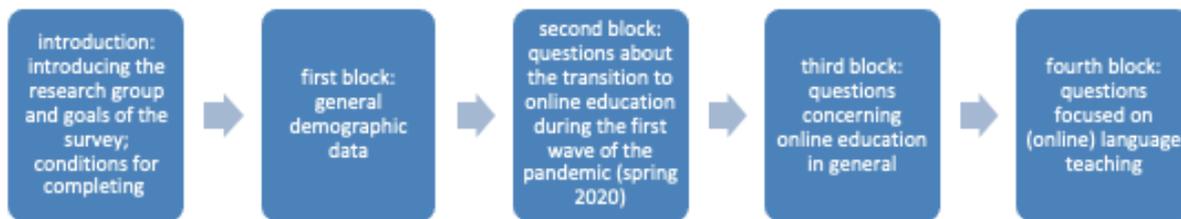


Figure 2. The structure of the questionnaire

Data Collection and Analysis

The quantitative study used an online questionnaire as an instrument to collect data. This approach was the most suitable method to obtain a large amount of data on a national level. We knew that schools are far too often contacted for questionnaire surveys, which reduces teachers' willingness to fill in questionnaires. Nevertheless, 705 completed questionnaires were returned. The collected quantitative data was then graphically presented in the form of diagrams and charts to visualize our data properly. We performed a Spearman correlation analysis to examine the correlations.

Ethics and Participants

The ethics approval of the research was granted under the number KE 2022/005, issued on 31 March, 2022 by the Research Ethics Committee of the ELTE Faculty of Primary and Pre-school Education: "On behalf of the Research Ethics Committee of ELTE TOK, we declare the application for research ethics permission submitted by Dr. Peter Medgyes, head of the research group, and Dr. Valeria Arva, project supervisor, on the topic of Digital Early Childhood Language Teaching to be appropriate, and therefore we grant research ethics permission. The research ethics principles of the ELTE TOK are fully met on the basis of the documents submitted."

As was mentioned above, for our study we only analysed the responses returned by teachers of German nationality schools; out of a total of 67 German nationality teachers who completed the questionnaire, 72% were minority German primary teachers and 28% secondary school teachers. This proportion is one-tenth of the total number of respondents, which clearly indicates that German nationality language and culture is in minority in Hungary (Figure 3).

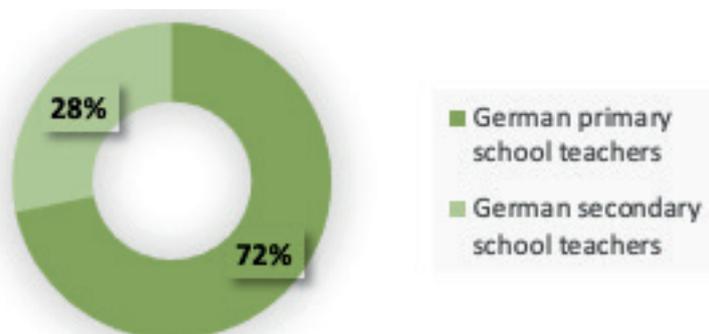


Figure 3. Number of German nationality teachers and teacher respondents

The majority of the respondents teach at lower secondary level, with 34 in lower secondary only, eight respondents in grades 5 and 6, seven teachers in the first six grades and 18 in all grades of primary school (Figure 4).

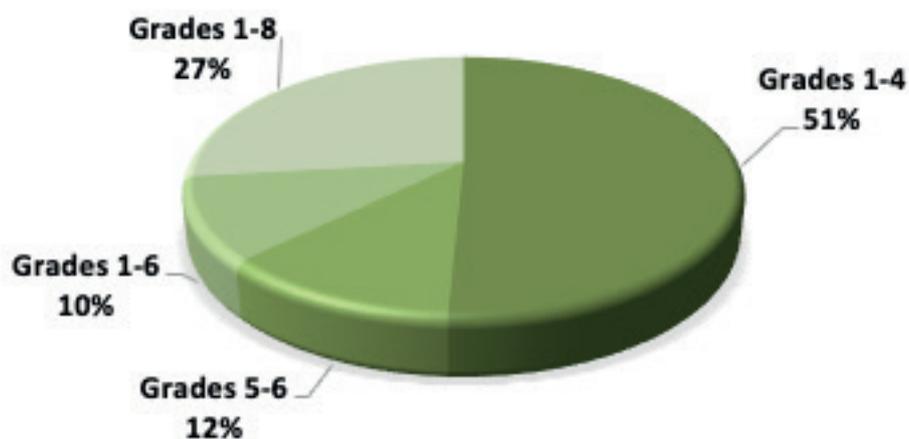


Figure 4. Distribution of responding teachers by year of teaching

The majority (43 respondents) teach in a minority language teaching primary school; 16 teach in a national minority bilingual (Hungarian-German) institution where German is a minority language, while only 3 teach in a regular bilingual institution (Hungarian-German) where German is a second language (Figure 5).

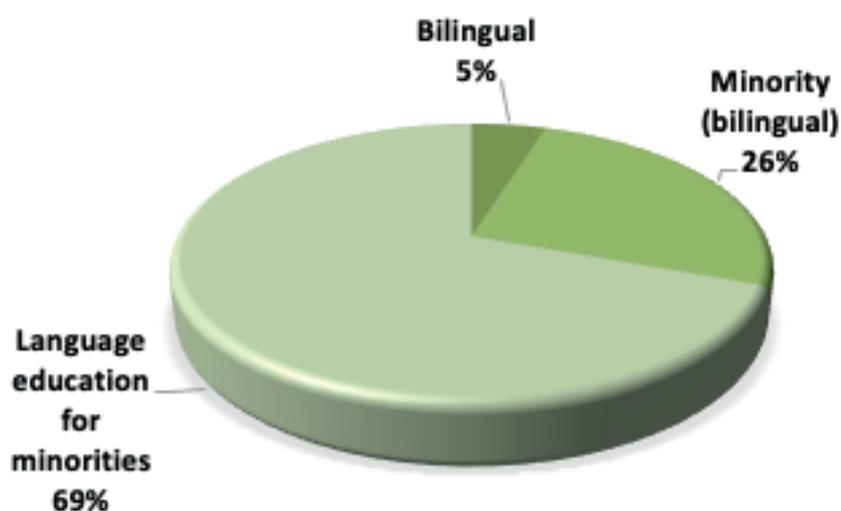


Figure 5. Types of schools where the majority of respondents teach

FINDINGS

The majority of German teachers were reluctant to switch to online teaching because they did not feel prepared for this transformation (Figures 6 and 7). The less prepared they felt for online education, the more they feared the transition to online education ($r= 0.254^*$; $p= 0.038$).

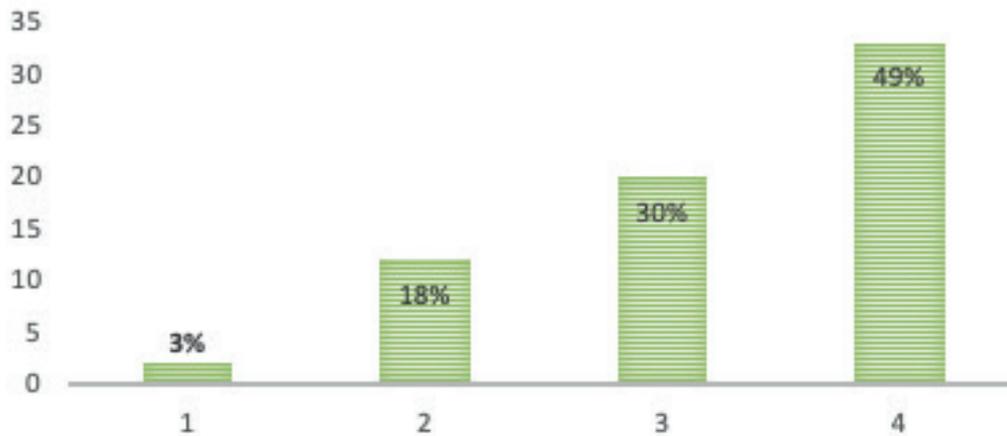


Figure 6. The problem of transition to online education
(Scaled from 1 to 4, 1 = not at all, 4 = very much)

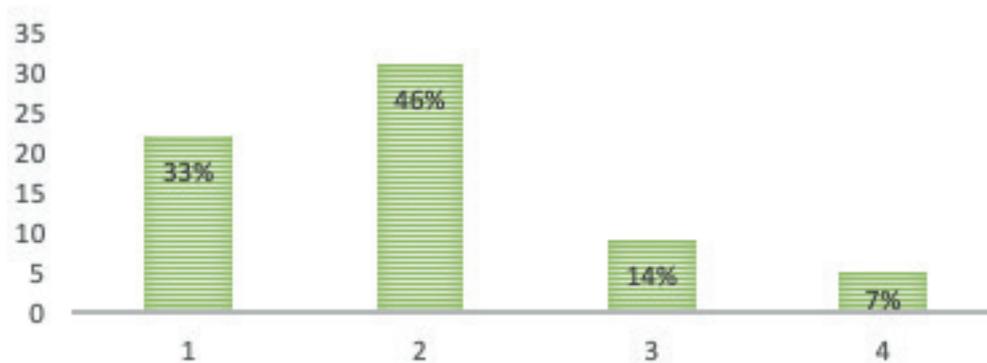


Figure 7. The problem of online education readiness
(Scaled from 1 to 4, 1 = not at all, 4 = very much)

As the emergency required immediate action, many teachers (58) searched for training opportunities online and/or tried to catch up and learn the basics of online education through self-taught training or with the help of friends (37 people). Few teachers could rely on support expended by their own institution (Figure 8).

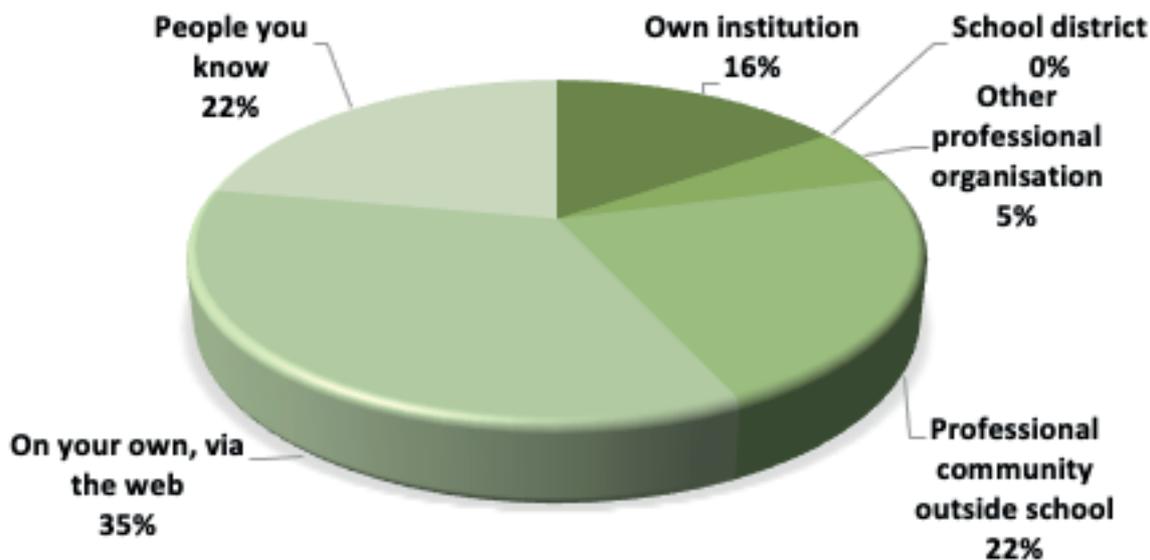


Figure 8. Possibility to ask for help during online education

Overall, the German nationality teachers in Hungary who filled in the questionnaire rated the success of their language teaching work during the online instruction as moderately good (Figure 7). 1 in Figure 9 means ‘not at all’ while 4 means ‘completely’.

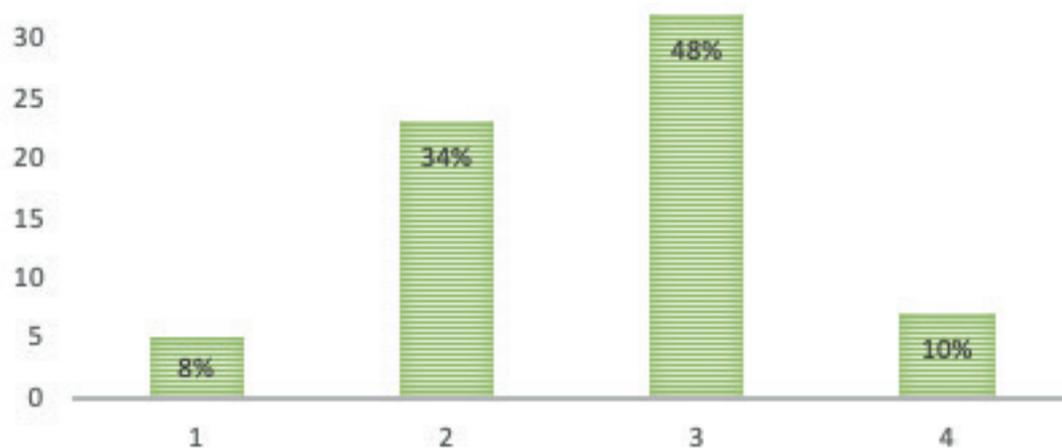


Figure 9. Perception of the success of language teaching in online education

The majority of teaching tools were available and caused fewer problems during the transition to online teaching, but the teaching methodology was less available for online teaching (Figure 10).

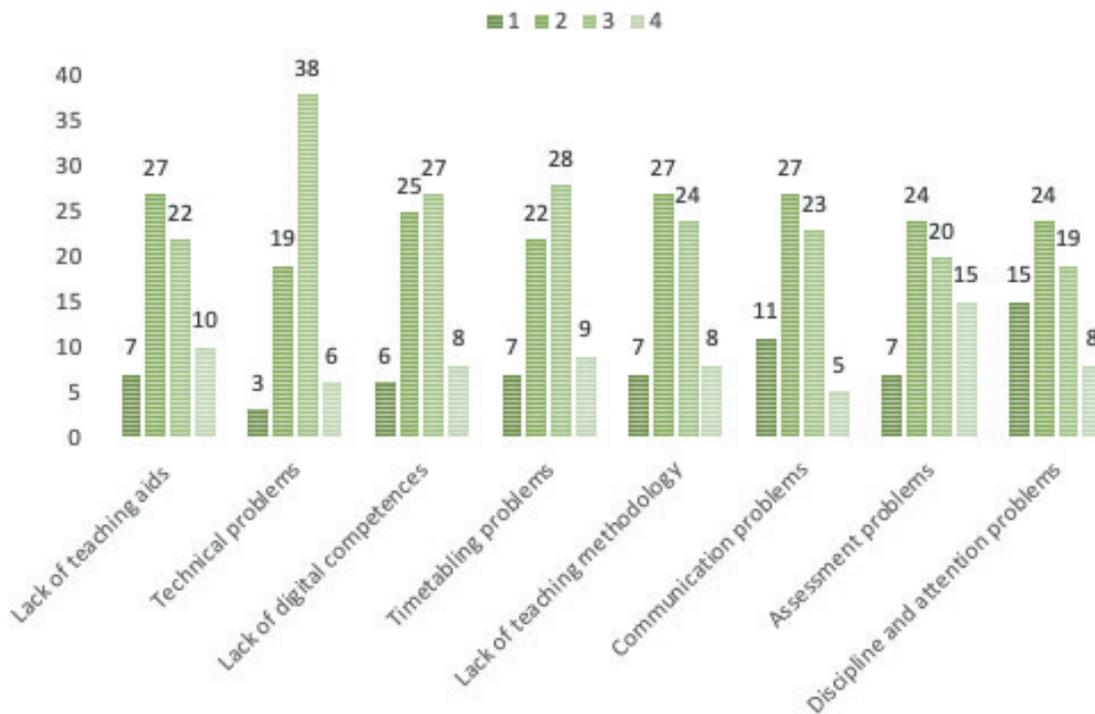


Figure 10. The problems with online education (N)
(1 = not at all, 2 = rarely, 3 = often and 4 = regularly)

Problems with lesson organisation were significantly related to communication ($r= 0.355^{**}$; $p= 0.003$), attention and discipline ($r= 0.344^{**}$; $p= 0.005$). Discipline problems made it more difficult to maintain attention and to organize and adhere to lessons. Technology did not cause insurmountable difficulties, but it was still a significant problem for the majority and showed the clearest correlation with lower levels of digital competence ($r= 0.443^{**}$; $p= 0.000$).

Table 1. Correlations between class organization, communication, attention, technical problems and lack of digital competences

| | Spearman's rho | 1) | 2) | 3) | 4) | 5) |
|-----------------------------------|-------------------------|--------|--------|--------|--------|----|
| Timetabling problems | Correlation Coefficient | | | | | |
| | Sig. (2-tailed) | | | | | |
| Communication problems | Correlation Coefficient | ,355** | | | | |
| | Sig. (2-tailed) | ,003 | | | | |
| Discipline and attention problems | Correlation Coefficient | ,344** | ,540** | | | |
| | Sig. (2-tailed) | ,005 | ,000 | | | |
| Technical problems | Correlation Coefficient | ,402** | ,367** | ,554** | | |
| | Sig. (2-tailed) | ,001 | ,002 | ,000 | | |
| Lack of digital competences | Correlation Coefficient | ,364** | ,495** | ,493** | ,443** | |
| | Sig. (2-tailed) | ,003 | ,000 | ,000 | ,000 | |

The ANOVA table of the linear regression in our research clearly shows that the predictor variable has a small but significant effect on the outcome variable ($F= 4.638$; $p= 0.035$). The fact that teachers continue to use online elements when returning to face-to-face teaching in later years is explained by the development experienced during online teaching in only 6% of the cases. The coefficients table provides a good illustration

of the negative Beta slope, and the t-test (Beta= -0.258; t= -2.154; p= 0.035) also shows that, although the digital competence of the teacher has improved, the use of online platforms will not be favoured in the classroom when returning to face-to-face teaching.

DISCUSSION

Reviewing the relevant international literature it emerges – which is consistent with the data we have found – that the vast majority of teachers were caught completely unaware and mostly unprepared for the closure of schools and the forced digital switch to distance learning. They were therefore fearful and frustrated by the situation they had to face. Because the changeover happened so quickly, teachers had little time to prepare for distance and online education. Our data shows that language teachers were largely self-sufficient, without much methodological support given by their schools. Despite this, the majority of German language teachers in our survey rated the success of distance learning as moderate.

Hasan et al. conclude in their research that Indian teachers were also unprepared for the transition to online education (Hassan et al., 2020, p. 21). European research studies reached similar results as well. A Europe-wide survey on distance learning by the School Education Gateway from April to May 2020, with nearly 5000 participants (including 86% teachers and school leaders), focused the survey – similar to our study – on experiences, negative and positive challenges, technology and the future of digital elements in teaching. The results of the survey are similar to our findings. For example, 67% of the respondents claimed that online teaching during the pandemic had been their first experience with online teaching. 25% had some previous experience and only 6% had extensive experience with online education (<https://www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm>).

The main problem teachers in Hungary faced at the time of the closures had to do with technology. Many respondents reported that the lack of appropriate teaching methodology for teaching German online was also a problem, in addition to the lack of digital competences, especially with regard to teaching at primary level. Here, children were clearly dependent on parents for help. Organising lessons was also reported as a major difficulty. This proved to be a much more difficult task in the online space than in face-to-face classroom teaching. Furthermore, many respondents found it a challenge to develop communication skills, nor could they cope with the task of assessment in the online space. Discipline problems made it more difficult to maintain the attention of the children.

Ivancan interviewed 209 Croatian language teachers (German and English) in primary education for her thesis (Ivancan, 2022, p. 21), a target group that received comparatively little attention in studies on foreign language teaching during the pandemic and is therefore of particular interest for our study. Her results are similar to ours in several respects. For example, she states that Croatian teachers were also completely unprepared for online teaching (Ivancan, 2022, p. 25). She suspects that the reasons for this uncertainty lie in the lack of digital competences for online teaching in initial and in-service training. The teachers surveyed tried to fill this knowledge gap in other ways by researching different platforms and digital tools on their own (94%), seeking advice from colleagues and acquaintances (66%), continuing their education via internet tutorials (59%) or participating in online continuing education courses (51%) (Ivancan, 2022, p. 26). A difference to our study can be found in terms of satisfaction with the support of the schools, where 49% of the respondents claimed to be mostly satisfied while only 14% being dissatisfied (Ivancan, 2022, p. 27). Our preliminary hypotheses were largely confirmed. The biggest difficulties in distance education were the use of technical tools and digital platforms. Those who perceived online education as an improvement have retained the use of online elements when returning to face-to-face education.

The Europe-wide survey on distance learning by the School Education Gateway from April to May 2020 reached partially similar results: The most frequently cited challenge the respondents mentioned was access to technology (computers, software, stable internet connection, etc.). This was true for both students (mentioned by 49%) and teachers (34%). Increased workload and stress when working from home was cited by 43%, with 18% of teachers finding time management and organisation a challenge. Digital literacy was cited as a challenge for both students (24%) and teachers (24%). The most frequently cited challenge in terms of learning content and assessment was redesigning activities and content for online/distance learning (28%), closely followed by creating relevant content (27%) and assessing student progress (25%) ([https://](https://www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm)

www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm).

In terms of the future use of digital elements in the classroom, 44% of respondents felt that school reality would change to include more online teaching. 17% indicated that schools would change a lot: online teaching would become an integral part of school practice. On the other hand, 39% said that very little could be expected. 32% agreed that schools would return to their original practice with minor changes whereas 7% assumed that schools would return to their original practice unchanged. Factors perceived as positive by the respondents were innovation, freedom to try new things in the classroom, flexibility, and a wide range of digital tools. Similar results were found in the ELTE-TOK survey. In terms of support or assistance, respondents felt that more educational resources would help them meet the challenges, together with clear guidelines from the Ministry of Education targeting professional development, e.g. in the form of fast-track courses for online teaching and opportunities for teachers to share resources, ideas, and difficulties (<https://www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm>). Similar results to the ELTE-TOK survey are also shown by the results regarding the positive impact of distance/online teaching: respondents believe that these results may give some early indications to policy makers and school leaders that distance/online teaching and learning, although challenging, can have lasting positive effects and open up interesting opportunities for innovation and new ways of working, especially if supported by adequate and timely professional development.

An unexpected finding is that the use of learning support applications does not seem to depend on whether one lives in a town or a village, nor on how experienced or young the teacher is. However, it does depend to a small extent on the grade level being taught. It was also found that those who received more technical and methodological support were more likely to befriend online platforms and applications. A surprising result is that, when returning to face-to-face teaching, the majority of teachers continue to use online elements regardless of whether their digital competence improved during online teaching. On the other hand, it could well be expected that in primary school the use of digital learning support elements will not be the preferred method of teaching for the time being.

IMPLICATIONS AND RECOMMENDATIONS

In our research, we show how teachers of foreign languages in primary schools reacted to the forced and rapid digital changeover in 2020, and how distance learning was implemented in the teaching of German as a minority/foreign language. We highlight the problems teachers had to overcome and where and from whom they received help. We also aimed to discover how successful German teachers in Hungary felt online teaching to be, and whether they have retained online/digital elements upon returning to face-to-face teaching.

Our research results show the importance of training, support, methodological assistance, and technical equipment for language teachers in the field of national minority education and foreign language teaching. In our view, the teaching of digital competences should play an important role in (language) teacher training, an added value in education, as children are in the habit of using their own devices, such as mobile phones. This technology can therefore increase motivation in language teaching, a problem area in public education in Hungary. In addition to the motivating effect of digital elements, teaching without these tools is inconceivable in the future, even in primary schools. The microcosm of the school and learning environment and the macrocosm of the world are changing at an ever-faster pace and learners need to develop skills to deal with these changes: “The rapid spread of COVID-19 has demonstrated the importance of building resilience to face various threats, from pandemic disease to extremist violence to climate insecurity, and even, yes, rapid technological change. The pandemic is also an opportunity to remind ourselves of the skills students need in this unpredictable world such as informed decision making, creative problem solving, and perhaps above all, adaptability. To ensure those skills remain a priority for all students, resilience must be built into our educational systems as well.” (World Economic Forum Webpage: <https://www.weforum.org/agenda/2020/03/3-ways-coronavirus-is-reshaping-education-and-what-changes-might-be-here-to-stay/>)

Furthermore, the need for teacher professional development (TDP) in a rapidly changing world, especially in terms of digitalization, must be a clear goal in the training of educators. One instrument which provides a general reference frame to support the development of educator-specific digital competences, can be SELFIE

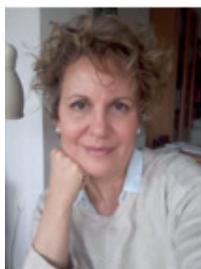
(Self-reflection on Effective Learning by Fostering the use of Innovative Educational Technologies), a tool provided by *The European Framework for Digitally-Competent Educational Organisations* (DigCompOrg, https://joint-research-centre.ec.europa.eu/digcompedu_en).

In the next phase of the research, comparative analyses will be carried out, comparing English and German teaching along the same competences: Do they have a similar view of the problem areas? Would English language teachers returning to face-to-face teaching use these online platforms more frequently than their colleagues teaching German? Did English language teachers use more digital learning support formats than German teachers? Do English teachers use different platforms or more platforms than German teachers?

Authors' Note: The present research was conducted by the MTA-ELTE TOK research group on childhood language teaching supported by digital tools. It discusses the consequences and lessons learned from the educational situation triggered by the COVID-19 pandemic in the field of foreign language teaching in childhood.

Acknowledgements: We express our deep sense of gratitude to the teachers who cooperated with us in providing the feedback required for this study. The research was supported by the MTA Public Education Development Research Programme.

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