FAKULTA PŘÍRODOVĚDNĚ-HUMANITNÍ A PEDAGOGICKÁ <u>TUL</u>



Diplomová práce

Interactive Textbooks in EFL Classes

Studijní program: N0114A300106 Učitelství pro střední školy a 2.

stupeň základních škol

Studijní obory: Anglický jazyk

Německý jazyk

Autor práce: Bc. Lenka Jílková

Vedoucí práce: PhDr. Iva Koutská, Ph.D.

Katedra anglického jazyka

Liberec 2024

FAKULTA PŘÍRODOVĚDNĚ-HUMANITNÍ A PEDAGOGICKÁ <u>TUL</u>



Zadání diplomové práce

Interactive Textbooks in EFL Classes

Jméno a příjmení: Bc. Lenka Jílková

Osobní číslo: P22000853

Studijní program: N0114A300106 Učitelství pro střední školy a 2.

stupeň základních škol

Specializace: Anglický jazyk

Německý jazyk

Zadávající katedra: Katedra anglického jazyka

Akademický rok: 2022/2023

Zásady pro vypracování:

Cílem této diplomové práce je zkoumat využití interaktivních učebnic ve výuce anglického jazyka (EFL). Diplomová práce se bude opírat o tři výzkumné otázky: Pro jaké účely učitelé využívají interaktivní učebnice? Do jaké míry využívají učitelé anglického jazyka interaktivní učebnice v poměru s jinými materiály? Setkávají se učitelé angličtiny s obtížemi spojenými s používáním interaktivních učebnic se výuce anglického jazyka? Pokud ano, s jakými? Teoretická část diplomové práce bude obsahovat tři tematické okruhy: 1. Technologie ve výuce: definice výukových technologií, jejich role ve výuce, jejich role ve výuce cizího jazyka, jejich přínosy a limity při rozvoji cizího jazyka. 2. Vývoj učebnic: tradiční tištěná verze učebnice, funkce učebnice, proměna do digitální učebnice. 3. Interaktivní učebnice: definice pojmu (interaktivita, multimedialita) a synchronní a asynchronní využití technologií. Praktická část zahrnuje pozorování 10 učitelů anglického jazyka, a to: jak, do jaké míry a pro jaké účely používají interaktivní učebnici. Bude provedeno dotazníkové šetření s pozorovanými učiteli pro získání poznatků o jejich zkušenostech a postupech při používání interaktivních učebnic. Dále budou porovnány vybrané učebnice a jejich interaktivní verze, na základě nichž budou vypracována metodická doporučení, jak je možné s interaktivními učebnicemi ve výuce anglického jazyka pracovat.

Rozsah grafických prací: Rozsah pracovní zprávy:

Forma zpracování práce: tištěná/elektronická

Jazyk práce: angličtina

Seznam odborné literatury:

Blyth, C. 2009. From textbook to online materials: the changing ecology of foreign language publishing in the era of ICT. In M.J. Evans (ed.), Foreign language learning with digital technology (pp. 174–202). London and New York: Continuum.

Černá, M. 2022. Evaluation of ELT Textbooks: A Handbook for Trainee Teachers. Brno: Masarykova univerzita.

Lewis, Gordon. 2009. Bringing technology into the classroom. Into the classroom. Oxford: Oxford University Press.

Roblyer, M. D., and Aaron Herbert Doering. 2013. Integrating educational technology into teaching. 6th ed. Boston: Pearson.

Stanley, Graham. 2013. Language learning with technology: ideas for integrating technology in the language classroom. Edited by Scott Thornbury. Cambridge handbooks for language teachers. Cambridge: Cambridge University Press.

Vedoucí práce: PhDr. Iva Koutská, Ph.D.

Katedra anglického jazyka

Datum zadání práce: 20. června 2023 Předpokládaný termín odevzdání: 12. července 2024

L.S.

prof. RNDr. Jan Picek, CSc. děkan

prof. PhDr. Tomáš Kasper, Ph.D. garant studijního programu

Prohlášení

Prohlašuji, že svou diplomovou práci jsem vypracovala samostatně jako původní dílo s použitím uvedené literatury a na základě konzultací s vedoucím mé diplomové práce a konzultantem.

Jsem si vědoma toho, že na mou diplomovou práci se plně vztahuje zákon č. 121/2000 Sb., o právu autorském, zejména § 60 – školní dílo.

Beru na vědomí, že Technická univerzita v Liberci nezasahuje do mých autorských práv užitím mé diplomové práce pro vnitřní potřebu Technické univerzity v Liberci.

Užiji-li diplomovou práci nebo poskytnu-li licenci k jejímu využití, jsem si vědoma povinnosti informovat o této skutečnosti Technickou univerzitu v Liberci; v tomto případě má Technická univerzita v Liberci právo ode mne požadovat úhradu nákladů, které vynaložila na vytvoření díla, až do jejich skutečné výše.

Současně čestně prohlašuji, že text elektronické podoby práce vložený do IS/STAG se shoduje s textem tištěné podoby práce.

Beru na vědomí, že má diplomová práce bude zveřejněna Technickou univerzitou v Liberci v souladu s § 47b zákona č. 111/1998 Sb., o vysokých školách a o změně a doplnění dalších zákonů (zákon o vysokých školách), ve znění pozdějších předpisů.

Jsem si vědoma následků, které podle zákona o vysokých školách mohou vyplývat z porušení tohoto prohlášení.

Acknowledgments

I would like to express my gratitude to my thesis advisor, PhDr. Mgr. Iva Koutská, Ph.D., for her invaluable guidance and support throughout the writing of this thesis. Her expertise, patience, and insightful feedback have been essential to the completion of this work.

Furthermore, I am very grateful to the teachers who participated in the research.

Their cooperation and willingness to share their experiences made this research possible.

Lastly, I would also like to thank my family and boyfriend for their constant support throughout my studies. Their encouragement and understanding have been invaluable to me during my studies.

Anotace

Tato diplomová práce zkoumá využití a účinnost interaktivních učebnic při výuce angličtiny jako cizího jazyka na druhém stupni základních škol v České republice. Výzkum zahrnuje kvalitativní přístup, včetně pozorování výuky, dotazníku a analýzy vybraných učebnic. Pozorování bylo provedeno v deseti hodinách anglického jazyka za účelem získání praktických poznatků, následováno dotazníkem pro zachycení subjektivních zkušeností a praxí učitelů. Zjištění naznačují, že ačkoli jsou interaktivní učebnice často používány, jejich plný interaktivní potenciál je často nevyužit. Učitelé je většinou používají především jako prezentační nástroje, spíše než pro jejich interaktivitu. Mezi identifikované výzvy patří omezené školení a technické překážky. Navzdory těmto výzvám učitelé uznávají přínosy interaktivních učebnic při zvyšování zapojení žáků a poskytování různorodých vzdělávacích zkušeností.

Klíčová slova

výuka angličtiny jako cizího jazyka, učebnice, interaktivní učebnice, technologie ve výuce

Abstract

This diploma thesis investigates the use and effectiveness of interactive textbooks in teaching English as a Foreign Language (EFL) in lower secondary schools in the Czech Republic. The research involves a qualitative approach, including lesson observations, a questionnaire, and an analysis of selected textbooks. Observations were conducted in ten English language lessons to gather practical insights, followed by a questionnaire to capture teachers' subjective experiences and practices. Findings indicate that while interactive textbooks are frequently used, they are often underutilised in terms of their full interactive potential. Teachers tend to use them primarily as presentation tools rather than for their interactivity. Challenges identified include limited training and technical problems. Despite these challenges, teachers recognize the benefits of interactive textbooks in enhancing student engagement and providing diverse learning experiences.

Keywords

Teaching English as a foreign language (EFL), textbooks, interactive textbooks, educational technologies

Contents

1. Technology in the classroom	. 10
1.1. Technology in EFL classes	. 13
1.2. The role of technology in EFL classes	. 16
1.3. Technology integration into EFL classes	. 18
1.4. Benefits and limitations of technology utilisation in EFL classes	. 20
1.5. Synchronous and asynchronous use of technology in EFL classes	. 24
1.6. Practical implication of technology utilisation in EFL classes	. 26
1.6.1. Development of listening via technology	. 26
Historical Context of Technologies in Teaching Listening in Fore	ign
Languages	. 28
1.6.2. Development of speaking via technology	. 29
Historical Context of Technologies in Teaching Speaking in Fore	ign
Languages	. 30
1.6.3. Development of reading via technology	. 32
Historical Context of Technologies in Teaching Reading in Foreign Language	ges
	. 33
1.6.4. Development of writing via technology	. 34
Historical Context of Technologies in Teaching Writing in Foreign Language	ges
	. 35
2. Textbook and its function	.35

	2.1.	Development of textbooks	. 38
	2.1.1.	Grammar-translation Method	. 39
	2.1.2.	Direct Method	. 42
	2.1.3.	Audiolingual method	. 45
	2.1.4.	Communicative Language Teaching	. 49
	2.2.	Transformation of printed textbooks into digital textbook	. 51
	2.2.1.	Types of textbooks	. 52
	2.3.	Interactivity and multimodality as a textbook feature	. 56
	3.	Interactive textbooks	. 59
4	. Р	ractical part	. 62
	4.1.	Analysis of textbooks	. 63
	4.1	.1. Bloggers interactive textbook	. 64
	4.1	.2. Project fourth edition	. 68
	4.2.	Analysis of observed lessons	. 72
	4.3.	Analysis of questionnaire	. 77
	4.4.	Discussion of the findings	. 87
	4.5.	Recommendations	. 88
C	Conclus	ion	. 90
R	Lesourc	es	. 92
C	nline 1	resources	. 93

List of Figures

Figure 1: Digital Education Strategy by MŠMT 2014, p. 18	12
Figure 2: Excerpt from textbook page 25	42
Figure 3: Excerpt from textbook page 24	42
Figure 5: Excerpt from Charts 1	44
Figure 4: Excerpt from the textbook Stage 1	44
Figure 6: Grammar table	48
Figure 7: First lesson	48
Figure 8: Exercises (articles, translation, writing, speaking)	48
Figure 9: Exercises (pronunciation and speaking)	48
Figure 10: Unit 18 from "The Cambridge English Course I."	51
Figure 11: Excerpt Bloggers 2: unadjusted version	66
Figure 12: Excerpt Bloggers 2: simplified version	66
List of Graphs	
Graph 1: comparison of interactive textbook with other materials	72
Graph 2: the way of use of interactive textbook	73
Graph 3: language skills observed during the lessons	74
Graph 4: language systems observed during the lessons	74
Graph 5: functions of interactive textbooks used during the observation	75
Graph 6: frequency of the use of interactive textbooks	78
Graph 7: future use of interactive textbook	85

List of Tables

Table 1: functions of interactive textbooks	78
Table 2: function of interactive textbook – language skills	79
Table 3: factors for effective integration	79
Table 4: effectiveness of interactive textbook features for pupils	81
Table 5: effectiveness of interactive textbook – language skills and systems	81
Table 6: effective features of interactive textbook for teacher	82
Table 7: difficulties with interactive textbooks	83
Table 8: Advantages in comparison of printed and interactive textbooks	83
Table 9:Comparison of disadvantages of printed and interactive textbooks	84

Introduction

This diploma thesis aims to investigate the utilization of interactive textbooks in English language teaching as a foreign language. The thesis is guided by three research questions: What purposes do teachers use interactive textbooks for? To what extent do English language teachers use interactive textbooks compared to other materials? Do English language teachers encounter difficulties using interactive textbooks in English language teaching? If so, what are the difficulties?

The rationale behind this diploma thesis stems from the desire to explore the current utilization of interactive textbooks in English language teaching at lower secondary schools in the Czech Republic as the environment of education evolves with technological advancements, and interactive textbooks seem to be an effective technological tool to be integrated into language teaching. This research aims to contribute to the broader understanding of interactive learning materials and their role in language teaching, considering the current student-oriented and (post)communicative approach to teaching foreign languages. This knowledge will enrich my understanding of the advantages and disadvantages of using an interactive textbook in the EFL classrooms and also equip me with the potentially beneficial skills of doing action-based research that could help me overcome any obstacles I may encounter in my future role as an English language teacher. Hopefully, this will apply to any potential reader as well.

The diploma thesis is divided into two main parts. The theoretical part of the thesis will cover three thematic areas. The first area is educational technology, which involves a comprehensive overview of technology integration in English language teaching. Beginning with the historical context of technology integration in schools, the thesis

includes the list of chosen moments that have shaped the current digital era in education, for example, the significance of initiatives such as the Digital Education Strategy 2020, highlighting the concerted efforts to integrate modern technological means into teaching gradually. The following chapters examine the various technologies and their practical implications in EFL classes, from interactive textbooks to online platforms and applications. The exploration also extends to the benefits and limitations of technology integration in developing language skills and systems, i.e., listening, speaking, reading, and writing. Furthermore, the text suggests practical strategies for teachers to effectively integrate technology into their classrooms, emphasizing educational objectives, learner proficiency levels, and appropriate usage contexts. It also underscores the pivotal role of teachers in guiding pupils' digital literacy development, ensuring responsible and ethical engagement with digital resources.

The second area involves textbooks' function and development. It focuses on the function of textbooks in the educational process and their evolution from print to digital formats. It also points out the historical development of methods in teaching foreign languages and their influence on textbook design. Various types of textbooks are also mentioned, including printed, digital, interactive, and hybrid, and their features, advantages, and disadvantages are compared to complete the overall picture of the thematic area: textbooks within English as a foreign language learning.

The third area provides a more detailed analysis of interactive textbooks and their role in modern education, focusing on their implementation in the Czech Republic. It covers interactive textbooks' features, advantages, and functions, such as multimedia integration, teacher support, and flexibility for both online and offline use. Interactivity and multimodality are also examined in terms of education, exploring traditional and

contemporary perspectives on these concepts and their implications for teaching and learning.

The practical part begins with a description of the research methodology. It further includes an analysis of selected textbooks, observations of ten EFL lessons, and a questionnaire. This research is particularly relevant in the context of modern educational practices, where the demand for interactive and engaging teaching materials is ever-increasing, as well as the need for digital literacy development.

1. Technology in the classroom

Vyskočilová and Dvořák (2002) mentioned that, in the late 20th century, there was a communication revolution associated with the advent of the digital era. There has been increased attention to developing critical thinking, leading to the beginnings of experiments with computer-assisted learning and emphasis on the concept of hypertext. (Vyskočilová and Dvořák 2002, in Kalhous, Obst, and col., 2002, p. 29)

The three essential concepts, i.e., critical thinking focus, computer-assisted learning, and hypertext emphasis, in the quotation above document clearly the development of technology utilisation in the classrooms. In other words, with the start of the digital era being defined as 'a time in which there is a widespread, ready and easy access to, sharing of and use of information in electronically accessible' (Lau 2003 in Haris 2016, p. 2) a computer-assisted learning started to be used, 'a mode of teaching and learning in which learning material is presented via a computer, and the learner is able to interact with them' (Wallace 2015, p. 63) leading to individualization and personalisation of learning due to the existence of hypertext that is 'a setup for a group of computer software programs that are linked logically rather than by a simple linear

sequence. These programs contain encoded textual, auditory, and graphical information.'
(Spafford 1998 p. 384)

The quotation also shows that technology in education or educational technology is by many connected nowadays to digital, online, web-based solutions; see also in Brdička (2003), who describes the historical context of technology integration in European schools, particularly as the influence of the United States where a directive was published in 1995 for all American public schools to be connected to the Internet by 2000 (Brdička 2003, p. 24) or in Pumpo (2023), who describes educational technology (known also as EdTech) as "the use of digital tools in a learning environment designed to enhance teacher-led learning in the classroom and improve students' learning outcomes." (Pumpo 2023)

However, classroom technology can be seen from a broader perspective.

- 1. The use of machines and educational equipment of different sorts (e.g. language laboratories, tape recorders, video, etc.) to assist teachers and learners.

 (Richards and Schmidt 2002, p. 174)
- Educational technology encompasses the strategies and techniques relating to the learning process, as well as the equipment and resources used to support it. (Wallace 2015, p. 307)
- 3. Educational technology often means no more than visual aids, but it should refer to the techniques and understanding of the whole process of learning as well as the hardware. (Gordon and Lawton 2005, p. 241)

Coming back to the rather limited understanding of the term technology as 'digital.' For example, Stanley (2013) divides technologies into the Internet, Software, and Hardware. (Stanley 2013, p. 4-5) Also, the Ministry of Education, Youth, and Sports operates with

the term in the sense of 'digital technologies' as can be seen, e.g., from the fact that at the turn of November 2014, the Czech Government adopted the Digital Education Strategy 2020 following the US example described above. According to MŠMT (2014), this strategy responds to the ever-developing digital technologies and plans to integrate modern technological means into teaching gradually.

Three priority objectives have been formulated for this Digital Education Strategy:

- 1. Open education to new methods and ways of learning through digital technologies,
- 2. Improve pupils' competencies in information and digital technologies,
- 3. Develop pupils' computational thinking.

(MŠMT 2014, p. 15)

Seven lines of intervention have been identified to meet the three main objectives (MŠMT 2014, p. 15), as shown in Figure 1.

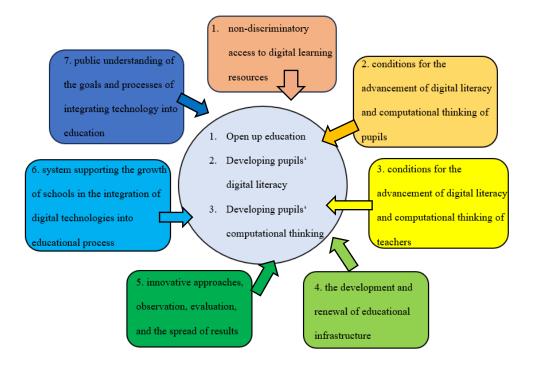


Figure 1: Digital Education Strategy by MŠMT 2014, p. 18

The diploma thesis works with the term educational technology in the same narrowed sense, i.e., in the context of 'digitality.'

1.1. Technology in EFL classes

Blake (2008) explains that technology is within the realm of language learning as an array of electronically driven platforms and tools. These resources cater to diverse language learning activities, from fundamental mechanical drills to interactive real-time conversations. (Blake 2008, p. 15)

As most schools now provide their pupils with access to Wi-Fi, internet connectivity gives teachers new possibilities for what to include in their lessons. For example, Stanley (2013) suggests using *instant messaging, new websites, survey websites, automatic translators, podcasts, and online videos*. (Stanley 2013, p. 4-5) Also, Harmer (2015) listed several ways a teacher can use the internet connection in teaching. One method highlighted by Harmer is video communication, whereby platforms such as Teams or Google Meet enable real-time visual interaction. Harmer pointed out the potential benefits of such platforms for "*student-to-student interaction and individual coaching between teachers and students.*" He noted that using these platforms can foster a sense of equality between teacher and student, as both utilize the same technology, potentially challenging traditional classroom hierarchies. Additionally, these platforms offer the opportunity to host guest speakers virtually, enriching the learning experience. (Harmer 2015, p. 195)

Amongst suggested software, Stanley (2014) involves *apps*, *E-books*, *quiz-making* software, and survey tools. (Stanley 2013, p. 4-5) Through exercises and quizzes, pupils can actively participate in learning and receive immediate feedback on their progress. E-

books may offer an accessible and convenient way for pupils to access reading materials. With features such as built-in dictionaries and audio support, e-books can enhance reading comprehension skills and promote independent learning outside of the classroom.

Regarding hardware, Stanley (2013) covers computer rooms, data projectors, interactive whiteboards, smartphones, and tablets. Computer rooms with internet access and educational software facilitate interactive learning experiences, enabling pupils to engage with language materials and multimedia resources. It fosters language acquisition through immersive experiences and enhances digital literacy skills essential for navigating the digital space. Data projectors offer visual aids that complement instructional materials, allowing teachers to deliver dynamic presentations and enhance comprehension through visual reinforcement. Interactive whiteboards promote active engagement by enabling collaborative learning activities, interactive exercises, and multimedia-rich lessons. These technologies facilitate interactive language practice, enabling pupils to manipulate language elements in real-time and receive immediate feedback on their performance. Smartphones and tablets are essential when using mobile applications for language learning. (Stanley 2013, p. 4-5) Stanley's division of technologies into internet, software, and hardware is essential for the full functionality of interactive textbooks because these technologies (internet, software, and hardware) ensure their comprehensive use and effectiveness. On the other hand, Harmer's understanding of educational technologies such as video communication platforms (e.g., Teams or Google Meet) can be utilized to facilitate real-time interaction. These platforms can create an interactive learning environment crucial for practicing communication skills in EFL classes. (Harmer 2015, p. 195)

The following table can clarify the specific use of technology in EFL classes. The table demonstrates various technological tools' potential benefits and applications in EFL classes. These are possible uses:

Category	Tools	General use	Specific Use in EFL
Internet	Instant messaging, website and online resources, video communication	quick access to materials and communication tools	access to authentic materials (articles, videos), real-time communication with native speakers (accents, dialects)
Software	Quiz, survey apps, e- books	interactive exercises, digital reading material	language learning apps (Duolingo, TalkPal, Kahoot), immediate feedback, practice for language skills, systems, built-in dictionaries, audio support
Hardware	Interactive whiteboards, smartphones, tablets, computers, projectors	supports interactive teaching methods, mobile learning, visual aids	provides access to language learning apps, allows the use of interactive textbooks, and visuals in teaching/learning

These technologies can be applied in a variety of subjects, but they may hold promise for EFL due to their ability to create interactive and engaging learning environments. This perspective suggests that such an approach might support the development of language skills and systems more dynamically, which could be especially beneficial for students learning English as a foreign language.

1.2. The role of technology in EFL classes

In the realm of EFL classes, technology is often regarded as a multifaceted component that can significantly impact various dimensions of language learning. This chapter explores potential roles, considering how technology might enhance the teaching and acquisition of English as a foreign language. Generally speaking, technology can play many roles, for example:

- Technology as a medium: Technology is not only a tool but also a medium that forms and influences education and ways of learning. (Cloete 2017, p.
 2)
- **Technology as an adaptation to today's times**: Technology is often associated with the need to *keep up with a rapidly changing society and global environment*. Technology is seen as essential to modernise and adapt to current trends. (Söderström et al. 2012 in Cloete 2017, p. 2)
- Technology as promoting independent learning: According to Cloete (2017), it is assumed that students, while using technology, are motivated enough to study independently and organize their time. (Cloete 2017, p. 2)
- Technology as interactivity and reflection: According to Baporikar (2016), interactive learning technologies encourage reflection, which is key to connecting new knowledge with prior learning and deeper understanding. Reflection enables dialogue between students and teachers, which is essential for critical thinking. (Baporikar 2016 in Cloete 2017, p. 3)
- **Technology as a resource/material**: Söderström (2012) mentioned that educational technology enhances the *availability of learning materials by*

expanding access, offering greater study flexibility, and reducing costs. (Söderström 2012 in Cloete 2017, p. 2)

Dudeney and Hockly (2008) highlight several roles of technology, specifically in (foreign) language teaching:

- Technology as real-world experience: Young learners are accustomed to technology, making it a valuable tool for bringing real-world experiences into the classroom. Students increasingly expect language schools to incorporate technology into their teaching methods.
- **Technology as a source of materials**: The internet offers new opportunities for authentic tasks and access to a vast array of EFL materials. Technology is often included in published teaching materials such as textbooks.
- As a modern approach, technology provides innovative ways to practice language skills and improve performance. With the rise of mobile technology, learning can occur anywhere in the classroom, at home, or on the go.
- Technology as a practice: ICT tools enable learners to practice and develop all four main language skills: speaking, listening, writing, and reading. (Dudeney and Hockly 2008 in Abunowara 2014, p. 9)

To sum up, technology in EFL classes offers a wide range of benefits that enhance the quality and efficiency of the educational process. Technology enables more relevant and interactive learning, provides access to more resources, supports innovative teaching methods, and increases students' motivation and engagement. This makes them an ideal tool for modern English language teaching.

1.3. Technology integration into EFL classes

Blake (2008) says that technology is neutral in terms of theoretical models or teaching methods. However, its effectiveness in language teaching depends on how it is utilized, influenced by practitioners' understanding of second language acquisition. (Blake 2008, p. 11) In other words, the role of technology changes not according to the theoretical model or teaching method, but according to the teacher's utilization in the EFL classroom. It is crucial to mention how teachers can effectively integrate technology into the classroom.

Stanley (2013) mentioned *a principled approach*. A principled approach is a methodological framework designed to ensure technology's effective and meaningful use in teaching. Previously constructed by Hockly (2011) and Lyon-Jones (2011); expanded by Stanley. The principled approach stands on purposeful integration, reflective practice, engagement and interaction, critical evaluation, adaptability, and flexibility.

The approaches to integrating technology into education introduced by Hockly, Lyon-Jones, and Stanley differ primarily in their depth and scope. Hockly (2011) focuses on fundamental questions regarding the use of technology in the classroom, providing teachers with a general framework for its integration. Lyon-Jones (2011) emphasizes reflection and practical preparation, highlighting the need to reconsider why and how technology is used and stressing the shift from a teacher-centred to a student-centred approach, implying that technology should not just be a static tool for delivering content but should be leveraged to foster interaction and engagement. Stanley (2013), however, elaborated on the concept and created a list of questions that allow an in-depth focus on critical technology utilisation.

- 1. 'Why use the technology?' Stanley (2013) expands it to refrain from utilizing technology merely for its presence. The teacher should evaluate whether the educational objective can be more efficiently accomplished without dependence on technology.
- 2. 'Who is the technology best for?' With this question, he aimed to underscore that educators must ascertain whether the application of a particular technology is suitable for the students who will be using it, considering factors such as language proficiency, media literacy, and age.
- 3. 'What is the technology best used for?' According to Stanley (2013), teachers should focus on whether the given technology aligns with the learning outcomes students are expected to achieve during its use.
- 4. 'Where should it be used?' He particularly expands on this question by referring to "classroom management," addressing how the technology is intended to be used, e.g., choosing individual work, group work, classroom with computers, or home.
- 5. 'When should the technology?' i.e., considering at what stage of the lesson the technology should be implemented.
- 6. 'How should the technology be used?' i.e., whether the technology would be effective considering the time. (Stanley 2013, p. 4-5)

Blake (2018) sums up by saying that simply incorporating technology into teaching without proper pedagogical planning may not lead to successful outcomes for pupils, thus highlighting the importance of effective lesson plans regardless of technological enhancements. (Blake 2008, p. 11). In other words, when using technology in foreign language teaching, it is always essential to consider whether the lesson's goal will be met

through technology and whether the technology will be beneficial from a didactic point of view, not just interesting for the students.

Because as Szotkowski (2013) emphasizes, while technology has enlivened teaching during its integration into the educational process, there has been no shift from passive to active learning. (Szotkowski 2013, p. 14)

1.4. Benefits and limitations of technology utilisation in EFL

classes

The concept of using educational technology is intricately associated with benefits and limits. In Sander's article (2022), she stated that integrating technology can potentially intensify student involvement. Through the implication of technology in teaching, educators can introduce content in an innovative format, promoting active participation among students in their learning. Educational technology further provides avenues for collaborative efforts and creativity, facilitating students to cultivate essential skills relevant to the twenty-first century. (Sander 2022)

In Kopecký and Szotkowski's words (2018), the advantages of utilizing technology lie in the potential for differentiation within a given classroom. Teachers can leverage online features that modify the same task according to various language proficiency levels. When pupils can access a technological device, they can progress at their own pace and complete assigned tasks during the lessons. Technological devices can also be employed for pupils who do not require full teacher support. Consequently, it provides the opportunity and space for the teacher to focus on students who require closer attention. (Kopecký, Szotkowski 2018, p.8-9)

Various challenges require consideration; for example, Blake (2018) pointed out that the rapid pace of technological change can challenge language teachers accustomed to traditional teaching methods. It highlights concerns about constant updating and education when working with technology. (Blake 2008 p. 13) Sander (2022) emphasizes the common issue of the lack of reliable access to devices and the internet. The difficulty may also arise from finding the right balance between screen time and traditional teaching methods. Sander (2022) highlights that technology should enhance learning rather than become dependent. Conclusively, facing resistance from parents also poses a potential difficulty. (Sander 2022)

Another challenge connected to technology utilisation is the lack of digital skills and competencies. The concept of "digital literacy" is worthy of acknowledgment here. Harmer (2015) states that being raised in a digital environment does not automatically confer digital expertise upon most children. He explains it by describing an example of exposure to books that do not guarantee proficiency in reading and writing unless guided in learning and appreciating these skills. Harmer (2015) adds that in today's digital age, additional literacies are essential for successfully navigating the internet and ubiquitous technological devices. Even seemingly simple tasks like internet searches can be significantly enhanced through more sophisticated and practical approaches. (Harmer 2015, p. 197)

Harmer (2015) listed what digital literacy includes (i.e., digital literacy plus additional literacies needed in a digital age) based on the findings conducted by Dudeney, Hockly, and Pegrum (2013), which include:

1. Language literacy: Understanding the structure and appropriate language usage for specific contexts.

- 2. Information literacy: Filtering out irrelevant information to focus on what is relevant and essential.
- 3. Design literacy: The ability to effectively combine and utilize various media forms.
- 4. Awareness of online privacy and safety.

(Dudeney, Hockly, and Pegrum 2013 in Harmer 2015, p. 197-198)

The implication for (foreign) language teaching is that when engaging students in activities utilizing digital resources, it is essential to consider the literacies they need to navigate such tasks effectively. *Teachers must be prepared to assist them in developing these literacies alongside their language learning and development* (Harmer 2015, p. 198).

Yet, another limitation in technology utilisation may lay in the so-called digital gap, i.e., 'unequal access to information technology.' (Tarman 2003 p. 3) However, in the Czech Republic, the digital gap has been addressed. According to the Ministry of Education, Youth, and Sports, funds were provided to schools in 2020 to purchase technological resources and devices to implement distance learning. This financial support continued in the following years, focusing on equipping pupils with digital learning tools (for instance, tablets) and preventing the digital divide concerning families' socioeconomic status to enable pupils to use technology from schools at home. Schools could, therefore, get not only basic technological teaching aids such as tablets or laptops but also advanced digital tools such as 3D printers or virtual reality tools. (MŠMT 2023, p. 2-3)

As a summary of the benefits and limits of technology utilisation in EFL classrooms, one must emphasize the potential positive impacts that technology can bring; these are:

- 1. Increased student engagement,
- 2. increased interactivity, promoting active participation,
- 3. collaboration and creativity,
- 4. digital literacy development,
- 5. differentiation possibilities, and efficient use of time.

The limits mentioned above, and the benefits imply that interactive textbooks, as educational technology, can create an environment that promotes interaction and increases motivation to learn, provide students with the opportunity to work at their own pace and adjust the difficulty of tasks according to their abilities. Lack of access to technological devices and the Internet can hinder the effective use of interactive textbooks. As Sander (2022) points out, to address this and the other mentioned above, it is vital to explain the benefits of educational technology on student outcomes and provide educators with training.

Using an interactive textbook with whiteboards or other digital devices is essential because these technologies provide the means for dynamic and effective learning. In conjunction with these technologies, interactive textbooks enable individualized learning, promote active students' engagement in learning, and develop digital literacy.

1.5. Synchronous and asynchronous use of technology in

EFL classes

The thesis deals with interactive textbooks as one type of educational technology, especially when viewed as a unit with interactive whiteboards, computers or tablets, and mobile phones, all of which operate on an internet connection (thus potentially excluding the interactive textbooks on portable devices as CD ROMs from the discussion). Generally said, two possible modes of interactive textbooks' usage need to be described, i.e. synchronous and asynchronous.

According to Mick and Middlebrook (2015), the primary difference between synchronous and asynchronous is the moment of access to the content of the pupils and the teacher. While in the case of synchronous classes, the access of the teacher and the pupils occurs at the same time (i.e., although from different locations, the teaching takes place at the same time - this approach is thus more akin to traditional teaching), in the case of asynchronous classes, both the teacher and the students access the teaching material in the form of different teaching materials both from different locations but also at different times, according to their own needs. (Mick and Middlebrook 2015 in Hewett and DePew 2015, 129-130)

Both synchronous and asynchronous modes of learning were extensively used primarily within the COVID-19 pandemic-related restrictions, so while synchronous learning used/uses the web and videoconferencing as a space for discussion and instant feedback, asynchronous learning used/uses the internet to assign work and discuss the results.

It is clear from the definitions above that the modes of delivery (synchronous and asynchronous) are based on different premises. As Wintemute (2023) stated, while synchronous teaching tries to deviate as little as possible from traditional teaching and is therefore based on a fixed schedule and lively discussion during the lesson, asynchronous teaching is more benevolent towards the student in terms of time, giving them only the space in which to solve the assignment (i.e., setting only boundaries).

Wintemute (2023) further stresses that synchronous and asynchronous use of technology can also be seen in the traditional daily classroom. Pupils can use technology synchronously, for example, gamification, on the Kahoot platform. Students use the technology at the same time and place. Subsequently, asynchronous use can be when using Google Classroom, where the teacher sets an assignment, and the pupils complete it according to their needs and availability. In terms of interactive textbooks, synchronous teaching could be represented by their use in the real classroom; asynchronous teaching, on the other hand, e.g., access to the interactive workbook, where they can practice exercises or complete assignments at their own pace, independent of a fixed class schedule. (Wintemute 2023)

In the research part of this thesis, only the synchronous model is used. This decision is due to the focus on interactive textbooks in EFL classes during face-to-face classes. Synchronous use of technology involves simultaneous participation from both teachers and students, allowing for immediate interaction and feedback. By concentrating on this model, the research aims to capture the dynamic aspects of teaching with interactive textbooks and associated technologies, providing insight into their practical application and effectiveness during classes.

1.6. Practical implication of technology utilisation in EFL classes

A teacher can use technology in an EFL class in many possible areas. The following chapters focus primarily on the potential utilisation of technology for the development of language skills, such as listening, speaking, reading, and writing. This emphasis is chosen due to technology's significant benefits, including enhanced interactivity, immediate feedback, and increased student engagement. These advantages are important for effective language learning as they foster a more dynamic and interactive learning environment. While language systems such as vocabulary, grammar, phonology, and discourse are undeniably important, language systems can be integrated directly through language skills, thereby improving learners' overall communicative competence.

1.6.1. Development of listening via technology

Shebab (2022) stated that listening is integral to language development, especially in second language acquisition. It involves simultaneously understanding various aspects such as speech, accent, vocabulary, grammar, and overall meaning. Several technological devices can be exploited to improve listening skills in EFL classes, including CD players, tape recorders, educational broadcasts, satellite TV channels like the BBC, computers, CD-ROMs, and internet voice chatting. These methods provide students with audio and visual inputs to enhance their comprehension and communication abilities. (Shehab 2022, p. 476) According to West (2018), helping students improve their listening abilities can be challenging, especially given the limited diversity in available teaching materials and methods. Thus, the rise of new technological resources presents an exciting opportunity for teachers working with language learners. (West 2018)

West (2018) highlights especially the effectiveness of integrating technology into the process of listening development, mainly through platforms like YouTube. Features such as adjustable playback speed and closed captions offer learners valuable support in adjusting the listening experience to suit their needs, aiding comprehension and skill development. When engaging with new listening materials, given their lack of accompanying aids such as vocabulary lists or comprehension questions, learners may struggle with comprehension. That is where technology utilisation comes into play as, e.g., links to dictionaries, AI-generated chatbots ready to ask and answer questions regarding comprehension and imitating social interaction strategies, and ongoing progress monitoring can be used. (West 2018)

Shehab (2022) elaborated on using video and audio materials from a didactic perspective regarding cultural awareness fostering potential. He stated that multimedia technology offers a wealth of information about the English language and the cultures of native countries. Through video and audio materials, learners can comprehensively understand the cultural background. (Shehab 2022, p. 478) These tools are valuable for developing listening skills providing learners access to various dialects, accents, and sociolects. This variety of spoken forms helps enhance learners' comprehension of spoken English, thereby improving their overall listening proficiency.

Stritto and Linder (2017) found that captions in listening materials are highly beneficial for students, aiding their focus, retention of information, and overcoming poor audio quality. (Stritto and Linder, 2017, p. 15) Mo, Wang, Dai, and Jin (2022) examined how different playback speeds affect cognitive load and learning effectiveness in students. They specifically found that slowing down video playback allows students to process

complex information better, leading to improved understanding and retention of knowledge (Mo, Wang, Dai, and Jin 2022, p. 8)

Most features mentioned, such as adjustable playback speed, captions, dictionaries, and ongoing process monitoring, are inherently integrated into interactive textbooks. These functionalities enhance the learning experience by providing students with tools to better process and retain information gained from audio or audio-visual materials embedded in interactive textbooks. Consequently, it can be inferred that using interactive textbooks may contribute to more effective and engaging listening activities.

Historical Context of Technologies in Teaching Listening in Foreign Languages

Auditory teaching aids hold a key role in EFL classes. According to Al-Ansari and Wigzell (1996), the emergence of the audio-lingual approach in the late 1950s and 1960s marked a significant shift in foreign language education, emphasizing listening and speaking over reading and writing. The first integrated technology into EFL was the tape recorder. With the advent of dual-track tape recorders, learners could engage with verbal prompts and verify their responses against correct models, receiving immediate feedback in line with behaviourist learning theories. (Al-Ansari and Wigzell 1996, p. 233) The recordings were recorded on cassettes.

In the late 1990s, compact discs (CDs) began to play a significant role in EFL classes. Brett (1997) stated that advances in computer technology enabled the integration of digital video and audio with written text in a single interface. This potential was adapted for developing listening skills on EFL CD-ROMs. These CD-ROMs provide listening tasks, language input, and feedback on task performance, all accessible through

the computer screen. However, as Brett (1997) stresses, not every school had access to a computer. Therefore, CDs were often used in conjunction with radio, which transmitted only sound. (Brett 1997, p. 40)

According to Alsied and Pathan (2013), computers allow students to enrich language education by offering access to the real world, especially with the invention of Internet, as internet access offers numerous benefits for listening skills, providing a wide range of authentic audio and video materials for developing listening skills. (Alsied and Pathan 2013, p. 63)

Artificial Intelligence (AI) is another development of technology that can be used to develop listening skills. According to Suryana and Murwantono (2020), AI-based mobile applications like TuneIn and Joox Music offer personalized learning experience with adaptive feedback through various listening tasks. (Suryana and Murwantono 2020, p.56)

In conclusion, the historical development of technologies in teaching listening skills in EFL has seen significant advancements, from the early use of tape recorders and cassettes to the integration of CDs and computers and, more recently, the benefits of Internet access and AI-based applications. Each technological innovation has progressively enhanced the ability to enrich the development of listening skills, offering richer and more interactive learning experiences.

1.6.2. Development of speaking via technology

Shehab (2022) underscores the crucial need for mutual understanding between speakers and listeners to facilitate effective communication. Firstly, internet voice chatting facilitates real-time voice interactions over the Internet, potentially exposing learners to native speakers. Furthermore, integrating speech synthesis programs and artificial intelligence systems holds promise in refining English language learners' speaking proficiency, vocabulary acquisition, and pronunciation accuracy. (Shehab 2022, p. 477)

Samad, Bustari, and Ahmad (2017) conducted research to determine whether integrating podcasts into teaching could enhance students' speaking skills, particularly their fluency and pronunciation. After analysing the data, the results supported the alternative hypothesis. Before the study, students faced numerous challenges in speaking, such as difficulties in expressing ideas, using correct grammatical structures, appropriate vocabulary, and accurate pronunciation. Using podcasts in teaching led not only to improved fluency, pronunciation, and advancements in vocabulary and grammar, but also to higher student engagement, increased confidence, and motivation. Initially, uncertain students became more self-assured and composed when speaking in front of the class after regular practice sessions (Samad, Bustari, and Ahmad 2017, p. 107-108), thus supporting the notion that technology can be an effective tool for enhancing students' speaking skills, as it provides authentic language materials and contributes to the development of critical thinking, comprehension, and vocabulary expansion.

Historical Context of Technologies in Teaching Speaking in Foreign Languages

The Dictaphones were among the first technological tools integrated into EFL classes to improve students' speaking skills. As mentioned in Chapter 1.6.1., with the introduction of dual-track tape records, students could interact with spoken prompts and compare their spoken responses to correct examples. (Al-Ansari and Wigzell 1996, p.

233) Nowadays, microphones connected to computers also allow students to record, edit and analyse their speeches.

Subsequently, combining microphones, computers, and internet connectivity enabled new possibilities for developing skills. Correa's research (2015) has shown that Skype conference calls can effectively enhance speaking skills in EFL classes. Skype enables students to interact socially, improve speech fluency, and practice oral communication outside traditional classroom settings. Students reported feeling more confident and fluent in speaking thanks to Skype and appreciated the opportunity to practice the same topics covered in class, reinforcing their knowledge and skills. (Correa 2015, p. 154) The same applies to several other modern software applications similar to Skype that can enhance EFL speaking skills, such as Google Meet or Zoom. Each has its advantages and disadvantages but generally operates on the same principle.

Another advancement in developing speaking skills technology is closely linked to AI. For example, a new software called TalkPal was released in 2023. This software operates on artificial intelligence principles. One of its significant advantages is the ability to practice speaking (and writing, according to individual preferences) because its virtual companion communicates with the individual based on their responses. Another advantage is its highly effective error correction feature. If the individual incorrectly formulates a sentence (both grammatically and in terms of suitable word choice), feedback is provided, explaining the identified mistake. (Talkpal 2024)

In summary, integrating technological tools into EFL classes to enhance speaking skills has evolved significantly over the years, similar to the technology-developing listening skills described in the previous chapter. From the early use of Dictaphones and dual-track tape recorders to the modern capabilities of internet-based applications such as

Skype, Google Meet, and Zoom, technology has continually offered new ways for pupils to practice and improve their speaking. The recent development of AI-based software such as TalkPal further exemplifies this progression, providing personalized learning experiences and effective feedback for users. As these technologies continue to advance, they offer promising opportunities to further enhance speaking skills in EFL education.

1.6.3. Development of reading via technology

Shebab (2022) mentions the significance of reading as an essential skill that can be cultivated through diverse technical methods. These include multimedia software, CD-ROM-based newspapers, internet resources, and computer reading programs. Each method offers distinct advantages in improving learners' vocabulary, background knowledge, and comprehension abilities. (Shehab 2022, p. 477). Paquet-Bélanger (2017) describes the importance of technology in enhancing reading comprehension skills. She emphasized the role of digital texts and visual learning software in supporting students' understanding of diverse text types and structures. Additionally, she mentioned how these technological tools can reduce cognitive load and facilitate connections between text elements, ultimately improving comprehension. These tools make reading easier by letting pupils customize their reading experience by adjusting font size and spacing. Features such as hyperlinked text provide extra help on unfamiliar topics, and visual learning software visually organizes information, making it easier to see connections between different parts of the text. (Paquet-Bélanger, 2017, p. 3-4)

For example, Korkmaz and Öz's (2021) study explored the effectiveness of educational games, notably Kahoot, in enhancing the reading comprehension abilities of EFL students. It highlighted the positive outcomes, particularly in enhancing students' internal motivation and fostering collaborative learning. They also observed enhanced

vocabulary acquisition and improvements in reading assessment, credited to prompt feedback and focused vocabulary instruction during gameplay. (Korkmaz and Öz 2021, p. 1145-1146)

Interactive textbooks utilize multimedia elements, digital texts with customization options, hypertext links, visual information organization, built-in dictionaries, interactive exercises, and immediate feedback. Given these features, interactive textbooks have the potential to be effective in teaching reading skills.

Historical Context of Technologies in Teaching Reading in Foreign Languages

The development of reading skills in EFL has significantly evolved with the advent of new technologies. Initially, reading skills were connected to using printed books. Pupils traditionally relied (and still do) on physical books. With the rise of digital technology, it offers new ways to teach and develop reading skills. As Chou (2015) listed a few new technologies:

Firstly, Chou (2015) mentioned that a screen-based reading environment has become popular thanks to e-books and e-journals. More reading materials are available electronically, and there is also a greater variety of reading devices for those who prefer electronic formats. Readers can choose from standard computer screens, tablets, small-form devices such as smartphones, or e-readers. (Chou 2015, p. 167)

Another significant change has occurred with the use of dictionaries. Pupils now have the option to use either traditional printed dictionaries or online dictionaries. According to Zheng and Wang (2016), the use of electronic dictionaries in EFL classes has grown, providing a practical and efficient alternative to traditional paper dictionaries.

These e-dictionaries offer quick and broad access to language resources. (Zheng and Wang 2016, p. 153)

1.6.4. Development of writing via technology

Shebab (2022) discusses English language learners' challenges in writing tasks, particularly in generating ideas and mastering grammar and vocabulary. However, he suggests several technical methods to enhance the writing skills of English language learners. These include utilizing computers and graphic-based programs to ease the writing process and improve clarity of expression. Shehab also highlights the benefits of internet-text chatting and e-mail writing in developing writing abilities through instant idea exchange and practicing formal language use. (Shehab 2022, p. 477)

In contemporary times, as described by Macro Learning (2023) the procedural dimension of writing has witnessed notable transformations. Spell and grammar checking, as well as plagiarism detection, have experienced substantial enhancements in accuracy and speed in the digital era. (Marco Learning 2023) One of the extensively utilized software tools is exemplified by Grammarly.com. *Initially designed as an educational tool for schools, but it is now utilized by students, academics, researchers, and professionals to ensure clear and effective communication. Grammarly allows users to write clearly, without errors, and in a manner that accurately conveys their intended message. It assists in identifying and correcting frequent mistakes, thereby aiding in their gradual elimination. Grammarly immediately suggests text modifications, covering grammar, spelling, tone, and style. (Grammarly 2023)*

Historical Context of Technologies in Teaching Writing in Foreign Languages

According to Gabrial (2007), the 19th century introduced mechanical innovations such as the typewriter, which revolutionized writing by making it more efficient and accessible. With the advent of technologies in the 20th century, writing tools became more sophisticated.

The development of computers and word processing software makes writing and editing more accessible and efficient. Gabrial (2007) mentioned Word, WordPerfect, and Apple Writer.

Furthermore, the internet and software advancements have enabled new forms of writing. These technologies provide instant access to information and enable collaborative writing through platforms like Google. (Gabrial 2007, p. 32-36)

Artificial intelligence (AI) based technologies are becoming key tools for improving writing skills. One prominent example is Grammarly, which, as previously mentioned, offers comprehensive support in writing clearly and accurately.

2. Textbook and its function

The main research target for this diploma thesis is an interactive textbook. Interactive textbooks offer several benefits, such as increased engagement, personalised learning, and multimedia resources. These features can significantly improve the effectiveness of teaching and learning and make education more accessible and adaptable to the needs of different learners. Understanding the effective integration and use of these textbooks in the classroom is crucial for enhancing the learning process. The previous

chapters described the possibilities of technology utilisation in education that interactive textbooks might be based on; the following chapters discuss the paper textbooks.

The definition of a textbook is a complex process, and there are multiple definitions depending on the perspective from which it is viewed. Veverková (2002) provides the following examples of the definition of the term "textbook":

- 1. A textbook as a teaching and learning tool specifies the educational goals of the curriculum, specifies the scope and content of the subject, and provides materials for developing intellectual and practical skills.
- 2. A textbook concerning the teaching process characterizes a textbook as a general model of the teaching process scenario.
- 3. From the perspective of pedagogical communication, a textbook is characterized as a means of communication between the student (and possibly the teacher) and the subject. (Veverková 2002, in Kalhous, Obst, and col., p. 143)

Textbooks hold a special place in education, mainly due to the functions they include. Veverková (2002) identifies two types of functions of a textbook:

1. Didactic function:

- a. Informative function that provides information about the curriculum,
- b. formative function aimed at making acquired knowledge and skills internal values of the pupils,
- c. methodological function aims to help pupils acquire methods of cognition.

2. Organizational function: includes planning, motivational, and instructional functions in the teaching process, as well as controlling and self-control functions.

(Veverková 2002 in Kalhous, Obst, and col., p. 143)

To enrich this perspective further, Richards and Schmidt (2002) provide an international definition of textbooks from the field of language teaching: *a book on a specific subject used as a teaching learning guide, especially in a school or college.*Textbooks for foreign language learning are often part of a graded series covering multiple skills (listening, reading, writing, speaking, grammar) or deal with a single skill (e.g. reading). (Richards and Schmidt 2002, p. 550)

According to Průcha (1998), it is essential to consider textbooks' function from the perspective of both pupils and teachers. According to him, textbooks serve as a source from which pupils acquire knowledge and develop skills and attitudes. From the teacher's standpoint, textbooks are crucial for lesson planning, delivering content during lessons, and assessing students' educational outcomes. (Průcha 1998, p. 19)

When comparing these definitions, it becomes evident that Veverková (2002) provides a broader educational perspective, considering textbooks' various roles and functions in the teaching and learning process. Richards and Schmidt (2002) offer a more focused view, emphasizing the practical use of textbooks in language teaching. Průcha (1998), while aligning with Veverková's broader perspective, specifically highlights textbooks' dual role for pupils and teachers. This comparison illustrated the multifaceted nature of textbooks, demonstrating how their functions can be viewed from different educational angles.

Textbooks are usually a crucial component of the educational process, serving as a fundamental source of information, guidance, and support for pupils and teachers in teaching and learning. They are designed to meet the educational process's diverse needs, provide a structured framework for organising the classroom, and reflect on the latest knowledge and trends in the field of education.

According to Richards and Schmidt (2002), textbooks should be adaptable to remain effective across different educational contexts and student needs. Richards and Schmidt (2002) defined adaptation 'as changes made in the use of published teaching materials in order to make them more suitable for particular groups of learners, e.g., by supplementing, modifying, or deleting parts of a textbook.' (Richards and Schmidt 2002, p. 10) This adaptation process ensures that textbooks remain relevant and effective. It is typically the responsibility of textbook authors, editors, and teachers to carry out this adaptation.

To sum up, textbooks are essential components of the educational process, fulfilling various roles and functions that support both teaching and learning. They provide structure, information, and guidance. Their adaptability ensures that they remain relevant and practical. Understanding these multifaceted roles highlights the importance of textbooks in achieving educational goals.

2.1. Development of textbooks

Textbooks have long been essential tools in education. However, with the rise of digital technologies impacting nearly every aspect of our lives, textbooks have adapted to these changes, thus resulting besides others also in interactive textbooks. Apart from technological changes, the development of textbooks has mainly been influenced by the

evolution of teaching methods and approaches. As Liškař stated, a comprehensive understanding of the historical progression of teaching foreign languages and its methods and approaches is fundamental in comprehending present-day initiatives striving to reconcile previous inconsistencies. (Liškař 1969, p. 23) Although this statement was made as early as the 1960s, it holds relevance in development. Interactive textbooks are just one result among many that reflect the initiative mentioned above to deal with educational inconsistencies or "untouched" aspects.

The following chapters describe in detail the evolution of teaching methods to show the shift from grammar-translation method-based strict paper version of textbooks to current (post)communicative approach-based interactive textbooks that reflect studentcentred, active involvement of pupils in education, interaction importance, and personalisation and differentiation narrative.

2.1.1. Grammar-translation Method

Richards and Schmidt (2002) define the grammar-translation method as "a method of foreign or second language teaching which makes use of translation and grammar study as the main teaching and learning activities." (Richards and Schmidt 2002, p. 231)

According to Richards and Rodgers (2001), the Grammar Translation Method dominated foreign language education in Europe and beyond from the 1840s to the 1940s and persists in specific contexts today. This approach required pupils to memorize extensive lists of grammar rules and vocabulary for translation purposes, often resulting in dissatisfaction among learners. (Richards and Rodgers 2001, p. 6-7)

Kravchenko (2023) outlines the main principles of the grammar-translation method as follows:

- The primary focus is on understanding literary language, which is considered more important than the ability to speak actively.
- It emphasizes reading and writing while speaking, listening, and pronunciation are neglected.
- The classroom is teacher-centred, with the teacher directing instruction and correcting pupils' errors.
- The learning process is supported by frequent use of native language (L1).
- Grammar is taught and practiced separately, often without practical context.
- Pupils are consistently guided to apply specific language rules, which are isolated from the broader linguistic environment, and are required to memorize all rules. (Kravchenko 2023)

In teaching practice, as Liškař (1969) described, the application of this method was evident in the artificial construction of sentences from individual words following grammatical rules. Pupils were taught words in isolation, devoid of context, neglecting the nuances of their meanings. Within the grammar-translation method, greater emphasis was placed on the form of sentences rather than their meaning, leading to limited development of pupils' communicative skills. The language teaching was often focused on memorizing grammar rules and translation, resulting in inadequate practical application of the language in real-life situations. (Liškař 1969, p. 24-25)

An example of a textbook with the grammar-translation method as a leading principle, one can name the book called "Učebnice anglického jazyka pro střední školy 1. díl" by Simeon Potter and Bohumil Trnka, PhD, which was published in 1926. Two excerpts from the textbook are selected for illustration in Figures 2 and 3 below. The

elements that reflect the use of the grammar-translation method are particularly evident in:

- Structured grammar explanation: the textbook's content is organized according to grammatical phenomena such as the inflection of nouns. The rules include the translation into the target language but are mainly explained in the native language. Thus, the textbook supports direct translation between the two languages (L1 and L2) and emphasizes the importance of knowing the grammatical structures of both languages, see Figure 3.
- Exercises and translations: Exercises aim to practice grammar rules and translations between the two languages and are often without any context; for an example, see Figure 2.
- Translations: Each lesson includes a section for sentence translation where pupils translate from Czech (L1) into English (L2). Thus, understanding the grammatical structures and meanings of words in both languages is promoted.

Because this textbook does not involve a teacher's book, it is not traceable how it was supposed to be taught.

```
Grammar.
                                                                                                                                                                                                                                                                                                                                     they oni, sy, sa
of them
to them

    Declension of Nouns. Sklonení substantiv.
    The farmer asks. Rolník se táže. Today the boys are not at

                                                                                                                                                                                                                                  5. he on
of him
to him
him
    The farmer asks. Rolník se táže. Today the boys are not at school. Dnes nejsou hoši ve škole.

Then the boys go into the house of the farmer. Pak jdou hoši do domu rolníkova.

It belongs to Mr. Newman. Náleží panu Newmanovi.

I know that dog. Znám toho psa.

Větné vztahy, jež vyjadřuje čestina příponamí pádovými, vyznačují se v angličtině postavením slova ve větě neb předložkami.

Nominatív vyznačuje se v angličtině postavením slova před určitým slovesem, akusatív postavením slova za slovesem. Srov. Dick likes Tom. Tom likes Dick.

Vztahy, k jejichž vyjádření užívá čeština přípon genitívních, vyznačují se v angličtině pomocí předložky of av, av na př. The house of the farmer.

Vztahy datívní vyjadřují se v angličtině předložkou to tú, tu, ta, ta, na př. it belongs to the farmer.

Celé paradigma deklinační zní tudíž takto:
                                                                                                                                                                                                                                                                                                                                      them
                                                                                                                                                                                                                                  Nepravidelné sklonění má pouze ještě tázací a vztažné zájmeno
»kdo«:
                                                                                                                                                                                                                       Gen. whose húz koho, či. Dative to whom húm komu. Acc.
                                                                                                                                                                                                                     a) First of all, they go along the streets of the town. On the way they look at the shops.

Příslovečná určení, vyjädřená předložkovými pády, mohou předscházetí v čele věty před předmětem.
b) "Is not this work very hard for you?" asks Tom. — "How are you all?" he asks.

Ve větách následujících za přímou řečí klade se jmenný podemt za sloveso určitě. Zájmenný podmět předchází i v tomto příspadě před slovesem.
                                                                                                                                                                                                                                                                      3. WordsOrder. Slovosled.
                 Celé paradigma deklinační zní tudíž takto:
                                                                                                                                           Plural.
                                                               Singular.
   Nominative: the farmer rolnika of the farmers rolnikû of the farmer rolnika of the farmers rolnikû to the farmers rolnikûm to the farmers rolnikûm the farmers rolnikûm the farmers rolnikûm.
                                                                                                                                                                                                                                                                      4. Prepositions. Předložky.
                                                                                                                                                                                                                                   On the way na cestě.
                                                                                                                                                                                                                       On the way na cestě.

In the country na venkově: into the country na venkov.

At school ve škole.

Along the streets po ulicích, ulicemi.
Is not this work hard for you? Není tato práce pro vás těžká?

They are going for a walk. Jdou na procházku.

It is very kind of you to come. Jest velmi laskavé od vás, že jste přišli. One of the boys. Jeden z hochů.
                              2. Declension of Pronouns. Sklonění zájmen.
                Zájmena osobní mají pro akusativ zvláštní tvary:
                                     I : me mne
you : you tebe
he : him jej, ho
                                                                                                       we : us nás
you : you vás
                                       she : her ji
it : it je
                                                                                                        they : them je.
                                                                                                                                                                                                                                                                                         Exercises.

    a) Substitute a pronoun for each blank in the following sen-
tences (dosadte zájmeno na každé prázdné místo v následujících
větách);

              Ježto všechny anglické předložky se pojí s akusativem, bude
zníti skloňovací paradigma osobních zájmen takto:
                    1. N. I já
                                                                                                                                                                                                                                  The boys see a dog. Tom, one of knows of very well, it belongs to Mr. Newman, the farmer. The boy knows of well and talks to He asks if (jestlize, zdali) he likes his work. The farmer answers: "Am fond of my farm."
                                                          we my
of us
to us
                                                                                                                        2. you ty, vy
                            G. of me
                                                                                                                                   of you
                           D. to me
                                                               to us
                                                                                                                                 to you
```

Figure 3: Excerpt from textbook page 24

Figure 2: Excerpt from textbook page 25

2.1.2. Direct Method

Richards and Rodgers (2001) highlight the 19th-century campaign for naturalistic language learning principles, i.e., the Direct Method. Doggett (1986) summed up the direct method as follows: the direct method prioritizes active engagement and thinking in the target language. Pupils play an active role in the learning process. The direct method includes a direct association between meaning and the target language. New vocabulary is introduced through real-world examples. Pupils predominantly communicate in the target language, practicing speaking in simulated real-life scenarios. Grammar rules are learned through practical examples. The inductive method is used to teach and learn grammar so the pupils progress from individual facts to general rules. The direct method emphasizes spoken language over written, focusing on everyday speech and aspects of foreign culture. The native language (L1) is not used in the classroom, and evaluation is

based on practical language use through oral assessments and written tasks. (Doggett 1986, p. 4)

In Richards and Rogers' words (2001), the Direct Method is characterized by immersive oral interaction in the target language and the avoidance of translation and native language reliance. In their words, central to this approach was the direct conveyance of meaning through demonstration, action, and the establishment of direct associations between linguistic forms and meanings. Teachers were encouraged to promote active use of the foreign language in the classroom, prioritizing pronunciation and employing techniques such as mime, demonstration, and visual aids for vocabulary instruction. The method compared language learning in the classroom to natural acquisition methods, demanding that teachers possess native or highly proficient language skills. (Richards and Rodgers 2001, p.11-13)

Kravchenko (2023) mentions the following principles of direct method:

- Pronunciation receives significant attention right from the start of language learning.
- *An inductive approach is favoured when teaching grammar.*
- The teacher's correction of mistakes is minimal, and pupils are encouraged to self-correct themselves.
- Translation is avoided entirely, emphasizing creating an immersive learning environment and fostering pupils' ability to think in the foreign language without reliance on translations. (Kravchenko 2023)

An example of the Direct Method-based textbook is a textbook whose first edition is from 1960, entitled "Callan Method – Student's Book," published by Orchard

Publishing LTD. in association with the Callan Method Organisation LTD. and the Callan School in London. The main features representing the Direct Method basis are:

- An inductive approach: The textbook focuses on the practical application of grammar through exercises and examples corresponding to the inductive approach. Pupils are guided to gradually understand grammatical rules through practical examples rather than relying on formal interpretation, see Figure 4.
- Visual aids: Using pictures in the textbook helps students better understand the new language and consolidate vocabulary and grammar. This strategy allows students to actively practise new phrases, which aids their ability to use the language, see Figure 5.

On the other hand, one can observe elements of the grammar-translation method in this textbook. It includes vocabulary translation into the mother tongue, as shown in Figure 4.

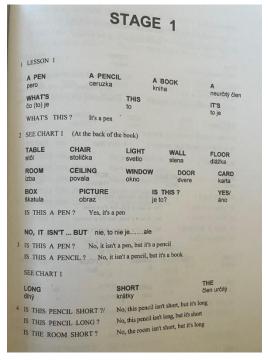


Figure 5: Excerpt from the textbook Stage 1

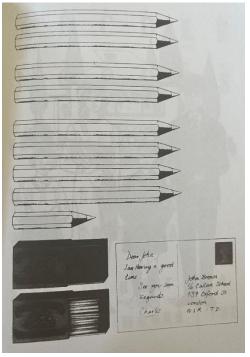


Figure 4: Excerpt from Charts 1

2.1.3. Audiolingual method

Doggett (1986) describes that the main idea of the Audiolingual method, originating in the 1950s and 1960s, revolves around the behaviourist 'belief of acquiring precise language habits.' (Doggett 1986, p. 3) According to Richards and Rodgers (2012), 'applying behaviourist theory to language learning involves viewing the learner as the organism, with verbal behaviour as the central focus. The stimulus is the language material presented, while the learner's reaction is the response. Reinforcement comes from teacher praise, peer approval, or personal satisfaction from language use. Mastery of the language is achieved by forming correct stimulus-response connections.' (Richards and Rodgers 2012, p. 56)

To further elaborate on the practical application of these behaviourist principles, the Audiolingual method aims to ensure learners can use the target language for communication, mastering it to the point of automatic usage through developing new language habits and overcoming any tendencies from one's native language. The teacher is responsible for guiding the pupils and serving as a positive example for pupils. The language teaching is focused on communication skills, emphasizing the importance of repeated practice, imitation, and positive reinforcement for effective language learning. Cultural awareness is integrated into the learning process, and reading and writing tasks are developed from oral exercises. In the Audiolingual Method, the native language is not utilized. (Doggett 1986, p. 3-4)

Kravchenko (2023) points out the following principles of Audiolingual Method:

- The essence of ALM lies in guiding pupils to speak accurately by providing immersive contexts, such as role-playing dialogues or gap-filling exercises based on audio stimuli.
- Teachers prioritize error correction to prevent the formation of incorrect habits, emphasizing pronunciation and repetitive practice until language elements can be produced automatically.
- Grammar rules are not explicitly explained; they are induced from examples and practice, following the natural order of language skill development: listening, speaking, reading, and writing. (Kravchenko 2023)

As an example, a textbook originated in the Czech Republic that involves the Audio-Lingual method may be mentioned the book "Angličtina pro jazykové školy I." created by Dlouhá, Zavadil, Veselý, and Dr. Gottheinerová published in 1962. The audiolingual method is reflected in the following elements:

- Use of pictures and concrete situations: the textbook includes examples of linking pictures to concrete sentences, encouraging the active use of the target language in meaningful situations, see Figure 6. It also shows the deductive way of teaching grammar.
- Emphasis on pronunciation and repetition: pronunciation explanations/corrections and vocabulary repetition practice are included in the textbook.
- Grammar practice: the grammar exercises are designed to give pupils the accuracy and automatic ability to use grammatical constructions and aim at the automatic use of practiced expressions, see Figures 6 and 7, facilitating

grammatical constructions through a presentation that avoids unnecessary theoretical explanations.

- Active communication: learners' communication in concrete situations using the discussed grammar is encouraged. At the end of the units, there are always questions that the teacher can ask, and pupils can automate their answers and grammatical constructions. Alternatively, pupils can ask each other questions. They can thus gain confidence in speaking in the target language, at least on a particular topic.
- Dictation: the pupils practice writing by dictation.
- Real-life situations-based vocabulary selection: deliberate selection of vocabulary based on its common usage and relevance in everyday conversations.

On the other hand, one can also observe elements of the grammar-translation method in the textbook. As shown in Figure 9, pupils are asked to translate a sentence from their native language into the target language, indicating that translations are still prevalent. The grammar is presented deductively with examples and pictures, then explained in the native language, and then visualised in a table. This demonstrates that grammar-focus and deductive approach to teaching grammar remained in the textbook.



Figure 7: First lesson

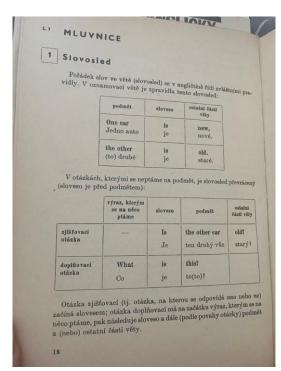


Figure 6: Grammar table

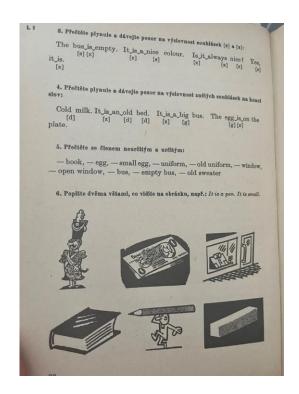


Figure 9: Exercises (pronunciation and speaking)

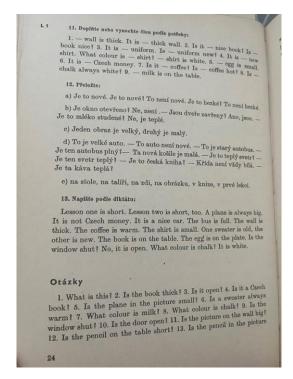


Figure 8: Exercises (articles, translation, writing, speaking)

2.1.4. Communicative Language Teaching

The Audiolingual Method was succeeded by the Communicative Approach. (Richards and Rodgers 2001, p. 15) The roots of Communicative Language Teaching (CLT) lie in the evolution of British language teaching practices during the late 1960s. This pedagogical framework fundamentally views language as a medium for communication. (Richards and Rodgers 2001, p. 151) Doggett (1986) highlighted that the communicative approach emphasizes teaching communicative proficiency over mere linguistic skills, prioritizing functional aspects over grammatical forms. It involves pupils working in small groups, using authentic materials to engage in communicative activities to enhance their ability to 'negotiate meaning'. (Doggett 1986, p. 6)

Kravchenko (2023) points out that the Communicative Approach in teaching highlights that mastering grammar and vocabulary alone is insufficient for becoming a successful speaker; consistent practice is essential. From this perspective, it becomes evident that pupils' capacity to respond suitably in real-life scenarios holds significant importance. Previous methods (Grammar-translation method, Direct Method, and Audio-linguistic Approach) are more teacher-centred; this communicative approach is student-centred; the teacher is only there as a mentor, so the pupils take more responsibility for their learning. (Kravchenko 2023)

Kravchenko (2023) also mentions the following advantages of the communicative approach:

• Enhancing pupils' speaking skills is undoubtedly achievable by offering ample speaking opportunities. With increased practice, pupils naturally

improve their speaking proficiency, as the practice is known to be an essential improvement.

• The communicative approach pushes pupils beyond their comfort zones.

While speaking, pupils may express reservations, such as feeling unprepared or lacking sufficient knowledge. Nevertheless, the fact remains that the earlier pupils integrate the target language into their speech, the sooner they will feel comfortable using it naturally. (Kravchenko 2023)

An example of the Communicative Method-based textbook is Swan and Walter's 1984 textbook, "The Cambridge English Course 1."

• For example, the first exercise, "Who is the man on the phone talking to?" reflects the communicative method by actively engaging pupils in situations where they must communicate and express their assumptions based on a visual prompt. This activity mirrors the communicative method's emphasis on real-life situations and the use of language in authentic contexts. The teacher serves more as a guide, supporting and guiding pupils in communication and understanding.

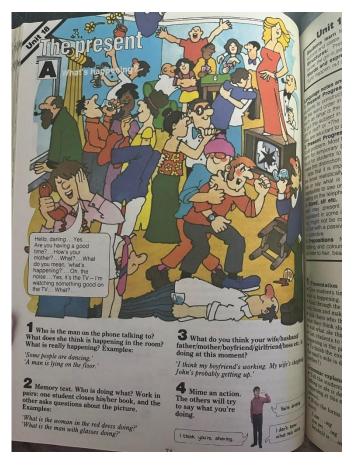


Figure 10: Unit 18 from "The Cambridge English Course I."

2.2. Transformation of printed textbooks into digital textbook

According to Brdička (2003), the invention of the printing press brought about a significant change in education by facilitating the production of printed textbooks. Despite initial beliefs in the potential of computers to replace textbooks and teachers, this scenario did not materialize, with computers and technology now seen as supplementary tools in the classroom. (Brdička 2003, p. 7) This statement can still be confirmed as, in most cases, traditional printed textbooks are still used, and the change that is currently undergoing is more of an interactive textbook as a bonus to the traditional one. More emphasis is indeed being placed on the digital competences of both pupils and teachers, and educational technologies are being incorporated into the teaching process. However,

it cannot be assumed that digital textbooks will replace traditional ones in the near future.

A relatively slow transformation from traditional printed textbooks to digital ones is happening.

On the other hand, as Blyth (2009) says, the advent of digital technology has dramatically altered the educational material production and distribution environment. Non-commercial developers now wield significant power and are equipped with the necessary tools like digital equipment and multimedia software, along with the expansive reach of the internet. The transformation has fundamentally reshaped the dynamics between content creators and users in the educational sphere. (Blyth, 2009) The change extends to textbooks and whiteboards; see later.

2.2.1. Types of textbooks

Regueira and Rodríguez (2015) pointed out that nowadays, there is a distinction between e-textbooks and traditional textbooks, noting that e-textbooks differ in format and incorporate interactive and multimedia resources such as videos, images, and animations. (Rogueira and Rodríguez 2015, p. 9), but multiple terms may be encountered based on the evolution of textbooks from traditional printed to digital textbooks.

Traditional textbooks are, as Lawver (2024) says, textbooks in printed format. Although traditional textbooks have several disadvantages over digital textbooks, such as being more expensive, heavier, and forgettable if needed, they also have advantages over digital textbooks, such as the ability to highlight and take notes directly on the pages, the ability to study anywhere without relying on electronic devices, and the ability to resell them in the future, which can recover some of the initial investment. (Lawver 2024) Since they have been used for a very long time and the technical equipment of all schools is not

the same, printed textbooks have their place in Czech education and are still widely used didactic tools in English language teaching.

Another type of textbook is a **digital textbook**. As Lawver (2024) sums up, digital versions have emerged with the development of technology, and another possible reason could be the emphasis on the digital competence of pupils due to the proliferation of digital devices. Digital textbooks also offer multimedia elements such as videos, images, and audio recordings. They often have an excellent visualisation of the discussed topics, and the multimedia elements are interconnected. Digital textbooks are convenient and affordable because they let pupils access their materials from any digital device. One major disadvantage of digital textbooks over traditional print textbooks is that they cannot be resold, which means there is no way to recover costs (Lawver, 2023). Because some teachers probably still prefer a traditional textbook, it can be assumed that purely digital textbooks are not used that often in the Czech Republic. The reason may be that relying solely on electronic devices can lead to potential reliability issues such as device failures or battery depletion; it can, however, reduce the need for bulky physical textbooks and provide flexibility.

Another type of textbook is an **interactive textbook**. Interactive textbooks are widespread in the Czech Republic. Most publishers provide an interactive textbook to supplement the traditional textbook. It is a textbook converted from traditional to digital but with the added element of multimodality and interactivity. The interactive textbook can be used through an interactive whiteboard, but it is also possible to use a computer and a projector. (Simbartl 2015 PhD dissertation, p. 15-16)

The last type of textbook is a **hybrid textbook**. Fraus defined it as a combination of a printed textbook, an interactive textbook, and subsequent additional internet practice materials. (Fraus, 2024)

Marqués (2010) summarized the features that traditional textbooks have in common with the e-version of the textbooks and examples of ways the e-textbooks differ.

Similarities between printed textbooks and e-textbooks listed by Marqués (2010) are:

- The technical and structural aspects include ensuring the text is clear and grammatically correct, utilizing highly readable fonts, and incorporating suitable and relevant illustrations to the content and audience.
- Functional and pedagogical aspects in printed or electronic textbooks share some common elements. These elements include providing information and guiding learning, targeting specific student groups, featuring well-structured informational content, incorporating exercises, and designing content and activities around instructional design principles. They also often include study guidelines for both students and teachers and allow for the continuation of activities later where they were left off.

Unique attributes of e-textbook listed by Marqués (2010) are:

• The most significant difference that could be seen from a technical and structural point of view is that they are accessible online. They incorporate various multimedia elements such as videos, animations, and simulations...

Another new feature is the hyperlinks within the text that enable easy navigation to other content within the book or external sources on the

internet. Digital textbooks often provide a virtual learning environment that allows teachers to monitor each pupil's progress and engagement with the material.

- From the functional aspect, e-textbooks offer interactive exercises with realtime feedback, enhancing pupils' learning outcomes. They are accessible from various devices with internet connectivity, providing flexibility and convenience for learners. When the technology fails, e-textbooks often include printable worksheets.
- From the pedagogical aspect, e-textbooks offer enhanced learning experiences by integrating multimedia elements, catering to diverse learning styles. They provide dynamic exercises that adapt to individual pupil progress. E-textbooks encourage more significant interaction between pupils and content through hyperlinks and interactive features. These resources often include simulators for practical experiments and provide support tools such as calculators, glossaries, and collaborative work environments. (Marqués, 2010 in Rodríguez, Bruillard, and Horsley 2015, p. 10-11)

Deficiencies in connection with e-textbooks are in Marqués (2010):

- Digital textbooks offer environmental benefits by reducing paper usage;
- however, they also create technological dependence, requiring costly devices and electricity consumption.
- Reading extensively on screens may cause fatigue.
- Additionally, digital textbooks may encounter speed issues depending on the user's computer and internet connection.

• For some pupils, multimedia elements in e-textbooks can distract them from learning. (Marqués 2010 in Rodríguez, Bruillard, and Horsley 2015, p. 11)

Distinguishing the types of textbooks that are digitally converted can sometimes be more complicated. It is, therefore, essential to focus on what the textbook directly offers as only the multimedia elements may not entirely fulfil the interactivity.

2.3. Interactivity and multimodality as a textbook feature

This chapter explores the essential role of interactivity and multimodality in education. As interactive textbooks are already created with these features, they should offer a more immersive and engaging learning experience, which can improve student outcomes.

Klement and Dostál (2013) discuss how multimodality and interactivity can be understood in traditional and contemporary contexts. In the traditional sense, multimodality refers to tools used to present educational content and facilitate communication between teachers and students. This concept typically involved incorporating videos, images, or animations during the lesson. However, in the contemporary context, multimodality is described as *an educational object integrating various data formats*. It involves combining multiple elements into one. (Klement and Dostál 2013, p. 495-496) Vlčková (2015) outlines the incorporation of didactic audiovisual materials and web resources as integral components of interactive education, enriching the understanding of the discussed topic. (Vlčková 2015, p. 46)

Tuma (2012) mainly focuses on interaction, specifically addressing technological and socio-cognitive approaches. Tuma (2012) mentions the hypermedia stream, which involves the learner's interaction with technology-generated content. In contrast, socio-

cognitive approaches rely on interaction between learners through technology. (Tůma, 2012 in Kasper (ed.) 2012, p. 177). On the other hand, Klement and Dostál (2013) describe the traditional understanding of interactivity as using 'pedagogical communication to facilitate information exchange between participants in the educational process'. (Klement and Dostál 2013, p. 497) Vlčková (2015) characterizes interactive education as a contemporary teaching approach that diverges from traditional methods, fostering heightened student engagement with learning. Central to its objectives is empowering students to become active contributors to the learning process rather than passive recipients. (Vlčková 2015, p. 46)

In their contemporary interpretation, Klement and Dostál (2013) further divided interactivity into two dimensions. The first dimension involves 'interaction between student and multimedia objects', emphasizing 'the students' active manipulation of these objects/technologies'. For instance, interactive exercises allow students to engage with multimedia content by clicking buttons, matching the correct options, ... The second dimension characterizes interactivity as 'human communication based on dialogue facilitated by information and communication technologies'. For example, it could involve online discussion forums, virtual classrooms, or collaborative projects where pupils interact with each other. (Klement and Dostál 2013, p. 498-499)

Building on the concept of interactivity, exploring how integrating multiple communication modes can further enhance educational practices is essential. This leads to the concept of multimodality. Ilmi and Dewi defined multimodality as "any form of representation or communication that employs multiple modes to convey its meaning. It utilizes various meaning-making resources, such as visual, spoken, gestural, and others." (Ilmi and Dewi 2022, p. 151) To deepen the definition, Spafford (1998) defined the term

multimedia as "the use of several types of information at one time in a computer application. For example, text, graphics, and sounds may be presented integrated, as in a CD-ROM encyclopedia." (Spafford 1998, p. 390)

Ilmi and Dewi's study (2022) revealed that learners perceive multimodal techniques positively in the classroom. Ilmi and Dewi (2022) stated that *incorporating audiovisual content and visual components greatly increased student engagement and understanding*. Furthermore, Ilmi and Dewi (2022) stressed that *multimodality enhances educational practices by incorporating a more comprehensive array of teaching methods, theoretical frameworks, and learning models, thereby creating a more dynamic and inclusive educational environment. (Ilmi and Dewi 2022, p. 157-158) To summarize, multimodality in education leverages multiple communication and multimedia resources to create a more effective and engaging learning experience. This approach caters to diverse learning styles, integrates various types of information, and enhances overall learning outcomes.*

Interactivity is evident as the interactive whiteboards allow pupils to engage with the lesson content actively. Szotkowski (2013) contends that the advent of interactive whiteboards in education brought interactivity to the classroom. Unlike traditional whiteboards, interactive whiteboards may be positioned differently depending on their role in the educational process. 'The standard boards are typically positioned at the front of the classroom, ensuring equal access to the writing surface for all students'. However, when it comes to interactive whiteboards, this convention may shift. If interactive whiteboards are 'the primary means of lesson presentation, they are placed in the same location as standard whiteboards. Conversely, if interactive boards are merely supplementary to regular boards', they are positioned elsewhere in the classroom. (Szotkowski 2013, p. 11)

While using interactivity, pupils can, for instance, come up to the board and interact directly with the displayed information, whether solving a problem or participating in interactive quizzes and activities. It fosters a dynamic learning environment where pupils can actively participate in the learning process rather than passively absorbing information.

Multimodality is seen in the interactive whiteboards, which combine various representation modes, such as text, images, videos, and audio, to convey information. Videos on platforms such as YouTube serve as an example of contemporary multimedia communication, employing dynamic visuals, spoken commentary, background music, and on-screen text.

3. Interactive textbooks

Interactive textbooks represent a modernized version of printed textbooks enriched with various multimedia elements that lead pupils to engage in learning actively. Interactive textbooks in the Czech Republic are known mainly as supplementary software to traditional printed textbooks. Teachers can use the interactive textbooks during online or offline lessons, usually used synchronously when pupils work together on a given exercise. Pupils can also access them at school and home for individual study, i.e., asynchronously.

Interactive textbooks are pre-prepared for use alongside interactive whiteboards. While interactive whiteboards are widely prevalent in classrooms, they are unavailable in every classroom. In such cases, teachers often attempt to substitute interactive textbooks using a projector, computers, or tablets. Lewis (2009) describes interactive whiteboards as "a touch-sensitive board connected to a computer and a projector and displays a

computer desktop. Unlike a conventional projector, it allows the computer to be controlled by touching the projection on the board." (Lewis 2009, p. 33)

As Pfaus (1996) mentioned, "Students can better retain experiences containing sound, images, and interactive elements ... An individual remembers about 10% of what they read, 50% of what they see, and full 90% of information acquired through interactive experience." (Pfaus 1996 in Brdička 2003, p. 19) Based on Pfaus' statement, interactive textbooks may be advantageous because they can facilitate better retention of information. Bikowski and Casal (2018) support this by noting that interactive textbooks include features such as embedded videos, hyperlinks, and interactive quizzes, supporting various learning styles and preferences. These features make learning more engaging. (Bikowski & Casal 2018, p. 129-133). Engbrecht (2018) further elaborates on the benefits of interactive textbooks by highlighting the inclusion of various media links, videos, podcasts, and live hyperlinks to provide a more tailored educational experience. Engbrecht (2018) also emphasizes the role of interactive activities and assessments that provide immediate feedback, helping students understand the material better by offering instant responses to their inputs. (Engbrecht 2018, p. 11) Compared to traditional materials, interactive textbooks can enhance learning outcomes since pupils remember many interactive experiences, such as those containing sound, images, and interactive elements.

The success of interactive textbooks, however, relies heavily on how well teachers can incorporate them into their teaching strategies. Engbrecht (2018) stated that teachers need to be proficient in using these digital tools and teaching students how to use them effectively. (Engbrecht 2018, p. 5)

Recognizing the shifts in educational tools, publishers have adapted by developing new coursebook series software. Lewis (2009) emphasizes the current trend among educational publishers in developing new coursebook series software tailored explicitly for integration with interactive whiteboard systems. Interactive textbooks are designed to interface with various interactive whiteboard systems seamlessly. Currently, these coursebook series are accessible through either CD-based formats or online mediums. Upon initiation of the program, users can see a user-friendly menu interface, allowing them to select desired units and activities. The publishers' software offers interactive whiteboards, incorporating features such as games, audio, and video clips. The textbook content fosters dynamic engagement with the material through these interactive elements. (Lewis 2009, p. 34-35)

In conclusion, integrating interactive textbooks in education offers numerous advantages that traditional textbooks cannot match. They enhance engagement, improve retention, and provide personalized learning experiences through multimedia and interactive features. For teachers, it is essential to be proficient in these digital tools and to effectively incorporate them into their teaching strategies to maximize their potential benefits. Interactive textbooks not only align with modern educational trends but also address the diverse learning needs of students.

However, it is also crucial to recognize the challenges associated with their implementation, such as the need for adequate training and the potential for mixed student preferences. According to Bikowski and Casal's research (2018), interactive textbooks are viewed by students as a learning tool that creates more engaging and enjoyable lessons. (Bikowski and Casal 2018, pp. 125-126). On the other hand, Engbrecht's research (2018) revealed mixed feelings among students. While some students appreciated the

convenience and interactivity in interactive textbooks, others preferred print textbooks due to familiarity and comfort (Engbrecht 2018, p. 19). This indicates that while interactive textbooks offer many benefits, their successful implementation depends on addressing the varying preferences and ensuring teachers are well-prepared to use interactive textbooks effectively.

The role of interactive textbooks in education will likely continue to grow. Teachers must stay informed about the latest developments and best practices to ensure these tools are used to their fullest potential. By doing so, they can help their students prepare for the future in an increasingly digital world.

4. Practical part

The preliminary stage (during teaching practice) suggested that teachers might not fully utilize the interactive features of interactive textbooks. It raised questions about the actual implementation of these textbooks in EFL classes. This research investigates the practical implementation of interactive textbooks among English language teachers.

The research methodology is based on a qualitative approach and consists of several steps: observation of EFL classes, analysis of two textbooks, and questionnaire.

Observations took place at lower secondary schools in the Liberec region. They were conducted in ten English language classes, each taught by a different teacher, to assess how, to what extent, and for what purposes teachers use interactive textbooks during their lessons. The sample size of ten teachers was chosen due to the difficulty in finding teachers who use interactive textbooks in their classes. It is important to note that

due to the small sample size of ten teachers, no general conclusions can be drawn from this research.

The two most frequently used textbooks observed during these classes were analysed using the ELT textbooks evaluation checklist made by Černá (Černá 2022, p. 25-30). Only textbooks from the Project and Bloggers series were used during lesson observations. No other textbooks were used by the teacher from the sample size.

To complement the observations, a questionnaire was completed by ten observed teachers, gathering insights into their experiences, perspectives, and challenges associated with using interactive textbooks in their teaching.

The following questions were defined for the practical part: For what purposes do teachers use interactive textbooks? To what extent do English language teachers use interactive textbooks concerning other materials? Do English teachers encounter difficulties using interactive textbooks in English language teaching? If so, which ones?

4.1. Analysis of textbooks

This chapter provides a detailed analysis of two textbooks used during the observed lessons: the Project series (used by eight participants during observation) and the Bloggers series (two participants). The aim is to evaluate their content, structure, and interactive features. The analysis focuses on how these textbooks align with the curriculum to support various language skills, systems, and interactive elements. Textbooks are analysed based on *the ELT textbooks evaluation checklist* made by Černá (Černá 2022, p. 25-30).

4.1.1. Bloggers interactive textbook

The Bloggers textbook series is designed to teach English at lower secondary schools. The content spans levels from A1.1 to A2.2, emphasizing communicative activities. An extra advantage of the textbook is its interactive support for both pupils and teachers, accessible at www.mcourser.cz, with access codes conveniently provided within the textbooks themselves. Publisher Klett lists ten advantages of using Bloggers in the classroom on their official website:

- Printed and fully interactive versions for teachers and students,
- simple navigation in the workbook and textbook,
- lots of exercises on each page,
- gradual progression,
- internal differentiation and the freedom to choose how to approach tasks,
- lowest prices on the Czech market,
- an international concept tailored to the Czech context,
- didactic videos.
- lesson preparation requirements are minimal because of the methodological handbook.
- a two-part workbook to minimize weight. (Klett nakladatelství s.r.o., 2020)

The printed version of the textbook is identical in content to the interactive version. The interactive textbook is enriched with multimedia, interactive elements, and features such as a video transcript, an online dictionary with pronunciation, and immediate feedback. The exercises are the same; the interactive textbook allows pupils to complete the exercises on an interactive whiteboard or computer with a projector through activities such as unscrambling, matching exercises, word search, or jigsaw. Teachers can create a

virtual classroom in the interactive textbook and monitor each pupil's progress with visually presented data.

There are always clearly articulated aims at the beginning of the unit. Since the textbooks have been approved by the Ministry of Education, Youth and Sports (MŠMT), they fully follow the curriculum.

From a textbook design perspective, the textbook includes a DVD with video audio recordings. These components are also automatically part of an interactive version of the textbook. The package includes a textbook, workbook, and their interactive versions. Furthermore, it includes a teacher's book with additional materials such as pre-prepared tests, activity templates, worksheets for videos, and Kahoot for each unit.

In terms of the textbook's organization and layout, the unit structure is apparent, and each unit follows the given structure (parts A, B, C, and D). The explanatory icons next to each exercise (icons for reading, writing, listening, and speaking) make it easier for the teacher to find their way to the textbook. The first few pages of the textbook contain a table that lists the units' topics, vocabulary, grammar, reading and writing, projects, and additional cultural topics. Tasks are meaningfully sequenced, from easier exercises to complex ones. Each lesson contains a revision section and at the end of the lesson pupils have the opportunity for self-reflection, i.e. they reflect on whether they have achieved the unit's objectives. The textbook involves a vocabulary list with colour differentiation for nouns, adjectives, pronouns, verbs, adverbs, prepositions, and conjunctions (e.g., green for adjectives and blue for verbs). Grammar is visualized in a table. The printed version of the textbook is easy to read and contains visual aids such as pictures, tables, and colours. The interactive version of the textbook has each exercise on one page, and the interface is user-friendly, divided into units, sections, and exercises.

The workbook has exercises with three levels of difficulty – easy, medium, and hard. As the workbook offers a lot of practice, it is possible to differentiate teaching for pupils with special educational needs. In addition, the interactive textbook includes a direct option to simplify some texts, so the textbook provides an option for internal differentiation, see Figures 11 and 12.



Figure 11: Excerpt Bloggers 2: unadjusted version

Figure 12: Excerpt Bloggers 2: simplified version

From the perspective of visual aspects, both versions (printed and interactive) of the textbook are visually appealing and include comprehensible visual components such as pictures, videos, mind maps, tables, colours. The ratio of visual and textual components seems to be balanced.

The textbook focuses on *gradual learning, active practice, and using authentic materials*. (Klett nakladatelství s.r.o., 2020). The textbook offers a variety of teaching techniques and engages learners with different learning styles and strategies. It includes role-plays, individual, pair, and group work, discussions, project work, and visual aids... Furthermore, the textbook may support learner autonomy. The learners' mother tongue plays a role in the textbook, especially in the instructions for the exercises (they are always in English and Czech), the grammar is visualized only in English but additionally explained in Czech, and the vocabulary list is English-Czech.

In terms of language content, the textbook presents British and American English, focusing on British English. Instructions are clear. The textbook includes pronunciation material and aims at individual sounds and suprasegmental features. Pronunciation is integrated mainly with vocabulary but also grammar, listening, and speaking. The selected vocabulary is relevant for the learners, focusing on real-life situations, such as hobbies, school life, sports and equipment, food, and places in the city... The textbook places importance on both the grammatical construction and its practical usage. The grammar is taught deductively, then including a variety of exercises for practice the given grammar (through exercises such as gap filling, sentence transformation, matching exercises, dialogues, interactive exercises in interactive textbook). The textbook includes pragmatic aspects by including speech acts (structures for making apologies, requests, ...), cultural awareness of English-speaking countries, role-playing, and authentic materials using real-life examples.

In terms of language skills, the textbook focuses on communicative purposes. All four skills (listening, reading, speaking, and writing) are developed, including authentic texts for each unit. The textbook offers practice of reading sub-skills, mainly skimming and scanning. Listening activities focus on listening to the main idea, gist, and detailed listening; in most cases, there is also visual support (video), which a person of learners' age accompanies. Furthermore, the textbook contains pre-reading and listening activities, mainly focusing on new vocabulary and drawing pupils' attention to the topic. Speaking activities concentrate on group and pair discussions, interviews, speaking according to a pattern, and expressing opinions. The textbook contains a variety of writing activities, including step-by-step instructions and different text types such as food recipes, blogs, descriptions, short stories, biographies, interview preparation, and e-mails... The learners are required to consider formal and informal language when speaking or writing.

From the perspective of topics, the textbook offers various topics that match learners' life experiences, such as hobbies for 6th graders and choice of school for 9th graders. The topics offer concrete situations that may encourage learners' thinking and emotional engagement. The topics include representations of Czech and foreign cultures, such as sightseeing in Britain (Albert Dock, Liverpool Cathedral...) and the USA (the Statue of Liberty, the Brooklyn Bridge, the Hollywood Sign...), traditional food from the Czech Republic and the UK, Christmas in the UK and Czech Republic, ...

From the perspective of practical considerations, the textbook is easily available on the market. The textbook costs around 230 CZK, and the workbook with a student licence is around 205 CZK.

4.1.2. Project fourth edition

The textbook Project series is used at lower secondary schools. Most teachers observed during the research were using these textbooks. The series includes levels from A1 to B1.

The traditional printed textbook is nearly identical to the online version. The online textbook includes multimedia and interactive features such as feedback, matching exercises, online dictionaries, and the ability to underline words and write in the textbook using an interactive whiteboard or computer. However, multimedia elements such as videos, visualisation, are more prevalent than interactive ones.

The aims are partially described in the teacher's book but not directly listed in the textbook. With the Ministry of Education, Youth, and Sports approval, Project series textbooks adhere closely to the curriculum. They are structured to match the pupils' language proficiency level, progressively advancing it.

From the design perspective, the textbook includes video in the digital version of the textbook or DVD and class CDs with audio for the printed version. The package includes a student's book (with an online version for in-class presentation and multimedia), a workbook with online practice (multimedia and interactive elements), and a teacher's book. It also includes additional vocabulary flashcards, activities for practice, and pre-prepared tests.

In terms of layout and organisation, the structure of units is clear, consisting of A, B, C, and D parts, a culture section, cross-curricular topics, revision of the lesson, and a project for learners. The layout of individual pages is transparent and contains colour-coding for different language skills and systems. The first pages of the textbook are tables of content for the whole textbook, including unit topic, grammar, vocabulary, communication and skills, culture, across the curriculum and project with pages where the content can be found. The exercises are logically linked and start from easier to more complex ones. Each unit contains revisions, and the workbook has a list of vocabulary and a grammar table. The textbook partly offers features to facilitate internal differentiation for students with special educational needs by using various types of exercise difficulty.

From the perspective of visual aspects, the textbook is visually appealing with visual components such as pictures, tables of grammar with diagrams and timelines, and colour coding that are used in a comprehensible way. There is a balance between visual and textual components.

In terms of approaches, the textbook emphasizes practical language use and multiskill exercises, which prepare students for real-world English communication. (Oxford University Press, 2014) The textbook mainly follows communicative language teaching, but each unit contains one lesson for Content and Language Integrated Learning (CLIL), which includes teaching and learning topics from ICT, Biology, Art, Science, Math, and other subjects in English. The textbook offers different learning styles and strategies. The textbook does not include self-assessment tools directly at the end of the unit; however, the workbook with online exercises contains exercises where pupils can self-check the answers and see their progress. The learners' mother tongue plays only a partial role in the textbook because the entire textbook is in English only. However, the workbook contains tables with grammar, which is then explained in Czech, and the vocabulary is given in English and translated into Czech.

From the perspective of language content, this textbook presents only British English. The instructions are clear. The textbook includes material for pronunciation and focuses on both individual sound and suprasegmental features relevant to Czech learners. Pronunciation is integrated through vocabulary, speaking, and listening, and the textbook also includes exercises that focus only on pronunciation, such as identifying different vowels, number of syllables, intonation, and stress. The vocabulary chosen is age-appropriate and aimed at real-life use. The textbook includes exercises targeting various aspects of words, such as meaning (with visualisation and translation in Czech), written and spoken forms, and words in context. It covers compound nouns, useful phrases, and functional language such as agreeing, disagreeing, ordering a meal, expressing worries, purposes... Grammar is taught mainly inductively; pupils figure out the rules from a short text and then complete the rules on the table and answer relevant questions about using a given grammar. It is followed by various exercises to practice the grammar. So, the textbook focuses on both language form and language use. There are various exercises for practicing grammar in both written and spoken form. The textbook follows the

pragmatic aspects of English, including speech acts (expressing worries...), paraverbal communication, connection words and phrases, and real-life examples.

In terms of skills, the textbook includes the development of all four skills and also uses authentic texts. Reading activities include skimming and scanning techniques, and listening activities include listening to the main idea, gist, and specific information. The videos are detailed, and the sound is clear. There are mostly pre-listening and pre-reading activities before listening and reading comprehension. However, sometimes, it starts directly with listening and reading without pre-steps, so it is up to the teacher to add the pre-step. Speaking activities concentrate on pair and group discussions, as well as roleplay. It includes comparing ideas, making dialogues, interviews, and descriptions of pictures. Writing contains different text types such as description, narration, biography, leaflet, and poster. Pupils mostly use informal language, but formal language is also included.

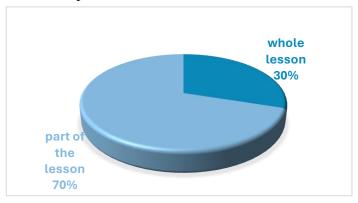
From the perspective of topics, there are enough topics in the textbook relevant for learners, including general topics such as sports, animals, holidays, and food for 6th graders and health, environment, and relationships for 9th graders. Thus, the topics are appropriate for the age of the pupils, for example, 9th graders, who may be dealing with questions about the environment or relationships. The topics may encourage learners' thinking and their emotional engagement. The textbook focuses mainly on the culture of the UK, such as famous people, heroes, films, sports, festivals, meals, weather, ...

In terms of practical considerations, the textbook is easily available on the market. The textbook costs around 400 CZK, and the workbook is 300 CZK.

4.2. Analysis of observed lessons

This chapter presents an analysis of ten observed EFL lessons, focusing on the utilization of interactive textbooks by the participants (i.e., ten English teachers who participated in this research). The prior analysis of the Project and Bloggers textbooks provided a foundation for understanding the potential these resources offer. The observation of lessons aims to examine the practical application of these interactive textbooks. The observation includes assessing key aspects such as the types of materials employed, whether the textbooks are used interactively or as presentation tools, the focus on either language systems or language skills, and the specific educational functions offered by the interactive textbooks.

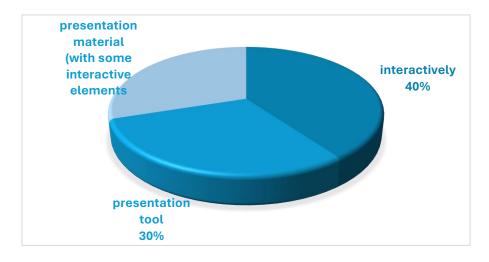
The first part of the observation focused on the extent to which participants use interactive textbooks compared to other materials.



Graph 1: comparison of interactive textbook with other materials

The findings revealed that most participants, precisely seven out of ten, utilized the textbook only for part of the lesson. The participants transitioned to other activities such as flashcards, bingo games, Kahoot, or worksheets created by the participants. In contrast, three participants consistently used the textbook throughout the lesson, aside from the initial routine questions, such as asking about pupils' well-being or attendance.

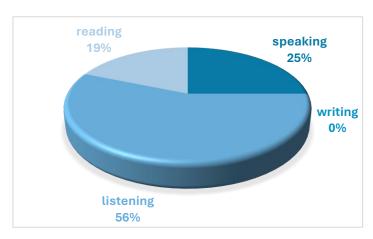
The second part observed was how the participants used the interactive textbook interactively or statically (i.e., as a presentation tool).



Graph 2: the way of use of interactive textbook

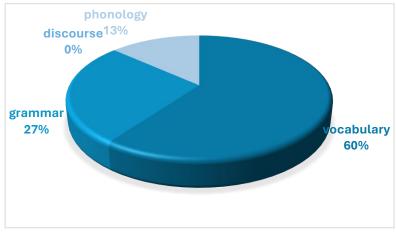
Four participants utilised the textbook interactively, actively engaging pupils in learning through various activities such as clicking on links, completing interactive exercises, and responding to multimedia content. Conversely, three participants used the interactive textbook purely as presentation material. For these participants, the textbooks served to present content without active pupils' engagement in interaction with the material. Although one of these participants included a video, the overall usage remained static, with no further interaction from the pupils. Three participants combined the use of the interactive textbook both statically and interactively. These participants did not fully use the interactive elements of the interactive textbooks, often beginning with a static presentation and later incorporating feedback. However, the static use of interactive textbooks as presentation material without active pupils' involvement led to passive absorption of information instead of active learning.

The third part focused on observing the use of interactive textbooks from the perspective of language skills and systems.



Graph 3: language skills observed during the lessons

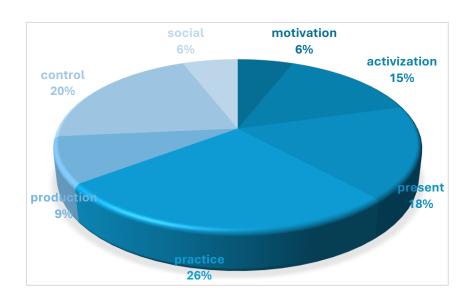
Listening was the most included language skill; participants used video, the option to stop and slow it down, and a transcript alongside the video that the interactive textbooks offer (both Project and Bloggers). Speaking activities were the second most utilized language skill, followed by reading activities. It was noticed that some participants used multimedia elements to guide the conversation with their pupils. Observation also showed that none of the participants used the interactive textbook for writing; however, the initiation of writing a few words in some lessons may indicate that writing was part of other activities rather than standalone writing exercises.



Graph 4: language systems observed during the lessons

In terms of the use of interactive textbooks for teaching language systems, the vocabulary was dominant. Participants mostly used the interactive elements of the interactive textbook for the learner's direct interaction with the vocabulary through various exercises (in the case of participants who fully utilized the interactive textbook) or multimedia such as pictures or recordings for pronunciation to present the vocabulary. Although grammar was not utilized as frequently as vocabulary, it demonstrated participants' efforts to use the interactive textbook and its exercises for practicing grammar. Grammar was mostly practiced through filling-gap exercises. Two participants incorporated phonology when using interactive textbooks. None of the observed participants utilized interactive textbooks for discourse.

The last observed part was the diversity of functions of interactive textbooks in English language teaching, focusing on identifying the primary purposes for which participants utilize the interactive textbook. Observing these functions, it sought to provide insight into the functional side of interactive textbooks and strategies employed by the participants.



Graph 5: functions of interactive textbooks used during the observation

The most observed purpose of interactive textbooks was practicing a given topic through various activities. The participants utilized the interactive textbook as a means for pupils to reinforce their understanding of the content through repeated exercises and tasks. The interactive elements provided pupils with feedback.

Many participants used interactive textbooks for controlling purposes, employing them to assess pupils' comprehension and mastery of the given content. Participants could monitor pupils' progress and identify areas of difficulty by utilizing interactive quizzes or assessments. Although monitoring activities were not fully individualised during lessons, participants could observe where pupils were making mistakes.

Many participants utilized interactive textbooks to present new material to pupils (especially the vocabulary), and some of them used interactive textbooks to activate pupils' prior knowledge (before listening or reading). A few participants followed the traditional "present, practice, and production" approach, using interactive textbooks to guide pupils through these stages. Some participants utilized interactive textbooks to motivate pupils and enhance their engagement with the learning materials. It seemed that interactive elements had captured pupils' interest and encouraged active participation and involvement in the lesson (especially for participants who interactively used the interactive textbook). A few participants utilized interactive textbooks for social functions, often through group work activities. It may indicate that interactive textbooks can also promote collaboration, communication, and interaction among pupils.

To summarize the observations, they revealed the following findings:

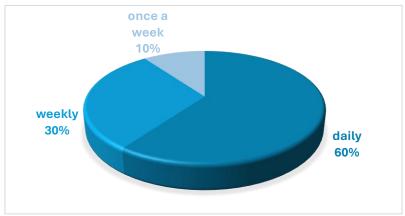
 Participants did not use interactive textbooks as only educational tools but as a supplement to traditional textbooks and other educational materials.

- An interactive textbook was usually used together with a traditional textbook.
- The interactive textbook was predominantly used as an in-class presentation material.
 - Thus, it was prevalent that the interactive features of the interactive textbooks were not fully utilized. Most participants interacted with the interactive textbook, not the pupils themselves.
 - Most often, the interactive textbook was used together with a projector and a computer.
- The interactive textbook was mainly used for listening comprehension,
 presentation, and vocabulary practice.

4.3. Analysis of questionnaire

This chapter analyses findings from a questionnaire conducted by ten EFL teachers at lower secondary schools while respecting the sample's specificity and, thus, the research's limitations. The sample of participants is the same as in the lessons observed. The questionnaire was completed after the observed lessons. It was structured to reflect key aspects, including the frequency of interactive textbook usage, their functions, perceived effectiveness for learners and teachers, comparison of printed and interactive textbooks, and challenges encountered by participants when using interactive textbooks.

The first question from the questionnaire addressed how often participants incorporate the interactive textbook into their teaching.



Graph 6: frequency of the use of interactive textbooks

The results show a level of integration of interactive textbooks among participants, from daily to once a week. It is important to recognize that while most participants (6) use interactive textbooks regularly, four participants incorporate them less frequently.

Another aspect examined is the function of the interactive textbook for which the participants use it.

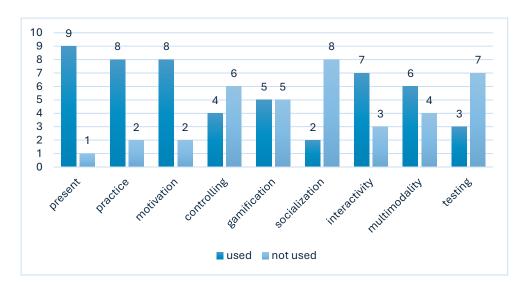


Table 1: functions of interactive textbooks

Participants most frequently utilize interactive textbooks to present new material (vocabulary, grammar...), and then for practice and motivation. Although the results indicate that participants aimed to use the interactive textbooks for their interactivity, the interactive features were not fully utilized during the observation in many cases. This

limited usage may suggest pupils were not actively engaging with the material as intended. Fewer participants use interactive textbooks for socialization and testing.

The functions of interactive textbooks from the perspective of language skills can be visualised according to participants' responses as follows:

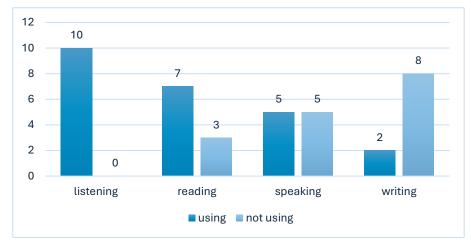


Table 2: function of interactive textbook – language skills

Participants' responses indicate they use interactive textbooks mainly for listening exercises, followed by reading. Speaking and writing are less commonly used.

Another point from the questionnaire focused on successfully integrating interactive textbooks into EFL classes.

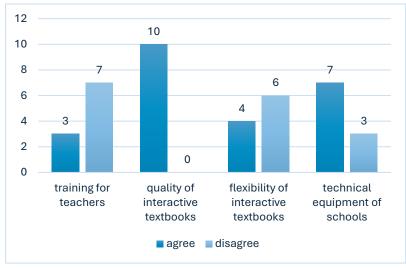


Table 3: factors for effective integration

Most participants (7) disagree with the statement that teacher training is essential for successful integration. This statement may indicate why interactivity was not fully utilised in some cases, even though the participants had the appropriate technology available. The participants might not fully know all the tools the given interactive textbook offers.

According to the participants (10), the quality of interactive textbooks is a key factor for successful integration. On the other hand, six participants do not see the flexibility of interactive textbooks as a significant factor for integration. Most participants (7) also agree that the schools' technical equipment is essential for successfully integrating interactive textbooks. It suggests that good technical facilities are vital in using these tools. Without at least one computer in the classroom and a projector, making an interactive textbook operational would be impossible to allow pupils to interact with the material.

Despite emphasizing technical equipment, most participants (9) do not consider interactive whiteboards necessary to use interactive textbooks fully. It suggests that simple technological tools such as computers may be sufficient from the participants' perspective. The fact that four participants fully used the potential of interactive textbooks may indicate that even a computer may be sufficient. However, students need access to it or be engaged in other ways of interacting with the learning material (e.g., learners linking material on the board using a marker).

Another section of the questionnaire focused on the features/functions of interactive textbooks that participants consider effective for their pupils.

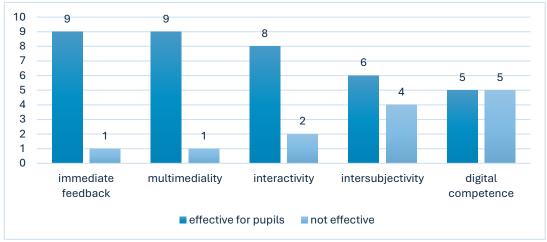


Table 4: effectiveness of interactive textbook features for pupils

The participants' responses show that they see the following points as effective in interactive textbooks for their pupils: immediate feedback, multimodality, interactivity, and intersubjectivity. Indecisive results were found regarding the interactive textbook's effectiveness in digital competence from the participants' perspective.

The next part of the questionnaire focused on evaluating the effectiveness of the interactive textbook for learners, specifically in terms of language skills and systems.

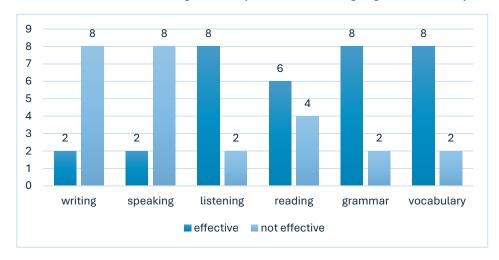


Table 5: effectiveness of interactive textbook – language skills and systems

Most participants (8) do not find interactive textbooks helpful in developing pupils' writing and speaking skills, suggesting that these textbooks may not offer sufficient opportunities or better features than traditional textbooks for these particular skills.

However, more than half of the participants (6) believe that reading exercises and features in the interactive textbook are beneficial in developing pupils' reading skills. Most participants (8) see listening activities in interactive textbooks as the most beneficial aspect. Additionally, many participants (8) find both grammar and vocabulary exercises and interactive textbook features advantageous for pupils' learning.

The next question focused on the features/elements of an interactive textbook that participants see as effective for teachers.

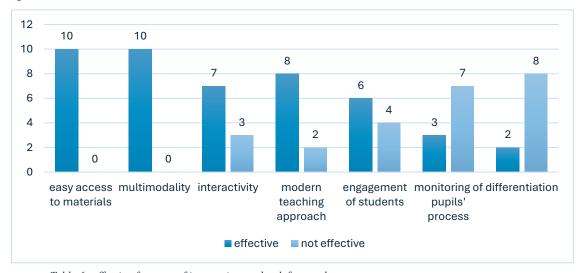


Table 6: effective features of interactive textbook for teacher

Regarding the effectiveness of the interactive textbook for teachers, the participants responded as follows: all participants find easy access to materials and multimodality in interactive textbooks effective. Other areas, such as the modern teaching approach, interactivity, and the engagement of students, are also considered adequate by many participants. However, the following features are mostly seen as ineffective: monitoring pupils' progress and differentiation, indicating potential areas for improvement.

Participants identify problems with using the interactive textbook as follows:

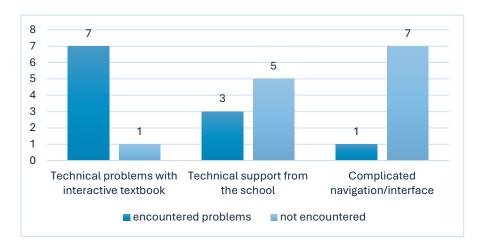


Table 7: difficulties with interactive textbooks

Most of the participants (8) have had problems with interactive textbooks. Many participants (7) encounter technical problems (setting up interactive textbooks directly in the classroom), highlighting this issue as a common barrier to practical use. While most participants (5) do not experience problems with technical support from the school, some (3) still do. Additionally, most participants (7) consider the navigation and interface of interactive textbooks user-friendly.

Participants also compared traditional and interactive textbooks in the questionnaire regarding possible advantages and disadvantages.

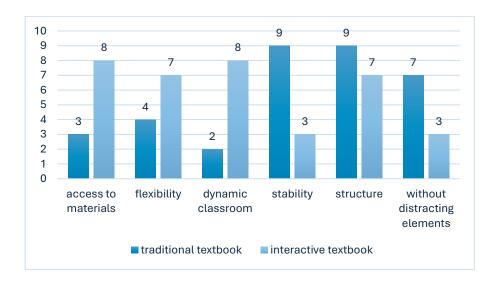


Table 8: Advantages in comparison of printed and interactive textbooks

Most participants find interactive textbooks advantageous for access to materials, flexibility, and creating a dynamic classroom environment. However, participants favoured traditional textbooks for their stability and structure. Traditional textbooks are also seen as having fewer distracting elements than interactive ones.

The comparison of traditional and interactive textbooks also includes the point of view of disadvantages based on the participants' perspective.

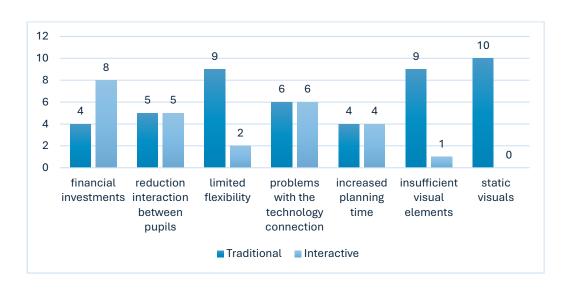
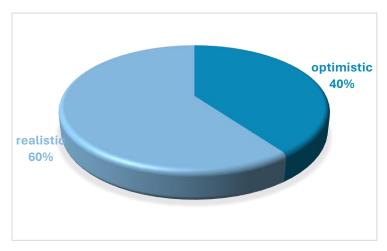


Table 9: Comparison of disadvantages of printed and interactive textbooks

Many participants (8) view financial investments as a disadvantage of interactive textbooks. However, participants also see the interactive textbook as more flexible and visually engaging than traditional textbooks. Participants see a traditional textbook as a static resource. They also noted both formats for potentially reducing interaction between pupils, requiring increased planning time, and problems with technology connection. The choice between traditional and interactive textbooks may, therefore, depend on weighing these various advantages and disadvantages based on the specific needs and resources of the classroom.

Lastly, the participants were asked to express their opinions about the future use of interactive textbooks in EFL.



Graph 7: future use of interactive textbook

Many participants (6) have a realistic outlook on using interactive textbooks in EFL classes in the future. While there is an acknowledgment of the numerous advantages that interactive textbooks can provide, such as increased engagement and access to diverse resources, there is also an awareness of potential disadvantages, including technical issues and the need for significant financial investment. This balanced view suggests that while interactive textbooks are valued and likely to be integrated into future teaching practices, they will be approached with a cautious strategy, considering their benefits and limitations.

To summarize the key findings from the questionnaire:

- The function of interactive textbooks
 - Participants use the interactive textbook mainly for presenting and practicing purposes, motivation, interactivity, and multimodality.
- Use and effectiveness of interactive textbooks for language skills and systems
 - Participants use the interactive textbook predominantly for listening,
 grammar, and vocabulary.

 Participants do not see the effectiveness of interactive textbooks in speaking and writing.

Technological and pedagogical challenges

- Participants often encounter technical problems with setting up interactive textbooks.
- They also see good technical equipment as important, though most participants do not see interactive whiteboards as necessary.
- Participants do not consider teacher training crucial for successful integration, possibly explaining some underutilization of features.
- Participants' perspective on effective features of interactive textbook
 - o Immediate feedback, multimodality, interactivity, and intersubjectivity are valued features of the interactive textbook by the participants.
 - There are mixed responses on features such as monitoring progress,
 differentiation, and digital competencies.

• Comparison of traditional and interactive textbooks

- Participants appreciate interactive textbooks for access to materials, flexibility, and creating a dynamic learning environment, but they face challenges related to financial investment and technology connection issues.
- They value traditional textbooks for their stability, structure, and fewer distractions; however, they are seen as static tools.

4.4. Discussion of the findings

Combining the questionnaire and observation findings revealed insights regarding using interactive textbooks in English language teaching.

Firstly, there is a noticeable inconsistency between how participants recognise the importance of interactivity and how they utilize interactive features in their teaching. While participants acknowledge the benefits of interactive textbooks, particularly their potential to engage pupils and learn through multimedia elements and interactive exercises, this potential is not fully realized in their practice. It can be said that this small sample of participants supports Engbrecht's (2018) statement that the effective use of interactive textbooks relies heavily on teachers, as mentioned in Chapter 3. Participants also agree on the importance of high-quality interactive textbooks that can provide benefits such as immediate feedback, develop digital competence, and offer interactive and multimodal features. However, observations show that interactive textbooks are often used primarily as presentation tools rather than for their interactive capabilities. As a result, pupils remained as passive listeners and did not benefit fully from interactive education, as characterized by Vlčková (2015), mentioned in Chapter 2.3., in most cases. Only a minority of participants fully used the interactive elements offered in these textbooks, suggesting a gap between their knowledge and actual practice.

Secondly, participants identified barriers to integrating interactive textbooks, such as technical issues and the need for reliable technical support. The lack of technical support was also evident when observing participants in their classes; it was also one of the theoretical limitations stated by Sander (2022), mentioned in Chapter 1.4. The lack of technical support in the classroom (e.g., only one computer) possibly led that some participants often interacted with the interactive textbook themselves, limiting pupils'

engagement with offered features, as the pupils did not have access to computers or other hardware technologies such as tablets or interactive whiteboards. Participants who predominantly use interactive textbooks themselves and did not have their pupils interact with the interactive textbook in any way, did not fully embrace the shift to active pupils' engagement, so these participants confirmed the theoretical statement from Szotkowski (2013), described in Chapter 1.4.

Thirdly, participants predominantly used the interactive textbook for listening exercises, vocabulary presentation, and practice. This finding remained consistent when compared to the results of the questionnaire. It underscored the emphasis placed by participants on these specific aspects of the interactive textbook.

In conclusion, the findings from the questionnaire and observations suggest that while interactive textbooks offer benefits, their full potential is not always realized due to various problems. Addressing these problems through better teacher training, enhanced technical support, and the development of more interactive exercises adapted to all language skills can significantly improve the effectiveness of interactive textbooks in the classroom.

4.5. Recommendations

The most observed limit of the use of interactive textbooks by the participants was that they did not fully utilise the interactive potential of the textbook. Pupils were still passive listeners from the viewpoint of interaction with the online material. The main issues hindering the full use of these textbooks are as follows:

1. Participants-only interaction with the interactive textbook:

- Issue: Participants interacted with the textbook, but pupils remained passive listeners enriched with multimedia elements. In most cases, participants had one computer at the front of the classroom and a projector that displayed the interactive textbook on a board in the middle of the classroom.
- Recommendation: To improve pupils' engagement, pupils should be allowed to interact directly with the material on the computer (if school policies allow), thereby improving their digital competence. Alternatively, pupils can interact with the material using a marker on the whiteboard, actively engaging with the content through physical interaction with the interactive textbook, whiteboard, and marker.

2. Limited interactivity in interactive textbooks:

- Issue: The analysis of the Project and Bloggers textbooks revealed that their interactive/digital versions are the same in context as the printed ones. The digital version of the Project textbook does not contain as many interactive features as, for example, the Bloggers textbook. The Project textbook focuses more on multimedia; only the workbook includes interactive elements.
- Recommendation: This issue largely depends on the developers who create
 and provide the educational materials. Developers may focus more on
 enhancing the interactivity of textbooks by including more interactive
 exercises adapted to all language skills.

Addressing these challenges and maximizing the interactive capabilities of textbooks can lead to more effective and enriching language learning environments for students.

Conclusion

This diploma thesis examined the use of interactive textbooks in EFL classes, and the intention was to answer three research questions that focused on the purposes of use, extent of use, and difficulties associated with interactive textbooks from teachers' perspectives.

The theoretical part covered three thematic areas: educational technology and its integration into EFL classes, textbooks, their functions and development with a focus on the change from print to digital format, and interactive textbooks and their potential benefits.

The practical part included observations of EFL classes focusing on teachers working with interactive textbooks regarding the student-centred approach and interactive education, textbook analysis, and questionnaire. The observations and questionnaire were done at lower secondary schools in the Liberec region. Ten teachers were observed and subsequently responded to the questionnaire.

The research revealed that participants predominantly used the interactive textbook as a presentation tool; thus, they often did not follow the principles of interactive education. Most frequently, participants used an interactive textbook for listening and vocabulary. It was also found that the participants most often encounter technical problems with the interactive textbook, especially when directly using it in the classroom.

Given the above findings, it can be concluded that the objectives of this thesis have been met. The purposes for which participants use interactive textbooks, the extent to which they are used compared with other materials and the difficulties associated with their use have been identified. One limitation of this research is the sample size of participants. Observations and questionnaire were conducted with a limited number of teachers and classes, which do not fully represent the diverse practices and challenges. Concerning this research limitation, the results cannot be generalized; however, the thesis provided insights into the use of interactive textbooks in EFL classes.

In line with the theoretical framework of this thesis, which emphasized the shift from a teacher-centred to a student-centred approach, it appears that interactive textbooks can be an effective tool for modernising teaching if their potential is fully used.

Further research might explore the long-term impact of interactive textbooks on student learning outcomes in English. Comparative studies across different regions or states could also highlight how varying conditions and resources affect the successful integration of interactive textbooks.

Resources

Blake, Robert J. 2008. *Brave new digital classroom: technology and foreign language learning*. Washington: Georgetown University Press.

Brdička, Bořivoj. 2003. Role internetu ve vzdělávání: studijní materiál pro učitele snažící se uplatnit moderní technologie ve výuce. Kladno: AISIS.

Callan, R.K.T. 1960. *Callan Method – Student's Book*. Orchard Publishing LTD.

Dudeney, Gavin. 2007. *The Internet and the language classroom: [a practical guide for teachers]*. 2nd ed. Cambridge handbooks for language teachers. Cambridge: Cambridge University Press.

Gordon, P., & Lawton, D. (2005). *Dictionary of British education*. Taylor & Francis e-Library.

Gottheinerová, Till, Pavla Dlouhá, Karel Veselý, and Miloš Zavadil. 1962. *Angličtina* pro jazykové školy I. Praha: Státní pedagogické nakladatelství.

Harmer, Jeremy. 2015. *The practice of English language teaching*. Fifth edition. Harlow: Pearson Education Limited.

Kalhous, Zdeněk, and Otto Obst. 2002. Školní didaktika. Praha: Portál.

Lewis, Gordon. 2009. *Bringing technology into the classroom*. Into the classroom. Oxford: Oxford University Press.

Potter, Simeon, and Bohumil Trnka. 1926. *Učebnice anglického jazyka pro střední školy 1. díl.* Praha: Gustav Voleský.

Richards, Jack C., and Theodore S. Rodgers. 2001. *Approaches and methods in language teaching*. 2nd ed. Cambridge language teaching library. Cambridge: Cambridge University Press.

RICHARDS, Jack C.; PLATT, Heidi a PLATT, John Rader. 2002 *Longman dictionary* of language teaching & applied linguistic. New edition. Harlow: Longman

Spafford, C. A., Pesce, A. J. I., & Grosser, G. S. 1998. *The Cyclopedic Education Dictionary*. Delmar Publishers.

Stanley, Graham. 2013. Language learning with technology: ideas for integrating technology in the language classroom. Edited by Scott Thornbury. Cambridge handbooks for language teachers. Cambridge: Cambridge University Press.

Swam, Michael, and Catherine Walter. 1984. *The Cambridge English course*1. Student's book. Státní pedagogické nakladatelství.

Szotkowski, René. 2013. Od běžné školní tabule k tabuli interaktivní: z pohledu učitele základní a střední školy. Brno: Paido.

Wallace, S. 2015. A Dictionary of Education. Oxford University Press.

Online resources

Abunowara, Ahmed Mohamed. 2014. *Using Technology in EFL/ESL Classroom*. International Journal of Humanities and Cultural Studies (IJHCS) Volume 1 (Issue 2).

Al-ansari, Saif, and Roy WigzellI. 1996. *The Influence of the Tape-Recorder on Attainment in EFL*. Pergamon 24 (No.2): 233–43.

Alsied, Safia Mujtaba, and Mustafa Mubarak Pathan. 2013. *The Use of Computer Technology in EFL Classroom: Advantages and Implications*. IJ-ELTS: International Journal of English Language & Translation Studies Vol: 1, Issue: 1.

Bikowski, D., and Casal, J. E. 2018. *Interactive digital textbooks and engagement: A learning strategies framework*. Language Learning and Technology, 22(1), 119-136. https://www.researchgate.net/publication/323151066_Interactive_digital_textbooks_and engagement A learning strategies framework

Brett, Paul. 1997. *A comparative study of the effects of the use of multimedia on listening comprehension*. Pergamon Vol. 25, No. 1: 39–53.

Černá, Monika. 2022. Evaluation of ELT Textbooks: A Handbook for Trainee Teachers.

Masarykova univerzita. Brno, E-kniha (PDF).

https://munispace.muni.cz/library/catalog/view/2207/6554/4262-1/0#preview.

Cherednichenko, Galina, Lyudmila Shapran, and Lyudmila Kunitsia. 2011. *The role of technology in teaching listening*. Trendy Ve Vzdělávání 01: 78–83. https://tvv-journal.upol.cz/pdfs/tvv/2011/01/19.pdf.

Chou, I-Chia. 2015. Engaging EFL Students in E-books Using Reader-Response Theory.

The Reading Matrix: An International Online Journal Volume 15, Number 2.

https://readingmatrix.com/files/13-erl73moy.pdf.

Cloete, A.L. 2017. *Technology and education: Challenges and opportunities*. HTS Teologiese Studies/ Theological Studies 73(4), a4589. https://doi.org/10.4102/hts.v73i4.4589

Correa, Yeferson Romaña. 2015. *SkypeTM Conference Calls: A Way to Promote Speaking Skills in the Teaching and Learning of English*. Universidad Distrital Francisco José de Caldas, Bogotá, Colombia. http://dx.doi.org/10.15446/profile.v17n1.41856

Doggett, Gina. 1986. *Eight Approaches to Language Teaching*. ERIC Clearinghouse on Languages and Linguistics, Washington, D.C. https://files.eric.ed.gov/fulltext/ED277280.pdf.

Engbrecht, J. R. 2018. *Digital Textbooks Versus Print Textbooks*. Culminating Projects in Teacher Development, St. Cloud State University. Available at: https://repository.stcloudstate.edu/ed_etds/35

Gabrial, Brian. 2007. *History of Writing Technologies*. Concordia University, Montreal, Canada. http://richardcolby.net/writ2000/wp-content/uploads/2017/10/Gabrial-2007-Handbook-History-of-Writing-Technologies-OCR.pdf.

Grammarly. 2023. *Skvělé, jednoduché psaní v angličtině*. Grammarly. https://grammarlycz.cz/.

Haris, Adnan Rizal. 2016. *Issues in Digital Era*. Universiti Teknologi MARA. https://www.researchgate.net/publication/328528038 Issues In Digital Era.

Hermagustiana, Istanti, and Desy Rusmawaty. 2021. *The Application of ICT for Vocabulary Teaching in EFL Classrooms: Support and Challenges*. The Journal of EFL Education and Research. Volume: 6 Number: 2.

Hewett, Beth L., and Kevin Eric DePew. 2015. Foundational Practices of Online Writing

Instruction. E-book. Parlor Press.

https://wac.colostate.edu/docs/books/owi/foundations.pdf

Hockly, Nicky. 2011. *The Principled Approach* 2. E-Moderation Station. https://www.emoderationskills.com/the-principled-approach-2/.

Ilmi, K., & Dewi, D. 2022. *The Integration of Multimodality in EFL Classes: Students' Perception.* Jo-ELT (Journal of English Language Teaching) Fakultas Pendidikan Bahasa

& Seni Prodi Pendidikan Bahasa Inggris IKIP, 9(2), 150-159.

doi:https://doi.org/10.33394/jo-elt.v9i2.6343

Klement, Milan, and Dostál Jiří. 2013. *Tradiční a soudobé chápání multimediality a interactivity*. Trendy ve vzdělávání. Obecné aspekty a specifika vzdělávání v informační společnosti. https://tvv-journal.upol.cz/pdfs/tvv/2013/01/109.pdf.

Klett nakladatelství s.r.o. 2020. *Bloggers – moderní sada pro výuku angliického jazyka*. Klett https://klett.cz/bloggers/.

Kopecký, Kamil, and René Szotkowski. 2018. *Moderní informační komunikační technologie ve výuce*. Pedagogická Fakulta UP. Olomouc. https://www.pdf.upol.cz/fileadmin/userdata/PdF/VaV/2018/odborne_seminare/Moderni informacni komunikacni technologie ve vyuce.pdf.

Korkmaz, S., Öz, H. 2021. *Using Kahoot to improve reading comprehension of English as a foreign language learners*. International Online Journal of Education and Teaching (IOJET), 8(2). 1138-1150. https://files.eric.ed.gov/fulltext/EJ1294319.pdf

Kravchenko, Arina. 2023. *The History of the Method: The Direct Method*. Grade University. https://grade-university.com/blog/the-history-of-the-method-the-direct-method.

Kravchenko, Arina. 2023b. *The History of the Method: The Audio-Lingual Method. Grade University.* Grade University. https://grade-university.com/blog/the-history-of-the-method-the-audio-lingual-method.

Kravchenko, Arina. 2023c. *The History of the Method: The Grammar-Translation Method*. Grade University. https://grade-university.com/blog/the-history-of-the-method-the-grammar-translation-method.

Kravchenko, Arina. 2023d. *What Is Communicative Language Teaching?* Grade University. https://grade-university.com/blog/what-is-communicative-language-teaching.

Lawver, Haylee. 2023. *The Pros and Cons of Digital Textbooks Vs. Traditional Textbooks*. Maranatha Baptist University. https://www.mbu.edu/blog/student-interests/pros-cons-digital-traditional-textbooks/.

Liškař, Čestmír. 1969. *Vývoj cizojazyčného vyučováni*. Sborník prací Filozofické fakulty brněnské univerzity. I, Řada pedagogicko-psychologická. Vol. 18, iss. 14, pp. 23-45. https://digilib.phil.muni.cz/sites/default/files/pdf/112539.pdf.

Marco Learning. 2023. *Using Technology to Improve Student Writing Skills* https://marcolearning.com/using-technology-to-improve-student-writing-skills/.

Mo, Chuan-Yu, Chengliang Wang, Jian Dai, and Peiqi Jin. *Video Playback Speed Influence on Learning Effect From the Perspective of Personalized Adaptive Learning: A Study Based on Cognitive Load Theory*. Frontiers in Psychology 13 Article839982.https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2 022.839982/full

MŠMT ČR. 2014. *Strategie digitálního vzdělávání do roku 2020*. MŠMT. https://www.msmt.cz/uploads/DigiStrategie.pdf.

MŠMT ČR. 2023. Národní plán obnovy - prevence digitální propasti a podpora vybavení škol digitálními učebními pomůckami pro rozvoj informatického myšlení žáků a jejich digitálních kompetencí pro ZŠ, SŠ a KON pro rok 2023. MŠMT. https://www.msmt.cz/vzdelavani/skolstvi-v-cr/narodni-plan-obnovy-prevence-digitalni-propasti-a-podpora.

Nakladatelství Fraus. 2024. *Hybridní systém výuky ve škole i doma*. Učebnice Fraus. https://ucebnice.fraus.cz/cs/nezavisle-stranky/hybridni-vzdelavaci-materialy/o-projektu-22265

Oxford University Press. 2014. *Project Fourth Edition*. English Language Teaching Czech Republic. https://elt.oup.com/catalogue/items/global/teenagers/project_fourth_edition/?cc=cz&sel Language=cs&mode=hub.

Paquet-Bélanger, Nathalie. 2017. *How Can Technology Be Used to Support Reading Comprehension?* LD@School. https://www.ldatschool.ca/support-reading-comprehension-a-t-e/#:~:text=Students%20are%20able%20to%20use,to%20better%20understand%20the%

Pumpo, Alessandro. 2023. 50 Best EdTech Tools by Category. Europass Teacher

Academy. https://www.teacheracademy.eu/blog/best-edtech-tools/.

20texts.

Rodríguez, Jesús Rodríguez, Eric Bruillard, and Mike Horsley. 2015. *Digital Textbooks, What's New?* Universidade de Santiago de Compostela.

https://repository.gei.de/bitstream/handle/11428/64/818883286_2016_A.pdf?sequence= 2&isAllowed=y.

Samad, Iskandar Abdul, Ahmad Bustari, and Diana Ahmad. 2017. *The use of podcasts in improving students' speaking skill*. Syiah Kuala University. Journal of English Language and Education Vol 3. No. 2.

Sander, Riya. 2022. *How to Start Using Educational Technology in Your Classroom Today*. eLearning Industry. https://elearningindustry.com/how-to-start-using-educational-technology-in-your-classroom-today.

Shehab, Hanan Mohammed. 2022. *The Effect of Technology on Learning English as a Second Language*. Vol. 10, Issue 4, pp: (474-481). Kuwait: International Journal of Social Science and Humanities Research. ISSN 2348-3164 (online) Available at: www.researchpublish.com

Simbartl, Petr. 2015. *Validace interaktivních učebnic pro základní školy*. PhD Dissertation. Západočeská univerzita v Plzni, pedagogická fakulta. https://dspace5.zcu.cz/bitstream/11025/20693/1/disertace-simbartl.pdf.

Stritto, Mary Ellen Dello, and Katie Linder. 2017. *A Rising Tide: How Closed Captions Can Benefit All Students*. Educause Review. https://er.educause.edu/articles/2017/8/a-rising-tide-how-closed-captions-can-benefit-all-students.

Suryana, Irfan, and Didik Murwantono. 2020. Artificial Intelligence to master English Listening skills for non-english major students. Ahmad Dahlan University, Indonesia JOLLT Journal of Languages and Language Teaching Vol.8, No.1.

Talkpal. 2024. Learn English with Talkpal. Talkpal AI. https://talkpal.ai/

West, Richard. 2019. *Using Technology to Help Learners Develop Listening Skills on Their Own*. CityU of Seattle. https://www.cityu.edu/using-technology-to-help-learners-develop-listening-skills-on-their-own/.

Wintemute, Doug. 2023. Synchronous Vs. Asynchronous Classes: What's the Difference? The Best Schools (blog). https://thebestschools.org/resources/synchronous-vs-asynchronous-programscourses/#:~:text=Synchronous%20classes%20run%20in%20real,hours%20and%20from %20different%20locations.

Zheng, Huibin, and Xiaoli Wang. 2016. *The Use of Electronic Dictionaries in EFL Classroom*. Shantou University in China. Studies in English Language Teaching Vol. 4, No. 1: https://core.ac.uk/download/pdf/268085062.pdf.