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TEACHER DIGITAL SKILLS IN ONLINE LANGUAGE TEACHING AND LEARNING: SURVEY IN LITHUANIA

Technology driven language teaching and learning is closely related to the need to integrate digital technologies into the language classroom. The technological advances are also evident in the work of the European Commission with the acknowledgement of the use of digital technologies to empower learners and launching numerous EU-funded research projects focused on the ICT use in teaching and learning (European Commission 2020). It becomes evident that improving teacher digital skills is essential as it is also related to the improvement of the digital skills of the learner and the improvement of the teaching and learning process. Teachers’ self-evaluation of their digital prowess is a link towards teachers’ self-identification as professionals. The current study aims to overview the change in the language educators’ perception of their own digital skills in Lithuania. A digital questionnaire designed on Google Forms was employed for collecting and analysing the data in the current study. The research results reveal that educators feel the need to augment their digital skills related to language teaching and learning and see this as part of their professional identity. The study reveals that language educators possessing a higher level of digital skills have the tendency to use more complex digital resources. Most of the respondents rely on textual and audio materials with lesser use

of interactive resources which indicates that there is room for augmenting language educator digital skills.

1. Introduction

Digital technology empowers teachers and enables them to make better use of instructional strategies. OECD Program for International Student Assessment in 2021 ICT account draft version states that "technology profoundly transforming people's work and professional life […] significantly affect multiple facets of education. […] provide new opportunities for students to learn outside of school and can change teachers' pedagogical approaches and the learning experience of students in school" (PISA 2021:6). Technology-driven language teaching and learning strategies undergo a change moving away from the familiar lecture-based forms of instruction and changing the previous emphasis on memorization or simple comprehension. Deacon et al. (2017) stresses the need to integrate digital technologies into the language classroom as universities have the main goal of preparing learners for 21st-century employment with the necessary language and digital skills. Overall, according to the same PISA draft 2021, educators' ICT skills "depend on the availability, accessibility, and quality of ICT resources" (PISA 2021: 26). Educators' perception of areas that make up ICT skills includes five aspects, namely: 1. Information and information literacy; 2. Communication and collaboration; 3. Creation of digital content; 4. Security; 5. Problem-solving (INTEF 2017). In this context, improving teacher digital skills becomes one of the essential elements for teachers' personal professional perspective and identity (Canrinus et al. 2012) and, in its own turn, it is related to improvement of the digital skills of the learner and improvement of the language teaching and learning process. Having in mind the importance of teacher digital skills, research in this area may provide useful insights on the perception and uptake of teachers' digital skills in language teaching and learning environments. The aim of the current study is to overview the change in the language educators' perception of their own digital skills as part of the digital transformation within the EU-declared Digital Decade and the areas of ICT use that construct the self-assessed digital skills of educators and their personal professional identity. The current study focuses on language educators' perceptions of their dig-

ital skills in the language teaching and learning process in Lithuania with the following objectives of how language educators perceive their digital skills, their attitudes to the development of digital skills and support received in the process of the development of digital skills.

2. Theoretical Background

Scientific literature widely analyses the integration of Information and Communication Technologies (ICT) in language education (Dudeney and Hockly 2012). Researchers do not overlook the fact that integration of technology started with the use of word processors for text processing and elementary language games (Dudeney and Hockly 2012; Pappa and Papadima-Sophocleous 2019). The use of ICT in education, especially in language teaching and learning, is related to mastering such state-of-the-art tools as Learning Management Systems (LMSs), cloud technologies and artificial intelligence, as well as such resources as Massive Open Online Courses (MOOCs) and Open Educational Resources (OERs). These advances are also evident in the work of the European Commission which has acknowledged the use of digital technologies to empower learners (European Commission 2020) by launching numerous EU-funded research projects focused on ICT use in teaching and learning. In teaching and learning languages, technologies provide ways to find sources of authentic materials and expose learners to real-life language use situations. There are numerous tools and applications which could be implemented in language teaching and learning if the use of digital technology has the guiding pedagogical basis (Bloch 2013). Heggart and Yoo (2018) provide an example of how the use of cloud computing in teaching and learning languages could lead to greater participation and interaction both between students, and between students and teachers. There are also telecollaboration projects aiming at real-life communication (Sevilla-Pavón and Haba-Osca 2017; Bohm et al. 2019). Bonner and Reinders (2018) introduce one of the newest virtual realities (VR) advancements applied in teaching and learning languages that enable language use in digital environments and augmented reality. Gaming and social media use is also actively applied in teaching and learning languages (Rosell-Aguilar 2018; Pappa and Papadima-Sophocleous 2019). Loewen et al. (2019) observe that the popularity of language learning and

teaching apps and tools is constantly growing by providing the example of Duolingo with over 200 million users and Babbel with over one million subscribers. Sharifi et al. (2018) advocate for the inclusion of computer-assisted tools and language learning apps in language learning and teaching. The authors observe that learners of English as a foreign language using computer-assisted tools and learning apps demonstrated better learning results than their peers that rely solely on traditional face-to-face classes. The authors also identify four important moderators of learning in this context: type of interaction (progressing from receptive strategies to more interactive strategies), communication mode (delivery mode), language learning context (language typology), and treatment duration (from a few weeks to an academic year). Luef et al. (2020) also analyse several apps used for language learning (dictionaries, etc.), looking into the usefulness of the apps and the time spent on apps with the results of the research revealing positive implications of the use of language learning apps in the foreign language classroom. Plump et al. (2017) reveal that game-like features provided by Kahoot such as the music, colours, and interactivity turned it into a classroom phenomenon with the increasing numbers of millions of users as Kahoot features encourage student focus and bring excitement into the classroom. Technology enhances a shift form the study of a prescribed, one-size-fits-all curriculum towards instructional approaches that include collaborative investigations, interdisciplinary projects, and diversification of learner interactions, providing opportunities for learners to discuss complex ideas, to investigate open-ended, real-world problems or to connect academic subjects to their personal interests (Dede 2014). The use of digital technology puts forward a shift away from the classroom (White 2006). Dede (2014) identifies important technology driven teaching and learning strategies as:

– case-based learning, which provides opportunities for teaching and learning through the analysis of real-world situations;
– sharing the variety of representations of concepts, showing alternative explanations and in this way enabling the learner to understand complex material;
– collaborative learning, which shows learners that their collective efforts often work better than their individual knowledge and skills;
– apprenticeships, which introduce learners to real-world contexts with real

challenges and responsibilities;

– self-directed learning, which is a good way to foster academic engagement, and an opportunity to pursue specific interests;
– interdisciplinary studies, which enable learners to identify how different study fields complement each other;
– personalized learning, which entails opportunities for learners to receive tailored instruction and support responsive to learner needs (Rose and Gravel 2012);
– connected learning, which enables learners to study outside the classroom (Ito et al. 2013);
– diagnostic assessments, which ensure formative learning.

Sánchez-Cruzado et al. (2021) observes that improving teacher digital skills is essential as it is also related to the improvement of the digital skills of the learner and the improvement of the teaching and learning process. Clark-Wilson et al. (2014) identifies that there are both extrinsic and intrinsic factors influencing teachers' use of digital technology for teaching and learning. The authors claim that intrinsic factors are crucially important because they decide the teacher's focus on the use of digital technology (Artigue 2002) to enable the teacher to apply pedagogical content knowledge while using digital tools for teaching and learning (Zbiek et al. 2007).

Concerning the situation in Lithuania, Kasperė and Liubinienė (2022) observe that the current situation of technology-enhanced pedagogy in Lithuania still needs development and improvement to ensure meaningful integration and access to digital educational environments to learners. The above observations of the growth and outcomes of the language teachers' technological efficacy is an issue of the general teachers' attitude towards "task perception and future perspective" (an ongoing process of professional development based on personal commitment in job contexts) of their professional values (Kelchtermans 2009). The authors observe that the efficacy of language teachers' digital skills is improving, yet more research is needed to spread understanding of the language teachers' professional identity in relation to digital efficacy for current and future policymakers and implementers for continuous development of digital skills.

3. Methodology

Hodges et al. (2020) raise awareness that it should be distinguished between online instruction and emergency remote teaching. The former is deliberate and elaborate, whereas remote teaching, on the other hand, is a temporary transition due to crises such as weather or war. Remote teaching differs from planned online teaching. In Lithuania there is still a need to research the current situation of meaningful technology-enhanced teaching and learning including the research into teacher digital skills. Our study focuses on how language teachers working in adult education understand and evaluate their digital skills in language teaching and learning in online environments. Based on the theoretical assumptions discussed the following research questions were formulated:

- How do language teachers working in adult education in Lithuania assess the development and the perspectives of their digital skills?
- How and what digital resources and apps do language teachers working in adult education in Lithuania use in teaching and learning languages?

To find out the answers to the research questions, a questionnaire was developed, which included closed ended (e.g. how the teachers assess their digital skills at the beginning of the pandemic and how they assess their digital skills now) and open-ended questions (e.g. If the teachers could mention 1-3 examples of particular apps/tools they think enable students to connect more interactively to the course) to obtain quantitative and qualitative data. The questionnaire of 32 questions included 5 questions of demographic nature, “Gender”, “Age”, “Years of Teaching Experience”, “Academic Qualifications”, “Tittle of the Institution” and the rest of the questions focused on teacher digital skills and digital pedagogy A digital questionnaire designed on Google Forms was the main tool for collecting the empirical data. The questionnaire contained both closed-ended and open-ended questions. The closed-ended questions were based on multiple-choice answers arranged according to the Likert Scale. The questions were formulated based on language teaching and learning practices related to digital pedagogy (Thaine 2010). In total 36 language educators from Vilnius (the capital of Lithuania) region tertiary institutions and adult education centres participated in the survey. Most of the research participants were female (86%). Also, English language teachers of tertiary institutions and adult education centres made up

the majority (77%), and those functioning in the lecturer's position were 75%. The research participants varied more in their age and educational background.

4. Research Findings

The cross-reference analysis was carried out focusing on the question of how educators' digital skills improved throughout the online teaching process (self-appreciation of skill improvement, intention of further improvement, and the manner of digital skills augmentation). Next, the analysis focused on categorization of different types of resources (audio, text-based, etc.) according to the degree of use in language teaching with the aim to identify the most used resources and less used ones relating the statistics to the quality and security area of digital skills depending on the complexity of the resources used.

4.1. Digital skills self-assessment

Respondents provided three measures of their personal digital skills assessment. The first self-assessment is related to the digital skills possessed prior to the pandemic situation. According to the results of the answers to the question of how teachers assess their digital skills at the beginning of the pandemic, where the levels of digital skills were defined relying on the traditional classification of linguistic proficiency levels from beginner to expert, 16.7 of the respondents assessed their abilities as elementary, 52.8 % as intermediate, and 30.6 % as advanced (Figure 1.). None of the respondents claimed to be either expert or beginner at the digital skill measurement scale.

The second self-assessment measure is related to the current, late or post-pandemic situation, i.e., digital skills now (Figure 1.). The answers to the study question of how teachers assess their digital skills now revealed that the pandemic experience has led to the development of digital skills: there were no self-assessing as elementary, 61.1% self-assessed as advanced, which doubled in comparison with the pre-pandemic measure identified by the research participants, while 8.3% self-assessed as expert in ICT application. It should be noted that 14 respondents did not consider their digital skills to have transformed:

they see their skills unchanged by the pandemic situation demands and assess them as intermediate (6 respondents) or advanced (8 respondents). Overall, the results of Lithuanian language educators, obtained through the questionnaire and incorporating some part of the digital skill components, are more optimistic than Eurostat overall educators' results incorporating all five components of digital skills – in Lithuania there are 49% of individuals in general with basic or above basic overall digital skills in 2021 (EUROSTAT 2021). This can be partly accounted by the smaller professional survey group of the current research and, hence, focusing on a more digitally exposed proxy of statistics. Eurostat indicators of digital skills are measured on a "status quo" basis, while in the current research, the transformative perspective was emphasised and the potential of augmenting digital skills for professional purposes was accounted for in a more optimistic mode.

The third measure of digital skills self-assessment relates to the future perspective. When asked if they intend to further augment their digital skills, it was found that the vast majority (77.8%) intended to further develop their digital skills (Figure 1.). In an open question asked to indicate ways of developing digital skills in the future the respondents provided a variety of answers: 1) learning with a tutor (taking part in professional courses, trainings, and seminars for language teachers), 2) learning independently (browsing, searching, and using relevant new apps). In answering about their intention to develop their digital skills further one fifth of the respondents (22.2%) chose the answer 'maybe'. This group consists in half as the ones who self-assess their digital skills as intermediate and half as advanced. The overall overview of the transformation of self-assessment of the digital skill is seen in Figure 1.

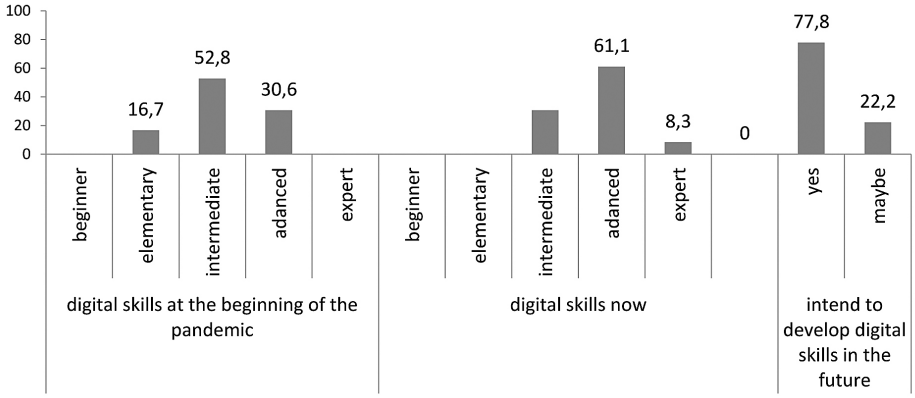

Figure 1. Self-assessment of digital skills

As it could be observed in Figure 1. the research participants identify the increase of their digital skills after the pandemic period and demonstrate their determination to intention to develop their digital skills in the future.

4.2. Motives for digital skills augmentation

In the period of global health crisis, digital skills augmentation was conditioned by compelling trainings provided by the institutions, but educators mentioned a few personal attempts for augmenting their digital skills as well. According to the respondents' replies to the question of how much and what support the teachers received in using the technology for teaching (Figure 2.), the predominant type of aid is training support (one third of the respondents received 'a lot' of such support). In addition, a quarter of the respondents pointed out that they received 'a lot of peer support'. Financial support was mentioned by the smallest number of the respondents. Only 8.3% of the respondents have received sufficient financial support that was evaluated as 'a lot'.

In the answers to the question of how much and what institutional support the teachers received in using the technology for teaching, the internal motives not related to external institutional efforts stood out as significant components for augmentation of digital skills. Among those who self-assessed themselves as expert ICT users, only one third experienced peer, training, and financial support. Half of the educators (54.5%) did not receive any financial support for develop-

ing these skills, almost one fifth of the respondents (18.2%) did not consult their colleagues, and one tenth (9.1%) never attended institutional trainings.

Figure 2 shows the responses to the question of how much and what institutional support teachers received in using the technology for teaching.

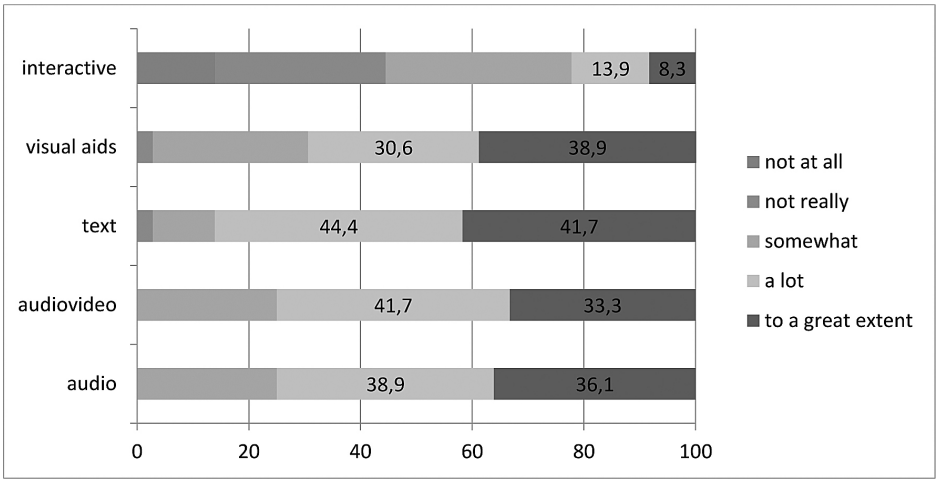

Figure 2. Support received by self-assessed digital skill educator groups at the beginning of the pandemic.

Teachers with intermediate and advanced digital skills benefited most from the external institutional support. The predominant type of support was training. Few elementary skilled teachers have benefited from financial support. It should be noted that peer support was not often resorted to.

4.3. Digital resources used

Looking into the complexity and security components of digital skills formation, it must be noted that educators used various teaching resources in their classes (Figure 3).

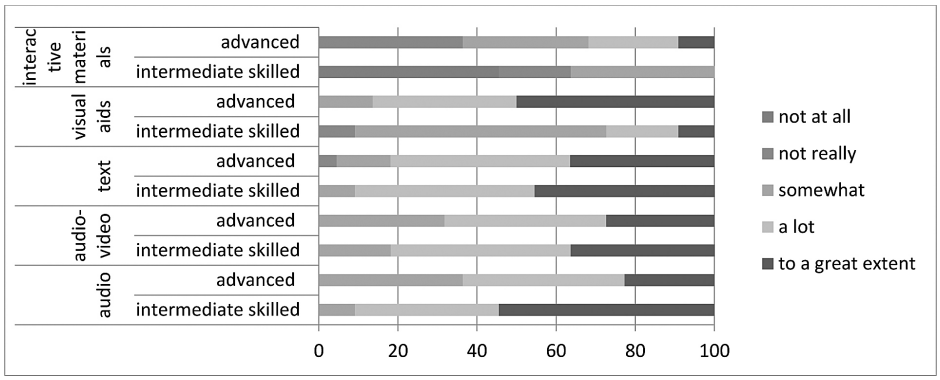

Figure 3. The use of different digital resources in language teaching

Most often used resources were texts – two-fifths of the respondents (44.4%) use textbooks, literature, etc. often ('a lot'), while other two-fifths (41.7%) use texts 'to a great extent'. Almost as often as texts, audio and audio-video resources are used in teaching languages. The majority of the respondents used them 'a lot' (38.9% (texts) and 41.7% (audio-video) respectively) and 'to a great extent' (36.1% (texts) and 33.3% (audio-video)). In language teaching visual aids were used 'a lot' by 30.6% of the respondents and 'to a great extent' by 38.9% of the respondents. The least used were more complex, interactive materials (for example, Wordwall, Nearpod, PearDeck, etc.). In addition, the survey data revealed that about half of the respondents (47.2%) use apps in their lessons (27.8% in all classes, while 19.4% in almost all classes). One third of the respondents (36.1%) do not use apps at all when teaching, see Figure 3.

It should be noted that the use of more complex resources, i.e., visual aids and interactive materials, is related to the educators' level of digital skills (Figure 4).

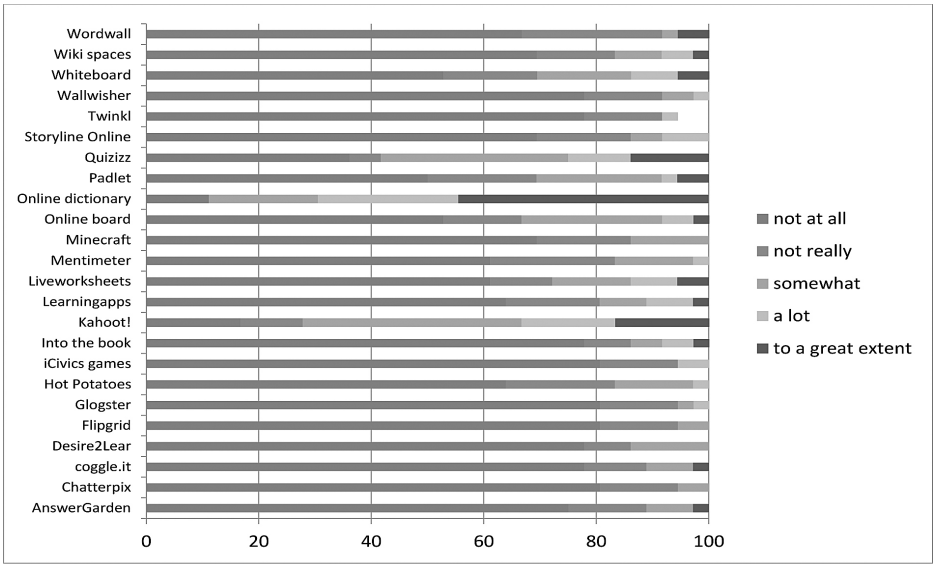

Figure 4. Usage of teaching resources in accordance with teachers' digital skills (self-assessment)

The received data revealed that educators who self-assessed themselves as having intermediate level of digital skills do not tend to use interactive materials and visual aids unlike advanced skilled educators (the difference is statistically significant). In addition, audio resources are preferred by intermediately skilled educators in comparison to the advanced skilled educators, see Figure 4.

The respondents were provided with a list (Figure 5.) of online tools used when teaching a foreign language. The aim was to find out the most commonly used online tools and sources to establish the tendencies of the tools and sources used for teaching and learning languages.

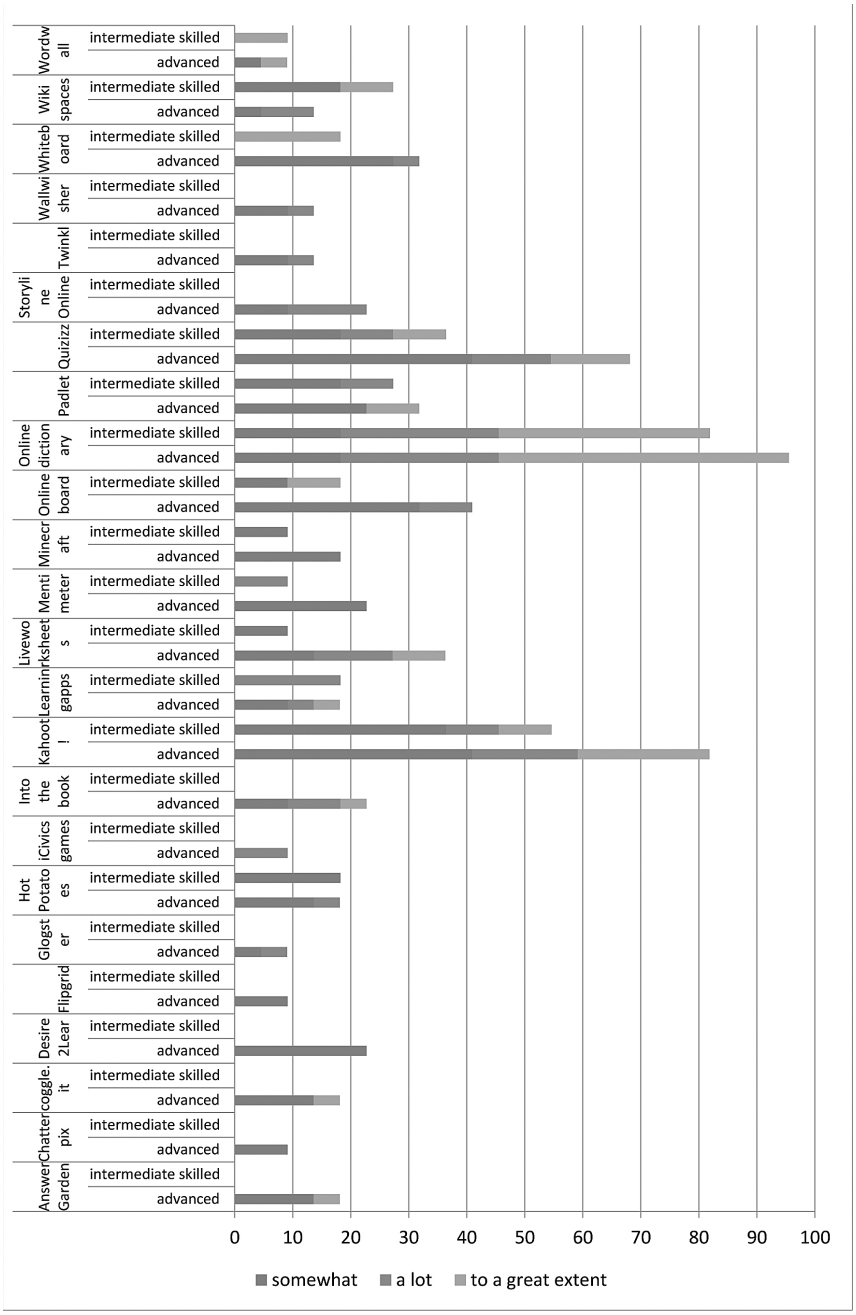

Figure 5. Usage of internet tools (a list was provided)

It can be seen that only three online tools from the list provided are often used by most educators in their classes. Many teachers use online dictionaries and Kahoot! Half of the respondents used Quizizz 'somewhat' and 'to a great extent'. The third tool was Padlet, whiteboard, online board used 'somewhat' or 'a lot'. However, it can be seen that many of the listed online tools are not extensively used by the respondents.

Educators who self-assessed their digital skills as advanced used significantly more diverse online tools in their teaching than intermediately skilled educators, see Figure 6.

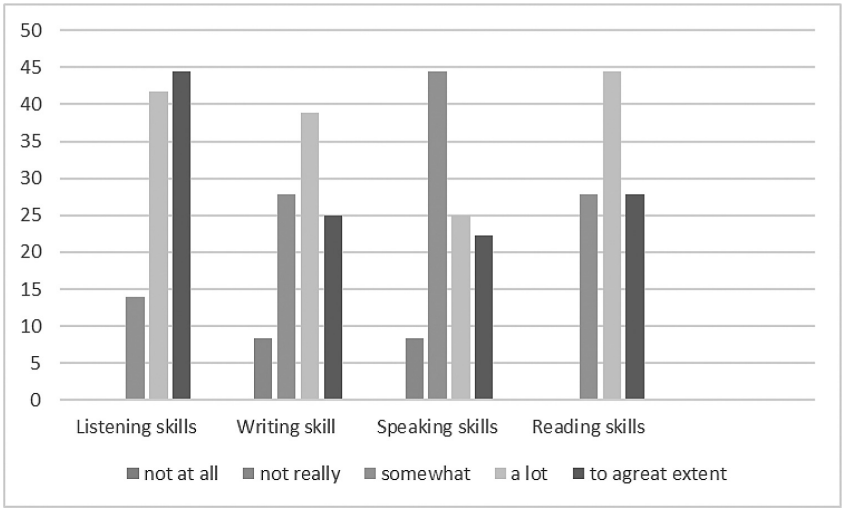

Figure 6. Comparison of the use of internet tools by intermediately skilled and advanced skilled educators

Also, the data suggests that online tools are used more often by advanced skilled educators in their classes, see Figures 5 and 6.

Assessment of educators' attitudes towards platforms and digital apps shows that the overall assessment is positive. Many educators felt that digital apps should be used to improve education. Teachers see most potential of application of digital tools in developing listening and reading skills (Figure 7). One respondent expressed scepticism about improving speaking and writing skills.

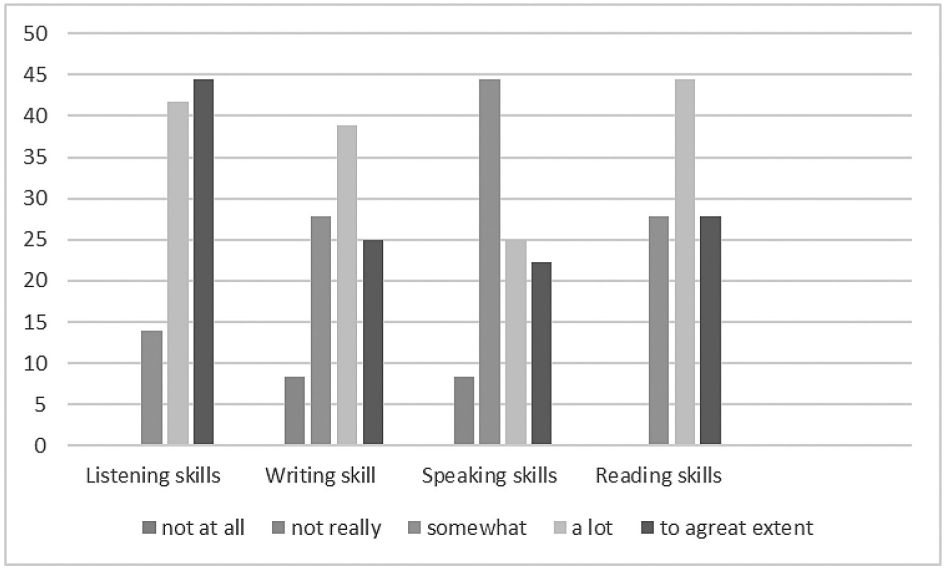

Figure 7. Opinion about skills to be practiced using platforms and digital apps

The respondents see great possibilities in developing learner reading, writing and listening skills while applying digital apps; however, the respondents are a bit reserved about speaking skills (Figure 7) which might mean teacher attitudes and preferences for well-established communicative language teaching and learning approach.

Educators also see the multi-functionality of online resources. The vast majority of the respondents agree that digital apps are useful for teaching and learning languages. According to the answers of the respondents to the question of how much platforms and digital apps can be used in teaching learning activities identified in figure 8, it is identified that platforms and digital apps are most suitable for individual activities, but also for collaborative and frontal activities (where the teacher addresses the whole group in teaching and learning), see Figure 8.

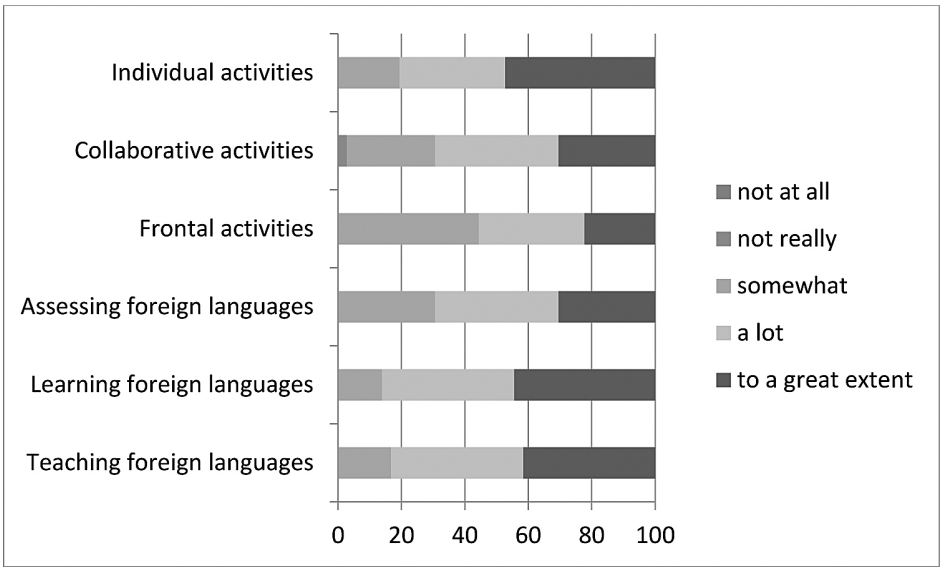

Figure 8. Opinion about purposes to use platforms and digital apps

Overall, the study shows that a variety of digital apps is used in language teaching and learning, but there is certain room for expanding the use of digital apps and tools and improving language teacher digital skills by especially paying attention to the uptake of interactive materials and visual aids like Kasperė and Liubinienė (2022) observed improvement is still necessary in the current situation of technology-enhanced pedagogy in Lithuania.

5. Conclusions

Our observations on language teacher digital skills in Lithuania, understanding of digital skills as professional efficacy and, eventually, as part of the professional identity, and recommendations for the future research are the following. The concerns and perceptions of teaching staff related to their personal digital skills must be noted as an important part of teachers' professional self-identity. The development of digital skills requires certain provisions to ensure digital pedagogical in-service training (related to a similar observation by Brauer 2021). Having in mind the dimensions of digital pedagogy such as digital pedagogical

practices and the digital pedagogical competencies, there is a need to research and cater for the development of teacher digital skills from different perspectives. It should be noted as a limitation of the current study that the focus of current research was a small (36) professional group of educators in a transformative situation but no age group or gender approach was applied. The focus of research was not the level of precision for a whole statistical intake but rather the behavioural dynamics of a professional entity.

The research results reveal that educators feel the need to augment their digital skills related to language teaching and learning as part of their professional growth. The choice of the digital tools and apps used appears to be related to the level of teacher digital expertise as the use of more complex resources, i.e., visual aids and interactive materials, was the choice of the educators with a higher level of digital skills. Nonetheless, the majority of the respondents rely on textual and audio materials with a lesser use of video resources. From the provided list of the online tools and apps the majority of the respondents use online dictionaries and Kahoot. The use of online dictionaries seems to be a predictable result in language teaching and learning activities; however, the use of Kahoot gives an especially optimistic result relying on Plump's (2017) observation on the game-like features provided by Kahoot such as the music, colours, and interactivity turning the language teaching and learning into a more focused and effective process.

The research participants acknowledge the transformation of their digital skills fuelled by the demands of the pandemic situation which relates to the observation by Hodges et al. (2020) that the pandemic health crisis provided a chance for both teachers and students to apply online teaching and learning solutions. Furthermore, the research participants demonstrate their intent to further develop their digital skills also identifying various ways available for digital skills improvement, such as learning with tutors, by taking part in professional courses, trainings, and seminars for language teachers or learning on their own by browsing, searching, and using relevant new apps. The determination to further foster acquisition of digital skills necessary for teaching and learning reveals the presence of language teacher motivation to develop professionally in application of ICT. Also, two thirds of the respondents developed their digital skills without institutional or peer support which reveals certain connotation with the obser-

vations by Artigue (2002) that teacher self-improvement is crucially important because it plays a decisive role in the teachers' orientations towards digital technology use in teaching and learning. The research participants reveal that digital skills appear to be a valuable part of their professional efficacy and motivation and, eventually, part of their professional identity.

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Digitalne vještine nastavnika u mrežnome poučavanju i učenju jezika: istraživanje u Litvi

Sažetak

Poučavanje i učenje jezika vođeno tehnologijom usko je povezano s potrebom integracije digitalnih tehnologija u jezičnu učionicu. Tehnološki napredak vidljiv je i u radu Europske komisije s priznanjem uporabe digitalnih tehnologija za osnaživanje učenika i pokretanjem brojnih istraživačkih projekata koje financirana Europska unija, a usmjereni su na primjenu ICT-a u nastavi i učenju. Postaje očito da je poboljšanje digitalnih vještina nastavnika ključno jer je također povezano s poboljšanjem digitalnih vještina učenika i poboljšanjem procesa poučavanja i učenja. Samoprocjena nastavnika o njihovoj digitalnoj sposobnosti poveznica je prema samoidentifikaciji nastavnika kao profesionalaca. Sadašnjoj je studiji cilj iznijeti pregled promjene u percepciji nastavnika jezika o vlastitim digitalnim vještinama u Litvi. Za prikupljanje i analizu podataka u ovoj studiji iskorišten je digitalni upitnik dizajniran na Google Formsu. Rezultati istraživanja otkrivaju da nastavnici osjećaju potrebu za povećanjem svojih digitalnih vještina povezanih s poučavanjem i učenjem jezika te to vide kao dio svojega profesionalnog identiteta. Studija otkriva da edukatori jezika s višom razinom digitalnih vještina teže primjeni složenijih digitalnih resursa. Većina ispitanika oslanja se na tekstualne materijale i audiomaterijale uz manju upotrebu videoresursa, što ukazuje na to da postoji prostor za poboljšanje digitalnih vještina edukatora jezika.

Keywords: digital skills; language teaching and learning; online teaching; digital tools; digital environments.

Ključne riječi: digitalne vještine; poučavanje i učenje jezika; online podučavanje; digitalni alati; digitalna okruženja.