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Diplomová práce

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Use of digital tools in foreign language teaching at lower-secondary school

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V Olomouci, dne 28. 11. 2023   Bc. Dagmar Janásová

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List of abbreviations

AI	Artificial Intelligence
coef.	coefficient
DigCompEdu	digital competence of educators
DT	digital tools
EU	European Union
e.g.	for example
etc.	et cetera
ICT	information and communication technology
MPSV	Ministry of Labour and Social Affairs
MŠMT	Ministry of Education, Youth and Sports
RQ	research question
RVP	Framework Education Programme
vs.	versus

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Abstract

We live in a world where technology permeates every aspect of our lives. This thesis deals with issues of using digital tools in education. The aim of the document is to find out teachers' attitudes towards the integration of digital tools in foreign language teaching at lower-secondary schools. The theoretical part focuses on the description of key concepts based on literature review, strategic documents in the field of digital education and teachers' competences and digital literacy. The practical part presents the results of a mixed research conducted among teachers in the town of Dvůr Králové nad Labem and the Královéhradecký region.

Key words: digital technology, digital tools, foreign language teaching

Introduction

We live in a global word. Globalisation is not just about the economics, but it is also a political and cultural process. It means that people can exchange not only goods and services, but also ideas and knowledge. Our world has been changing rapidly and educational institutions need to respond to these shifting conditions. Especially teachers are the bearers of education in our society, as they impart scientific knowledge to students during the teaching process. On the other hand, today's generation of students is very well oriented in the world of information. Students living in the 21st century are used to using technology to search for information, they have the possibility of comparing different sources and evaluating the data obtained. This makes the situation for teachers more difficult than in the past. Of course, teachers cannot fall behind their students, and they are forced to improve their qualifications and broaden their horizons especially in the field of foreign languages and digital technologies. In addition, the covid-19 pandemic of the past two years has shown that traditional teaching materials and techniques are no longer sufficient. The educational authorities are aware of this situation which is why the emphasis is placed now not only on students' but on teachers' competences as well.

Obviously, education does not end with leaving school. As a result of changes in society, it is necessary people to educate themselves throughout the whole life. From a personal point of view, I can see the importance of lifelong learning because in my professional career, I have worked in various positions in our school system. In the past, I worked as a leisure time educator, a clerk in the department of education and social affairs in a municipal office, a head of a school canteen, a language lecturer and since September 2021, I have been teaching English at lower-secondary school. All these positions meant being prepared to learn new things.

In 2019, my bachelor thesis dealt with the issue of teachers' continuing learning and professional development. I studied teachers' motivation for lifelong learning. The theme of this diploma thesis is again related to teachers' willingness to develop their knowledge and skills, but now in the field of using digital tools in foreign language teaching at lower-secondary school. The main aim of this thesis is to find out teachers' attitude towards this issue, to define what factors influence the use of digital technologies in the teaching process and to outline the problems which prevent incorporating them in teaching. The secondary objective is to explore teachers' opinions on how the use of digital tools motivates students to learn foreign languages.

The theoretical part of the thesis is focused mainly on the description of key terms based on literature review, strategic documents in the field of digital education and teachers' competences and digital literacy. Furthermore, examples of suitable digital tools for teachers' lesson preparation and foreign languages teaching are presented.

In the practical part, teachers' attitude to integration of digital tools in foreign language teaching is examined. I have chosen to utilise mixed research, in the first phase of the research interviews with foreign language teachers will be conducted. The aim is to find out teachers' opinions and more details about the situation in our school. The qualitative method has been chosen because it provides a deep insight and understanding of the issue. To verify the results, the second phase of research will follow. In this phase, the quantitative method of questionnaire survey will be used. The results from the first phase of the research will be compared to opinions of foreign language teachers in the Královéhradecký region. The purpose of the study is to answer the following research questions: What factors influence the integration of digital tools in foreign language teaching at lower-secondary school? How do teachers use digital tools in foreign language teaching? The research also examines teachers' opinions on whether the use of digital tools motivates students in lower-secondary schools to learn foreign languages. The data obtained will be analysed and evaluated. In addition, examples of practical lesson plans with the integration of digital tools in language teaching at lower-secondary school are attached.

1 Digital education

"If we teach today's students as we taught yesterdays, we rob them of tomorrow."

John Dewey

(American philosopher, psychologist, and educational reformer, 1859 – 1952)

Digital education is an often-mentioned term nowadays. The document Digital Education Strategy to 2020 (MŠMT, 2014) describes digital education as education that reacts to changes in society related to the development of digital technologies and their use. The aim of digital education is to prepare students for their employment in society and the future labour market using digital technologies.

Our society is often referred to as the information society (Šeďová, Zounek, 2009) because information and communication technologies (ICT) are ubiquitous and influence our everyday lives. It is obvious that the field of education is also responding to these trends. Modern educational institutions need to prepare their students for the future. According to Dewey's quote, we cannot teach our children today in the same way as we did in the past. Práger and Řeřicha (2009) explain that our schools have changed from a textbook-based environment to one based on digital technology. Schools with traditional paper materials seem boring and old-fashioned to students who use electronic devices every day. Čapek agrees that our textbooks do not provide enough support for varied teaching and teachers need to find other resources (2019, p. 48).

1.1 Digital technologies in education

Scientific and technical development brings changes to all areas of our lives. Nowadays, people share goods, services, and information as well. As a result of globalization, the whole world is connected. Kler (2014, p. 256) defines information and communication technologies as a "diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information." Zounek et al. (2021, p. 45) state that the term digital technologies and the term information and communication technologies may be considered synonyms, and they specify that "these are all technologies and telecommunications systems which enable working with data in digital form." Examples of digital technologies are computers, laptops, tablets, mobile phones but also e-books, e-magazines, devices for

communication Wi-Fi, Bluetooth, Internet etc. Programmes, websites, applications, and other online resources are usually called digital tools. Černá et al. add that these technologies are mainly used online, so in the research conducted at Palacký University they are referred to as online technologies and online tools (2022, p. 15). Due to different terminology, for the purpose of this thesis, all the terms mentioned above are considered synonyms. Průcha, Walterová and Mareš (2003, p. 139 – 140) mention new technologies in education which include especially networks, multimedia, mobile devices, and access to distance education. In pedagogical dictionary, the explanation of the term computer assisted learning (CAL) is available. Průcha, Walterová and Mareš (2003, p. 259) point out that computers perform several functions in the educational process, for example, computers are tools for pedagogical and psychological diagnosis, teaching aids, they are also used for testing and evaluating students.

The Czech School Inspectorate regularly deals with the integration of digital technologies in Czech schools. According to its report, in 2017 computers were outdated, the internet access was limited, and the situation was assessed as critical (Neumajer, 2017, Kopecký et al., 2021). The report published in 2018 stated that two thirds of teachers did not use technologies properly (Kopecký et al., 2021). However, Annual report of the Czech School Inspectorate on the quality of education in the Czech Republic in 2021/2022 refers that computers with internet access are standard in most schools (2022, p. 685). Findings from educational activities in lower-secondary schools visited show that 50% of teachers used digital technologies effectively, but in 18.5% of cases, digital technologies were not available at all, and only 10.2% of pupils used ICT effectively (2022, p. 274).

The change in the approach to the use of digital technologies occurred in March 2020, when schools were closed due to the covid-19 pandemic. Pupils' physical presence at school was forbidden, and teachers were faced with a situation where teaching moved overnight into the online space. After the covid-19 pandemic, the situation in schools has changed. Apparently, the pandemic had a positive impact on equipping schools with technologies because schools received more funding to purchase digital technologies for both teachers and pupils. Neumajer notes that during the pandemic, teaching without computers would have been impossible, however, he stresses that it is the teacher who makes teaching high-quality, not the technology (2021, p. 12).

What is teachers' attitude to the integration of digital technologies and how teachers today use the experience gained during online teaching will be, among other things, the subject of investigation in research described in the practical part of this diploma thesis.

1.1.1 Factors influencing the use of digital technologies

Práger and Řeřicha state that "technology is not a magic wand" (2019, p. 10), it is necessary to think about other factors that influence digital technologies integration in education. Zounek (2021) stresses that there is a disproportion between a teacher's concept of teaching and the extremely rapid development of technology, and this disproportion is one of the significant factors in the integration of digital technologies in teaching. Harrell and Bynum (2018) believe that the incorporation of digital technologies in teaching is a multilateral process. They divide factors limiting technology integration into external (e.g., technology equipment, infrastructure) and internal ones (e.g., self-efficacy, teachers' perceptions). Mumtaz (2006) distinguishes between two groups of factors – factors preventing teachers from using technology (e.g., teacher's experience, financial support, lack of time) and factors encouraging teachers to use technology (e.g., teacher's motivation, school support, access to quantities of technology). Kler (2014) describes three main groups of factors influencing integration of ICT: personal, institutional, and technological.

Personal factors:

Kler (2014) identifies these personal factors: age, gender, educational qualification, computer experience and attitudes towards computers. In particular, the need for a positive teachers' attitude towards computers is emphasized. The influence of teachers' age and gender on the use of technology in education is debatable. Kler (2014) says that various studies have informed about gender differences in technology utilising in education. According to research studies, male teachers use technology more than female teachers (Kay, 2006, Kler, 2014). Contrary to this, Neumajer (2012) claims that the teacher's age, gender, and length of experience do not influence the pedagogical use of ICT. Young teachers are better at working with texts, charts, and the Internet but they have the same problems with incorporating ICT into teaching as their older colleagues. However, Czech School Inspectorate in its Annual report (Zatloukal et al., 2022, p. 683) refers that older teachers are more likely to be apprehensive about using ICT, mainly due to a lack of knowledge and lower self-confidence handling ICT.

Other important personal factors to mention are computer competence and teacher workload. Kler (2014) defines computer competence as "the ability of handling various applications on computer for more than one purpose." Jones (2004) agrees that teachers' confidence in using technology in education is related to their computer skills.

Institutional factors:

Institutional factors include professional development, accessibility, technical support, and leadership support (Kler, 2014). Professional development of teachers is a key factor in ICT implementation in teaching. In the Czech Republic, it is obligatory for teachers to become involved in further education. This obligation is checked by Czech School Inspectorate. Further pedagogical education for a continuing professional development is organized by a school headteacher according to a study plan. Teachers usually participate in seminars, courses, or lectures in special institutions, or they attend modern forms of self-development such as webinars or online courses (Janásová, 2019).

Leadership support plays imperative role in ICT integration. Neumajer emphasized that a headteacher should be a person with a vision who can attract teachers, parents, and students to this vision (Tomková, 2021). Kler (2014) agrees that leader's stimulation and encouragement are essential.

Technological factors:

It is important for teachers to know that a new technology has benefits and is compatible with their needs. Rogers (2003), cited in Kler (2014), claims that studies have shown the significance of complexity and compatibility of digital technologies for their adoption.

1.1.2 Barriers preventing the use of digital technologies

Although digital technologies are part of our everyday lives, the implementation of ICT in education is not without its problems. Zounek et al. believe that negative attitudes towards digital technologies in general are a significant barrier. Furthermore, compared to other countries, the prices for internet connection are still high in the Czech Republic. Lack of skills in operating digital devices and insufficient motivation are considerable obstacles in our country as well. The main problem is that teachers do not know the meaning and goals of pedagogical use of technology (2021, p. 238 - 239, p. 247).

Salehi (2012) defines that "a barrier is considered as any condition that makes it difficult to make progress or to achieve an aim". Kler (2014) claims that researchers distinguish two major categories of barriers preventing ICT integration in education. The first category are extrinsic barriers which include time, support, resources, training, and the second ones are intrinsic barriers, which include: beliefs, attitudes, practices, resistance.

Kler (2014, p. 263) describes two main categories of barriers: Teacher-level barriers and School-level barriers.

Teacher-level barriers are related to individuals. They include lack of confidence, lack of teacher competence, resistance to change and negative attitudes. The issues of teachers' confidence and computer competences were mentioned in previous chapter as personal factors. The theme of teachers' competences is described in detail in Chapter 2. Kler (2014) refers that some teachers are not willing to accept using digital technologies for teaching which is related to their negative attitudes to digital technology. Mumtaz (2006, p. 320) adds that teachers' resistance to computer use is divided into two areas which are "resistance to organisational change and resistance to outside intervention".

School lever-barriers are mainly lack of time, lack of effective training, lack of accessibility and lack of technical support. Nowadays, especially time plays important role in our activity, so it is not surprising that this factor is widely mentioned. Mumtaz (2006, p. 320) states the lack of time as one of inhibitors preventing teachers from ICT utilisation. According to Sicilia (2005), teachers complain that preparing lesson plans based on using ICT is time-consuming. Lack of effective training is a problem as well. The self-confidence of teachers is closely linked to their skills. Teachers need to get proper training to be able to work with technology in the classroom. The level of school equipment and availability of digital resources also influence ICT utilisation in teaching. According to the Sicilia's study (2005), technical problems and lack of technical support were identified as main problems for many teachers.

What are main factors and barriers influencing the use of digital technologies specifically in foreign languages teaching in Czech schools will be one of the research questions in the practical part of this thesis.

1.1.3 Myths about digital technologies

Digital technologies are a phenomenon of our time and as such they are also surrounded by myths. Information about these myths illustrates the situation regarding the ICT inclusion in teaching. In 2012, Neumajer published the article about myths and fallaciousness related to digital technologies in education. The situation has been changing rapidly so some of the myths may be questionable nowadays. The use of ICT is more common now than it was eleven years ago. Neumajer (2012) declares that the myth about technology being a means of teaching only is not true completely because technologies are also curriculum and educational content.

He further refutes the myth that the curriculum with ICT is more attractive for pupils, he explains that it is not the curriculum itself, but methods and forms used during teaching. In this context, Zounek points out that the ability to use technologies does not guarantee their meaningful utilisation in teaching, educational objectives and content are paramount (2021). Kopecký et al. (2021, p. 13) reject the myth that digital technologies are ineffective because any appropriate use is motivating for students and can have an educational effect. Moreover, they dispute the myth that technology is only for computer science teachers and ICT coordinators because today digital technologies can be applied to all school subjects. Their view is also supported by the change of the Framework Education Programme for Elementary Education.

1.2   Strategic documents in the field of digital education

The above-mentioned Framework Education Programme is a national document based on the education strategy that emphasizes, among other things, key competences. Digital competence is one of the competences considered as key in elementary education. In the field of digital education, the following national strategic documents should also be mentioned briefly:

Digital Education Strategy of the Czech Republic until 2020 issued by Ministry of Education, Youth and Sports in 2014.This document was focused on the situation in pre-school, elementary and secondary education. The priority objectives were to open education to new methods through digital technologies, to improve pupils' ICT competences and to develop their informatics thinking (MŠMT, 2014).

In 2015, Ministry of Labour and Social Affairs published the Digital Literacy Strategy of the Czech Republic for the period 2015 – 2020. The document was focused on the development of digital literacy of citizens, the main objective was to promote competitiveness and adaptability of human resources (MPSV, 2015).

These days, a fundamental document for the development of education in the Czech Republic is the Strategy for Education Policy of the Czech Republic until 2030+. This strategy has two main objectives: transforming the educational content and reducing social inequalities. This document also includes the topic of digital technologies and emphasizes the importance of the teacher as a person who teaches how to work with information in digital environment (MŠMT, 2020).

At the school level, digital education is included in the School Education Programme. Schools prepare their school curricula independently, provided that the school programmes are based on the Framework Education Programme for Elementary Education.

The Czech Republic is a member of the European Union. Therefore, European strategic documents should also be outlined:

The European Union is also involved in digital education. The EU is working to ensure that citizens are ready for the digital transformation. The Digital Education Action Plan 2021-2027, adopted on 30 September 2020, calls for greater cooperation in the field of digital education at European level. This EU initiative "sets out a common vision of high-quality, inclusive and accessible digital education in Europe, and aims to support the adaptation of the education and training systems of Member States to the digital age" (European Commission, European Education Area).

1.3 Summary of Chapter 1

Today's society is changing rapidly. Modern technologies that are part of our everyday lives are also penetrating the field of education. The terms digital technology, ICT and online technology are generally considered synonymous. The use of digital technologies in education is influenced by personal, institutional, and technical factors. The main barriers to the use of technology in schools are lack of digital skills, negative attitudes of teachers, lack of time and technical support. Online technologies are a phenomenon of our time, and therefore surrounded by many myths. Neumajer emphasizes that it is not the mere use of technology that attracts students, but the methods and forms of teaching. The importance of digital technologies in education is underlined by strategic documents at European, national, and school level.

2 Teaching foreign languages with digital tools

Foreign languages offer numerous benefits for individuals in today's interconnected word. Knowing a foreign language opens doors to effective communication with people from different cultures, leads to more diverse job opportunities, enables travelling and exploration. According to Janíková, foreign language teaching and learning has been changing, new directions, tendencies and teaching methods emerge. Teaching methods are more closely connected with the latest scientific knowledge (2011). Already in the past, teachers used television, video, or radio to teach foreign languages. Nowadays, ICT and related multimedia applications are incorporated into teaching process. Read claims that these tools are "a wonder of the age we live in". Visual images combined with sound attract learners more than traditional teaching materials such as books (2007, p. 263). Digital tools enable to enhance learning experience and personalize learning as well. On the other hand, integrating digital tools into teaching means that teachers need to change their approach to teaching, and they must be able to use the tools in the right didactic way. Šeďová and Zounek (2009, p. 55) explain that the positive impact of digital technologies does not arise automatically, but how teachers work with them in the classroom is crucial. Pirklová claims that education with the help of digital technologies is a world of learning objectives, good planning, and didactically competent teachers. She uses the term principled eclecticism (2022, p. 12 – 13), which means "the process of choosing items from a range of methods and constructing a collage methodology" (Scrivener, 2005, 40).

2.1 The changing role of teachers

Šeďová and Zounek point out that in connection with the use of modern technologies, the role of teachers is changing. The teacher is no longer just a traditional provider of knowledge but becomes an advisor and a guide for students (2009, p. 55). Bednářová similarly adds that teachers are becoming more moderators, tutors, or coaches (2020, p. 95), and Janíková enlightens that the humanization of foreign language teaching emphasizes the need to change the role of the teacher, who is understood as a facilitator and organizer of students' learning (2011, p. 9). This opinion corresponds to the constructivist concept of learning. Furthermore, Šeďová and Zounek state that implementation of ICT in teaching transforms the role of the teacher who now acts as a mediator or as a partner in relation to students. The teacher – mediator organizes, monitors, and evaluates the interaction between the student and the ICT. The teacher

– partner symmetrizes his / her role in relation to the student, both work in parallel, work with ICT in a similar way. During the lesson, the roles of mediator and partner may intermingle in different ways (2009). Kler claims that with the ICT integration into teaching, the role of the teacher changes due to new conditions, teachers use new electronic resources instead of chalkboards and projectors for presenting study materials, learners' knowledge can be assessed by using online tests. The changed role of the teacher requires teaching students to navigate the world of information, to differentiate between the right information and the misinformation (2014, p. 266 – 267).

2.2 Teachers' competences

If a teacher is to guide students through the world of information, he or she must have the necessary competences which are defined as "the set of knowledge, skills, and experience necessary for future, which manifests in activities" (Selvi, 2010). Gupta (1999, as cited in Selvi, 2010) states that competences are "knowledge, skills, attitudes, values, motivation and beliefs people need in order to be successful in a job". Průcha, Walterová and Mareš (2003, p. 103 – 104) declare that teacher competences are "a set of professional skills and dispositions that a teacher needs to be equipped with in order to perform his/her profession effectively" (translated by the author). These are professional competences (subject knowledge, communication, management, and diagnostic skills), and personal competences (responsibility, creativity, problem-solving ability etc.). Maňák, Janík and Švec (2008, p. 76) emphasize that nowadays the creativity of the teacher is at the centre of attention.

According to Scrivener (2005), traditional teaching means that teachers transmit knowledge to the class, explaining things at the blackboard. This type of teaching is characterised by "an emphasis on chalk and talk" and assumes that the teacher is the knower. However, we live in an information society, so teachers' attitudes need to change. Nowadays, foreign language teachers should fulfil the following basic aspects:

a) proficiency in the target language – teachers should be able to communicate effectively, both in spoken and written form and demonstrate a strong command of grammar, vocabulary, and pronunciation,

b) understanding of language teaching methodologies and approaches – teachers should be familiar with various teaching methods and approaches which include: The grammar-translation method, the audio-lingual method, communicative language teaching (CLT) or

communicative approach (CA), total physical response (TPR), community language learning (CLL), the natural approach, task-based learning (TBL), the silent way etc. (2005, p. 39),

c) cultural awareness – a competent language teacher should have cultural knowledge and awareness related to the target language,

d) communication and interpersonal skills – teachers should be able to explain language concepts clearly, provide constructive feedback, establish positive teacher-students relationships and learning atmosphere,

e) continuous professional development – teachers should stay updated with the latest research and trends in language education, attending workshops or conferences, participating in online forums, and seeking opportunities for self-improvement (2005, p. 370 – 375),

f) assessment and feedback – teachers should be knowledgeable about assessment techniques and tools to measure students' language proficiency and provide constructive feedback (2005, p. 375 – 380),

g) flexibility and adaptability – teachers should be able to modify teaching strategies, materials, and activities according to individual students' needs,

h) integration of digital tools into foreign language teaching (Zounek et al., 2021, Read, 2007, Kopecký et al., 2021).

2.2.1 Digital natives and immigrants

In the Czech Republic, teachers are usually prepared for their profession at universities, which means that pupils in primary and lower-secondary schools are taught by university graduates who must be specialised in pedagogy. According to the law, teachers have obligation to involve in further professional development. It is very important because of massive changes in our society and a large amount of new scientific knowledge. However, when it comes to integrating digital tools in teaching process, there may be observed a generational disparity between teachers and students. According to the Czech School Inspectorate report, the average age of foreign languages teachers in lower-secondary schools is 46,3 (2019, p. 8). In relation of the age of teachers and learners, the terms digital natives and digital immigrants can be found in literature. Digital natives are people who grow up surrounded by modern technology, which is normal part of their lives, whereas digital immigrants are people who have encountered digital technologies later in their life (Prensky, 2001, Zounek et al., 2021). Práger and Řeřicha (2019) agree that nowadays, young people are called digital natives because they come from

the first generation using mobile devices and social media. Zounek et al. (2021, p. 61-65) add that today's young people are referred to as "the net generation". Although Prensky himself later partially revised the generational division under criticism from experts, the term digital natives and immigrants is still used today. Natives are perceived as more adept at using digital technologies. On the other hand, Ondřichová (2017, p. 3) claims that students use modern technologies in their free time mainly for entertainment, communication, and information search, while teachers use technology to create multimedia contents, work with tables and presentations, etc.

A critical perspective on the issue of digital natives is provided by Kirschner and De Bruyckere (2017, p. 140), who mention that especially educators of future teachers should not spread myths, but rather think about how future teachers - digital natives will integrate the use of technology naturally into their teaching. Zounek et al. (2021, pp. 64-65) refer to research carried out by Valtonen et al. in 2011 in Finland, in which the assumptions that teacher students - digital natives would innovatively integrate ICT into their teaching were not confirmed. It was found out that students were more likely to adopt traditional teaching methods supplemented by digital technologies only. As a result, it is desirable for prospective teachers to become familiar with and master technological-pedagogical knowledge and skills (Mishra, Koehler, 2006, Zounek et al., 2021). In the Czech Republic, in 2021, there was conducted research among students of 3 universities (Palacký University in Olomouc, Masaryk University in Brno and University of Pardubice) related to using online tools for foreign language learning. There were 338 participants, future primary and lower-secondary school teachers. Although this research was focused on technologies for informal learning, it may be interesting to read some of the research results and to find out which tools were described as useful for learning foreign languages. The findings showed that prospective English teachers spend from five to approximately 110 minutes a day with using technologies for their studies and entertainment. Research participants used mostly these types of digital technologies: Google, YouTube, and social networks (Facebook, Messenger), for the possible classroom usage these tools were stated: Kahoot, Wordwall, Quizlet. Digital tools are viewed as a source of teaching materials and inspiration for teaching (Černá et al., 2022).

What tools are used by current language teachers in lower-secondary schools will be the subject of research, the results of which will be presented in the practical part of this thesis. Possible online tools are outlined in Chapter 2.3 as well.

2.2.2 Digital competence

As mentioned above, teachers need to respond to the dynamic development of technology and its integration into teaching. This changes the notion of a teacher's professional equipment. Černochová (2003) and Zounek et al. (2021) talk about the so-called e-teacher, who should have professional knowledge and skills, pedagogical, didactic-psychological, and managerial skills, language skills, social-communication competences and knowledge and skills in the pedagogical use of ICT. In addition, Solvie (2005, as cited in Zounek et al., 2021) further defines three key areas for teachers to know and to be able to do: to know students, to know curriculum and to know tools. She emphasizes that the teacher must be able to use digital technology for students' needs and be able to select adequate tools.

The digital competence of teachers is enumerated in the European Framework for the Digital Competence of Educators (DigCompEdu). This is one of the most important documents of recent times which was created by European Commission. The document defines the digital competence as "the ability of a person to have safe, critical and creative approach in the use of ICT" and further identifies twenty-two teachers' competences in six areas: teachers' professional engagement, digital resources, teaching and learning, digital assessment, empowering learners, facilitating learners' digital competences (Neumajer, 2018, Zounek et al., 2021, p. 86 – 88, Redecker and Punie, 2017). The relationship between these areas is illustrated in Figure 1 – adapted from https://joint-research-centre.ec.europa.eu/digcompedu_en.
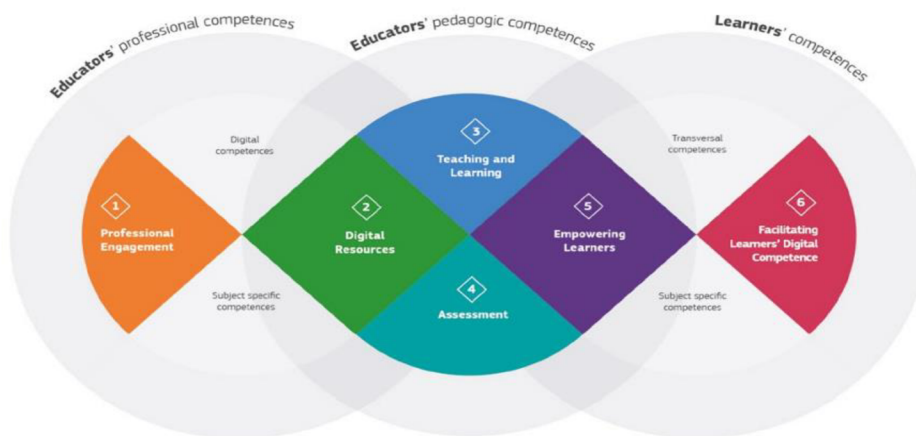
Figure 1 - DigCompEdu areas and scope

In all areas, different levels of progress are determined: A1 – Newcomer, A2 – Explorer, B1 – Integrator, B2 – Expert, C1 – Leader, C2 – Pioneer. According to this document, it is quite logical that every teacher should know first what an ordinary student or citizen knows. In the Czech Republic, teachers can use Profil Učitel 21 (the Teacher Profile 21) application, which was created on the DigCompEdu basis. There is possible to evaluate own digital competence and to plan further professional development. For self-assessment, teachers can also use a free tool called SELFIE for TEACHERS. This tool is managed by the EU and focuses on primary and secondary school teachers.

The Framework Education Programme defines the objectives of elementary education. One of these new objectives is "to help pupils to navigate in the digital environment and to lead them to use digital technologies safely, confidently, critically and creatively for work, learning, leisure and in their engagement in society and citizenship" (RVP, 2021, p. 9, translated by the author). The aim of education is to equip students with key competences, including the digital competence. By the end of elementary education, students should be proficient with commonly used digital devices, search for and critically evaluate information, edit digital content, use digital technologies to facilitate their work, critically evaluate their benefits and reflect on the risks of their use (RVP, 2021, p. 13). If these competences are defined for students, it is obvious that their teachers must possess them as well.

Whether language teachers know their level of digital competence will be the subject of research, the results of which will be described in the practical part of this thesis.

2.3 Teachers' tools

In foreign language teaching, teachers use a variety of tools to enhance the learning experience and help students develop their language skills. It is important to note that the choice of tools and technologies may vary depending on the teaching context, the age group of the learners, their level of proficiency and the resources available. Teachers use a combination of these to create a dynamic and effective language learning environment. In this case, school equipment, teaching aids, traditional and digital resources can be included under the general term tools.

2.3.1 Classification of school equipment

Essential items commonly found in classrooms are:

a) Blackboards, chalkboards, whiteboards – they are used for instructional purposes. Teachers can write or draw on them to present information, explain concepts, or demonstrate examples. Scrivener (2005, p. 96 – 98) recommends paying attention to organising items on the board and making separate sections for vocabulary, grammar, pictures etc. The teacher's position in front of the board is important, his / her body should not block pupils' view. A sideways position allows to talk to pupils and have eye contact with them.

b) Classroom furniture – it includes desks and chairs designed for functional learning environment. Flexible seating arrangements and collaborative workspaces may be utilised to encourage group work, cooperative learning, and project-based activities. It is useful when furniture is portable because the teacher can consider different seating for different activities. Scrivener provides the following examples: a circle or a horseshoe arrangement enables students to make eye contact, to interact better, which is very effective during speaking activities, group activities etc. (2005, p. 87 – 90).

c) Electronic devices – computers, laptops, and tablets. These devices may be used by teachers and students as well (Kopecký et al., 2021, p. 145 – 149). Nowadays it is quite common to use also mobile phones (students' own devices), whereas TV, DVD and video recorders are used less than in the past. Scrivener emphasizes that all these devices are other classroom tools only and they do not do teaching instead of the teacher (2005, p. 351). The other school electronic devices are projectors and screens which are used to display visual content, such as presentations, videos, and interactive materials. Interactive whiteboards allow interactive activities, engagement, and interactivity in the classroom. Teacher's support equipment also includes printers and scanners which provide hard copies of teaching materials or digitalize physical content.

d) Audiovisual equipment includes speakers, microphones, and audio systems. These tools enable to improve students' listening skills because modern language textbooks contain listening tasks. In addition, the teacher can work with authentic audio recordings or incorporate listening to songs into the lesson. According to Scrivener, examples of using songs in lessons are listening and discussing, gapped text, matching pictures during listening etc. (2005, p. 338 – 340).

e) Educational software and learning platforms. These tools offer interactive exercises, virtual simulations, and educational games to engage pupils (Pirklová, 2022, Kudrnová, 2021). Examples of these tools will be described in following chapter.

f) Internet connectivity is crucial for accessing online resources. Many schools provide wi-fi access to enable students and teachers to connect their devices and utilise online educational tools effectively.

g) Additional equipment includes school libraries or language laboratories. Some schools offer foreign language books and magazines in their school libraries and the other schools have a language classroom with the latest equipment, computers for students and teachers, professional headsets with microphones, an interactive whiteboard, and a data projector. The example of such a classroom used in the Czech Republic is the Robotel Smart Class+ language laboratory (https://robotel.cz). This and similar language laboratories promote high concentration and activation of students, differentiation of teaching and communication in a foreign language. The teacher has an overview of the work of all pupils in the class.

h) Textbooks, workbooks, teachers' methodology books, supplementary materials (in paper or digital versions). These tools are traditional in Czech schools. According to Ur, teachers should be aware of advantages and disadvantages of textbooks used in their classroom. If they want to offer richer options to students, it is suitable to add other supplementary materials (2009, p. 183 – 190).

The specific equipment available in schools may vary depending on the school's budget, infrastructure, and educational goals. Moreover, the equipment needs to be regularly updated and maintained to support effective teaching and learning.

Teachers' opinion on the level of facilities in their school will be investigated and presented in the practical part of this thesis.

2.3.2 Tools for teacher lesson planning

Lesson planning is a part of the teacher's work, it is a demanding thinking activity, but its form is not prescribed in the current Czech education system. Therefore, it is up to the teacher what form and what tools he/she uses to prepare the lesson. During lesson planning process, teachers design and organize instructional activities, resources, and assessments to achieve specific learning objectives. It is a crucial aspect of effective teaching. Rys (1988, as cited in Obst, 2017, p. 80 – 81) distinguishes three types of teacher's lesson preparation:

a) Imitative lesson preparation – in this type, teachers rely on existing, pre-prepared materials, textbooks, and lesson plans. The emphasis is on adhering to established teaching methods and strategies without significant modifications.

b) Adaptive lesson preparation – in this type, teachers use pre-existing materials as a basis but modify and adapt them according to the specific needs of their students. Teachers consider learning styles, interests, and abilities of students while planning lessons.

c) Creative lesson preparation – this type is the highest level of teacher autonomy, and it is characterized by questions: What are the students supposed to achieve? What are learning objectives? How do I want to achieve my goal? Means which can be used - choice of methods, tools, techniques. How will I activate the students? What will be most difficult for the students? How will I organise the teaching? How will I measure students' performance?

This classification serves as a framework, but teachers normally employ a combination of approaches based on subject matter, class dynamics, and their level of experience. Scrivener in accordance with Obst emphasizes that effective lesson preparation requires careful consideration of learning objectives, which should be specific, measurable, achievable, relevant. Scrivener adds other crucial factors: engaging content, logical sequencing of activities, differentiation according to diverse students' needs and abilities, interaction, which is vital for language learning, assessment and feedback, anticipation of problems, reflection (2005, p. 109 – 132). Stanley asks what comes first – technology or learning objectives? He explains that the students and their attitudes to using technology for language learning are the most significant (2013, p. 9).

In the past, teachers mainly used a pen and paper to prepare lessons. The rapid advancement of technology and availability of various online tools enable teachers to work differently these days. However, a lot of teachers may still use handwritten lesson plans or paper resources. It is important that teaching materials are of high quality, interesting for students and up to date. On the other hand, Read states that ICT and multimedia offer a range of tools for learning a foreign language, but the advantages of ICT incorporation are not automatic and require careful teacher's preparation and planning (2007, p. 263). In terms of the use of digital technologies for lesson preparation, the following tools can be mentioned:

a) Word processing software – traditional word processors like Microsoft Word or Google Docs are commonly used by teachers to create and format lesson plans.

b) Spreadsheets – applications like Microsoft Excel or Google Sheets can be adapted for lesson planning purposes.

c) Presentation software – tools like Microsoft PowerPoint, Google Slides, Canva or Google Jamboard can be utilized to create visually engaging lesson materials, including slideshows, presentations, and multimedia content.

d) Online educational resources – various online platforms offer pre-made lesson plans, activity ideas, and resources that teachers can integrate into their planning. These include websites like ESL Collective, British Council Learn English Kids / Teens or One Stop English etc., where teachers can find lesson plans, worksheets, audio / video materials and flashcards.

In general, it is possible to say that the Internet is currently the largest source of materials. It is up to the teachers how they decide to find and use this material for lesson preparation and teaching. The results of the research conducted at Palacký University among prospective teachers show that research participants most often use Google as a search engine for their formal education, followed by You Tube for non-academic purposes (Černá et al., 2022). Given this, it may be assumed that the future teachers will also use these online tools for their lesson preparation. This presupposition is supported by research findings which show that prospective English language teachers are positively influenced by their personal experience with digital technologies, and they are interested in using not only Google and You Tube, but also applications such as Kahoot, Wordwall and Quizlet in their teaching (Černá et al., 2022).

In the lesson preparation process, teachers' collaboration and sharing of materials cannot be overlooked. Teachers can collaborate within a school as well as with other schools. Various online platforms for teachers can be used to find inspiration, exchange ideas and share lesson plans. Examples of these platforms are Digitální lektoři (Digital lecturers: https://digitalnilektori.cz), Učitelé učitelům (Teachers for teachers: https://uciteleucitelum.cz), Ditch that textbook (https://ditchthattextbook.com), etc. Fletcher-Wood claims that subject committees are best for sharing ideas and improving teaching in schools because capitalising on teachers' collective knowledge and experience should improve pupils' learning and help teachers in the long term. (2021, p. 148 - 149).

Foreign language teachers' tools used for lesson preparation and teachers' willingness to share ideas and materials will be examined in research and presented in practical part of this thesis.

2.3.3 Tools for classroom teaching

The requirements for education in foreign languages are formulated in the Framework Education Programme for Elementary Education. These requirements are based on the Common European Framework of Reference for Languages. At lower-secondary school, the expectation is to reach A2 level (RVP ZV, 2021).

Cruttenden defines a language as "a system of conventional signals used for communication by a whole community" (1994, p. 4). Yule emphasizes that foreign language students need to develop communicative competence which can be defined as "the general ability to use language accurately, appropriately, and flexibly" (2010, p. 194). A language system refers to the complex and organized set of rules, structures, and components. Key components are grammar, syntax, vocabulary, phonetics and phonology, semantics, and pragmatics, discourse. Concentration on grammar or vocabulary only does not enable to produce foreign language expressions properly (Yule, 2010, p. 194). It is therefore desirable for teachers to focus on the language skills that are generally categorized into four main areas: listening, speaking, reading, and writing skills. Language skills are interconnected, proficiency in one area often supports the development of others. Listening and reading are called receptive skills, speaking and writing are the productive skills. No part of language system and language skills exists in isolation (Scrivener, 2005, p. 29).

Figure 2 – adapted from Teaching Learning, author: Jim Scrivener, 2005, p. 29.

Language systems	Language skills	
knowing	*doing*	
Phonology		
Lexis	Productive	Speaking Writing
Grammar		
Function	Receptive	Reading Listening
Discourse		
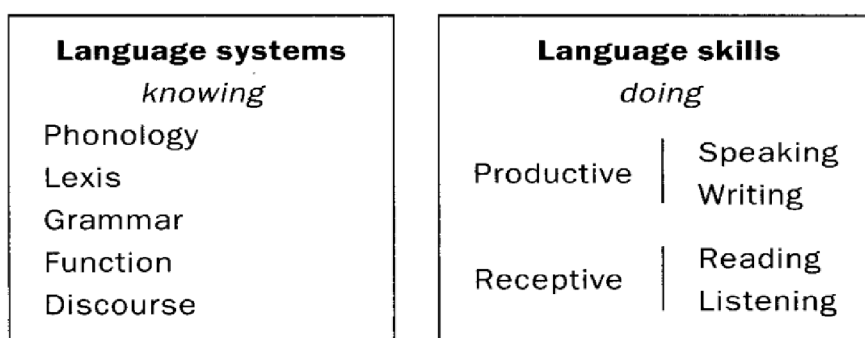
Figure 2 - Language systems and skills

Foreign language teachers can integrate a variety of online tools into their teaching methods to enhance their students' language skills. Stanley emphasizes that technology should be consistently integrated into a teacher's ongoing classroom activities and used only to enhance and extend the learning experience. It should not be treated as a separate activity from

regular classroom instruction or as a reward for good behaviour (2013, p. 9). In this chapter, examples of some tools suitable for foreign language teaching are outlined.

Productive skills – speaking and writing:

Teachers can use visual materials to support speaking. These include describing pictures or setting up situations for dialogues. Tools such as PowerPoint, Canva (https://www.canva.com) or Genial.ly (https://genial.ly) are suitable for presentations. Learners can use their mobiles for describing own photos. Online tools such as Story dice (https://davebirss.com/storydice) and Story cards (https://learnhip.com/storycards) or random generators are entertaining for students. With these tools, the element of chance brings tension to the activity and increases student interest. Also, QR codes can be generated to reveal discussion topics and conversation starters (https://me-qr.com). Kudrnová (2021, p. 27) recommends finding and contacting native speakers, for example expats or students who live in the Czech Republic or use Tandem Language Exchange app (https://www.tandem.net). Communication between students and native speakers via video conference calls is possible thanks to international projects on the e-Twinning platform (https://www.etwinning.cz). This initiative enables collaboration between all types of schools in Europe through online tools. For communication in a foreign language, correct pronunciation is important. Pirklová states that pronunciation training is one of the most underestimated disciplines in foreign language teaching in the Czech Republic (2022, p. 33). Voice recording in Vocaroo application (https://www.vocaroo.com) allows pronunciation improvement and subsequent autocorrection of errors. If students are recorded, they perform at their best and spend more time thinking about how they speak (Stanley, 213, p. 147).

To support writing skills, visual materials as pictures or videos can be used effectively. Learners describe what they have seen. Pirklová argues that writing is naturally much more used in the digital space than outside of it (2022, p. 50). Different applications can make writing more attractive; for example, teachers can use the application called the Newspaper clipping generator for writing articles (https://www.fodey.com/generators/newspaper/snippet.asp), Random Face Generator for creating a person's story of life (https://this-person-does-not-exist.com/en), or Future Me application (https://www.futureme.org) to practise writing letters. According to Stanley (2013, p. 121), writing as a skill is most affected by the Internet. Students should be encouraged to try to write own blogs or online journals in the target language.

Receptive skills – reading and listening:

Stanley points out that nowadays educators have a crucial role in helping learners acquire the essential reading skills needed to engage with contemporary media. Different reading strategies are needed for reading electronic texts and combinations of texts and images. Newly acquired skills are grouped under the broader concept of digital literacy which refers to "a person's ability to perform tasks effectively in a digital environment and includes the ability to read and interpret media, to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments" (Stanley, 2013, p. 99). According to Pirklová, developing reading skills in a digital environment can be attractive to students because they can use gamified texts, interactive quizzes, or Google searches (2022, p. 39). Teachers should use authentic materials such as online articles, blogs, websites, and e-books to increase interest in reading in the target language. Kudrnová states that it is helpful to read a book in the target language and start reading aloud (2021, p. 36). Again, using QR codes generators may be helpful because reading paper materials is often boring for students but reading text on mobile screen or on tablets is more stimulating. The great source of reading materials are online libraries such as Open Library (https://openlibrary.org) or English e-reader application (https://english-e-reader.net) where e-books of different levels so called graded books are available. Scrivener emphasizes that extensive reading significantly influences the process of acquiring a language. The more students read, the more likely they are to absorb vocabulary and grammar presented in the texts (2005, 188 – 191).

Listening skills can be improved by providing authentic audio materials like podcasts, news clips, and interviews in the target language. For these purposes, teachers can use Radio Garden (https://radio.garden/listen/bbc-radio-4/CO4JBP8X) or Ted Talks (https://www.ted.com/talks). Kudrnová (2021, p. 84) recommends the Squid app, which simplifies access to global press and news (https://squidapp.co/en). Since students often like listening to songs, another useful tool can be Lyrics Training, where is possible to choose a song and fill in missing words based on listening. In addition to listening skills, spelling, and reading are also practised here (https://lyricstraining.com). For listening practice, a lot of audiobooks can be found on the Internet as well.

Lexis / vocabulary:

Scrivener explains that the terms vocabulary and lexis are closely related but have distinct meanings. While vocabulary covers the entire range of words known by a person, lexis

focuses on the specific set of words and phrases that are used effectively in practical language usage, considering context and commutative situations (2005, p. 226 – 251). Stanley agrees that it is more important to teach students many word combinations than to teach them individual words (2013, p. 39). Czech schools often use textbooks that include a Czech-English dictionary. Pupils learn vocabulary through translation. In this case, various digital tools can also be used to practise vocabulary, for example: Wordwall (https://wordwall.net), Kahoot! (https://kahoot.com) or Quizlet (https://quizlet.com). The Wocabee app combines a game with vocabulary learning, but it is a paid tool for students (https://www.wocabee.app). The following popular tools can be used free of charge: Babadum (https://babadum.com), Duo Cards (https://duocards.com/cs) or Duolingo (https://cs.duolingo.com) and others. Pirklová recommends using intensive reading to practice vocabulary, which focuses on understanding details. Teachers can use texts with deleted words, which students then must fill in, for example Live worksheets (https://www.liveworksheets.com) or the afore-mentioned Kahoot! (2022, p. 46 – 47). Vocabulary understanding and pronunciation can be combined in the YouGlish app (https://youglish.com), which offers practice using YouTube videos (Kudrnová, 2021, p. 82). Another tool related to vocabulary is an online dictionary which allows to find the meaning of a word and its sound forms (Google translator, Seznam dictionary) or Cambridge Dictionary (https://dictionary.cambridge.org). During the lessons, students can use dictionaries downloaded on their mobile phones. Sometimes teachers need to use so called fillers, short activities such as crosswords and a word search – online version on students 'mobiles (https://thewordsearch.com) or a word game Contexto (https://contexto.me) which is designed for more advanced students.

Grammar:

Grammar refers to the system of rules that govern how words are organized and combined in a language to form meaningful sentences. Ur and Scrivener state that teaching grammar should be learner-centred, and it is essential to adapt the approach based on students' needs, interests, and proficiency levels, and furthermore, they emphasize the importance of context-based learning, where grammar is presented within relevant and authentic communication situations (2009, p. 75 – 89, 2005, p. 252 – 282). Teachers can use several online tools for teaching and practising grammar of a foreign language. These tools offer interactive exercises, explanation, feedback, examples are: Duolingo, Wordwall, Quizlet with flashcards, quizzes, and games, Kahoot or Live worksheets (mentioned above) with games, quizzes, and grammatical exercises, etc. It is essential to supplement online tools with other

activities like speaking or writing practice, teachers can use different visual materials made in Canva, Genial.ly or Google Jamboard to encourage students to practise verb tenses, parts of speech etc.

Projects and authentic materials:

The above-mentioned authors (Ur, 2009, Scrivener, 2009) advise that teaching vocabulary, grammar and language skills should be linked to real-life situations. The authentic materials available online serve this purpose very well. Students can combine a foreign language with technology and authentic materials in various projects, for example on shopping (e-shop websites in the target language), travel (holiday generators, train and bus timetables and flight schedules, hotel websites in the target language), eating out (restaurant menus, a breakfast generator), etc. Stanley adds that technology encourages project work, especially for young learners and teenagers, and motivates students to practise language. Examples of projects supporting by technology are an online magazine, e-books, a recipe book etc. (2013, p. 189).

2.3.4 Teacher support tools

Teachers use online support tools to organise activities during the lesson, and the activity itself does not necessarily involve integration of digital technologies. To work in groups or pairs, students can be divided randomly using the Flippity app (https://www.flippity.net), so they learn to communicate and collaborate with different classmates. This application allows, among other things, the creation of a set of online flashcards, quiz shows or board games. As another supporting tool, it is worth mentioning the website called Toy Theater (https://toytheater.com/category/teacher-tools) where is possible to use a classroom timer or a virtual dice. Tool Bee is now available free of charge for foreign language teachers. The Slovak app contains useful tools, such as Language Cube or Tick Tock timer. A Name Wheel and a Group Maker are in progress.

In addition, teachers can incorporate digital tools into homework assignments and student testing. Students can practise vocabulary and grammar using the popular Wordwall or Kahoot apps, where the teacher monitors students' success and students receive immediate feedback. Fletcher-Wood (2018) emphasizes that providing feedback as a part of effective formative assessment actively involves students in the learning process. Based on the feedback, the teacher identifies areas for improvement. For testing students, online tests, and quizzes such as Microsoft Forms or Google Forms may be suitable. These tools help the teacher to evaluate

results more quickly, identify students' strengths and weaknesses, and adjust their teaching accordingly.

The use of various online tools for teaching, practising, testing, homework, and projects will be explored in the research and described in the practical part of this thesis. Examples of lesson plans using online tools will be presented.

2.4 Digital tools and teaching methods

The tools mentioned above in Chapter 2.3 are referred to as didactic tools. Janiš and Loudová (2016, p. 86 – 93) divide these tools into material (for example: school equipment, teaching aids, didactic technology) and non-material ones which are didactic principles, organisational forms, and teaching methods. This chapter discusses teaching methods and outlines the use of digital tools in the context of some teaching methods.

2.4.1 Teaching methods classification

Teaching method is defined as a teacher-learner activity that leads to achieving a predetermined educational goal (Průcha, Walterová, Mareš, 2003, p. 287; Janiš, Loudová, 2016, p. 68). Maňák and Švec (2003) add that the method does not operate in isolation but is a part of a complex of factors that influence the teaching process. One of the most important functions of teaching methods is to impart knowledge and skills, but they also have an activating and communicative function. The choice of teaching method depends mainly on the aim and content of the lesson, the level of mental and physical development of the learners, the characteristics of the classroom, the external environment (noise, technical equipment of the school, etc.) and the personality of the teacher.

Maňák and Švec (2003, p. 49) distinguish three basic groups of teaching methods according to the criterion of increasing complexity of educational links:

1. Classical teaching methods, which include verbal methods (narration, explanation, lecture, text work, interview), demonstration methods (demonstration and observation, work with images, instruction) and skill-practical methods (imitation, manipulation, tinkering and experimentation, skill development, production methods).

2. Activating methods, which include discussion methods, heuristic methods, problem solving, situational methods, staging methods, and didactic games.

3. Comprehensive teaching methods, which include frontal teaching, group and cooperative teaching, peer teaching, individual and individualised teaching, independent work, critical thinking, brainstorming, project-based learning, drama teaching, open learning, learning in life situations, tele-teaching, computer-assisted teaching, suggestopedia and super learning.

2.4.2 Teaching methods in the 21st century

Jůvová et al. (2023) emphasize that modern and innovative trends in the educational process prefer teaching methods that encourage students to learn actively, respect the principles of pedagogical constructivism and emphasize the development of skills and competences relevant to the needs of the 21st century. The 21st century skills are now an integral part of the key competences set out in the curriculum. These skills are a set of abilities that directly develop individuals and increase their ability to integrate into society, to enter the labour market and to face challenging situations. The emphasis on the ability to navigate in a digital environment, critical thinking and the ability to distinguish between true and false information is also important. Zounek et al. (2021, p. 38 - 42) state that learning provides people with the conditions for an active and creative life but point out that while the role of learning in life remains the same, the conditions for a full and active life are changing nowadays. The basic skills needed today include communication, collaboration, creativity and critical thinking (the so-called 4 Cs), as well as the ability to use digital technologies, work with information and solve problems. These skills can be achieved through appropriate teaching methods combined with the use of modern technology. As mentioned above, it always depends on the learning objective, the educational content, but also on the creativity of the teacher. Jůvová et al. (2023) mention so-called digital didactic tools which are for example digital storytelling, edu-clips, eTwinning, smartphones, interactive whiteboards, data projectors, podcasting, presentations etc.

Most teaching methods can be successfully complemented by the use of digital tools. Ordinary explanations or narratives can be supplemented with digital images, and the teaching of language skills can be supported by integrating different applications, mobile phones, iPads and computers into the learning process. Digital technologies are widely used in project-based learning or in individual and personalised learning.

The most common teaching methods used in combination with digital tools will be investigated during the research and described in the practical part of this thesis.

2.5 Summary of Chapter 2

The use of digital technologies in the classroom changes the role of the teacher from a traditional transmitter of knowledge to a mentor, tutor, facilitator. To use modern technologies, a teacher needs to have the knowledge and skills to work with technology. Students are often very adept at working with online technologies because they are surrounded by them practically from their birth. They are so-called digital natives. Teachers, as members of a different generation who learn to use technology later in their life, are often referred to as digital immigrants. Digital competence, which is part of a teacher's professional skills, is described in the European Framework for the Digital Competence of Educators (DigCompEdu).

Chapter 2 outlines the different tools a teacher uses to teach foreign languages. These include school equipment such as blackboards, furniture, electronic devices, audiovisual systems, textbooks, language classrooms and libraries. Teachers also use digital tools - the Internet, educational software and learning platforms. These tools are included in lesson planning, in actual teaching, student testing or as support tools for the organisation of teaching. Today it is possible to work with a wide range of digital tools, so it is not possible to name all of them. Only some common applications and tools that the author has experience with are listed in this thesis. For example, these are Canva, Google Jamboard, Genial.ly, Kahoot, Wordwall, Quizlet etc.

Furthermore, in Chapter 2, a classification of teaching methods is given, and these methods are put in the context of the integration of digital tools in the teaching process.

3   Artificial Intelligence in teaching

The previous chapter outlined examples of possible digital tools suitable for a teacher's lesson preparation and teaching. All these tools now seem to be overshadowed by tools based on artificial intelligence. The term artificial intelligence (AI) has been frequently mentioned in recent months. However, it is not a current innovation, as efforts to create a machine operating on a similar principle to the human brain date back to the early 20th century (Lukáš, 2022). "Artificial intelligence is a broad term used to describe a collection of technologies that can solve problems and perform tasks to achieve defined objectives without explicit human guidance" (Schmidt and Strasser, 2022). Cahlík and Jindra (2022) add that it is a programme that simulates human thinking and action. AI refers to the development of computer systems that can perform tasks that typically require human intelligence, such as learning from experience, recognizing patterns, making decisions, and solving problems. The purpose of this paper is not a technical description of how AI-based tools work. The question is what the relationship between AI and education is and how teachers can incorporate AI into foreign language teaching.

In March 2022, an initiative called "AI for Children" was established in the Czech Republic. The authors of the project are Eva Nečasová and Jitka Šimková. The project's aim is to help schools and the public introduce the topic of artificial intelligence to children. According to the authors, it is important to create high-quality educational materials, support awareness and demystify AI (AI dětem, 2022). One of the main goals should be for the young generation to be able to understand not only the possibilities of artificial intelligence, but also to see the dangers of this innovative technology. In this context, Lupták (2022) states that AI literacy is "a set of competences that enable an individual to function competently in an AI-connected society" (translated by the author).

It can be said that new tools appear almost every day, so teachers should follow new trends and be able to choose online tools that will be beneficial for their teaching. Teachers need to create chances for their students to utilise advanced technology and digital resources. Nowadays, students themselves are already encountering AI-based applications outside of schools. Some of these tools can also be incorporated into the classroom. According to Kopecký et al. (2021, p. 139 – 140), one of these tools are voice assistants, which not only communicate with household devices but also serve as a smart information search engine. The most well-known assistants include Alexa, Siri, and Cortana. As the communication is in English, it would

be possible to include these assistants in the teaching of foreign languages in schools (making questions, listening comprehension, etc.).

To use AI in education, teachers first need to understand and work with AI-based tools. They can find inspiration from the Internet, seminars, and webinars. On June 20, 2023, the University of Hradec Králové hosted a conference entitled AI for Education. Participating teachers had the opportunity to familiarise themselves with the latest findings and trends in the use of AI in education. The conference focused on how to use IA in schools, how to teach about AI, and ethical issues were also discussed. Examples of some specific AI-based tools were given by Libor Klubal, an experienced teacher, lecturer, and mentor, who presented the use of chatbots in the classroom. Haristiani states that it is very appropriate to incorporate chatbots into language learning and teaching and defines them as "computer programmes based on artificial intelligence that can carry out conversations through audio or text". Learners can use chatbots anywhere and anytime. However, Haristiani notes that they are more suitable for advanced students. If teachers permanently integrate chatbot technology into language practice, motivation and learning in the classroom may be enhanced (2019, p. 1 – 4). One of the most popular chatbots today is ChatGPT developed by Open AI. It is a language model that can answer questions and produce text in different languages. Nowadays, in the Czech Republic, it is possible to use version 3.5, which is free of charge, or the higher paid version 4.0. ChatGPT defines itself as follows: "It is a language model specifically based on the generative pre-trained transformer architecture. It is designed to generate human-like text based on the input it receives" (https://chat.openai.com). GPT itself notes that it does not always provide complete and accurate information and users should therefore verify this information with trusted sources.

In Chapter 2, some examples of teachers' online tools are outlined. ChatGPT can be used for teachers' lesson preparations as well as in teaching process. Based on the correct request, GPT creates lesson plans, tests for students, texts to improve reading skills, exercises to practice grammar, etc. Teachers can also find inspiration for their lessons, ideas for projects or discussions. This means that the teacher's work can become faster and more efficient. If GPT is included directly in the teaching process, students must be over 13 years old, and the consent of legal guardians (parents) is required. In the case of younger students, or if parental consent has not been granted, it is possible to work in groups, the teacher operates the application, the students ask questions only (AI dětem, Vykoukal, 2022). For educational purposes, Klubal (AI for Education conference, 2023) recommends trying out apps without registration, such as: Byte

Chat (codebreakeredu.com) or Koala Chat (https://koala.sh/chat). Many AI-based applications can be used in foreign language teaching and learning. Some of them, such as Babadum, Duolingo, and Contexto have already been mentioned in chapter 2.3.3. For inspiration, some other tools can be named: Character.ai (https://beta.character.ai/) - students chat with a fictional character to improve their writing and reading comprehension skills, this application is entertaining not only for young people. Tandem GPT is very similar (https://www.tandem-gpt.com), students can conduct a dialogue according to a given or their own scenario. The app simulates realistic conversations. The advantage is that the system recognizes communication errors, corrects, and explains them. Wisdolia (https://www.wisdolia.com) is a tool which allows to create AI-powered flashcards for learning vocabulary. An excellent tool designed specifically for English teachers is an app called Twee (https://twee.com). With this tool, teachers can convert a YouTube video into text, create questions for the video, generate customised exercises or brainstorm vocabulary. Another example is creating images which may be interesting for students, and it is also a stimulus for speaking in a foreign language (describing a picture, creating a story, practising grammar, and vocabulary, etc.). In this case it is possible to use Bing Image Creator (https://www.bing.com/create) or Canva (https://www.canva.com) which allow convert texts into images. These examples of AI-based tools show that teachers can use innovative technologies to create engaging lessons for students. It depends on the teacher's knowledge, skills, creativity, and willingness to try something new. However, it also means that the teacher needs to spend a lot of time searching for new tools. Again, sharing materials and ideas plays an important role here.

Palacký University in Olomouc with the support of Microsoft company conducted research on artificial intelligence in Czech schools between 25th April and 30th June 2023. The research was focused on how Czech teachers are prepared for the advent of AI, what tools they use, and whether they can meaningfully integrate AI into their teaching and homework. According to the research report, 2175 teachers from all over the Czech Republic participated in the research and their average age was 46.68 years. According to the survey results, approximately one third (33%) of Czech teachers use AI in various forms. 82% of respondents believe that the introduction of AI requires teachers to have new knowledge and skills in didactics. However, 70% of the schools where teachers work does not yet have the use of AI in schools regulated at the level of internal regulations.

Teachers' attitudes towards AI and the use of AI-based tools will be the subject of research, the results of which will be interpreted in the practical part of this thesis.

3.1 Summary of Chapter 3

Artificial intelligence as a phenomenon of our time is also well applicable in education. It is a broad field, which is why in 2022 an initiative called "AI for Children" was created to help schools and the public in the Czech Republic apply AI to education. Teachers have many AI-based tools at their disposal but should always keep in mind the ethical issues and pedagogical use of the tools to achieve learning goals. AI-based tools can be used in a teacher's lesson preparation as well as directly in the classroom. Chapter 3 lists some examples of specific tools suitable for education.

Research conducted by Palacký University in Olomouc in cooperation with Microsoft examined the situation among teachers in the Czech Republic. The results of the study on teachers' attitudes towards the use of AI in education were published in September 2023.

4 Conclusion of the theoretical part

In the theoretical part of this thesis, I have introduced basic facts about digital education and digital technologies used in education. In the first chapter, I have described the factors that influence the integration of digital technologies and the barriers that hinder their use, based on the perspectives of different authors. I have provided background information on the main policy documents in the field of digital education.

In the second chapter, in the section on foreign language teaching with the inclusion of digital tools, I have mentioned the changing role of teachers, teachers' professional competences including digital competence. I have also explained the terms of the digital natives and the digital immigrants.

I have provided a classification of teacher's tools, describing school equipment, tools for lesson planning and also giving examples of some tools used directly in the teaching process or supporting tools for organising teaching. I have explained the importance of teaching methods and the benefits of incorporating online tools into these methods.

As I have mentioned the 21st century skills, in Chapter 3, I have also provided background information on Artificial Intelligence (AI) and AI-based tools used in education. As there are new applications coming out on an almost daily basis these days, these are just a few examples of the tools that I have already tried out in my teaching.

The following pages of this thesis present the results of the first phase of my research which was carried out at lower-secondary school in the town of Dvůr Králové nad Labem. The results from this phase of the research are then compared with the opinions of foreign language teachers in the Královéhradecký region (the second phase of the research). The results of the research are the subject of a discussion at the end of the thesis.

Chapter 8 also contains a sample of two lesson plans. These are English language lessons using digital technologies.

5 The research

The purpose of this study is to compare the findings of the literature review, which are presented in the theoretical part, with the practical experience of lower-secondary school teachers in using digital tools in foreign language teaching. The research is divided into two phases. A form of mixed research was chosen, in which the interview method (qualitative research) is used in the first phase and the questionnaire survey method (quantitative research) is used in the second phase.

The topic of the research is loosely related to my bachelor's thesis, where I dealt with the issue of teachers' professional development and their willingness to engage in lifelong learning.

In the practical part of this thesis, first of all, the research objectives, the research questions and the research methods are stated. This is followed by a description of the research process and then the results are presented.

5.1 Research objectives and research questions

The main aim of this thesis is:

- to find out teachers' attitude towards the use of digital tools in foreign language teaching at lower-secondary school.

The other objectives are:

- to define factors which influence the use of digital tools in the teaching process and outline the problems which prevent incorporating them in teaching,
- to explore teachers' opinion on whether the use of digital tools motivates students to learn foreign languages.

For the purpose of this research, I have set the following research questions:

1) What factors influence the integration of digital tools in foreign language teaching at lower-secondary school?
2) How do teachers use digital tools in foreign language teaching?
3) Does the use of digital tools motivate learners at lower-secondary school to learn foreign languages?

5.2 The research methods

I decided to use mixed methods research which involves different combinations of qualitative and quantitative research. They allow researchers to gain a deeper and more comprehensive understanding of the research topic by combining the strengths of both qualitative and quantitative approaches. Qualitative methods provide rich, context-specific insights, while quantitative methods offer broader generalisability and statistical rigour (Dörnyei, 2007; Creswell, 2009; Chrástka, 2016).

5.2.1 Qualitative research

I have chosen qualitative research for the first phase of my research because it provides basic information and the insight into the issue of incorporating digital tools into foreign language teaching. Qualitative research presents its findings verbally, using descriptions that are concrete, vivid and detailed. Qualitative research usually avoids trying to express reality numerically (Gavora, 2010; Dörnyei, 2007; Creswell, 2009).

Qualitative research methods have both advantages and disadvantages. As mentioned above, qualitative research provides a detailed and in-depth understanding of complex phenomena. These research methods are very flexible and adaptable. Researchers can change their approach, questions and methods during the research process based on emerging findings. In addition, qualitative methods prioritise the perspectives and experiences of participants. On the other hand, qualitative research is more subjective because it relies on the interpretation of the researchers. This subjectivity can introduce bias into the findings. Findings from qualitative research are often context-specific and may not be easily generalised to larger populations. In addition, qualitative research can be time-consuming, as it involves extensive data collection, transcription and analysis, and typically involves smaller sample sizes, which may limit the ability to make statistically significant claims (Švaříček, Šeďová et al.,2007; Gavora, 2010; Dörnyei, 2007).

Typical qualitative research methods are unstructured observation, interview, narrative method and human product analysis (Gavora, 2010, p. 181). For the purpose of the first phase of this research, it seems appropriate to use the interview method, which is the most common method of data collection in qualitative research (Švaříček, Šeďová et al.,2007, p. 159). There are two main types of interviews: the semi-structured interview, which is based on a pre-prepared list of topics and questions, and the unstructured interview. The interview is a source

of data about reality, the aim is to obtain information. For this reason, I decided to use the method of interviewing foreign language teachers in the school where I work.

5.2.2 Quantitative research

For the second phase of my research, I have chosen a quantitative method of questionnaire survey, which should confirm or refute the information obtained in the first phase of the research. Quantitative research involves data collection procedures that result in primarily numerical data, which are then analysed using primarily statistical methods (Dörnyei, 2007; Creswell, 2009; Chrástka, 2016).

Quantitative research has a number of advantages and disadvantages. This type of research is often seen as more objective because it relies on numerical data and statistical analysis, reducing the influence of researcher bias. Findings from quantitative research can often be generalised to larger populations because they typically involve larger sample sizes and statistical methods that allow for inferential statistics. Additionally, quantitative studies are designed to be replicable, so that other researchers can conduct similar studies and verify the results. On the other hand, there are also disadvantages. Quantitative research may lack the depth of understanding and context that qualitative research provides, as it focuses on numerical data and may miss nuanced insights. The reliance on numbers can oversimplify complex social and human behaviours, reducing them to quantifiable variables. Furthermore, quantitative research designs can be less flexible in adapting to unexpected findings or changes in research focus during the study (Gavora, 2010; Dörnyei, 2007; Creswell, 2009).

Quantitative research uses different methods to collect and analyse numerical data. Typical quantitative research methods include surveys and questionnaires, which are the most common. Researchers use structured surveys and questionnaires to gather data from large numbers of participants. These tools consist of closed-ended questions with predetermined answer options, making it easy to quantify responses. Other examples of quantitative methods include experiments, observational studies or content analysis (Gavora, 2010).

The choice between quantitative and qualitative research depends on the research questions, the nature of the phenomena being studied, and the research objectives. It is recommended using a combination of both methods (mixed methods research) to gain a fuller understanding of a topic.

5.2.3 The research participants

The research focused on adult respondents. For the first phase of the research (the qualitative research), five lower-secondary school teachers were chosen. All of them are my colleagues from the school in the town of Dvůr Králové nad Labem and they teach foreign languages.

The teacher 1 – female, 24 years old, 1.5 years of teaching practice, teaches Russian and English languages, not fully qualified yet.

The teacher 2 – female, 41 years old, 18 years of teaching practice, teaches English, fully qualified.

The teacher 3 – female, 52 years old, 28 years of teaching practice, teaches English and German languages, fully qualified in German.

The teacher 4 – female, 55 years old, 24 years of teaching practice, teaches English and Maths, fully qualified.

The teacher 5 – female, 47 years old, 25 years of teaching practice, teaches English and Russian languages, fully qualified in English.

The second phase of the research included a questionnaire survey among foreign language teachers in the Královéhradecký region. According to the School Information Portal, there are 566 schools in the region, 277 of which are elementary schools, 166 of which are complete schools (with a lower-secondary level). The number of schools in individual districts of the Královéhradecký region is shown in Table 1. These are schools of all founders - municipal, regional, private, church and schools established by the Ministry of Education, Youth and Sports.

Table 1 - The number of lower-secondary schools in the Královéhradecký region

Districts	Lower-secondary schools
Hradec Králové	40
Jičín	27
Náchod	30
Rychnov nad Kněžnou	27
Trutnov	42
Total:	**166**

5.3 The research stages

It was necessary to complete the following steps before starting this research. At first, I defined the research problem:

What is teachers' attitude to the use of digital tools in foreign language teaching at lower-secondary school?

This was followed by the identification of research objectives and research questions. The objectives and questions are presented in Chapter 5.1. I then chose research methods for each phase of my research. These methods are described in Chapter 5.2.

I started the informational preparation of the research by studying Czech and foreign literature (books, articles, thematic reports, research on similar topics, etc.). I also obtained the necessary facts by attending professional conferences and webinars. The information gained is described in the theoretical part of this thesis. After the theoretical part, I started collecting, processing and analysing the data. The research stages are depicted in Table 2.

Table 2 - Research timetable

Types of activities	Time interval in months
Defining the research problem	January 2022
Informational preparation	August 2022 - July 2023
Research methods preparation	May - June 2023
Data collection and processing	August - October 2023
Data interpretation	October - November 2023
Research report writing	September - November 2023

The following chapters guide the reader through the research process and the interpretation of the results.

6　The research processes

As it was already stated, this was mixed research. In the first phase, the qualitative method of the interview was used, data was collected among five lower-secondary school teachers. The second phase involved a larger sample of respondents and a quantitative survey method among teachers was used.

6.1　The first phase

I approached my colleagues at school in the town of Dvůr Králové nad Labem with a request for an interview on the topic of integrating digital tools into their foreign language teaching. I prepared a semi-structured interview with questions on the topic. The interviews were conducted individually and lasted on average sixty minutes. The questions were the same for all respondents, and during the interviews it was possible to ask for further information and to respond to the research participants' answers. At the beginning of the interview, the research topic was introduced, and respondents were asked to agree to participate in the research. None of the interviews were recorded, only written notes were taken. The interview questions mainly focused on the use of digital technologies and tools in teacher's lesson preparation and language teaching, teachers' digital literacy, teaching methods and learners' motivation. Teachers' opinions on the use of artificial intelligence in education were also sought.

The list of questions prepared before the interviews:

1) Is your school sufficiently equipped with digital technologies for teaching foreign languages (e. g. PCs, interactive whiteboards, internet connection, etc.)?
2) Do you think your knowledge and skills in the use of digital technologies and tools in foreign language teaching are at a sufficient level?
3) Has the Covid -19 pandemic affected your use of digital tools in your current face-to-face language teaching?
4) What digital technologies do you use in your lesson preparation?
5) What resources do you use in your lesson preparation?
6) Where do you find inspiration for your work?
7) Do you create your own learning materials? Which digital tools do you use for it?
8) Do you make audio recordings? What tool do you use for this?
9) What digital technologies do you personally use most often in foreign language teaching?

10) What digital tools do your students usually use in their regular foreign language lessons?

11) What tools do you consider important and can't imagine your foreign language teaching without them?

12) Do you use authentic materials in your foreign language teaching?

13) Do you and your students make any audio or video recordings during your foreign language lessons?

14) Do you teach foreign languages in a PC classroom or with a mobile classroom (laptops, tablets) so that students actively use modern technology throughout the lesson?

15) Do you have experience in organising videoconferences in which learners can communicate online in the target language with abroad partners (e. g. in e-Twinning projects)?

16) Do your students do their homework online?

17) Do you use any digital tools for examining / testing?

18) Which teaching methods do you most complement by using digital tools?

19) Do you think that the use of digital tools motivates students to learn foreign languages?

20) What is your opinion on the use of artificial intelligence in education?

I used an open coding method to analyse the interviews with individual teachers. This is a technique that involves labelling and categorising concepts; the analysed text is divided into units to which codes (words or short phrases) are assigned. Guiding questions (e. g. what, who, how, why, etc.) are used to select the codes (Švaříček, Šeďová at al., 2007). Each interview was coded separately, and all concepts were then linked and categorised. The results were then processed using the "card layout" method, that is the retelling of essential information using codes (Švaříček, Šeďová at al., 2007, p. 226).

6.1.1 The interviews

The teacher 1 – interview results:

Based on a verbal conversation with Teacher 1, I assigned the following codes:

- partial satisfaction with school facilities
- a high level of digital skills, certainty
- a positive attitude towards digital tools, enthusiasm
- a great ability to produce custom materials
- online resources combined with traditional materials

- a strong sense of cooperation and sharing
- no experience with international projects
- online homework and testing
- comprehensive methods combined with digital tools
- learners' positive motivation thanks to digital tools, competitiveness, excitement
- interest in the use of AI tools in language learning, enthusiasm.

During the interview, the teacher mentioned these most used digital technologies and digital tools (applications and websites):

- PCs, notebooks, iPads, mobile phones and a data projector
- Wordwall, Kahoot, ISL collective, Live worksheets, Learning apps.

The teacher 2 – interview results:

Based on a verbal conversation with Teacher 2, I assigned the following codes:

- full satisfaction with school facilities
- a low level of digital skills, uncertainty
- a neutral attitude towards digital tools
- a low ability to produce custom materials
- mostly traditional paper materials
- a strong sense of cooperation and sharing
- no experience with international projects
- no online homework and testing
- classical and comprehensive methods combined with digital tools
- neutral attitude towards learners' motivation
- no experience with AI

During the interview, the teacher mentioned these most used digital technologies and digital tools (applications and websites):

- PCs, mobile phones and a data projector
- Wordwall, Live worksheets.

The teacher 3 – interview results:

Based on a verbal conversation with Teacher 3, I assigned the following codes:

- full satisfaction with school facilities
- a low level of digital skills, uncertainty
- a neutral attitude towards digital tools
- a low ability to produce custom materials
- mostly traditional paper materials
- a strong sense of cooperation and sharing
- no experience with international projects
- no online homework and testing
- classical methods combined with digital tools
- learners' positive motivation thanks to digital tools
- no experience with AI

During the interview, the teacher mentioned these most used digital technologies and digital tools (applications and websites):

- PCs, interactive whiteboard
- Wordwall.

The teacher 4 – interview results:

Based on a verbal conversation with Teacher 4, I assigned the following codes:

- full satisfaction with school facilities
- a high level of digital skills, certainty
- a positive attitude towards digital tools
- a high ability to produce custom materials
- online resources combined with traditional materials
- a strong sense of cooperation and sharing
- no experience with international projects
- online homework and testing
- classical, comprehensive and activating methods combined with digital tools
- learners' positive motivation thanks to digital tools, competitiveness, interest
- no experience with AI

During the interview, the teacher mentioned these most used digital technologies and digital tools (applications and websites):

- PCs, mobiles, interactive whiteboard, a language lab
- Wordwall, Kahoot, Learning apps, Liveworksheets, Padlet.

<u>The teacher 5 – interview results:</u>

Based on a verbal conversation with Teacher 5, I assigned the following codes:

- full satisfaction with school facilities
- a high level of digital skills, certainty
- a positive attitude towards digital tools, enthusiasm
- a great ability to produce custom materials
- online resources combined with traditional materials
- a strong sense of cooperation and sharing
- no experience with international projects
- online homework and testing
- comprehensive methods combined with digital tools
- learners' positive motivation thanks to digital tools, competitiveness, excitement
- interest in the use of AI tools in language learning, enthusiasm.

During the interview, the teacher mentioned these most used digital technologies and digital tools (applications and websites):

- PCs, mobile phones, a data projector, a language lab
- Wordwall, Kahoot, Quizlet.

After the teacher interviews were completed, I analysed the results. Codes were assigned to the different parts of the interview and then I categorised them. The result of grouping the codes and making categorisations based on the interviews conducted with five foreign language teachers is shown in the following table.

Table 3 - Grouping the codes into categories

Grouping the codes into categories			
Categories	**Sub-categories**	**Codes**	**Notes**
School equipment		partial satisfaction	T1
		full satisfaction	T2, T3, T4, T5
Use of digital tools	Teachers	a high level of digital skills, certainty	T1, T4, T5
		a low level of digital skills, uncertainty	T2, T3
		interested in using AI based tools	T1, T5
		no experience with AI	T2, T3, T4
		combination of comprehensive methods and DT	T1, T2, T4, T5
		combination of classical methods and DT	T2, T3, T4
		combination of activating methods and DT	T4
		a positive attitude towards DT, enthusiasm	T1, T4, T5
		a neutral attitude towards DT	T2, T3
		a great ability to produce custom materials	T1, T4, T5
		a low ability to produce custom materials	T2, T3
		online resources combined with traditional materials	T1, T4, T5
		mostly traditional paper materials	T2, T3
		PC, laptop, iPad, data projector	T1
		PC, data projector	T2, T3, T4, T5
		PC, mobile phones	T2, T4, T5
		applications and websites	T1, T2, T4, T5
		interactive whiteboard	T3, T4
	Learners	online homework and testing	T1, T4, T5
		no online homework and testing	T2, T3
		tablets, mobile phones, a language lab	T1
		tablets, mobile phones	T2
		mobile phones	T4, T5
		interactive whiteboard, language lab	T1, T3, T4
		language lab	T5
		competitiveness, excitement	T1, T2
Cooperation	Schools	no experience in international cooperation	T1, T2, T3, T4, T5
	Teachers	a strong sense of cooperation and sharing	T1, T2, T3, T4, T5
	Learners	during comprehensive methods	T1, T2, T5
		during activating methods	T4
Motivation	Teachers' view	positive motivation thanks to DT	T1, T3, T4, T5
		neutral attitude towards motivation thanks DT	T2
		competitiveness, interest	T1, T4, T5

6.1.2 Interview results interpretation

The aim of the interviews with five teachers was to find out the situation in a mainstream lower-secondary school. The questions covered two main areas, namely the factors that influence the use of digital tools in foreign language teaching and the identification of specific tools that teachers use in their preparation and teaching process. At the same time, teachers' views on the motivation of students through the incorporation of modern technology in the classroom were investigated.

All the teachers expressed satisfaction with the digital technology facilities at their school. The school has computers and data projectors, laptops, iPads and good internet access in all classrooms. Learners use the school's Wi-Fi connection when working on their own devices - mobile phones. Teachers reported that good quality school equipment is essential for working with online tools. Four out of five teachers stated that the need for online teaching during the covid -19 pandemic had positively influenced their use of digital tools in current face-to-face teaching. However, only three teachers are confident that their level of digital literacy is high, with two teachers expressing uncertainty in this area. On the other hand, all teachers admit that they have never tested their digital literacy with any of the official tools for teachers.

Three teachers claimed to be interested in using digital tools, citing their positive attitudes, even enthusiasm, for incorporating modern technology into language teaching. Two teachers are even already using AI-based tools, but three of the five teachers have no experience with AI yet. Teachers mostly work with computers, laptops, data projectors and interactive whiteboards in the preparation of lessons and in the teaching process. They use various websites and applications for their preparation. During teaching process, the most common tools are Wordwall, Kahoot, Live worksheets, Learning apps. The ISL collective website is used as a source of teaching materials. Two teachers mentioned a low ability to produce custom materials and one of them works mainly with traditional paper materials. The others combine online resources with traditional materials, and they also usually incorporate online and paper authentic materials. All the teachers expressed a strong sense of collaboration, collegial support and sharing of materials within their school.

Each teacher has his or her own teaching style, so the choice of teaching methods depends on the teacher, the material covered, the learning objectives and the classroom situation, etc. Teaching methods are complemented by digital tools in different ways.

The interviews show that four teachers use a combination of complex methods and digital tools. In particular, these teachers complement online tools with group teaching, project-based learning and frontal teaching. Digital tools allow for individualisation of teaching. The three teachers use digital tools in combination with classical teaching methods such as interpreting, working with a text or working with images. Only one teacher claims to use a combination of activating methods and online tools.

During the interviews, the teachers were also asked about learners' work with modern technologies. Three teachers use online tools for homework, especially for vocabulary and grammar practice. In one case, students are also asked to produce online presentations as part of their homework. Students do not produce audio or video recordings at all. In foreign language classes, students mostly use mobile phones, interactive whiteboards and language labs, and sometimes work with iPads. Students cooperate mostly if teachers use comprehensive and activating teaching methods. According to four teachers, the use of digital tools has a positive impact on students' motivation to learn foreign languages. These teachers observed an increased interest and excitement among their students when working with these tools. One teacher has a neutral attitude, pointing out the competitiveness between students, which is not always positive and can also disadvantage slower students or students with special learning needs. International cooperation could be a motivating factor for students, for example through eTwinning or Erasmus+ programme, where it is possible to combine a foreign language with digital tools. None of the teachers, however, have experience with these international projects.

6.1.3 Summary of the first phase of research

In the first phase of research, the interview method was chosen because it is a qualitative method that provides insight into the issue. In the interviews with five teachers, the situation in a common lower-secondary school was outlined. The teachers emphasized the necessity of quality equipment and internet connectivity as fundamental factors influencing the integration of digital tools into foreign language teaching. It also emerged from the interviews that the age is not a limiting factor because even older teachers are capable of using modern technology. It depends on their interest, knowledge and skills. According to most of interviewed teachers, the online tools are a motivating factor for students as they bring greater interest, excitement and competitiveness into the teaching process. Another motivating factor could be international school cooperation, where foreign languages and digital technologies can be practically utilised. However, none of the interviewed teachers had experience with this activity yet.

6.2 The second phase

Since this thesis focuses on the opinions of teachers and their attitudes towards the use of digital tools, a quantitative questionnaire method in the form of a Likert scale was chosen for the second phase of the research. A Likert scale is a type of questionnaire that uses either a five-point or seven-point rating system. The response options range from 'strongly agree' to 'strongly disagree', allowing survey designers to capture a broad perspective of individuals' views. In addition, all Likert scales have a middle point, such as 'neither agree nor disagree', to accommodate those who are neutral on the issue. This measurement tool was first introduced in 1932 by social psychologist Rensis Likert.

Likert scales are a widely used research tool for data collection, but they have their own set of advantages and disadvantages. Likert scales are relatively easy for respondents to understand and use. They provide a clear and structured format for expressing their opinions. Responses can be easily quantified, making data analysis straightforward. On the other hand, there are disadvantages. Respondents may tend to agree with statements or choose the extreme options on Likert scales, which can affect the accuracy of the results. There are a limited number of response options which may not capture the full complexity of respondents' opinions or attitudes. This method provides quantitative data but does not provide insight into the reasons behind respondents' choices (Gavora, 2010, p. 110 – 120).

For this phase of the research, I prepared a questionnaire for foreign language teachers consisting of 15 items. These questions were based on the findings of the first phase of the research and mainly concerned factors influencing the integration of digital tools in foreign language teaching, teachers' digital competences and the practical use of online tools. The online form of the questionnaire was chosen for data collection and the questionnaire was sent by e-mail to 166 schools in the Královéhradecký region. The time to complete the questionnaire was limited to two weeks. The questionnaire can be scored in two ways, either as a percentage or as a coefficient.

6.2.1 The questionnaire results

This phase of research builds on the phase 1 and aims to confirm or refute the information obtained in the first phase of the research.

As the questionnaire was sent to 166 schools, it was assumed that at least 100 teachers would participate in the survey. Although 91 respondents attended the survey, only 68 completed the questionnaire (a success rate of 74.7%). The results of the questionnaire in the form of graphs and in the original language are presented in the appendix of this paper.

The first part of the questionnaire, consisting of five items, dealt with factors influencing the use of digital tools.

A: Factors/barriers affecting the use of digital tools:

Number 1: Our school is equipped with digital technologies for teaching foreign languages. Respondents indicated their level of agreement or disagreement with school facilities such as computers, tablets, interactive whiteboards, internet access and language laboratories.

Table 4 - No. 1 - PCs and laptops

No. 1 - PCs and laptops	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	53	14	0	1	0	68
percentage of responses (%)	77.9	20.6	0.0	1.5	0.0	100
responses x coefficients	265	56	0	2	0	323
average	x	x	x	x	x	**4.8**

Table 5 - No. 1 - Tablets

No. 1 - tablets	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	41	14	1	6	6	68
percentage of responses (%)	60.3	20.6	1.5	8.8	8.8	100
responses x coefficients	205	56	3	12	6	282
average	x	x	x	x	x	**4.1**

Interviews with teachers in the first phase of the research revealed that computers are a common part of teachers' lesson preparation and also a standard part of the teaching process. In the questionnaire survey, 98.5% of respondents agreed that their school is equipped well with computers and laptops for foreign language teaching. This view is consistent with the teachers'

claims in the first phase of the research. However, the possibility of using tablets is slightly lower (80.9%).

Table 6 - No. 1 - Interactive whiteboards

No. 1 - interactive whiteboards	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	53	10	1	0	4	68
percentage of responses (%)	77.9	14.7	1.5	0.0	5.9	100
responses x coefficients	265	40	3	0	4	312
average	x	x	x	x	x	**4.6**

Interactive whiteboards are digital didactic tools, and their use is one of the skills of the 21st century teacher (Chapter 2.4.2). These whiteboards allow teachers to display a wide range of multimedia resources, including videos, images and interactive language exercises. This visual support can help learners to better understand and remember foreign language concepts. Teachers can design activities that involve students in the learning process, making lessons more engaging and enjoyable. In the first phase of the research, interactive whiteboards were often mentioned as a common tool for foreign language teaching. In the second phase, 92.6% of teachers said they are satisfied with the provision of interactive whiteboards in their schools.

Table 7 - No. 1 - Internet connection

No. 1 - internet connection	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	63	5	0	0	0	68
percentage of responses (%)	92.6	7.4	0.0	0.0	0.0	100
responses x coefficients	315	20	0	0	0	335
average	x	x	x	x	x	**4.9**

According to the Czech School Inspectorate computers with the internet access are standard in schools in the Czech Republic now (see Chapter 1.1). Internet connectivity is considered a crucial factor for digital tools incorporation. Although the prices for internet connection, in comparison with other countries, are still high in the Czech Republic (see Chapter 1.1.2), 100% of respondents are satisfied with internet connectivity in their schools. This means that the internet connection is not a barrier for teachers.

Table 8 - No. 1 - Language labs

No. 1 - language labs	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	26	12	2	10	18	68
percentage of responses (%)	38.2	17.6	2.9	14.7	26.5	100
responses x coefficients	130	48	6	20	18	222
average	x	x	x	x	x	**3.3**

Language laboratories are language classrooms with the latest equipment, computers for students and teachers, professional headsets with microphones, an interactive whiteboard, and a data projector. This equipment enables effective language teaching, and students who come to a specialised classroom may be more interested in learning, which increases their motivation. The first phase of the research confirmed teachers' positive attitudes towards the use of language classrooms, however, in the second phase of research, 41.2% of respondents stated that their school was not sufficiently equipped with these specialised classrooms. The results of the first and second phases of the research diverge on this point.

For all items in Question 1, a coefficient was calculated to reflect the level of agreement or disagreement of the respondents. A comparison of the coefficients for each item thus shows that respondents are most satisfied with the availability of computers (coef. 4.8) and the internet access (coef. 4.9) at school. The lowest coefficient (3.3) was obtained for the availability of language laboratories in schools.

Number 2: My knowledge and skills in the use of digital technologies and tools in foreign language teaching are at a sufficient level. Respondents were asked to assess their knowledge and skills in the use of modern technologies in teaching of foreign languages.

Table 9 - No. 2 - Digital knowledge and skills

No. 2 - digital knowledge and skills	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	21	37	6	3	1	68
percentage of responses (%)	30.9	54.4	8.8	4.4	1.5	100
responses x coefficients	105	148	18	6	1	278
average	x	x	x	x	x	**4.1**

Number 3: I had the opportunity to test my digital competence with some of the official tools for educators (e.g., Teacher 21 Profile). Respondents indicated whether they had already tested their digital competences.

Table 10 - No. 3 - Digital competence testing

No. 3 - digital competence testing	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	5	9	7	17	30	68
percentage of responses (%)	7.4	13.2	10.3	25.0	44.1	100
responses x coefficients	25	36	21	34	30	146
average	x	x	x	x	x	**2.1**

Evaluation of questions 2 and 3:

Sufficient digital competence of teachers is a prerequisite for working with digital technologies and tools. In today's education, this competence is considered crucial not only for teachers but also for students (see Chapter 1.2). In the first phase of research, 2 out of 5 teachers (40%) expressed their uncertainty about their digital knowledge and skills. On the other hand, in the second phase, only 5.9% of those surveyed are concerned that their skills are not up to date. 58 out of 68 respondents (85.3%) think that their digital competences are at the required level. The results of the survey showed that only 14 respondents (20.6%) took the test of their digital skills. A comparison of the coefficients in questions 2 (4.1) and 3 (2.1) shows that teachers' self-assessment and reality may be different.

Number 4: Online teaching during the covid-19 pandemic has influenced how I currently use digital tools in foreign language teaching. Respondents were asked about the impact of the covid -19 pandemic on their current teaching in relation to modern technology.

Table 11 - No. 4 - Covid-19 pandemic impact on teaching

No. 4 - covid -19 pandemic impact on teaching	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	27	20	6	8	7	68
percentage of responses (%)	39.7	29.4	8.8	11.8	10.3	100
responses x coefficients	135	80	18	16	7	256
average	x	x	x	x	x	**3,8**

The covid -19 pandemic had a positive impact on equipping schools with technologies (see Chapter 1.1). 47 respondents (69.1%) out of 68 think that the covid -19 pandemic influenced their current teaching and also 4 out of 5 teachers from the first phase of the research agree with this statement.

Number 5: In my case, the use of digital tools is affected by… Respondents were asked to evaluate which factors influence their work with digital tools.

In question 5, respondents considered six factors that may influence their use of digital tools. These included interest in new technologies, school management's requirements, the school's technical equipment, lack of experience, lack of time and the teacher's age.

Table 12 - No. 5 - Interest in new technology

No. 5 - interest in new technology	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	26	27	3	9	3	68
percentage of responses (%)	38,2	39,7	4,4	13,2	4,4	100
responses x coefficients	130	108	9	18	3	268
average	x	x	x	x	x	**3,9**

Table 13 - No. 5 - School management request

No. 5 - school management request	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	9	22	6	30	1	68
percentage of responses (%)	13,2	32,4	8,8	44,1	1,5	100
responses x coefficients	45	88	18	60	1	212
average	x	x	x	x	x	**3,1**

Table 14 - No. 5 - Technical equipment

No. 5 - technical equipment	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	27	34	2	4	1	68
percentage of responses (%)	39.7	50.0	2.9	5.9	1.5	100
responses x coefficients	135	136	6	8	1	286
average	x	x	x	x	x	**4.2**

Table 15 - No. 5 - Lack of experience

No. 5 - lack of experience	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	4	9	5	19	31	68
percentage of responses (%)	5.9	13.2	7.4	27.9	45.6	100
responses x coefficients	20	36	15	38	31	140
average	x	x	x	x	x	**2.1**

Table 16 - No. 5 - Lack of time

No. 5 - lack of time	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	3	15	5	26	19	68
percentage of responses (%)	4,4	22,1	7,4	38,2	27,9	100
responses x coefficients	15	60	15	52	19	161
average	x	x	x	x	x	**2,4**

Table 17 - No. 5 - Teachers' age

No. 5 - teachers' age	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	5	12	5	14	32	68
percentage of responses (%)	7,4	17,6	7,4	20,6	47,1	100
responses x coefficients	25	48	15	28	32	148
average	x	x	x	x	x	**2,2**

43 respondents (77.9%) agree that interest in new technologies is a factor influencing the use of technology and digital tools in language teaching. School management's requirement to integrate digital tools into the lessons is an important factor for only 45.6% of respondents. On the other hand, 89.7% of respondents consider technical equipment to be fundamental. The research also shows that lack of experience and lack of time are not considered to be relevant factors affecting the integration of digital tools in foreign language teaching. Only 13 teachers (19.1%) admit to lack of experience, 18 out of 68 teachers cite that lack of time prevents them from using digital tools. In the opinion of 46 respondents (67.7%), the teacher's age is not an important factor in the use of digital tools.

Comparing the coefficients of the individual items in question 5, it is clear that teachers consider the technical equipment of schools to be the most important issue (coefficient 4.2) and the least influential factor in working with digital tools is the lack of experience (coefficient 2.1).

The second part of the questionnaire, consisting of ten items, dealt with the use of specific digital tools (including AI) and their impact on student motivation.

B: Use of digital tools in lesson preparation and teaching process, student motivation:

Number 6: Digital technology and online tools (apps, websites, etc.) facilitate my (teacher's) work in lesson preparation.

Table 18 - No. 6 - Impact on lesson preparation

No. 6 - impact on lesson preparation	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	35	29	2	0	2	68
percentage of responses (%)	51.5	42.6	2.9	0,0	2.9	100
responses x coefficients	175	116	6	0	2	299
average	x	x	x	x	x	**4.4**

Nowadays, many tools can be used for effective lesson preparation (see the classification of tools in chapter 2.3.2). The majority of respondents (94.1%) agree that digital tools make it easier for them to prepare for lessons, with only 2 respondents expressing strong disagreement on this issue.

Number 7: I get inspiration from the Internet, seminars/webinars, sharing with colleagues, magazines and publications. In the first phase of the research, teachers showed a strong sense of sharing teaching materials and ideas with their colleagues, and they claimed that in general, they usually look for teaching materials and ideas on the Internet. In the second phase of the research, respondents selected from the four items mentioned above.

Table 19 - No. 7 – Inspiration - the Internet

No. 7 - inspiration - the Internet	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	39	22	1	5	1	68
percentage of responses (%)	57.4	32.4	1.5	7.4	1.5	100
responses x coefficients	195	88	3	10	1	297
average	x	x	x	x	x	**4.4**

Table 20 - No. 7 - Inspiration - seminars, webinars

No. 7 - inspiration - seminars, webinars	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	19	25	2	20	2	68
percentage of responses (%)	27.9	36.8	2.9	29.4	2.9	100
responses x coefficients	95	100	6	40	2	243
average	x	x	x	x	x	**3.6**

Table 21 - No. 7 - Inspiration - sharing with colleagues

No. 7 - inspiration - sharing with colleagues	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	25	30	0	12	1	68
percentage of responses (%)	36.8	44.1	0.0	17.6	1.5	100
responses x coefficients	125	120	0	24	1	270
average	x	x	x	x	x	**4.0**

Table 22 - No. 7 - Inspiration - magazines and publications

No. 7 - inspiration - magazines, publications	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	3	9	1	31	24	68
percentage of responses (%)	4.4	13.2	1.5	45.6	35.3	100
responses x coefficients	15	36	3	62	24	140
average	x	x	x	x	x	**2.1**

According to the research, the Internet is used by 61 respondents (89.8%) to obtain educational material and ideas. About a third fewer teachers seek inspiration from seminars and webinars (64.7% of respondents). Sharing materials and ideas with colleagues is quite widespread, with 80.9% of Phase 2 participants selecting this option; these responses are consistent with Phase 1 respondents. On the other hand, magazines and publications seem to be the least used source of inspiration for teachers. Only 12 respondents (17.6%) stated to use them.

A comparison of the coefficients of the individual items in question 7 shows that most teachers cite the Internet (coef. 4.4) and sharing with colleagues (coef. 4.0) as a source of inspiration. Magazines and publications with coefficient 2.1 are currently the least used source.

Number 8: In the process of foreign language teaching, I use digital tools for… (nine items listed). This question asked respondents to identify the purposes for which they use digital tools in the foreign language teaching process. Items included: practice (vocabulary, grammar, etc.), exams and testing, making audio and video recordings, working with authentic materials, projects, finding information, international collaboration, homework, fun and variegation for learners.

Table 23 - No. 8 - Practice (vocabulary, grammar, etc.)

No. 8 - practice (vocabulary, grammar)	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	50	13	2	3	0	68
percentage of responses (%)	73.5	19.1	2.9	4.4	0.0	100
responses x coefficients	250	52	6	6	0	314
average	x	x	x	x	x	**4.6**

When learning a foreign language, students need to practise their language skills and all parts of the language system. As mentioned in Chapter 2.3.3, several digital tools can be used for this practice. In the first phase of the research, respondents reported using digital tools (e.g., Wordwall and Kahoot) mainly to practise grammar and vocabulary). In the questionnaire survey, 63 out of 68 respondents (92.6%) confirmed that digital tools serve the same purpose, to practice vocabulary and grammar.

Table 24 - No. 8 - Exams, testing

No. 8 - exams, testing	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	12	21	1	30	4	68
percentage of responses (%)	17.6	30.9	1.5	44.1	5.9	100
responses x coefficients	60	84	3	60	4	211
average	x	x	x	x	x	**3.1**

Online assessment and testing tools can be beneficial for teachers, making their work more efficient and providing feedback to students (see Chapter 2.3.4). Three Phase 1 respondents reported using digital tools for homework and tests. These were mainly quizzes created in Wordwall and Kahoot, and one teacher also used Microsoft Forms. However, the survey showed that almost half of teachers (50%) do not use online testing tools at all.

Table 25 - No. 8 - Audio and video recordings

No. 8 - audio and video recordings	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	46	12	1	8	1	68
percentage of responses (%)	67.6	17.6	1.5	11.8	1.5	100
responses x coefficients	230	48	3	16	1	298
average	x	x	x	x	x	**4.4**

Voice recording enables pronunciation improvement and correction of errors. Video recordings can also serve as feedback on the student's speech in the target language. The interviews with the teachers revealed that none of them make audio and video recordings. However, the Phase 2 respondents (85.2%) claimed that they do. This finding is very interesting, but due to the nature of the research method (quantitative research) further details cannot be ascertained.

Table 26 - No. 8 - Authentic materials

No. 8 - authentic materials	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	35	22	3	7	1	68
percentage of responses (%)	51.5	32.4	4.4	10.3	1.5	100
responses x coefficients	175	88	9	14	1	287
average	x	x	x	x	x	**4.2**

Authentic materials provide students with a connection between the target language and the real world. Their advantages were mentioned in Chapters 2.3.1 and 2.3.3. In the first part of the research, respondents mentioned that they use these materials, mostly in a combination of paper and online materials. This is confirmed by the Phase 2 respondents, 83.9% of whom use authentic materials. Only 8 out of 68 respondents do not work with these materials.

Table 27 - No. 8 - Projects

No. 8 - projects	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	26	28	5	8	1	68
percentage of responses (%)	38.2	41.2	7.4	11.8	1.5	100
responses x coefficients	130	112	15	16	1	274
average	x	x	x	x	x	**4.0**

As it was stated in Chapter 2.4.1, project-based learning is one of the comprehensive methods. This approach emphasizes active, experiential and student-centred education. Students work on complex, real-world projects or problems, often in collaboration with their peers, to explore and construct a deeper understanding of the subject matter. In terms of language learning, it allows students to apply and practice language skills in real-world contexts, making the learning experience more meaningful and motivating. From this perspective, it is pleasing that 79.4% of respondents report that they supplement project-based learning with digital tools.

Table 28 - No. 8 - Finding information

No. 8 - finding information	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	53	13	0	1	1	68
percentage of responses (%)	77.9	19.1	0.0	1.5	1.5	100
responses x coefficients	265	52	0	2	1	320
average	x	x	x	x	x	**4.7**

The use of digital information retrieval tools in language teaching can be very beneficial for both teachers and learners. These tools can enhance language learning by providing access to a wide range of resources and opportunities for interactive learning. As mentioned in Chapter 2.1, the role of the teacher is changing; they are no longer the sole provider of knowledge. This is also confirmed by the survey results, as 97% of respondents say they use digital tools to find information.

Table 29 - No. 8 - International cooperation

No. 8 - international cooperation	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	17	11	2	26	12	68
percentage of responses (%)	25.0	16.2	2.9	38.2	17.6	100
responses x coefficients	85	44	6	52	12	199
average	x	x	x	x	x	**2.9**

International cooperation between schools can be an important motivating factor for foreign language learning. International cooperation projects such as eTwinning (see also Chapter 2.3.3) offer a number of benefits to teachers and learners at lower-secondary level. eTwinning, in particular, is an EU-funded online platform that enables teachers and learners from different countries to work together on educational projects. Through international cooperation, teachers can share teaching materials and methods with their foreign colleagues, broaden their cultural horizons and deepen their language skills. Students who communicate in the target language deepen their communication skills, learn to work together and gain greater cultural insight. When collaboration takes place on an online platform, students also improve their digital skills. Despite the above-mentioned benefits of international school collaboration, none of the teachers in the first phase of the research had any experience with international

projects. However, the questionnaire survey shows that 41.2% of the respondents (28 out of 68 teachers) use digital tools for international cooperation.

Table 30 - No. 8 - Homework assignment

No. 8 - homework assignment	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	11	21	5	25	6	68
percentage of responses (%)	16.2	30.9	7.4	36.8	8.8	100
responses x coefficients	55	84	15	50	6	210
average	x	x	x	x	x	**3.1**

As it was stated in Chapter 6.1.2, three teachers of the Phase 1 use online tools for homework, especially for vocabulary and grammar practice. In one case, students are also asked to produce online presentations as part of their homework. According to the survey results, 47.1% of teachers assign homework using online tools. However, 45.6% of teachers do not use this method.

Table 31 - No. 8 - Fun and variegation for learners

No. 8 - fun and variegation for learners	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	47	17	0	4	0	68
percentage of responses (%)	69.1	25.0	0.0	5.9	0.0	100
responses x coefficients	235	68	0	8	0	311
average	x	x	x	x	x	**4.6**

From interviews with teachers, it is clear that integrating online tools into the classroom is fun and motivating for students. One teacher points out that the competitiveness during online quizzes can have a negative impact on weaker students. Only four respondents (5.9%) from the second phase of the survey indicated that they disagreed with the inclusion of digital tools in the classroom for student entertainment, however, 94.1% of respondents incorporate online tools into their lessons for variegation and fun. It should be noted here that Stanley stresses that modern technology should not be provided to students for entertainment or reward but should be a normal part of their studies (Chapter 2.3.3).

Question 8 contained nine items on which the respondents commented. After the comparison of the coefficients of each item, it can be concluded that teachers use digital tools most for information retrieval (coef. 4.7), grammar and vocabulary practice and fun and variegation (both coef. 4.6), while they use digital tools least for international school collaboration (coef. 2.9).

Number 9: In my foreign language teaching I use the following tools … Respondents chose from 8 common applications: Wordwall, Kahoot, Quizlet, Learning apps, Google Jamboard, Live worksheets, Canva and Genial.ly. The five apps were included in Phase 2 of the research based on the results of interviews with teachers in Phase 1. Google Jamboard, Canva and Genial.ly were added based on the personal experience of the author of this thesis.

Table 32 - No. 9 - Wordwall

No. 9 - Wordwall	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	37	13	0	12	6	68
percentage of responses (%)	54.4	19.1	0,0	17.6	8.8	100
responses x coefficients	185	52	0	24	6	267
average	x	x	x	x	x	**3.9**

Wordwall is an online platform and app that allows educators and content creators to create interactive educational games and activities for learning and assessment purposes. It offers a wide range of templates and tools to create custom quizzes, word games and interactive exercises. These activities can be used to teach different subjects and are designed to engage and educate students. Wordwall was the most frequently mentioned application during the interviews and in the questionnaire survey. 73.5% of respondents agreed that they use it.

Table 33 - No. 9 - Kahoot

No. 9 - Kahoot	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	32	17	0	11	8	68
percentage of responses (%)	47.1	25.0	0,0	16.2	11.8	100
responses x coefficients	160	68	0	22	8	258
average	x	x	x	x	x	**3.8**

Kahoot is an interactive learning platform and app that allows educators and students to create and participate in quiz-based games. Users can design and play educational quizzes and games on a wide range of topics, making learning engaging and fun. It is often used in classrooms and training to promote interactive and competitive learning experiences. Kahoot was the second most frequently mentioned application during the interviews with teachers and in the questionnaire survey. 72.1% of respondents agreed that they use it.

Table 34 - No. 9 - Quizlet

No. 9 - Quizlet	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	17	13	2	12	24	68
percentage of responses (%)	25.0	19.1	2.9	17.6	35.3	100
responses x coefficients	85	52	6	24	24	191
average	x	x	x	x	x	**2,8**

Quizlet is an educational application and platform that provides a variety of tools for creating and studying digital learning materials. Users can access and create study sets covering a variety of subjects and topics. The app offers interactive learning features including flashcards, practice quizzes and games to help users memorise and review information more effectively. Although this app was quite popular during the covid-19 pandemic, only one of the five teachers interviewed in Phase 1 of this research uses it face-to-face teaching now. The app is also currently less popular with Phase 2 respondents, with 52.9% not using it.

Table 35 - No. 9 - Learning apps

No. 9 - Learning apps	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	13	16	2	17	20	68
percentage of responses (%)	19.1	23.5	2.9	25.0	29.4	100
responses x coefficients	65	64	6	34	20	189
average	x	x	x	x	x	**2.8**

Learning apps is an interesting online application for creating your own interactive exercises (sorting, quiz, matching, picture description, word guessing, memory game, puzzles, octagrams, etc.). According to the results of the survey, 29 out of 68 teachers (42.6%) include this application in their teaching, 37 (54.4%) do not use it.

Table 36- No. 9 - Google Jamboard

No. 9 - Google Jamboard	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	6	7	2	24	29	68
percentage of responses (%)	8.8	10.3	2.9	35.3	42.6	100
responses x coefficients	30	28	6	48	29	141
average	x	x	x	x	x	**2.1**

Google Jamboard is a collaborative digital whiteboard application developed by Google. It is designed for interactive, real-time visual collaboration, particularly in educational and business environments. Users can draw, write, insert images and work on shared 'jams' in a virtual space, making it easy for multiple participants to contribute and collaborate on ideas and projects. Accessible through web browsers and mobile apps, Jamboard provides a flexible and interactive way to brainstorm, present and collaborate remotely. This tool was popular during the covid-19 pandemic. According to research, it does not appear to be widely used in face-to-face teaching at present. In addition, Google has currently announced the end of support for this tool as of October 2024. No teacher mentioned this tool during the interviews in the first phase of the research. No teacher mentioned this tool during the interviews in the first phase of the research and 53 of the 68 respondents (77.9%) in the second phase of the research do not use this tool either.

Table 37 - No. 9 - Liveworksheets

No. 9 - Liveworksheets	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	25	23	2	5	13	68
percentage of responses (%)	36.8	33.8	2.9	7.4	19.1	100
responses x coefficients	125	92	6	10	13	246
average	x	x	x	x	x	**3.6**

Liveworksheets is an online platform and educational application that allows educators to create interactive and personalised worksheets for their students. These digital worksheets can include different types of interactive elements such as quizzes, puzzles and multimedia content. Liveworksheets is designed to make traditional worksheets more engaging and adaptable for digital learning and provides teachers with tools to track student progress and

results. This tool seems to be quite popular now, because 48 respondents mentioned to use it nowadays in their language lessons.

Table 38- No. 9 - Canva

No. 9 - Canva	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	17	14	1	16	20	68
percentage of responses (%)	25.0	20.6	1.5	23.5	29.4	100
responses x coefficients	85	56	3	32	20	196
average	x	x	x	x	x	**2.9**

Canva is a versatile and easy-to-use graphic design platform and app that allows users to create a wide range of visual content, including social media graphics, presentations, posters, flyers and more. It offers a huge library of templates, graphics and design tools, making it accessible to both professionals and non-designers. Canva is often used to create visually appealing and professional-looking materials for a variety of purposes, from marketing and education to personal projects. As outlined in chapters 2.32 and 2.3.3, Canva is used in foreign language teaching as a medium for presentations, provides visual material for speaking and writing, and is suitable for project-based learning. This tool is still being improved and there are now AI-based tools, e.g., for generating images from the texts, etc. Despite the undeniable benefits of this tool, 52.9% of respondents (36 out of 68) state they do not use Canva.

Table 39 - No. 9 - Genial.ly

No. 9 - Genial.ly	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	4	4	4	19	37	68
percentage of responses (%)	5.9	5.9	5.9	27.9	54.4	100
responses x coefficients	20	16	12	38	37	123
average	x	x	x	x	x	**1.8**

Genial.ly is an online platform and app that allows users to create interactive and multimedia-rich content such as presentations, infographics and interactive learning materials. It offers a wide range of templates and tools for adding videos, animations, quizzes and more to increase content engagement and interactivity. Genial.ly is widely used in education, marketing and other fields where visually appealing and interactive materials are important for

communicating information effectively. This tool is not very popular among the research participants, no interviewees in Phase 1 mentioned this tool, only 8 (11.8%) respondents in Phase 2 claim to include Genial.ly in their teaching.

The attached tables show that teachers most commonly use Wordwall (coef. 3.9), Kahoot (coef. 3.8) and Liveworksheets (coef. 3.6) in foreign language teaching. The least used tools in current face-to-face teaching, according to the research respondents, are Genial.ly (coef. 1.8) and Google Jamboard (coef. 2.1).

Questions 10, 11 and 12 in the questionnaire survey dealt with teaching methods and their complementation with digital tools. For each group of teaching methods (classification according to Maňák and Švec, see Chapter 2.4.1) several typical examples were selected so that respondents could express their level of agreement or disagreement.

Number 10: When teaching foreign languages, I use digital tools in combination with these classical teaching methods… In this question, respondents commented on whether they supplement verbal, demonstration and skills-based teaching methods with any digital tools. Examples of verbal teaching methods are interpreting, working with texts and conversation. Demonstration teaching methods include working with images and skills-based teaching methods include imitating.

Table 40 - No. 10 - Verbal methods

No. 10 - verbal methods	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	44	19	1	4	0	68
percentage of responses (%)	64.7	27.9	1.5	5.9	0.0	100
responses x coefficients	220	76	3	8	0	307
average	x	x	x	x	x	**4.5**

Verbal teaching methods are common, and it is pleasing that the majority of respondents (92.6%) say they supplement these methods with some digital tools. The disadvantage of the quantitative survey method is that it does not provide additional information (specifically, which tools are used).

Table 41 - No. 10 – Demonstration methods

No. 10 – demonstration methods	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	43	22	1	2	0	68
percentage of responses (%)	63.2	32.4	1.5	2.9	0.0	100
responses x coefficients	215	88	3	4	0	310
average	x	x	x	x	x	**4.6**

Working with images is an example of a demonstration teaching method where digital tools can be used very easily to enable presentations or the creation of visual materials (see related question 9). 95.6% of survey respondents confirm that they use some digital tools during these teaching methods.

Table 42 - No. 10 - Skills-based methods

No. 10 - skills-based methods	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	31	21	2	11	3	68
percentage of responses (%)	45.6	30.9	2.9	16.2	4.4	100
responses x coefficients	155	84	6	22	3	270
average	x	x	x	x	x	**4.0**

Skills-based methods belong to the group of classical teaching methods. According to the survey respondents, 76.5% of them supplement skills-based methods with digital tools.

The results of the research show that of the classical methods, digital tools are the most involved in demonstration methods (e.g., working with images, coefficient 4.6).

Number 11: When teaching foreign languages, I use digital tools in combination with these activating teaching methods…

Activating teaching methods are teaching techniques and strategies designed to stimulate students' interest, curiosity and active participation in the learning process. These methods aim to stimulate students' thinking, motivation and enthusiasm for the subject matter by using interactive activities, discussions, hands-on experiences, technology and other approaches that go beyond traditional passive learning. The aim is to make learning more dynamic and meaningful, ultimately improving retention and understanding. In this case,

respondents commented on three selected methods: discussion, problem solving and didactic games.

Table 43 - No. 11 - Discussion methods

No. 11 - discussion methods	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	24	31	3	9	1	68
percentage of responses (%)	35.3	45.6	4.4	13.2	1.5	100
responses x coefficients	120	124	9	18	1	272
average	x	x	x	x	x	**4.0**

Discussion teaching methods involve facilitating conversations and dialogues between students and the teacher to promote active learning and critical thinking. These methods encourage students to express their ideas, share perspectives, debate issues and collaborate, fostering a deeper understanding of the subject matter through interaction and reflection. Survey participants clearly recognise the benefits of using these methods in conjunction with digital tools, with 80.9% of respondents stating that they do so.

Table 44 - No. 11 - Problem-solving method

No. 11 - problem solving method	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	16	36	3	12	1	68
percentage of responses (%)	23.5	52.9	4.4	17.6	1.5	100
responses x coefficients	80	144	9	24	1	258
average	x	x	x	x	x	**3.8**

Problem-solving teaching methods focus on guiding students to solve real or simulated problems, typically involving critical thinking, analysis and creativity. These methods encourage students to apply their knowledge and skills to meet challenges, developing problem-solving skills and practical understanding of subject matter. 52 out of the 68 participants indicated that they use digital tools to complement this method in their teaching, which represents 76.4% of the respondents.

Table 45 - No. 11 - Didactic games

No. 11 - didactic games	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	36	24	2	5	1	68
percentage of responses (%)	52.9	35.3	2.9	7.4	1.5	100
responses x coefficients	180	96	6	10	1	293
average	x	x	x	x	x	**4.3**

Didactic games are educational games designed for teaching and learning purposes. These games incorporate educational objectives and content in a fun and interactive format to engage students and improve their understanding of various subjects, including foreign languages. Didactic games are popular in foreign language learning because they make the learning process more enjoyable and effective. They can improve language skills such as vocabulary acquisition, grammar comprehension, pronunciation and cultural awareness. The popularity of these games is confirmed by survey participants, 88.2% of whom say they supplement these games with digital tools.

When evaluating the individual items of question 11, it was found that the highest coefficient (4.6) was achieved by didactic games, which means that the teachers participating in the research most often supplement this activating method with digital tools.

Number 12: When teaching foreign languages, I use digital tools in combination with these comprehensive teaching methods... Respondents rated 5 items, namely frontal teaching, group/partner teaching, individual and individualised teaching, project-based teaching, and computer-assisted teaching.

Table 46 – No. 12 - Frontal teaching

No. 12 - frontal teaching	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	26	30	1	0	11	68
percentage of responses (%)	38.2	44.1	1.5	0.0	16.2	100
responses x coefficients	130	120	3	0	11	264
average	x	x	x	x	x	**3.9**

Frontal teaching, also known as traditional or lecture-based teaching, is a teacher-centred method. The teacher usually stands at the front of the classroom and imparts knowledge

through lectures, presentations and demonstrations. However, this method can be complemented by some digital tools, as evidenced by respondents' claims. This fact is mentioned by 82.3% of respondents.

Table 47 – No. 12 - Group/partner teaching

No. 12 - group/partner teaching	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	37	26	1	1	3	68
percentage of responses (%)	54.4	38.2	1.5	1.5	4.4	100
responses x coefficients	185	104	3	2	3	297
average	x	x	x	x	x	**4.4**

Group or partner teaching encourages teamwork and peer-to-peer learning, promotes different viewpoints and approaches to problem solving, increases student participation and interaction, and develops communication and interpersonal skills. Such teaching can be effectively complemented by a range of digital tools. 92.6% of respondents agreed with this statement. This is also consistent with the findings of Phase 1 of the research, where teachers also mentioned this fact during the interviews.

Table 48 - No. 12 - Individual and individualised teaching

No. 12 - individual and individualised teaching	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	22	29	2	13	2	68
percentage of responses (%)	32.4	42.6	2.9	19.1	2.9	100
responses x coefficients	110	116	6	26	2	260
average	x	x	x	x	x	**3.8**

Individual or one-to-one language teaching involves a teacher working with an individual student, tailoring the lesson to the student's specific needs and progress, whereas individualised teaching means adapting lessons to the unique learning styles, abilities and interests of each student within a group setting, providing personalised approaches to language learning. Complementing individual and personalised teaching with digital tools in language learning can be very beneficial. Digital tools such as applications, online resources and multimedia materials can enhance the learning experience. According to the survey, 51 out of

68 respondents (75%) supplement these methods with digital tools. The results of Phase 1 and Phase 2 research are also consistent in this respect.

Table 49 - No. 12 - Project-based teaching

No. 12 - project-based teaching	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	20	28	4	14	2	68
percentage of responses (%)	29.4	41.2	5.9	20.6	2.9	100
responses x coefficients	100	112	12	28	2	254
average	x	x	x	x	x	**3.7**

Project-based learning is an approach that focuses on student-driven, hands-on learning through the completion of real-world projects or tasks. Students collaborate, explore and apply their knowledge and skills to solve complex problems or create meaningful products, fostering critical thinking, creativity and deeper understanding of subject matter. Project-based teaching in question No.12 is related to question No. 8, which asked respondents to indicate the purposes for which they use digital tools in language teaching. When comparing the responses, there is a noticeable discrepancy, as in question No. 8 79.4% of the respondents indicated that they use digital tools for projects, but in question No. 12 only 70.6% of the respondents stated that they use digital tools for project-based learning.

Table 50 - No. 12 - Computer assisted teaching

No. 12 - computer-assisted teaching	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	26	23	10	6	3	68
percentage of responses (%)	38.2	3.8	14.7	8.8	4.4	100
responses x coefficients	130	92	30	12	3	267
average	x	x	x	x	x	**3.9**

Computer-assisted teaching is an educational approach that uses computer technology and software to support and enhance the teaching and learning process. It encompasses a wide range of digital tools and resources, including interactive programmes, e-learning platforms, educational software, online tutorials and more. Computer-assisted teaching aims to increase student engagement, provide opportunities for self-directed learning and offer a personalised approach to education. The survey results show that 10 respondents expressed no opinion, 49

out of 68 respondents (71.8%) supplement computer-assisted teaching with digital tools. However, 13.2% of respondents (9 participants) stated that they do not use digital tools in computer-assisted teaching. This response seems ambiguous as the teaching method mentioned is based on the use of technology and digital tools.

Group/partner teaching achieved the highest coefficient among the comprehensive teaching methods (4.4), meaning that respondents most often supplement this method with digital tools.

Questions 10, 11 and 12 dealt with teaching methods. When the items were compared across all types of teaching methods, it was found that respondents used digital tools most frequently in the following teaching methods: demonstration (working with images – coef. 4.6), verbal (coef. 4.5) and group/partner teaching (coef. 4.4).

Number 13: I believe that Artificial Intelligence (AI) is going to make a big difference in teaching foreign languages.

Number 14: I already use AI-based tools in foreign language teaching. Questions 13 and 14 of the dealt with artificial intelligence and are therefore evaluated together.

Table 51 - No. 13 - Progress in teaching

No. 13 - Progress in teaching	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	16	22	22	6	2	68
percentage of responses (%)	23.5	32.4	32.4	8.8	2.9	100
responses x coefficients	80	88	66	12	2	248
average	x	x	x	x	x	**3.6**

Table 52 - No. 14 - Use of AI-based tools

No. 14 - Use of AI-based tools	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	9	19	2	25	13	68
percentage of responses (%)	13.2	27.9	2.9	36.8	19.1	100
responses x coefficients	45	76	6	50	13	190
average	x	x	x	x	x	**2.8**

Tables 51 and 52 present the attitudes of research respondents towards artificial intelligence and its use in foreign language teaching. 22 respondents (32.4%) have a neutral opinion on whether AI brings progress to language teaching and learning. This is the item in the survey with the highest number of respondents with no opinion. 55.9% of respondents believe that AI brings progress to language teaching. However, only 41.1%, or 28 out of 68 research participants, admit that they already incorporate AI-based tools into their teaching. This disproportion is expressed by the coefficients 3.6 vs. 2.8.

For comparison, the results of a survey conducted by Palacký University showed that 24.2% of teachers said they felt ready to incorporate AI into their teaching and 33% were already using AI in various forms (see Chapter 3). However, their research was not only about foreign language teachers, but about teachers in general.

Number 15: In my opinion, digital tools have a positive impact on students' motivation for foreign language learning. In the final section of the questionnaire, teachers expressed their views on the impact of digital tools on student motivation.

Table 53 - No. 15 - Impact on student motivation

No. 15 - impact on student motivation	strongly agree	agree	no opinion	disagree	strongly disagree	Total
coefficients	5	4	3	2	1	x
number of responses	23	36	4	3	2	68
percentage of responses (%)	33.8	52.9	5.9	4.4	2.9	100
responses x coefficients	115	144	12	6	2	279
average	x	x	x	x	x	**4.1**

The impact of digital tools on student motivation can vary depending on several factors, including the specific tools used, the context in which they are used, and the individual preferences and needs of students. However, 86.7% of respondents in the Phase 2 strongly agree or agree that integrating digital tools into language teaching has a positive effect on student motivation. This research focused on teachers and did not include students' perspectives on the issue.

6.2.2 Summary of the second phase of the research

Phase 2 of the research was based on information gathered from five teachers during interviews in the Phase 1 of the research. In the second phase, a questionnaire survey was conducted among teachers in the Královéhradecký region. The questionnaire contained 15 questions and the Likert scale method was chosen. Questions 1 - 5 of the questionnaire dealt with factors and possible barriers affecting the use of digital tools in language teaching. Questions 6 - 12 were related to specific digital tools and teaching methods, questions 13 - 14 addressed the issue of artificial intelligence and question 15 allowed respondents to comment on the impact of digital tools on student motivation. The questionnaire was sent to 166 schools, 68 respondents participated in the Phase 2 of the research.

With regard to the factors influencing the integration of digital tools in teaching, the survey results show that respondents consider the provision of computers and a good internet access in schools to be the most important factors. 85.3% of respondents rate their digital skills positively, although only 20.6% of respondents have actually tested their digital competence using an official testing tool. In addition to the technical equipment mentioned above, interest in new technologies is also an important factor, according to the respondents. On the other hand, the research findings show that lack of experience, lack of time and the age of the teacher are not limiting factors for the integration of digital tools.

The second phase of the research confirmed that digital tools are mainly used for information retrieval, grammar and vocabulary practice, least of all for international collaboration. Wordwall, Kahoot and Liveworksheets are the most frequently mentioned applications for language teaching and learning and 41.1% of respondents also admit that they already incorporate AI-based tools into their language teaching.

Teachers see digital tools as having a positive impact on students' motivation to learn languages. Learners' opinions were not surveyed in this research.

7 Research summary and discussion

This study was designed to explore teachers' practical experience of using digital tools in foreign language teaching. The main aim of the research was to find out teachers' attitude towards the integration of digital tools into foreign language teaching, to define the factors that influence the use of these tools in teaching process and to explore teachers' opinion on whether digital tools have impact on students' motivation. For the research purpose, three research questions (RQ) were set. A form of mixed research was chosen, in the first phase of the research, interviews with teachers were conducted and in the second phase a questionnaire survey was carried out.

RQ 1: What factors influence the integration of digital tools in foreign language teaching at lower-secondary school?

In the first phase of the research, interviews were conducted with five lower-secondary school teachers. The teachers were asked about the technical equipment in their school (computers, the Internet, etc.) and their level of digital knowledge and skills. They also assessed other influences on the integration of digital tools, such as: interest in new technologies, lack of time or age of the teacher. All the teachers expressed satisfaction with the digital technology facilities in their school and reported that good quality school equipment is essential for working with online tools. Respondents of the second phase of the survey confirmed this information, stating that they were most satisfied with the availability of computers and internet access. The Czech School Inspectorate (2022) also claims that computers with internet access are now standard in schools (see Chapter 1.1).

Based on the research findings, another factor that positively influences the use of digital tools is the teacher's interest in new technologies. Mumtaz (2006) agrees that teacher's motivation is the factor that encourages digital technology incorporation (see Chapter 1.1.1).

The teacher's experience and teacher's time play important roles in the integration of online tools into teaching. Kler (2014) includes computer experience and age in the group of personal factors, Mumtaz (2006) argues that experience and lack of time hinder teachers' use of technology, while Neumajer (2012) states that length of experience and teachers' age do not affect the pedagogical use of ICT. The Czech School Inspectorate claims in its 2022 report that older teachers are more likely to be apprehensive about using ICT, mainly due to lack of knowledge. 3 teachers out of 5 from the Phase 1 of the research are confident that their level of

digital literacy is high. On the other hand, all the teachers admitted that they had not tested their digital skills with any of the official tools for teachers. In the Phase 2, 85.3% of the respondents indicated that their digital competence was at the required level, but only 20.6% of all respondents took the digital competence test, so the teachers' self-assessment and the reality may be different. Lack of time and lack of experience were not considered to be relevant factors affecting the integration of online tools and according to 67.7% of the respondents, the teacher's age is not an important factor as well. The comparison of the literature review and the research findings shows that the level of experience, lack of time and the age of the teacher are the most debatable factors influencing the integration of digital tools in the classroom, the opinions are not unified.

RQ 2: How do teachers use digital tools in foreign language teaching?

In the first phase of the research, respondents described working mainly with computers, laptops, data projectors and interactive whiteboards, sometimes with iPads, and students often used their own mobile phones. Teachers mentioned a variety of apps and websites, with the most common being Wordwall, Kahoot, Liveworksheets and Learning apps. These tools are mostly used for vocabulary and grammar practice. These findings are consistent with the responses of Phase 2 respondents. Two teachers also mentioned a low ability to produce custom materials. Phase 2 respondents confirmed that the most common tools are Wordwall, Kahoot and Liveworksheets. 45.6% of respondents use the Canva application, which can be used effectively both in foreign language teaching and for creating own materials. Regarding the most frequently mentioned language learning applications, a comparison can be made with the results of the research conducted by Palacký University (Černá et al., 2022, see Chapter 2.2.1). Again, Wordwall and Kahoot were the most frequently mentioned applications. The third tool was Quizlet, which, according to the results of my research, is not so popular among teachers in the Královéhradecký region.

Both phases of the research revealed that collaboration and sharing of materials between teachers works very well. The Phase 1 respondents reported that they currently share experience within the Jan Amos Komenský Operational Programme (OP JAK). In general, teachers seek inspiration from the Internet, webinars and seminars, and least from magazines and publications.

None of the Phase 1 teachers uses online tools for international projects such as e-Twinning. Phase 2 findings also show that incorporating online tools into international

collaboration is a weaker aspect of respondents, with only 41.2% of respondents participating in this cooperation.

Research suggests that modern technology is most commonly used for information retrieval, vocabulary and grammar practice. At the same time, teachers perceive these tools as a form of entertainment and variegation for students. In contrast, Stanley points out that technology should not be treated as a separate activity from regular classroom teaching or as a reward for good behaviour (2013, see Chapter 2.3.3).

This research also addressed the issue of teaching methods and their complementarity with digital tools. Although each teacher has his or her own teaching style, the research suggests that teachers rotate teaching methods to make teaching effective and interesting for students and supplement these methods with various digital tools. The research found that respondents incorporate digital tools most frequently in the following teaching methods: demonstration (working with images), verbal methods and group/partner teaching.

On the topic of AI in education, only two teachers from the first phase of the research said they had experience with AI-based tools. 32.4% of respondents reported they had no opinion on whether AI is making progress in language learning, but 41.1% of research participants confirmed that they were already using AI-based tools in their teaching. Findings from research conducted by Palacký University show a lower number of teachers (33%) who are already using AI in some way for teaching (see Chapter 3). However, it should be emphasised that their research participants were teachers at different school subjects, whereas my research focused only on foreign language teachers. Further research on AI in education is currently being organised by the University of Hradec Králové, but the results were not available at the time of writing this thesis.

RQ 3: Does the use of digital tools motivate learners at lower-secondary school to learn foreign languages?

Teachers in both phases of the research expressed that incorporating digital tools into language teaching has a positive effect on student motivation. The research focused only on the views of teachers. In order to answer this question objectively, it would have been more appropriate to assess the opinion of students as well. It would be useful to examine whether online tools are a common means for students, the so-called digital natives (see Chapter 2.2.1), or whether they can still increase their motivation. Furthermore, one teacher from the Phase 1 pointed out the competitiveness among students during using digital tools, which is not always

positive and can disadvantage students with special learning needs. The issue of students with special educational needs was not included in this research.

In conclusion, the results of the research suggest that foreign language teachers have a positive attitude towards the use of digital tools in the classroom, are interested in the possibility of using AI-based tools and believe that online tools increase students' motivation to learn foreign languages. The findings of this research contradict the claims of Zounek et al. (2021) who identified negative attitudes towards digital technologies in our country, lack of experience and lack of motivation as significant barriers for incorporating digital tools (see Chapter 1.1.2). In practice, the results of this research can provide a basis for school leaders to compare the situation in their school, inspire the direction of teachers' professional development, and stimulate local action groups working locally with schools and other education stakeholders.

8   Examples of lesson plans

This thesis also provides a practical demonstration of the integration of digital tools into English language teaching. There are two lesson plans in the appendix. The first lesson plan includes online tools that are mainly for practice, the second lesson plan uses these tools more extensively. In both cases, the topic of crime is treated, and the lessons are based on the Project 3 textbook for 8th grade students.

Lesson plan 1

In the first case, commonly available technologies were used - a computer, a data projector and students' mobile phones. The teacher worked with the most frequently mentioned digital tools from this research, Kahoot and Wordwall. The apps were used to check comprehension and to practise vocabulary. Students did not have the space to do their own creative work with the online tools used, but the learning was more enjoyable for them than with the traditional paper-based resources. The teacher's creativity was used to create the image in Canva. This visual cue allowed the students to speak more easily in the target language. Students were more spontaneous during speaking.

Lesson plan 2

The second demonstration is a follow-up lesson where students were given more space for their own creative work with online tools. This whole lesson was organised in a PC classroom. In the first part of the lesson, the students practised vocabulary related to crime. A picture was used as a visual aid to facilitate communication. Then students practised grammar using Wordwall (past tenses). The main task allowed students to use their imagination as the aim was to creatively portray a criminal (make an avatar) and describe his or her life story in English. Digital skills (working with the app), writing and the integration of target language were developed in a natural way. Moreover, the activity was fun and creative for the students. In the next two classes there were presentations of the students' work. Communication skills were practised, students evaluated each other, learned to give and accept constructive criticism.

From my perspective, lesson 2 (and following two classes) was more beneficial to the students than lesson 1 because students worked more actively.

Conclusion

Modern technologies, which can be found in many different areas nowadays, both simplify the lives of individuals and place demands on them. In the field of education, digital tools have a significant impact on teacher's lesson preparation and teaching process. This thesis examined the implementation of digital tools into foreign language teaching.

The theoretical part focused on the description of basic terms such as digital education, digital tools, teacher competences. Based on the literature review, the main factors and barriers affecting the use of digital technologies were defined. Furthermore, the main strategic documents related to digital education were presented. Teachers' digital competences are stated, and the paper gives examples of online tools suitable for lesson preparation, foreign language teaching and class organisation, and a classification of teaching methods.

At the time this thesis was commissioned, the use of Artificial Intelligence in education was not such a prominent topic, but in the course of its development it became necessary to add this theme. AI and its influence not only on education is a resonant topic in our society, therefore the issue of using AI was added to the theoretical and practical part of this thesis.

The practical part of this thesis explored teachers' experience of integrating digital tools into language teaching. The main aim was to find out teachers' attitudes towards these tools, the factors that influence the use of online tools and teachers' opinions on the impact of digital tools on students' motivation. A mixed methods research design was chosen, combining qualitative and quantitative methods. The research was carried out in two phases. In the first phase, interviews were conducted with five teachers in a lower-secondary school in the town of Dvůr Králové nad Labem. The aim was to outline the situation in a mainstream school and to find out the views of the language teachers. In the second phase, a questionnaire survey method was chosen. The questionnaire was sent to 166 schools in the Královéhradecký region in order to confirm or refute the statements given in the first phase of the research. The data obtained were analysed and evaluated in Chapters 6 and 7. The results of the research were also compared with the findings of other research on similar topics. Based on the research conducted, it can be concluded that, in general, the interviewed foreign language teachers have a positive attitude towards the use of digital tools, are interested in incorporating AI-based tools into their teaching and believe that the use of these tools is a motivating factor for students. Technical equipment and quality of internet connection were identified by the research respondents as the most important factors influencing the use of online tools. In contrast, lack

of time, lack of experience and the age of teachers were not found to be barriers to the use of digital tools in education. However, the research has shown that the weakness is lower involvement in international projects.

To summarize, the survey results indicate a growing interest among teachers in integrating online and AI-based tools into language teaching. This suggests a willingness to explore innovative and technology-enabled approaches to enhance the learning experience. In the light of the research findings and the eagerness of teachers to embrace technology, it is clear that there is great potential in the future of foreign language teaching. On the other hand, balance is important, and it is crucial to realize that technology is not the only tool in the classroom. Every teacher has his or her own teaching style. When choosing methods and tools, it is always necessary to consider the learning objectives, needs and abilities of the students.

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Appendixes

Appendix 1 – The questionnaire in the original language

Využívání digitálních nástrojů ve výuce cizích jazyků na 2. stupni základních škol

<u>Dotazník pro učitele – Likertova škála</u>

Vážení respondenti,

dovoluji si Vás požádat o vyplnění dotazníku týkajícího se využívání digitálních nástrojů ve výuce cizích jazyků na 2. stupni základních škol. Výsledky dotazníkového šetření budou sloužit jako podklad výzkumu v rámci mé diplomové práce. Dotazník je anonymní a jeho vyplnění Vám zabere nejvýše 10 minut.

Předem děkuji za ochotu a spolupráci.

Bc. Dagmar Janásová

A: Faktory / bariéry ovlivňující využívání digitálních nástrojů:

1. Naše škola je vybavena digitálními technologiemi pro výuku cizích jazyků.
    -   PC, notebooky
    -   tablety
    -   interaktivní tabule
    -   připojení k internetu
    -   jazykové laboratoře

2. Moje vědomosti a dovednosti v oblasti využívání digitálních technologií a nástrojů při výuce cizích jazyků jsou na dostatečné úrovni.

3. Měl/a jsem možnost otestovat si svoji digitální gramotnost některým z oficiálních nástrojů určených pedagogům (např. Profil Učitel 21).

4. Online výuka v období pandemie covidu-19 měla vliv na to, jak v současné době využívám digitální nástroje při výuce cizích jazyků.

5. Využívání digitálních nástrojů v mém případě ovlivňuje:
    -   zájem o nové technologie
    -   požadavek vedení školy
    -   technické vybavení školy
    -   nedostatek zkušeností
    -   nedostatek času
    -   můj věk

B: Využití digitálních nástrojů v přípravě na hodinu a v procesu výuky, motivace žáků:

6. Digitální technologie a online nástroje (aplikace, webové stránky apod.) mi v přípravě na hodinu usnadňují práci.

7. Inspiraci pro využití digitálních nástrojů hledám:
   - obecně na internetu (vč. sociálních sítí)
   - na seminářích, webinářích
   - sdílením s kolegy

8. V procesu výuky cizích jazyků využívám digitální nástroje pro:
   - procvičování (slovíčka, gramatika atd.)
   - zkoušení a testování
   - pořizování záznamů (audio nebo video)
   - práci s autentickými materiály
   - projekty
   - vyhledávání informací
   - mezinárodní spolupráci
   - zadávání domácích úkolů
   - zábavu a zpestření pro žáky

9. Z uvedených nástrojů ve výuce cizích jazyků využívám:
   - Wordwall
   - Kahoot
   - Quizlet
   - Learning Apps
   - Google Jamboard
   - Liveworksheets
   - Canva
   - Genial.ly

10. Během výuky cizích jazyků využívám digitální nástroje v kombinaci s klasickými výukovými metodami:
    - slovní (výklad, práce s textem, rozhovor)
    - názorně-demonstrační (práce s obrazem)
    - dovednostně-praktické (napodobování)

11. Během výuky cizích jazyků využívám digitální nástroje v kombinaci s aktivizujícími výukovými metodami:
    - diskuse
    - řešení problémů
    - didaktické hry

12. Během výuky cizích jazyků využívám digitální nástroje v kombinaci s komplexními výukovými metodami:
    - frontální výuka
    - skupinová výuka, partnerská výuka
    - individuální a individualizovaná výuka
    - projektová výuka
    - výuka podporovaná počítačem

13. Domnívám se, že umělá inteligence (AI) přináší pokrok do výuky cizích jazyků.

14. Nástroje založené na AI již ve výuce cizích jazyků využívám.

15. Myslím si, že digitální nástroje pozitivně ovlivňují motivaci žáků ke studiu cizích jazyků.

1. Naše škola je vybavena digitálními technologiemi pro výuku cizích jazyků:

2. Moje vědomosti a dovednosti v oblasti využívání digitálních technologií a nástrojů při výuce cizích jazyků jsou na dostatečné úrovni.
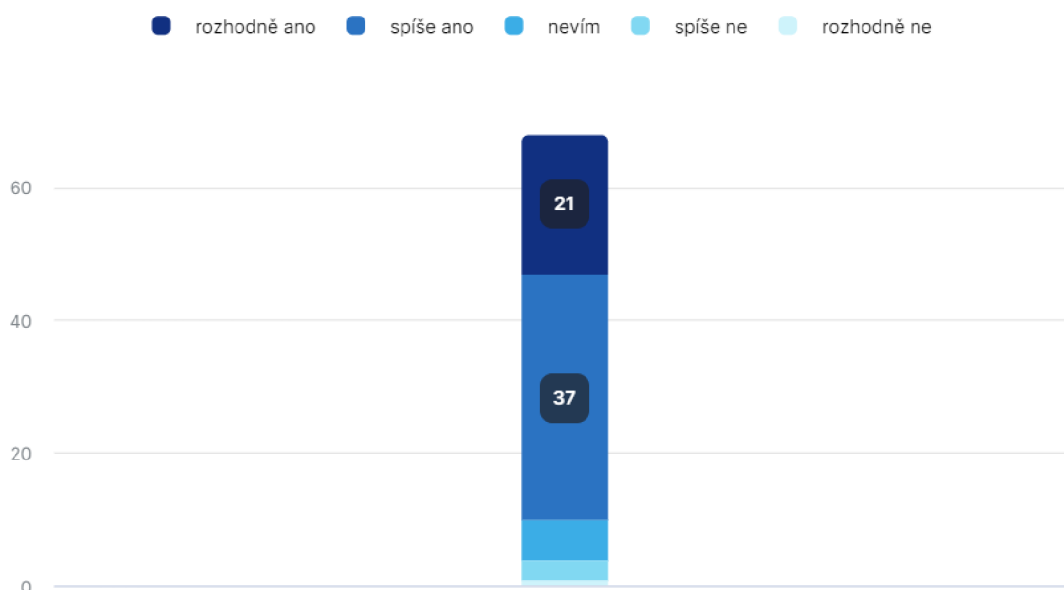
3. Měl/a jsem možnost otestovat si svoji digitální gramotnost některým z oficiálních nástrojů určených pedagogům (např. Profil Učitel 21).
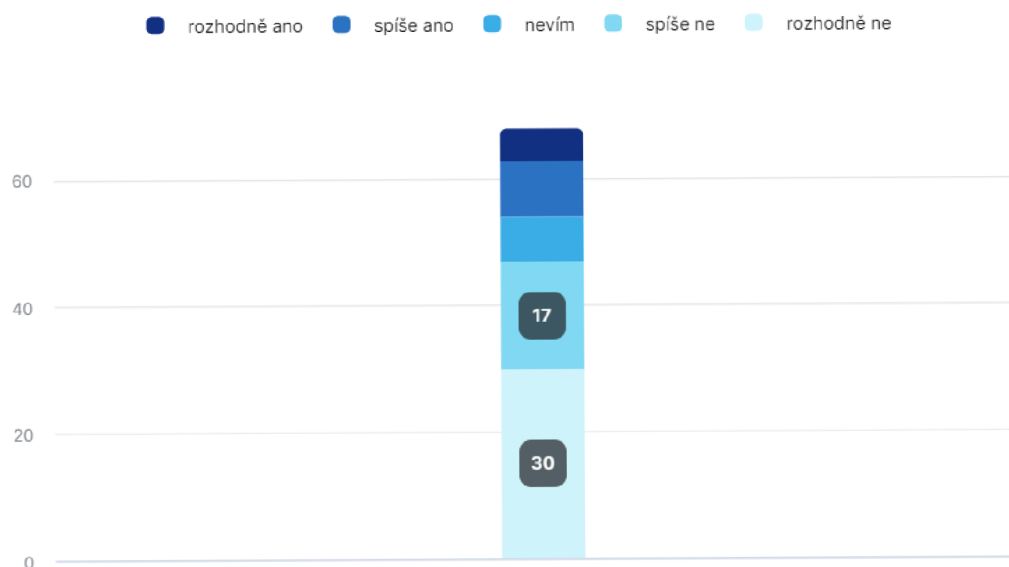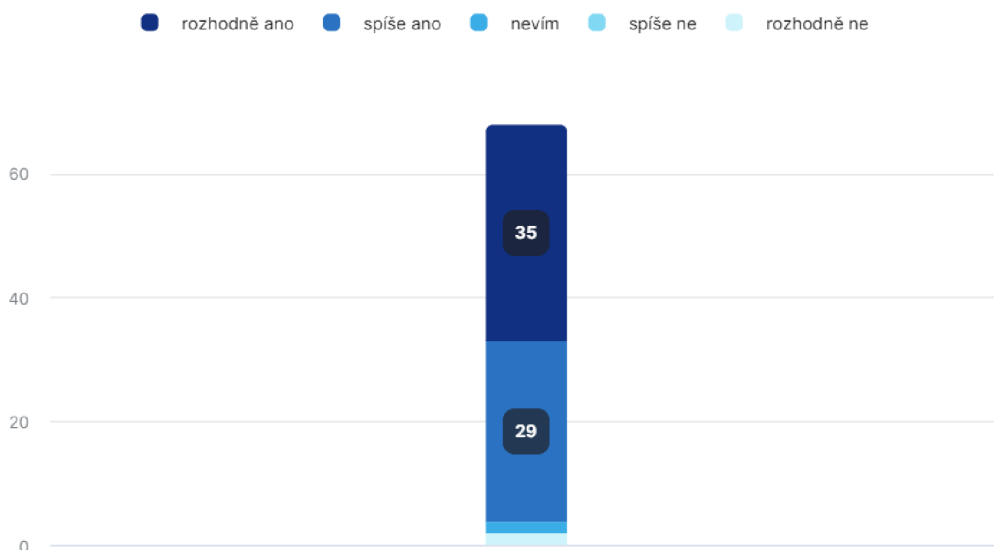

4. Online výuka v období pandemie covidu-19 měla vliv na to, jak v současné době využívám digitální nástroje při výuce cizích jazyků.
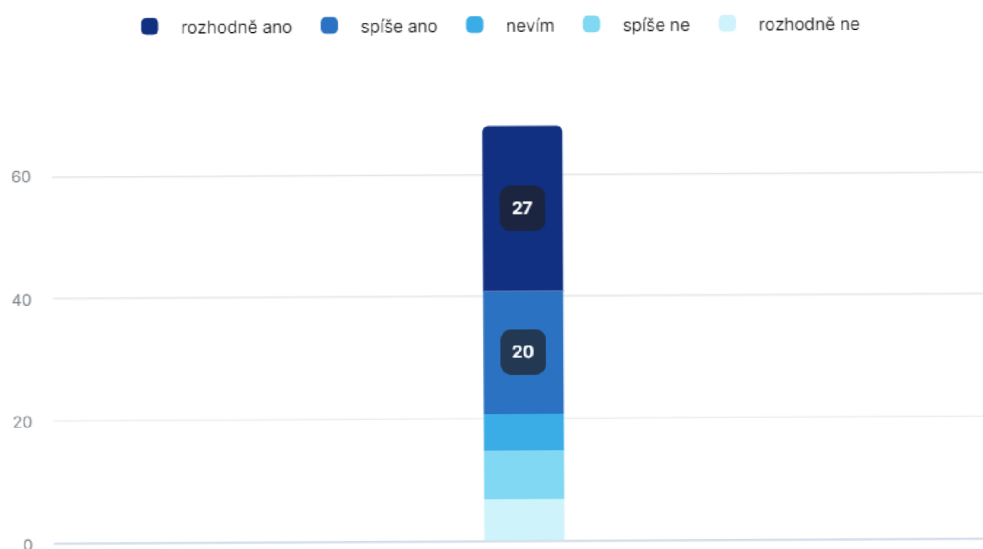
5. Využívání digitálních nástrojů v mém případě ovlivňuje:
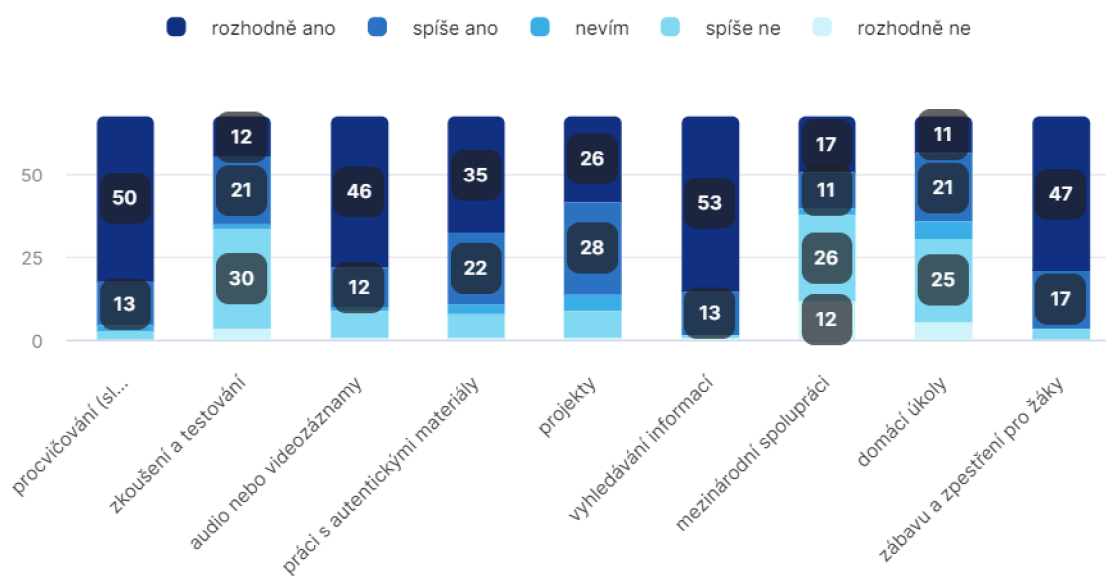

6. Digitální technologie a online nástroje (aplikace, webové stránky apod.) mi v přípravě na hodinu usnadňují práci.
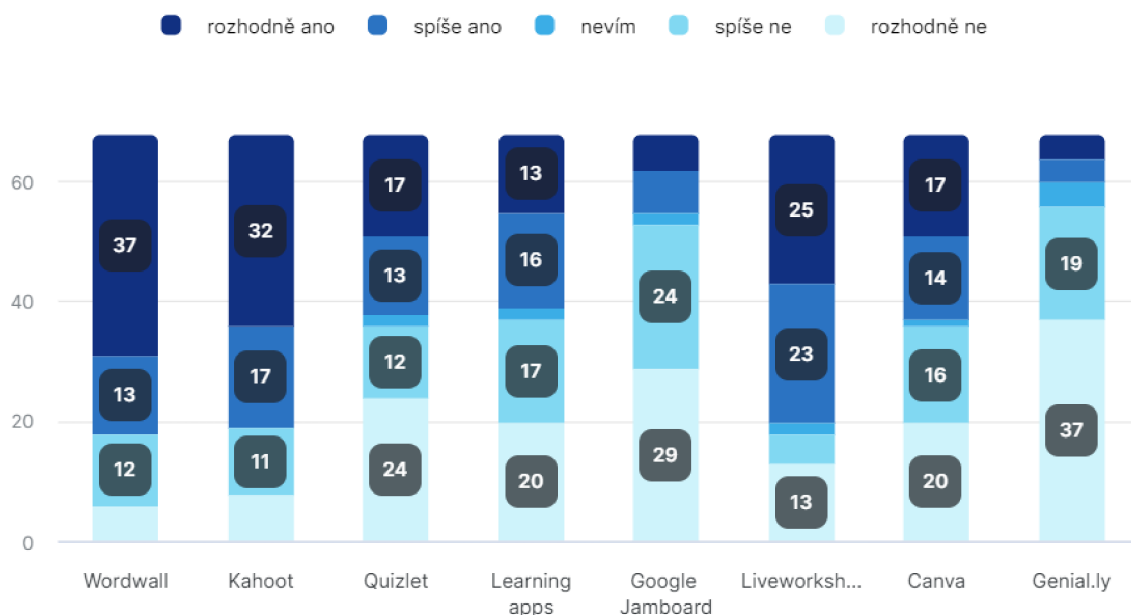
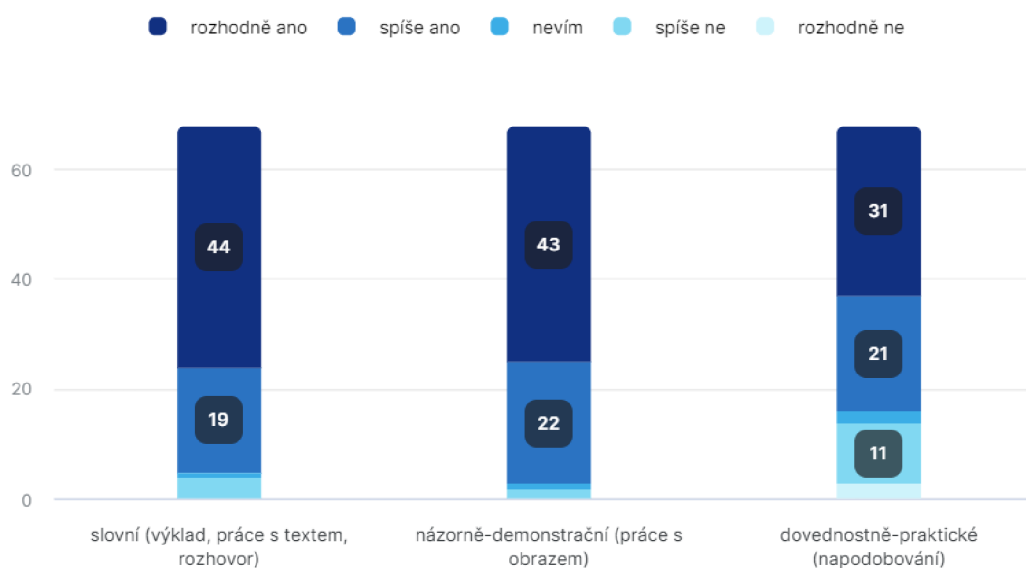## 7. Inspiraci pro využití digitálních nástrojů získávám:

Legenda: rozhodně ano | spíše ano | nevím | spíše ne | rozhodně ne

	na internetu	na seminářích, webinářích	sdílením s kolegy	v časopisech, publikacích
rozhodně ano	39	19	25	
spíše ano	22	25	30	31
spíše ne		20	12	24

8. V procesu výuky cizích jazyků využívám digitální nástroje pro:

Legenda: rozhodně ano | spíše ano | nevím | spíše ne | rozhodně ne

	procvičování (sl...	zkoušení a testování	audio nebo videozáznamy	práci s autentickými materiály	projekty	vyhledávání informací	mezinárodní spolupráci	domácí úkoly	zábavu a zpestření pro žáky
rozhodně ano	50	12	46	35	26	53	17	11	47
spíše ano	13	21	12	22	28	13	11	21	17
nevím		30					26	25	
spíše ne							12		

9. Z uvedených nástrojů ve výuce cizích jazyků využívám:

Legenda: rozhodně ano, spíše ano, nevím, spíše ne, rozhodně ne

	Wordwall	Kahoot	Quizlet	Learning apps	Google Jamboard	Liveworksh...	Canva	Genial.ly
rozhodně ano	37	32	17	13		25	17	
spíše ano	13	17	13	16	24	23	14	
nevím			12	17			16	19
spíše ne	12	11	24	20	29	13	20	37

10. Během výuky cizích jazyků využívám digitální nástroje v kombinaci s těmito klasickými výukovými metodami:

Legenda: rozhodně ano, spíše ano, nevím, spíše ne, rozhodně ne

	slovní (výklad, práce s textem, rozhovor)	názorně-demonstrační (práce s obrazem)	dovednostně-praktické (napodobování)
rozhodně ano	44	43	31
spíše ano	19	22	21
nevím			11

11. Během výuky cizích jazyků využívám digitální nástroje v kombinaci s těmito aktivizujícími výukovými metodami:

Legenda: rozhodně ano, spíše ano, nevím, spíše ne, rozhodně ne

diskuse: 24, 31
řešení problémů: 16, 36, 12
didaktické hry: 36, 24
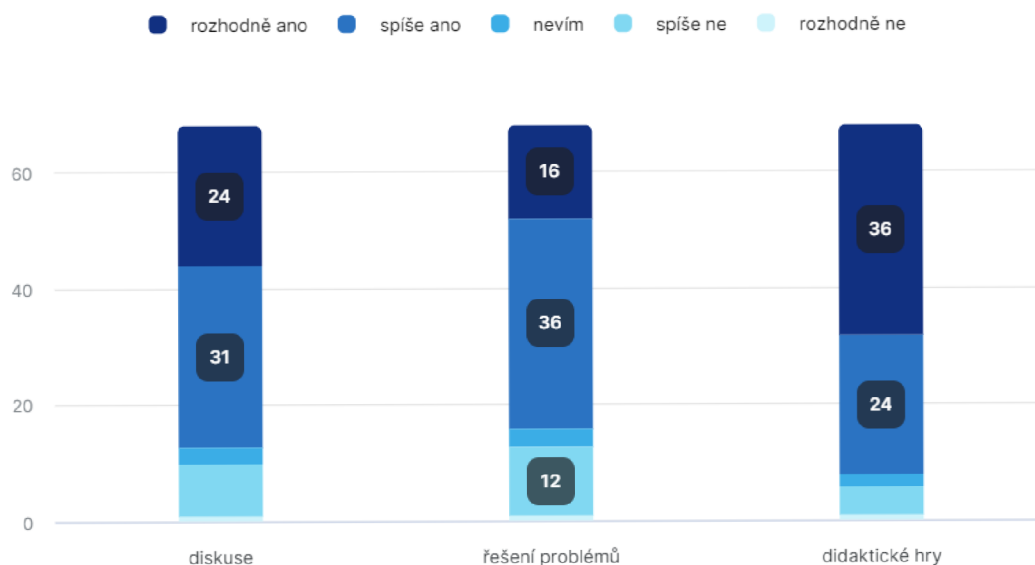
12. Během výuky cizích jazyků využívám digitální nástroje v kombinaci s těmito komplexními výukovými metodami:
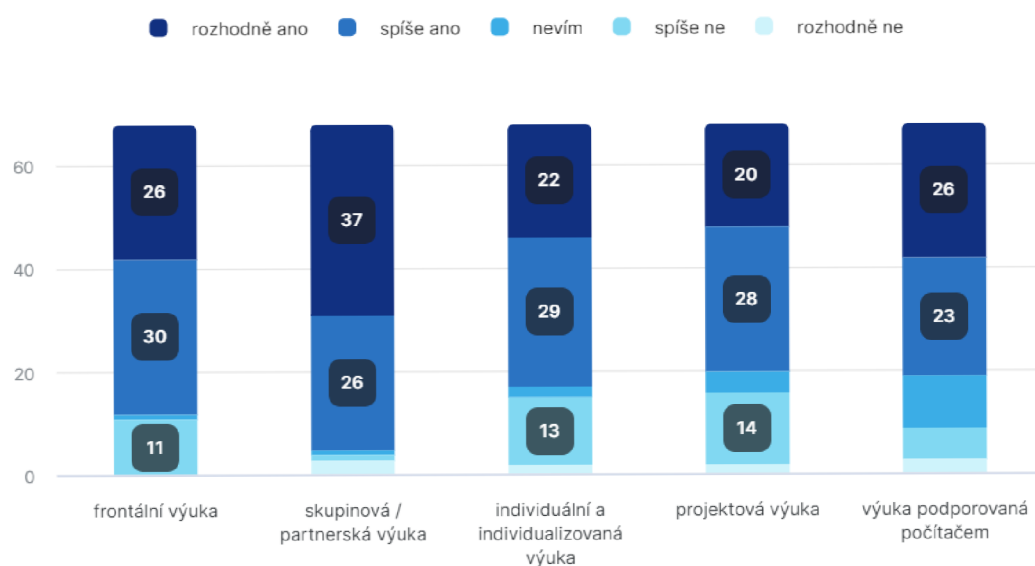
Legenda: rozhodně ano, spíše ano, nevím, spíše ne, rozhodně ne

frontální výuka: 26, 30, 11
skupinová / partnerská výuka: 37, 26
individuální a individualizovaná výuka: 22, 29, 13
projektová výuka: 20, 28, 14
výuka podporovaná počítačem: 26, 23

13. Domnívám se, že umělá inteligence (AI) přináší pokrok do výuky cizích jazyků.
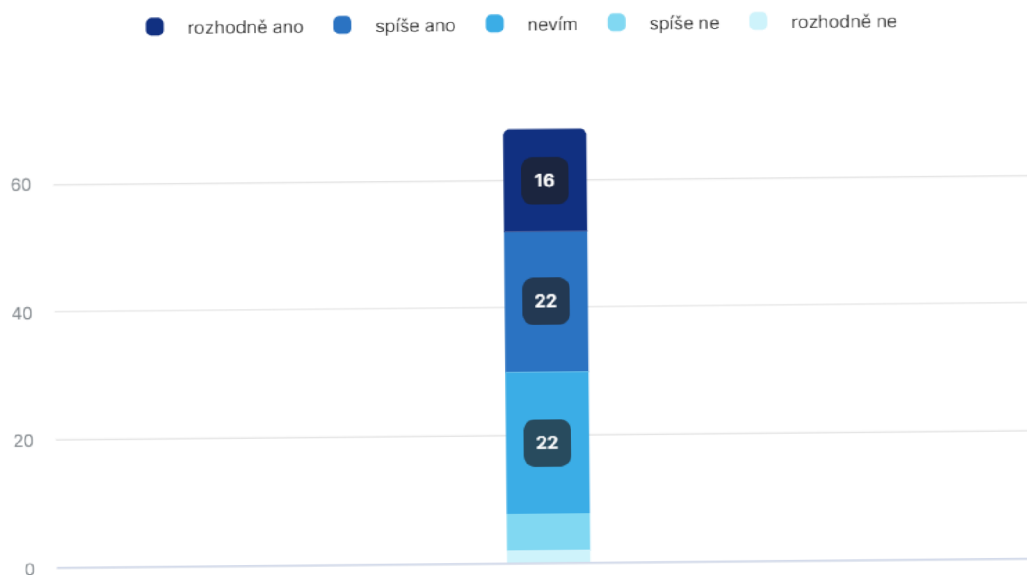
14. Nástroje založené na AI již ve výuce cizích jazyků využívám.
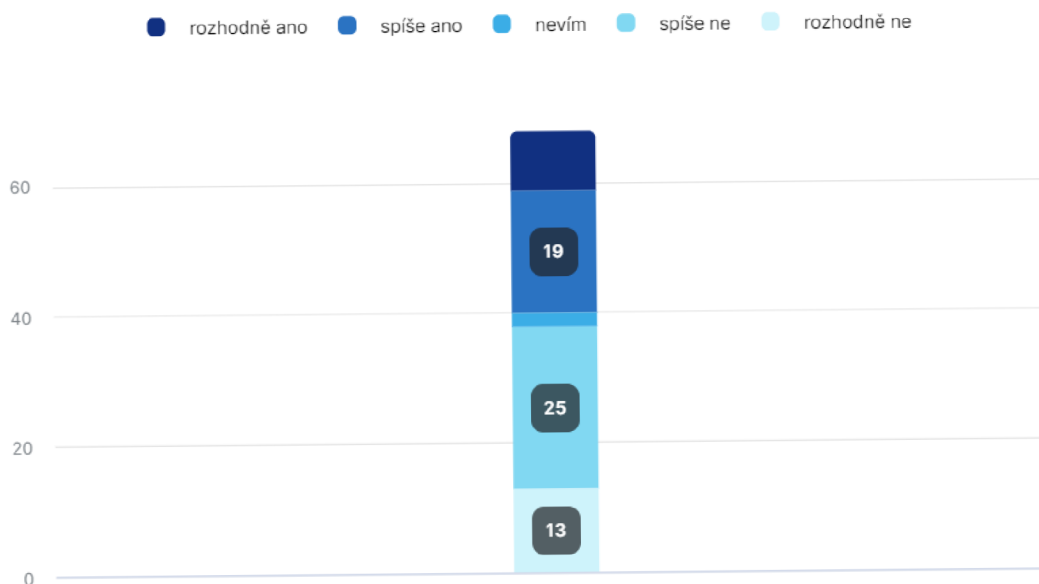
15. Myslím si, že digitální nástroje pozitivně ovlivňují motivaci žáků ke studiu cizích jazyků.
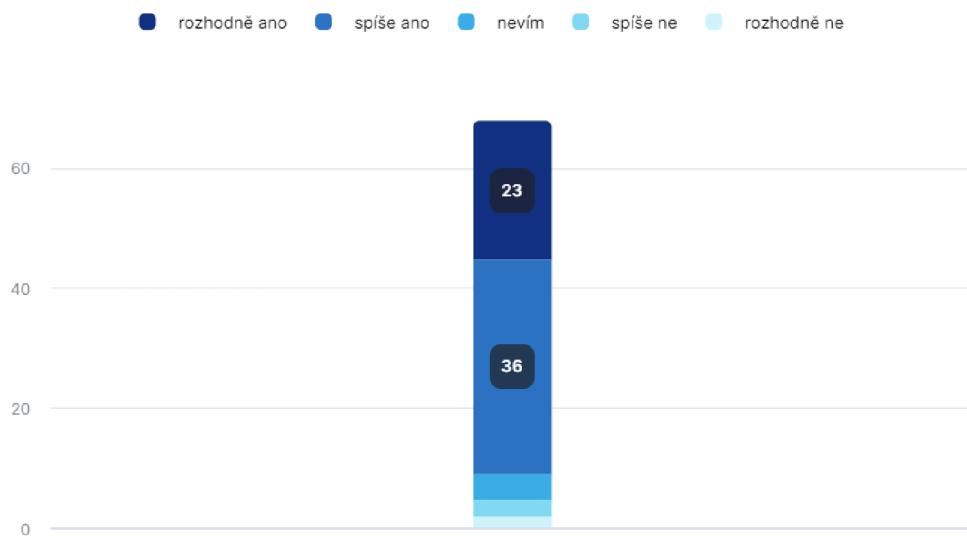
Appendix 3 – Examples of lesson plans

Lesson plan 1

Lesson: English   Class: 8th grade

Textbook: Project 3, Unit 3C   Topic: Crime

Aim: Improve listening, reading, writing and speaking skills, grammar: past tenses.

The learner will tell the story, name the rooms in the house, describe what people were doing at the certain moment (will use past continuous)

Key competences: communication competence, learning competence, digital competence, social and personal competence

Methods: brainstorming, frontal teaching, partner teaching

Aids, materials: a picture made in Canva, PC, a data projector, textbooks in paper and online forms, workbooks, mobiles, applications: Kahoot, Wordwall.

Warm-up activity, speaking - 5 min.

T: greets Ss, shows them a picture and asks: *What is the topic of our lesson today? Do you understand these words? Do you know any famous detectives? Who is this man?*

Ss: watch the picture, give ideas (brainstorming).

Created in Canva.com by the author.

Main part of the lesson, 25 min.

Vocabulary:

T: asks Ss to use their workbooks, p. 82/3C – Murder in the library

T: Now take your workbooks, go to page 82. Let's read the words together.

Pre-listening activities, listening, speaking

T: asks Ss to use their textbooks, p. 36/1.

T: Take your textbooks, please. Go to page 36, ex. 1. At first, look at the picture and tell me what you can see, name rooms in the house. Tell me what the people are doing. Who is Smart Alec? Do you remember him? Read and listen to Smart Alec' report, then answer the questions. Read the questions before listening.

Ss: describe the picture – name the rooms, speak about people in the house, then read the questions, listen to the recording, answer the questions together.

Speaking

T: asks Ss to work in pairs and to do ex. 3, p. 37.

T: Now work in pairs. What do you think happened to John Ross?

Ss: work in pairs, give ideas.

Listening

T: asks Ss to listen again.

T: Listen to Smart Alec interviewing Dona. Make notes. Write any new information about each person. Look at the picture in ex. 4b, p. 37.

Ss: listen to the recording, make notes, after listening check the answers with the teacher.

Speaking, listening

T: asks Ss to look at ex. 5.

T: Who is the murderer? Why? Give me the reasons.

Ss: give ideas, speak. Then listen to the last part of the recording to know who the killer was.
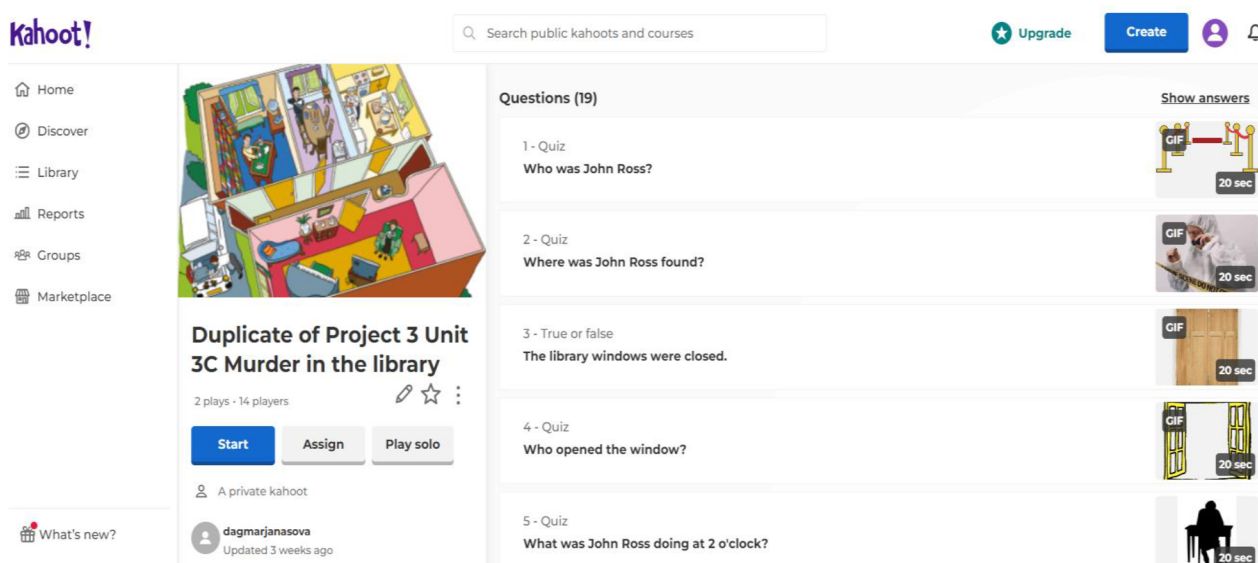
<u>Conclusion – 12 + 3 min.</u>

T: asks Ss to use their mobiles and play Kahoot to check students' understanding the story about John Ross in details.

T: Take your mobiles, use QR codes or PIN and play the game.

Ss: play the game on their own mobiles, answer the questions related to the story about John Ross.

<u>Game – reading and listening comprehension</u>

Source: https://create.kahoot.it/details/01f5a217-2dc8-47c8-9ee5-0eb5b8772ecb

<u>Homework, assessment and conclusion</u>

T: explains homework, asks Ss to learn new vocabulary, practise at home, to use Wordwall.

T: Your homework is to learn new vocabulary, you can use Wordwall to practise the words.

a cup	fingerprints	a shot	open	an accident	a murderer
gloves	broken	reveal	a cook	a library	a murder

	rozbitý, zlomený		vrah	a stepdaughter	nevlastní dcera
	kuchařka		knihovna		prozradit, odhalit
a killer	zabiják, vrah	empty	prázdný		výstřel
	rukavice		otevřený	clean	čistý, čistit
	otisky prstů		nehoda	explain	vysvětlit
	vražda	a gun	pistole		hrneček, šálek

Odeslat odpovědi

Project 3, Unit 3C_Murder in the library_vocab.

Sdílet

Created in Wordwall by the author: https://wordwall.net/cs/resource/63516609

T: asks Ss to evaluate the lesson with using the thumbs.

Ss: evaluate the lesson and say what they learnt.

Abbreviations: T = the teacher, Ss = students

Lesson plan 2

Lesson: English   Class: 8th grade

Textbook: Project 3, Unit 3C   Topic: Crime

Aim: Improve reading, writing and speaking skills, grammar: past tenses.

The learner will tell the story, use details about personal life, describe what people were doing at the certain moment (use past continuous), use digital technology, create his or her own project based on the topic of crime.

Key competences: communication competence, learning competence, digital competence, social and personal competence

Methods: brainstorming, project-based teaching

Aids, materials: a picture, PC for a teacher, a data projector, computers in a PC classroom for students.

Warm-up activity, speaking - 3 min.

T: greets Ss, shows them a picture and asks Ss to revise vocabulary related to the topic of crime.

T: look at the picture, name all the items in English.

Source: adapted from https://www.obrazkyvevyuce.cz – Mgr. Iva Svatoňová

Main part of the lesson, 40 min.

T: asks Ss to do all the task which are prepared for them in a Word document. T: monitors and helps in needed.

Ss: find the document and do the task individually.

T: After revising vocabulary, it is the time to work individually. Read the instructions very carefully and work individually. Do the project and be prepared to present your work to your classmates.

Ss: read the instructions, work individually, create a story about a criminal's life.

THE WRITTEN INSTRUCTIONS FOR STUDENTS

1) **Grammar practice**

Before you start to write your story about a criminal, practise past tenses here:

Wordwall – past simple x continuous

https://wordwall.net/play/36692/670/746

https://wordwall.net/play/631/559/83006

https://wordwall.net/play/14504/506/81379

2) **A criminal story – writing**

You are a police psychologist, create a portrait of a criminal. Use this app:

Avatar - https://avatarmaker.com/

Download the picture and describe the person. Write a story about his / her life and crimes in details. Use past tenses. If you want, you can also make a poster. Example:
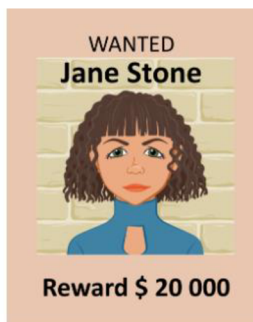
Source: adapted from https://www.obrazkyvevyuce.cz – Mgr. Iva Svatoňová

Email the story with pictures to your teacher. Be prepared to present your work to your classmates in the next lesson.

3) Game - reading

If you have a plenty of time, try to play the game called "Crime city". Read the instructions in English very carefully. Find the clues, reveal what happened and tell me who the killer was.

https://webapp.micromacro-game.com/democase/en/democase.html?fbclid=IwAR2ZYS1A--uj8QiQll_gqjrwoTeDDQ8stg6x6EYDFBZG-hbJ-615nWVqk48

Good luck 😊.

Conclusion of the lesson, 2 min.

T and Ss assess the lesson orally. The teacher reminds the students that in the next class they will present their projects to their classmates.

Abbreviations: T = the teacher, Ss = students

Anotace

Jméno a přímení:	Bc. Dagmar Janásová
Katedra nebo ústav:	Ústav cizích jazyků PdF UP Olomouc
Vedoucí práce:	Mgr. Ondřej Duda
Rok obhajoby:	2024

Název diplomové práce:	Využití digitálních nástrojů ve výuce cizích jazyků na 2. stupni základní školy
Název diplomové práce v anglickém jazyce:	Use of digital tools in foreign language teaching at lower-secondary school
Anotace diplomové práce:	Tato diplomová práce se zabývá využitím digitálních nástrojů ve vzdělávání. Cílem práce je zjistit postoj učitelů k začleňování digitálních nástrojů do výuky cizích jazyků na druhém stupni základních škol. Teoretická část se zaměřuje na popis základních pojmů na základě přehledu literatury, na strategické dokumenty v oblasti digitálního vzdělávání, kompetence učitelů a digitální gramotnost. V praktické části jsou prezentovány výsledky smíšeného výzkumu uskutečněného mezi učiteli ve Dvoře Králové nad Labem a v Královéhradeckém kraji.
Anotace v anglickém jazyce:	This thesis deals with issues of using digital tools in education. The aim of the document is to find out teachers' attitudes towards the integration of digital tools in foreign language teaching at lower-secondary schools. The theoretical part focuses on the description of key concepts based on literature review, strategic documents in the field of digital education and teachers' competences and digital literacy. The practical part presents the results of a mixed research conducted among teachers in the town of Dvůr Králové nad Labem and the Královéhradecký region.
Klíčová slova:	Digitální technologie, digitální nástroje, výuka cizích jazyků
Klíčová slova v angličtině:	digital technology, digital tools, foreign language teaching
Přílohy vázané v práci:	Questionnaire (dotazník) – příloha strana 96-98 Figures (grafy) – příloha strana 99-106 Lesson plans (plány hodin) – příloha strana 107-113
Rozsah práce:	114 stran
Jazyk práce:	Anglický jazyk