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Investigating the Effects of ICT-Based Interactive Foreign Language Teaching to Primary School Students

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Abstract

The integration of ICT in foreign language instruction at primary school level has emerged as a significant component of contemporary educational methodologies. This study aims to examine the impact of ICT-based interactive foreign language instruction on the academic performance and attitudes of fourth-grade students towards foreign language courses in Kazakhstan's primary schools. The study involved 66 students and utilized a control group pretest-posttest experimental design. The experimental group participated in foreign language lessons utilizing the interactive electronic textbook "English for Fun. Play & Learn" and the ICT-based Dyned Software Program for 12 weeks. The control group received foreign language instruction using the traditional teaching method for the same duration. The 'Foreign Language Academic Achievement Test' and the 'Scale of Attitude towards Foreign Language Lesson' served as instruments for data collection. The T-test method was employed to analyze the pre-test, post-test, and retention scores of students across the groups. The findings of the study revealed that students in the experimental group, who participated in ICT-based interactive foreign language education, exhibited superior academic performance and more favorable attitudes towards the foreign language course than those in the control group.

Keywords: *Primary school students, foreign language teaching, ICT, Interactive*

Introduction

Foreign language education and instruction hold significant importance within our nation's educational system, as they do globally. The teaching of foreign languages, which previously relied on very traditional methods, has significantly advanced through the integration of developing technology, leading to a more effective process on various fronts (Aubakirova et al,

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2024). The integration of technology in the process of foreign language education and teaching has assumed an inevitable role (Becho & Bhattacharya, 2017; Dooly & Masats, 2015).

The integration of technology with education has important functions in foreign language learning. In this regard, new multi-stimulus approaches are used in learning environments to develop foreign language skills and to make the process effective, motivating, and easy. The integration of computer technology in English language instruction has been a prevalent subject for the past three decades (Ansyari, 2015; Lee, 2000). Interactive mobile technologies significantly influence the daily lives of young students (Kilinc & Tarman, 2022). A report by Common Sense Media in 2020 indicated that 98% of households with children under the age of 8 have one or more mobile devices such as tablets, smartphones, e-readers or game consoles (Radesky et al., 2020).

Researchers acknowledge that the potential of newer interactive devices to facilitate learning exists, yet their recommendations for further research are still upheld (Abbitt & Klett, 2007; Chassiakos et al., 2016; Hughes et al., 2005). Consistent with this, the results of a meta-analysis showed that the interactive features of multimedia facilitate learning in school-age children (Takacs et al., 2015). The development of ICT enables people to access information rapidly (Ezeamuzie et al., 2023; Mapisa & Makena, 2024), share information easily, increase information sources, and even produce their own knowledge (Njoku, 2015; Taole, 2024). In this process, the use of digital tools, mobile information technologies, the internet, social media, portals, and similar environments constitute digital culture, which has a significant impact on the contemporary information society (Geddes, 2004; Ping Lim & Yong Tay, 2003; Pushpanadham et al., 2023). The new generation, called “Digital Natives” by Prensky (2001) and “Net Generation” by Tapscott (1998), is a generation that enjoys using the latest technologies (Frand, 2000; Howe & Strauss, 2000). For this purpose, teachers need to use technology in their classrooms to meet the demands of students who have grown up as digital natives and to select and implement the most appropriate teaching methods by evaluating the diversity of these technological tools (Maja, 2023).

Studies in ICT have affected the education system as much as they have affected many other systems in society. In 1998, ISTE (The International Society for Technology in Education) set “National Standards for Educational Technology” for students and teachers, and later for management. For students, the standards include knowing the basic concepts and procedures related to technology, understanding the social, ethical, and humanitarian issues related to the use

of technology, and using technology effectively to enrich learning, communication, research, problem solving and decision-making skills (Crompton & Burke, 2024; Kimm et al., 2020). With ICT, students could recognize their personal interests and talents and develop vital lifelong learning skills such as accessing information, producing knowledge, and sharing knowledge with peers. In other words, technology serves as an effective tool to support learning in various ways. In this respect, technology is one of the most important aspects of school innovation efforts and systematically plays a critical role in enhancing the effectiveness of the learning-teaching process (Dondlinger et al., 2016; Fuller, 2023).

The adaptation of technology to courses was first realized by adapting the computer as a lecture tool, and then this adaptation gradually increased with applications such as useful content, educational games, and internet-based lessons. The use of ICT in primary school and the adaptation of technology to the lessons reveal significant differences compared to the lessons taught with traditional methods. The use of ICT in primary schools allows children who are already familiar with technology to gain knowledge from reliable sources, use it effectively for both personal and educational purposes, and understand its benefits and risks, and protect themselves from harmful effects (Abel et al., 2022; Aesaert et al., 2015; Sang et al., 2011).

The PISA 2012 ICT Familiarity Questionnaire, which countries voluntarily participated in, consists of a total of 8 indices in 10 sub-dimensions. These sub-dimensions include students' access to ICT devices at home, access to ICT devices at school, general frequency of computer use, use of computer for recreational purposes outside school, use of computer for schoolwork both at home and at school; the use of computers in mathematics lessons, computers being important for learning, and computers being limited for learning (OECD, 2014). PISA describes ICT familiarity under five headings (OECD, 2013). These five aspects are respectively as follows: 1) Access to ICT, 2) General computer use 3) Computer use outside school 4) Computer use at school 5) Attitude towards computers.

ICT provides learners with innovative opportunities to apply their skills, including the creation of personal web pages, the production of targeted publications, software development, language practice, and the preparation of multimedia presentations. ICT devices integrate traditionally separate educational media, such as books, audio recordings, video recordings, databases, and

games, thereby expanding the contexts and temporalities in which learning can occur (Livingstone, 2011). Although students use the computer in all areas, especially in the lesson, it contributes to the integration of the computer with the lesson because it gives students the opportunity to practice. For this reason, effective and useful use of computers in lessons is a highly desirable situation regarding education.

Technological adaptation in primary schools started with educational films and videos, and recently, ICT has been integrated into education in various ways, such as intelligence-enhancing games and digital storytelling. As a common result of many studies, it is accepted that the use of ICT in primary school contributes to the development of skills such as visual literacy, cooperation, technological competence, multilingual skills, creativity, and problem-solving (Adedokun et al., 2024; Heo, 2009; Rahimi & Aghabarari, 2024; Robin, 2008).

It is crucial to remember that primary school children tend to make everything concrete. The way to teach language to students at this age is to provide learning via specific examples (Sartayeva & Kulnazarova, 2017). For instance, the use of ICT for this age group could be the projection of an English composition authored by a student. Students can provide feedback on the errors presented and more readily recognize the problems in their writing. Thus, learning can be more effective. Three key ways are identified in which smart boards aid in the teaching of foreign languages (Gerard & Widener, 1999): they facilitate engagement and dialogue in the classroom, introduce new cultural and language components, and enhance the teacher's organizing capabilities (Chinnery, 2006; Lange et al., 2023).

Technological tools are used in different disciplines in the field of education. Researches demonstrate its beneficial effects in every discipline in which it is used. Upon reviewing the literature, foreign language education has taken its place among the disciplines where technology is used (Calderon-Young, 2023; Sitora, 2023). About the combination of technology and foreign language, the understanding is that “the integration of technology tools into the curriculum in foreign language education will be effective in transferring the knowledge, skills and gains importance to develop basic language skills to the students and in increasing their motivation towards the lesson” (Blake, 2013; Golonka et al., 2014).

The success of primary school students in foreign language learning depends on making each lesson interesting and meaningful. Therefore, a syllabus for teaching English at an early age, which includes the age of play, should include activities that students will be interested in. Language is not only an object of learning but also an enabling environment, which means an integrated curriculum in an innovative and alternative way to communicative language teaching (Assylzhanova & Sadykova, 2024; Castaño et al., 2014).

Factors such as repetition, learning by doing, authentic learning environments, meaningful and immediate feedback, and social interaction, which are essential for foreign language learning, are highly compatible with the nature of ICT tools (Martins et al., 2012). The integration of ICT in language learning facilitates immediate feedback, promotes learner autonomy, and enables control over the learning pace (Hanrahan, 2005; Sagarra & Zapata, 2008; Stockwell, 2007; Wilkinson, 2016). It has been stated that multimedia tools make significant contributions to retention in individuals' learning (Al-Seghayer, 2016; Yoshii, 2006).

ICT, whose impact on academic achievement and student attitudes has been studied, is effectively integrated with various teaching-learning methods. This approach, carefully aligned with teaching strategies, is mostly used in studies involving experimental and control groups, where differences in academic achievement are analysed (Albugami & Ahmed, 2015; Cox & Marshall, 2007; Jaboob et al., 2024; Ozdemir & Ozturk, 2022; Stopar & Bartol, 2019). Many studies in the field of foreign language teaching have examined the impact of ICT (Botero et al., 2019; Kessler, 2021; Lee & Lee, 2021; Lin & Warschauer, 2015; Liu et al., 2024; Zhang & Zou, 2022). In short, ICT technologies facilitate rapid and advanced engagement, allowing students to acquire a foreign language more efficiently. ICT is a multidisciplinary domain. ICT-based foreign language teaching is utilized in studies concerning second language acquisition, linguistics, and semantics, in addition to study on the teaching of listening, speaking, reading, and writing competencies.

The use of ICT in foreign language teaching at primary school level has become an important part of modern educational approaches. ICT offers many advantages for both teachers and students in foreign language teaching and can make the learning process more effective, accessible, and motivating. ICT gives learners access to a wide range of digital resources. These resources include interactive language learning applications, online course materials, virtual classrooms, and

language games. This diversity enriches the language learning process and appeals to students' different learning styles (Egbert & Hanson, 2007; Gruba & Hinkelman 2012). Moreover, students have opportunities to learn outside the classroom, which can contribute to their continuous practice of the language. ICT enables the personalization of the learning process providing an educational environment that suits the individual needs and pace of each learner. In foreign language learning practices, this can help learners to focus on the areas where they have difficulties and to practice more in these areas (Stockwell, 2007). This personalized approach can help students to be more engaged and successful in foreign language learning. ICT technologies play an important role in increasing students' motivation. Interactive and gamified learning environments keep students' interest in the lessons alive and make the language learning process fun. Especially for primary school students, game-based learning can greatly increase their foreign language motivation and positive attitudes towards the course (Chapelle, 2003; Anastasopoulou et al., 2024). In this context, this study intends to investigate the impact of ICT-based interactive education on students' foreign language performance and their attitudes towards the course. The study aimed to obtain answers to the subsequent questions.

-Is there a significant difference in foreign language achievement between the experimental group, which received ICT-based interactive teaching, and the control group, which received traditional teaching methods?

-Is there a significant difference in learning retention between the experimental group, which received ICT-based interactive foreign language teaching, and the control group, which received traditional teaching methods?

-Is there a significant difference in attitudes towards the foreign language course between the experimental group, which received ICT-based interactive teaching, and the control group, which received traditional teaching methods?

Method

Design of Research

The research employed a quasi-experimental design, a specific form of quantitative research methodology. Experimental studies can be applied on a single subject or a single group, as well as on two groups (experimental and control groups) or more groups (Curtis et al., 2015). This study

employed a non-equivalent control group design, categorized as a quasi-experimental design type. Fry (2014) states that the non-equivalent control group design resembles the pretest-posttest control group design, with the distinction that it does not employ random assignment to equalize the groups. However, attention is directed towards the comparable characteristics of the participants, leading to an unbiased determination of the experimental and control groups. In this study, two classes with similar characteristics from primary school were randomly assigned as experimental and control groups (EG-CG). One of these classes received ICT-based interactive teaching, which was investigated for its effectiveness, while the other received the traditional curriculum. Quantitative data collection tools were applied to these two groups in the form of pre-test, post-test and retention test and the effects of the applications were compared. The design of the control group research is presented in Table 1.

Table 1
Research Design

	Pre-test	Experimental Procedures	Post-test	Retention Test
Control group	Foreign language academic achievement test Scale of Attitude Towards Foreign Language Lesson	Traditional teaching	Foreign language academic achievement test Scale of Attitude Towards Foreign Language Lesson	Foreign language academic achievement test
Experimental group	Foreign language academic achievement test Scale of Attitude Towards Foreign Language Lesson	Interactive electronic textbook "English for Fun. Play & Learn" and ICT interactive Dyned Software application	Foreign language academic achievement test Scale of Attitude Towards Foreign Language Lesson	Foreign language academic achievement test

Participants

The study involved 66 students from two fourth-grade classes at a public primary school in Astana, Kazakhstan. The convenient sampling approach, a non-random sampling method, was employed to identify the participants. This approach facilitates the research process by mitigating financial, facility, and labour losses. One class was designated as the 'Experimental Group' and the other as the 'Control Group'. The average age of the sample was 11.5 years. In the experimental group, there were seventeen female students and fifteen male students. In the control group, there were 17 female students and 17 male students. The experimental and control groups exhibited comparable academic achievement from the previous year (4th grade), as well as similar foreign

language proficiency and utilization of ICT technologies. Table 2 presents the demographic characteristics of the participating students.

Table 2
Participants' Distribution Based on Demographic Variables

	Experimental Group		Control Group	
Gender	N	%	N	%
Male	15	47.1	17	52.9
Female	17	52.9	17	47.1
Mother's Education Status				
Primary school graduate	3	9.38%	3	8.82%
Secondary school graduate	5	15.63%	6	17.65%
High school graduate	13	40.63%	13	38.24%
University graduate	11	34.38%	12	35.29%
Father's Education Status				
Primary school graduate	2	6.25%	3	8.82%
Secondary school graduate	4	12.50%	4	11.76%
High school graduate	11	34.38%	12	35.29%
University graduate	15	46.88%	15	44.12%
Total	32	100.0	34	100.0

Experimental Implementation

Before beginning the research, a pilot study was conducted to familiarise the students in the experimental group with the methodology to be used and the implementation. In this pilot study, a two-hour lesson plan for teaching 4th grade foreign language subjects supported by ICT technologies was designed and applied. Interactive electronic textbook "English for Fun. Play & Learn" and ' DynEd First English' software program were integrated into the foreign language lesson as part of ICT technologies. This approach helped students become familiar with the practical application of the software. In the pilot study, the learning outcomes of two units of the 4th grade foreign language course were covered. After completing the pilot study in the experimental group, the pre-test phase of the main study started. In the pre-tests, quantitative data collection tools were applied simultaneously to both the experimental and control groups. Then,

the teaching phase started. During this phase, the control group received instruction through traditional procedures, whereas the experimental group was instructed using digital technologies, specifically the electronic textbook and DynEd software. In both groups, teaching was conducted by the researcher and lasted 12 weeks. During the teaching process, both groups covered the topics of 'Vocabulary,' 'Grammar,' and 'Reading Comprehension' from two units of the 4th-grade foreign language curriculum.

The experimental group utilized First English software as part of the DynEd English Language Education System. First English is a multimedia software developed for students in the 4th and 5th grades. The program emphasizes instruction in sentence structures and vocabulary necessary for general English proficiency, alongside English frequently utilized in educational environments and classroom communication. Support software enables the system and teachers to monitor and guide students who work with computers at school and out of school. The DynEd Education System employs the proper learning approach, which involves using all of the senses at the same time, to assist students in acquiring a language and repeating it enough times for it to be permanently remembered. In this way, they compare their speaking speed, pronunciation and emphasis and try to pronounce the word or sentence in the most correct way.

Furthermore, students may view the dates and times of all their work, their accuracy in answering questions, the percentage of work completed, and their test scores, with the option to practice an unlimited number of times. Ongoing and immediate assessment of students' system entries enables the tracking of their language learning progress.

In the control group, the 4th grade foreign language course was taught with the traditional teaching method for 12 weeks in total. In this context, 'Vocabulary', 'Grammar' and 'Reading Comprehension' subjects in the first two units of the 4th grade foreign language course were taught with the direct traditional teaching technique. At this stage, the teacher mainly lectured the lesson and had the students repeat the lesson with question-answer activities. At the end of the experimental applications of the research, post-tests were applied to both groups (Foreign Language Academic Achievement Test and Scale of Attitude towards Foreign Language Lesson). Fifteen days after the application of the post-test, the 'Foreign Language Academic Achievement Test' was applied to the experimental and control groups as a retention test.

Implication of Study

First English Software

This software, First English, focuses on the sentence structures and vocabulary necessary for general English language use, as well as on the English language of communication in school life and in the classroom. The characters Judy, Shawn, Maria and Ken make the software more interesting by acting out communication scenarios in the school environment (Appendix 1). The units in the software also develop reading skills, starting with the alphabet, and continuing with letter-sound relationships. In subsequent units, listening, speaking, grammar, vocabulary and reading skills are continuously reinforced. Visual aids and dictionary support throughout the software make the language easier to understand. Interactive exercises and quizzes allow students to learn English in a fast but natural environment. Skills quizzes not only increase student motivation, but also help the teacher to monitor student work and provide the necessary guidance. The DynEd Record Manager and Tutor, both built into the software, are used to monitor student study records. Each unit in the software starts with a short lecture followed by listening practice with comprehension questions. This is followed by a variety of exercises that develop grammar, fluency and writing skills. Dyned software allows students to work at their own pace thanks to its special interaction system. When needed, students benefit from tools that facilitate learning such as repetition and audio-recording, listening to audio-recording, dictionary, reading the text in writing, reading the translation of the text and skills tests.

First English covers listening, speaking, grammar, vocabulary and reading skills through units in grade 4. The program includes skills exams, student exercises and worksheets. At the end of each unit, skills quizzes are given to assess the student's progress and readiness to move on to the next unit (Assylzhanova, 2022). Once the student started working in the software, the Enrolment Manager evaluated each student's performance and provided the necessary guidance. For certain lessons and skills exams, the teacher used the Record Manager to check the students' progress.

Course Design

Study periods vary depending on the level of the student. It is ensured that students work on each unit for at least 7 - 8 hours. Review activities are carried out on each new topic. In each unit, there are 5 lessons with different focal points: 1. the lessons in the listening section are divided into various sections. Each section introduces the main concepts of the language and provides intensive

listening and speaking exercises. Students compared their own speech with that of native speakers. Students engaged in activities that focused on 'comprehension' by going to the content with 'Wh-' and 'Yes-No' questions. Sample topics included name, nationality, native languages, countries, age, place/location and directions. The difficulty level of these lessons was adjusted according to the student's progress with the 'Level Adjuster' in the software.

-With the activities in the Dialog section, exercises were practiced in the school environment and in accordance with the level of the student. In each lesson, there are two or more conversation activities with 'comprehension' questions and dictionary support. In this section, examples of the functional use of the English language are presented through interesting characters.

-The activities in the Vocabulary section aimed at developing vocabulary knowledge about objects and actions that are important in the classroom setting. Each vocabulary lesson included several chapters with comprehension exercises and an assessed quiz covering all chapters.

-The lessons in the Grammar section focus on the basic rules of English grammar in listening, conversation, and vocabulary. The quiz-style Grammar Focus exercises help students to consolidate their knowledge of the English language.

-The activities in the Letters & Numbers section aim to improve reading and vocabulary skills. In this dimension of the software, the alphabet, phonics, numbers, time, and calendar language were among the sample topics covered. In each daily lesson session, students took a quiz related to that day's content (Appendix 2).

-Level Adjustment™ and Completion Percentage

As the student answers the questions and completes the exercises, the “Level Adjuster” is raised or lowered between 0.0 and 3.0 and the computer adjusts the scope and difficulty of the lesson. In some lessons of the First English software, additional sentence structures and comprehension questions are presented as the student's level increases. When the Level Adjustment reaches 2.0 or higher, it means that the highest-level exercises for that lesson have been opened during the student's study. For each lesson, the student is expected to reach first 80% and then 100% Completion Percentage. The Completion Percentage includes the completion targets of exercises such as sentence repetition, sentence audio recording attempts, voice recognition attempts,

dictionary use, level adjuster, and the number of questions answered correctly to ensure that students reach a sufficient level in communication.

-Tutor (Consultant): The Tutor in DynEd software analysed students' study data and made suggestions for improvement based on the results of software features such as completion percentage, study frequency, exam result level and voice recording for the class and for each student. Dyned's Tutor software provides users with a written report and a grade about their behaviour during their studies and indicates what needs to be done for more efficient learning.

Data Collection Instruments

Two quantitative data collection tools were used in the study. These are, Foreign Language Academic Achievement Test and Scale of Attitude towards Foreign Language Lesson.

Foreign Language Achievement Test

The Foreign Language Academic Achievement Test used in the study was developed by the researchers within the scope of this study. The test aims to measure the achievements of two units taught in the fourth grade within the scope of the Foreign Language course curriculum. The content of the test includes vocabulary, grammar, reading comprehension. The test contains a total of 25 multiple-choice items. The validity and reliability studies of the test were conducted by the researchers and the KR-20 reliability coefficient was .87. The Foreign Language Academic Achievement Test was administered to the experimental group and the control group in one class hour before and after the research (Pre-test/Post-test). The same test was administered to both groups 15 days after the experimental applications as a retention test.

Scale of Attitude towards English Language

The Scale of Attitude towards English Language Teaching utilized in the study was created by the researchers. The scale items utilize a 5-point Likert scale, with responses ranging from "strongly disagree" to "strongly agree." A total of 15 items are present, with 7 items designated as reverse scoring items. The scale's developers posited that it could effectively assess fourth grade students' attitudes toward the English course. The factor analysis conducted on the scale revealed a unidimensional structure. The reliability coefficient of the scale, measured by Cronbach's Alpha, was .85. The scale was administered concurrently to both the experimental and control groups

prior to and following the research, with each session lasting 30 minutes. The attitude scale was utilized as both a pre-test and post-test in the study.

Data Collection

During the data collection process, the study was carried out in the second semester of the 2023-2024 academic year over a period of approximately 12 weeks. The procedures followed in this experimental study are explained in detail in the experimental procedures section above. At the beginning of the study, the 'Foreign Language Achievement Test' was administered simultaneously to both the experimental group, where the ICT interactive foreign language approach would be applied, and the control group, where traditional teaching methods were used. This test aimed to assess the students' readiness levels and was later used in the data analysis process as a pre-test for both groups. The same test was administered simultaneously to both groups as a post-test and retention test following the experimental applications. In addition, the Scale of Attitude towards English was applied to both groups as both a pre-test and a post-test.

Data Analysis

In this section, details regarding the statistical analysis of the quantitative data collected with the help of the Foreign Language Academic Achievement Test and Scale of Attitude used in the study are presented. In the analysis of the data obtained from the Foreign Language Academic Achievement Test, the correct answers given by the students were scored as "1" and the incorrect answers and those left blank were scored as "0". Then, the data sets from each application were transferred to SPSS 27.0 for quantitative analysis. First, normality analysis was performed for each data set. The normality analysis in a data set can employ various methods. The Kolmogorov-Smirnov test is recommended for samples exceeding 50 participants, while the Shapiro-Wilk test is preferred for samples with fewer than 50 participants. The results of the Shapiro-Wilk test conducted on the pre-test and post-test data sets indicated that the p-value exceeded the .05 significance level, suggesting that the data sets did not significantly differ from a normal distribution. Therefore, parametric tests were used to analyse the data obtained from the foreign language academic achievement test. Therefore, independent samples t-test was used in the pre-test, post-test, and retention comparisons between the experimental and control groups.

In the analysis of the data obtained from the attitude scale, the scale items were coded from 1 to 5, from “strongly disagree” to “strongly agree”. Then the data sets were transferred to SPSS 27.0 and analysed for normality. As a result of the analyses, normality test was applied to each group. It was found that the p statistic values obtained regarding normality analysis were higher than .05; that is, the data sets did not differ significantly from the normal distribution (see table 3). Consequently, a t-test for independent samples was employed to compare the pre-test and post-test attitude scores between the experimental and control groups.

Table 3
Results of Normality and Homogeneity Tests for Foreign Language Achievement and Attitude Scale Scores

	Kolmogorov-Smirnov			Levene's Test	
	Statistics	df	Sig.	F	Sig.
Achievement Pre-Test	0.103	64	0.122	0.116	0.735
Achievement Post-Test	0.091	64	0.150	1.465	0.118
Retention Test	0.105	64	0.104	1.962	0.089
Attitude Pre-Test	0.107	64	0.109	1.713	0.202
Attitude Post-Test	0.105	64	0.104	1.926	0.092

Findings

The results of the Independent Samples t-test regarding the pre-test scores of the foreign language academic achievement and scale of attitude applied to the experimental and control groups at the beginning of the research are given in Table 4 and Table 5.

Table 4
t-test Results for the Groups' Pre-Test Scores on the Foreign Language Academic Achievement Test

	Group	N	$\bar{X}$	*SD*	T	P
Pre-test	Experimental	32	7.74	2.14	-0.157	0.876
	Control	34	7.82	2.49		

The table indicates that the experimental and control groups' pre-test results on the academic achievement exam for the foreign language course did not differ significantly ($t(64)=0.167$, $p>0.05$). Accordingly, prior to the experimental applications, the experimental group's mean pre-

test foreign language academic performance score ($\bar{X}$=7.74) did not differ significantly from that of the control group ($\bar{X}$=7.82).

Table 5

T-test Results for the Groups' Pre-Test Scores on the Scale of Attitude towards Foreign Language

	Group	N	$\bar{X}$	*SD*	T	P
Pre-test	Experimental	32	3.30	0.52	-0.184	0.855
	Control	34	3.32	0.24		

The experimental group's pre-test results on the scale of attitude towards a foreign language course did not significantly differ from those of the control group, as shown by the table ($t(64)=0.184$, $p>0.05$). Accordingly, it is seen that the mean pre-test scores of attitude towards foreign language course scores of the experimental group ($\bar{X}$=3.30) did not differ significantly from the control group ($\bar{X}$=3.32) before the experimental implementation.

Table 6

T-test Results for the Post-Test Scores of the Groups in the Foreign Language Academic Achievement Test

	Group	N	$\bar{X}$	*SD*	t	P
Post-test	Experimental	32	18.65	5.42	2.653	0.010
	Control	34	15.68	3.65		

The table shows a significant difference in post-test scores between the experimental and control groups on the foreign language course academic achievement test ($t(66)=2.653$, $p<0.05$). Accordingly, as a result of the ICT-based interactive foreign language teaching, it was found that the average foreign language academic achievement score of the experimental group ($\bar{X}$=18.65) was statistically significantly higher than the control group ($\bar{X}$=15.68).

Table 7

t-test Results for the Groups' Foreign Language Academic Achievement Retention Test Scores

	Group	N	$\bar{X}$	*SD*	t	P
Retention Test	Experimental	32	17.50	4.73	3.986	P<0.001
	Control	34	13.56	3.30		

The table indicates that the experimental group's retention test results on the foreign language academic achievement exam differed significantly from the control group's ($t(66)=3.986$, $p<0.01$). Because of the ICT-based interactive foreign language instruction, the experimental group's mean

foreign language retention test score ($\bar{X}$=17.50) was considerably higher than the control group's ($\bar{X}$=13.56).

Table 8
t-test Results for Post-Test Scores on the Foreign Language Attitude Scale between Groups

	Group	N	$\bar{X}$	SD	t	P
Post-test	Experimental	32	3.74	0.62	3.369	0.001
	Control	34	3.33	0.35		

The results of the experimental group's post-test on the scale of attitude towards foreign language course showed a significant difference from those of the control group, as indicated by the table ($t(64)=3.369$, $p<0.01$). Consequently, it was found that the experimental group's mean post-test score on their attitude towards the foreign language course ($\bar{X}$=3.70) was significantly higher than that of the control group ($\bar{X}$=3.29) as a result of the ICT-based interactive foreign language teaching.

Discussion

This study comparatively examined the effects of interactive ICT applications on students' foreign language achievement, learning retention and attitudes compared to traditional teaching in primary school 4th grade foreign language course. The study indicates that the interactive electronic textbook "English for Fun. Play & Learn" and DynEd software, which was used for 12 weeks, had a significant positive impact on primary school fourth-graders foreign language proficiency and learning retention. Students in the experimental group with the interactive electronic textbook and DynEd software achieved higher foreign language proficiency and learning retention compared to their peers in the control group with traditional teaching. These findings are consistent with the results of previous research (Aryani, 2019; Bećirović et al., 2021; Budiman, 2020; Farmana, 2018; Kayapinar et al., 2019; Yen & Nhi, 2021).

According to Sun et al. (2008), ICT applications provide students with individualized learning paths, allowing each student to progress at his/her own pace. This makes significant contributions, especially in learning complex language structures. For example, one learner may want to revisit a particular topic, while another learner may move on to a more advanced level. This flexibility contributes to maximizing the potential of each learner. According to Goloka et al. (2014) and Stockwell (2016), ICT applications enable students to receive immediate feedback on their errors. For instance, Dyned language learning software immediately identifies and corrects learner errors.

This immediate feedback is highly beneficial in foreign language classes in terms of accelerating the language learning process and making it more effective. ICT tools for foreign language learning make the language learning process more meaningful and useful by providing students with content that is connected to the real world. Through virtual applications, game activities and exercises, students were able to communicate with native speakers of the foreign language on the interactive electronic textbook "English for Fun, Play & Learn" and DynEd software and thus develop their language skills in practice. For these reasons, the use of ICT technologies in primary school foreign language education has made students' language learning process more effective and individualized, which in turn has increased foreign language achievement.

Another sub-problem of the research is the effect of interactive ICT foreign language applications on the attitudes of fourth grade primary school students towards foreign language courses. ICT applications with interactive electronic textbook "English for Fun. Play & Learn" and DynEd software had a positive effect on students' attitudes towards foreign language courses. Indeed, the results of the studies conducted by Kopinska (2020), Kuddus & Khan (2020), Qaddumi & Smith (2024), Villafuerte & Romero (2017) in foreign language classes support the findings of this study. ICT applications in primary school foreign language classes can have significant positive effects on student attitudes and motivation. By making learning processes more interactive and engaging, these technologies improve students' attitudes and their motivation to learn. In particular, the ICT applications based on the interactive electronic textbook "English for Fun. Play & Learn" and DynEd software, which were implemented for 12 weeks in this study, provided students with a more interactive and dynamic learning experience. The language learning games, simulations, and virtual worlds realized within the software enabled students to learn actively by using the language. Such interactions made language learning more fun and helped students develop a more positive attitude towards the lessons. According to Dörnyei & Ushioda (2013), a personalized learning approach based on ICT applications allows learners to feel more competent and in control of their language learning process. This may have increased their interest and motivation towards the course. As Shin & Albers (2015) state, learners can receive immediate feedback on their work through ICT applications. For example, a language learning application provides the opportunity to immediately identify and correct students' errors. This immediate feedback reinforces students' sense of achievement and increases their attitude and motivation towards language learning. In

addition, using gamification elements in DynEd ICT applications greatly increased students' interest in foreign language lessons. Gamification encouraged students to continue learning through elements such as rewards, levels, and points. This method yielded highly significant results, especially in the affective learning products of primary school students. This is because game-based learning is a powerful tool to engage and motivate them.

By offering interactive learning materials, ICT can enhance students' motivation. For instance, interactive videos, gamified content, and language learning applications encourage students to engage more actively in their lessons. These tools enable students to implement their acquired knowledge, thereby expediting the development of their language abilities (Almekhlafi, 2006; Korosidou et al., 2021).

Conclusion and Recommendations

In this experimental study, it was seen that the use of interactive electronic textbook "English for Fun. Play & Learn" and DynEd ICT-based interactive software application had a significant and positive effect on the foreign language achievement, learning retention and attitudes towards the course and activities of fourth grade primary school students. The experimental study conducted in Kazakhstan revealed statistical superiority in favour of ICT-based interactive foreign language teaching, leading to the conclusion that research on digital assisted teaching is significant enough to be worth encouragement. In this experimental study, it was concluded that ICT-based interactive foreign language teaching was more successful in terms of academic achievement and attitudes. However, there is a necessity for comprehensive research on the impacts of ICT-interactive teaching, particularly given the exclusion of qualitative studies from the analysis. Moreover, post-test findings cannot be considered as the only indicator of teaching. Thus, it is thought that it would be useful to support this experimental research with studies that include qualitative and mixed model studies. Assuming that further research proves beneficial, it is advised to apply ICT-based teaching software at all educational levels where equipment is available, given the finding that ICT-based interactive foreign language teaching is successful at the primary school level. It can be thought that institutions planning foreign language teaching and developing curricula should include interactive ICT teaching materials appropriate to the types and contents of the courses, which will increase the quality of foreign language education to higher levels.

References

Abbitt, J. T. & Klett, M. D. (2007). Identifying influences on attitudes and self-efficacy beliefs towards technology integration among pre-service educators. *Electronic Journal for the Integration of Technology in Education, 6*(1), 28-42. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=d1d2625c826a098034aff9e730231f0e505a70f4

Abel, V. R., Tondeur, J., & Sang, G. (2022). Teacher perceptions about ICT integration into classroom instruction. *Education Sciences*, *12*(9), 609-622. https://doi.org/10.3390/educsci12090609

Adedokun, T., Awung, F., & Usadolo, S. (2024). The Use of Technology in African Language Pedagogy – A Sociological Approach. *Research in Educational Policy and Management, 6*(2), 230-255. https://doi.org/10.46303/repam.2024.33

Aesaert, K., Van Nijlen, D., Vanderlinde, R., Tondeur, J., Devlieger, I., & van Braak, J. (2015). The contribution of pupil, classroom and school level characteristics to primary school pupils' ICT competences: A performance-based approach. *Computers & Education*, *87*, 55-69. https://doi.org/10.1016/j.compedu.2015.03.014

Al-Seghayer, K. (2016). ESL/EFL Instructors' Perceptions of the Efficacy of Online Reading Instruction. *International Journal of Linguistics, 8*(4), 119-132. http://dx.doi.org/10.5296/ijl.v8i4.9571

Albugami, S. & Ahmed, V. (2015). Success factors for ICT implementation in Saudi secondary schools: From the perspective of ICT directors, head teachers, teachers and students. *International Journal of Education and Development using ICT, 11*(1), Open Campus, The University of the West Indies, West Indies. https://www.learntechlib.org/p/151051/

Almekhlafi, A. G. (2006). The effect of computer assisted language learning (CALL) on United Arab Emirates English as a foreign language (EFL) school students' achievement and attitude. *Journal of Interactive Learning Research*, *17*(2), 121-142. https://www.learntechlib.org/primary/p/6218/.

Anastasopoulou, E., Katsonis, N., Stavrogiannopoulou, M., Travlou, C., Mitroyanni, E., & Tsogka, D. (2024). The Role of ICT in Enhancing Modern Teaching Practices in Elementary Schools. *Technium Social Sciences Journal*, 60, 38-45. https://doi.org/10.47577/tssj.v60i1.11440

Ansyari, M. F. (2015). Designing and evaluating a professional development programme for basic technology integration in English as a foreign language (EFL) classrooms. *Australasian Journal of Educational Technology*, *31*(6), 699-712. DOI: https://doi.org/10.14742/ajet.1675

Aryani, R. (2019). Developing Screamble Media To Enhance Speaking Skill for Preschoolers. *Premise: Journal of English Education, 8*(2), 144. https://doi.org/10.24127/pj.v8i2.2416

Assylzhanova, D.E. (2022). "English for Fun. Play & Learn" interactive electronic book for elementary school students. Certificate for objects protected by copyright No. 30734.

Assylzhanova, D.E.,& Sadykova. A.K. (2024).The Usage of Interactive Methods for the Formation of Foreign Language Communicative Competence of Primary School Students. *Journal Pedagogy and Psychology*, 58 (1), 50-58. https://doi.org/10.51889/2960-1649.2024.58.1.006

Aubakirova, A., Kurmanbayuly, S., Akhmetova, T., Smailova, K., Koshanova, Z. & Bayekina, N. (2024). The Effect of the Use of Contemporary Technologies on Teaching New Terms in Literature, *Journal of Social Studies Education Research, 15(*1), 187--211. https://jsser.org/index.php/jsser/article/view/5540/661

Becho, N.S., & Bhattacharya, K. (2017). Twenty Years of Technology Integration and Foreign Language Teaching: A Phenomenological Reflective Interview Study. *The Qualitative Report, 22*(3), 757-778. Retrieved from https://nsuworks.nova.edu/ tqr/vol22/iss3/6

Bećirović, S., Brdarević-Čeljo, A., & Delić, H. (2021). The use of digital technology in foreign language learning. *SN Social Sciences*, *1*(10), 246. https://doi.org/10.1007/s43545-021-00254-y

Blake, R. J. (2013). *Brave new digital classroom: Technology and foreign language learning*. Georgetown University Press.

Botero, G., Questier, F., & Zhu, C. (2019). Self-directed language learning in a mobile-assisted, out-of-class context: Do students walk the talk? *Computer Assisted Language Learning*, *32*(1–2), 71–97. https://doi.org/10.1080/09588221.2018.1485707

Castaño, A.B., Contero Urgal, C., Rodríguez Gómez, G., & Gallego Noche, M. B. (2014). LAMS as an assessment tool for teaching and learning English as a foreign language. *Teaching English with Technology – Special Issue on LAMS and Learning Design, 11*(1), 204-215. http://hdl.handle.net/10498/16942

Budiman, A. (2020). ICT and foreign language learning: An overview. Tarling: Journal of Language Education, 3(2), 245-267. DOI: https://doi.org/10.24090/tarling.v3i2.3913

Calderon-Young, E. (1999). Technology for teaching foreign languages among community college students. *Community College Journal of Research & Practice*, *23*(2), 161-169. https://doi.org/10.1080/106689299264981

Chapelle, C. A. (2003). English language learning and technology: Lectures on applied linguistics in the age of information and communication technology. John Benjamins Publishing.

Chassiakos, Y. L., Radesky, J., Christakis, D., Moreno, M. A., Cross, C., & Council on Communications and media (2016). Children and Adolescents and Digital Media. Pediatrics, 138(5), e20162593. https://doi.org/10.1542/peds.2016-2593

Chinnery, G. M. (2006). Going to the MALL: Mobile assisted language learning. *Language Learning & Technology. 10*(1), 9-16. llt.msu.edu: http://llt.msu.edu/vol10num1/pdf/emerging.pdf

Cox, M. J., & Marshall, G. (2007). Effects of ICT: Do we know what we should know?. *Education and information technologies*, *12*, 59-70. https://doi.org/10.1007/s10639-007-9032-x

Crompton, H., & Burke, D. (2024). The Nexus of ISTE Standards and Academic Progress: A Mapping Analysis of Empirical Studies. *TechTrends*, 68, 1-12. https://doi.org/10.1007/s11528-024-00973-y

Curtis, M. J., Bond, R. A., Spina, D., Ahluwalia, A., Alexander, S. P., Giembycz, M. A., Gilchrist, A., Hoyer, D., Insel, P. A., Izzo, A. A., Lawrence, A. J., MacEwan, D. J., Moon, L. D., Wonnacott, S., Weston, A. H., & McGrath, J. C. (2015). Experimental design and analysis and their reporting: new guidance for publication in BJP. British journal of pharmacology, 172(14), 3461–3471. https://doi.org/10.1111/bph.12856

Dondlinger, M. J., McLeod, J., & Vasinda, S. (2016). Essential conditions for technology-supported, student-centered learning: an analysis of student experiences with math out loud using the ISTE standards for students. *Journal of Research on Technology in Education*, *48*(4), 258-273. https://doi.org/10.1080/15391523.2016.1212633

Dooly, M., & Masats, D. (2015). A critical appraisal of foreign language research in content and language integrated learning, young language learners, and technology-enhanced language learning published in Spain (2003–2012). *Language Teaching*, *48*(3), 343-372. https://doi.org/10.1017/S0261444815000117

Dörnyei, Z., & Ushioda, E. (2013). Teaching and researching: Motivation. Routledge.

Egbert, J., & Hanson, E.S. (2007). CALL environments: Research, practice, and critical issues. Teachers of English to Speakers of Other Languages, Inc. (TESOL).

Ezeamuzie, N. M., Rhim, A. H. R., Chiu, D. K., & Lung, M. M. W. (2022). Exploring gender differences in foreign domestic helpers' mobile information usage. Library Hi Tech, 40(6), 1582-1605. https://doi.org/10.1108/LHT07-2022-0350

Farmana, Y. (2018). Improving the Students' Speaking Skill Through Learn To Speak English Software. September. https://doi.org/10.31227/osf.io/ha36x

Frand, J. (2000). The information-age mindset: Changes in students and implications for higher education. EDUCAUSE Review, 35(5), 15-24.

Fry, D.J. (2014). Teaching experimental design. *ILAR Journal*, *55*(3), 457-471. https://doi.org/10.1093/ilar/ilu031

Fuller, M. T. (2023). ISTE standards for students, digital learners, and online Learning. In *Research Anthology on Remote Teaching and Learning and the Future of Online Education* (pp. 904-910). IGI Global.

Geddes, S.J. (2004). Mobile learning in the 21st century: benefit for learners. Knowledge Tree e-journal: *An e-journal of flexible learning in VET, 30*(3), 214-218. http://pandora.nla.gov.au/pan/33606/20050928-0000/www.flexiblelearning.net.au/knowledgetree/edition06/html/pra_simon_geddes.html

Gerard, F., & Widener, J. (1999). A Smarter way to teach foreign language: The smart board interactive whiteboard as a language learning tool. ERIC: www.eric.ed.gov

Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L., & Freynik, S. (2014). Technologies for foreign language learning: a review of technology types and their effectiveness. *Computer Assisted Language Learning, 27*(1), 70-105. https://doi.org/10.1080/09588221.2012.700315

Gruba, P., & Hinkelman, D. (2012). Blended technologies in second language classrooms. Palgrave Macmillan.

Hanrahan, K. (2005). More homework please! Investigating the use of ICT as an effective, motivating and stimulating homework tool in modern foreign languages. *Reflecting Education, 1*(1-2), 41-58. http://www.reflectingeducation.net/index.php/reflecting/article/view/8/12

Heo, M. (2009). Digital storytelling: An empirical study of the impact of digital storytelling on pre-service teachers' self-efficacy and dispositions towards educational technology. Educational Multimedia and Hypermedia, 18 (4), 405-428.

Howe, N. & Strauss, W. (2000). Millennials rising: The next great generation. Vintage.

Hughes, J. E., Kerr, S. P., & Ooms, A. (2005). Content-Focused Technology Inquiry Groups: Cases of Teacher Learning and Technology Integration. *Journal of Educational Computing Research*, *32*(4), 367-379. https://doi.org/10.2190/2N87-8AGA-BJ3D-46Q8

Jaboob, M., Hazaimeh, M., & Al-Ansi, A. M. (2024). Integration of Generative AI Techniques and Applications in Student Behavior and Cognitive Achievement in Arab Higher Education. *International Journal of Human–Computer Interaction*, 1–14. https://doi.org/10.1080/10447318.2023.2300016

Kayapinar, U., Erkir, S., & Kose, N. (2019). The Effect of Tablet Use on Students' Success in English as a Foreign Language (EFL) Grammar Classroom. *Educational Research and Reviews*, *14*(5), 178-189. DOI: 10.5897/ERR2018.3670

Kessler, M. (2021). Supplementing mobile-assisted language learning with reflective journal writing: A case study of Duolingo users' metacognitive awareness. *Computer Assisted Language Learning*, 1-24, 1040–1063. https://doi.org/10.1080/09588221.2021.1968914

Kilinc, E. & Tarman, B. (2022). Citizenship types, social media use, and speaking foreign language as predictors of global competence, *Citizenship Teaching & Learning, 17*:1, pp. 49–62, https://doi.org/10.1386/ctl_00081_1

Kimm, C. H., Kim, J., Baek, E. O., & Chen, P. (2020). Pre-service teachers' confidence in their ISTE technology-competency. *Journal of Digital Learning in Teacher Education*, *36*(2), 96-110. https://doi.org/10.1080/21532974.2020.1716896

Kopinska, M. (2020). Beyond the novelty effect: EFL learners' attitudes towards ICT use in the classroom. *Hungarian Educational Research Journal*, *10*(1), 1-15. https://core.ac.uk/download/pdf/547388513.pdf

Korosidou, E., Bratitsis, T., & Griva, E. (2021). A framework proposal for interdisciplinary early childhood education integrating ICT and foreign language. *Research on E-Learning and ICT in Education: Technological, Pedagogical and Instructional Perspectives*, 147-168. https://doi.org/10.1007/978-3-030-64363-8_9

Kuddus, K., & Khan, N. M. (2020). Attitude of the international students towards integrating ICT in foreign language learning: A case study. In *ICT Systems and Sustainability: Proceedings of ICT4SD 2020, Volume 1* (pp. 685-695). Singapore: Springer Singapore. https://doi.org/10.1007/978-981-15-8289-9_66

Lange, S. D., Lilla, N., & Kluczniok, K. (2023). Do multilingual teachers make the difference? Evaluating the potential language resource of primary school teachers and their cultural beliefs. *Journal of Research in Social Sciences and Language, 3*(1),32-49. https://www.jssal.com/index.php/jssal/article/view/92

Lee, J. S., & Lee, K. (2021). The role of informal digital learning of English and L2 motivational self-system in foreign language enjoyment. *British Journal of Educational Technology*, **52**(1), 358–373. https://doi.org/10.1111/bjet.12955

Lee, K. W. (2000). English teachers' barriers to the use of computer-assisted language learning. The internet TESL Journal, 6(12), 1-8. http://www.c3schools.org/MHEC/WebCT/EnglishTeachers_barrierstocall.pdf

Lin, C. H., & Warschauer, M. (2015). Online foreign language education: What are the proficiency outcomes? *The Modern Language Journal*, 99(2), 394–397. https://doi.org/10.1111/modl.12234_1

Liu, G. Z., Fathi, J., & Rahimi, M. (2024). Using digital gamification to improve language achievement, foreign language enjoyment, and ideal L2 self: A case of English as a foreign

language learners. *Journal of Computer Assisted Learning, 40*(4), 1347-1364. https://doi.org/10.1111/jcal.12954

Livingstone, S. (2011). Critical reflections on the benefits of ICT in education. *Oxford Review of Education, 38*(1), 9-24. https://doi.org/10.1080/03054985.2011.577938

Maja, M. (2023). Teachers' Perceptions of Integrating Technology in Rural Primary Schools to Enhance the Teaching of English First Additional Language. *Journal Of Curriculum Studies Research, 5*(1), 95-112. https://doi.org/10.46303/jcsr.2023.8

Mapisa, B., & Makena, B. (2024). The Impact of ICT Adoption in Enhancing Teaching and Learning in Primary Schools of Amathole East District, Eastern Cape. *Research in Social Sciences and Technology, 9*(1), 213-231. https://doi.org/10.46303/ressat.2024.12

Martins, M. L. C., Moreira, G., & Moreira, A. (2012). Web 2.0 and authentic foreign language learning at higher education level. In L. Bradley & S. Thouësny (Ed.), *CALL: Using, Learning, Knowing, EUROCALL Conference*, Gothenburg, Sweden, Proceedings (pp. 64–69).

Njoku, C. (2015). Information and communication technologies to raise quality of teaching and learning in higher education institutions. *International Journal of Education and Development using ICT*, *11*(1). May 11, 2024 from https://www.learntechlib.org/p/151050/.

OECD (2013), *PISA 2012 Assessment and Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy.* OECD Publishing. http://dx.doi.org/10.1787/9789264190511-en.

OECD (2014). *PISA 2012 Technical Report; PISA*. OECD Publishing. https://www.oecd.org/pisa/pisaproducts/PISA-2012-technical-report-final.pdf

Ozdemir, D., & Ozturk, F. (2022). The investigation of mobile virtual reality application instructional content in geography education: Academic achievement, presence, and student interaction. *International Journal of Human–Computer Interaction*, *38*(16), 1487–1503. https://doi.org/10.1080/10447318.2022.2045070

Ping Lim, C. & Yong Tay, L. (2003). Information and Communication Technologies (ICT) in an Elementary School: Students' Engagement in Higher Order Thinking. *Journal of Educational Multimedia and Hypermedia, 12*(4), 425-451. Norfolk, VA: Association for the Advancement of Computing in Education (AACE). https://www.learntechlib.org/primary/p/11931/.

Prensky, M. (2001). Digital natives, digital immigrants. On the horizon, 9(5), 1-6.

Prensky, M. (2009). H. sapiens digital: From digital immigrants and digital natives to digital wisdom. *Innovate: journal of online education*, *5*(3), 1-9. https://www.learntechlib.org/p/104264/.

Pushpanadham, K., Mandal, S., & Sareen, S. (2023). Revisiting 'Great Media Debate': Technology-Mediated Learning and Ground Realities Across the Indian Institutes of Technology. *Research in Educational Policy and Management, 5*(1), 1-17. https://doi.org/10.46303/repam.2023.2

Qaddumi, H. A., & Smith, M. (2024). Implementation of learning management systems (Moodle): effects on students' language acquisition and attitudes towards learning English as a Foreign Language. *Trends in Higher Education*, *3*(2), 260-272. https://doi.org/10.3390/higheredu3020016

Radesky, J. S., Schaller, A., Yeo, S. L., Weeks, H. M., & Robb, M. B. (2020). Young kids and YouTube: How ads, toys, and games dominate viewing, 2020. Common Sense Media.

Rahimi, M. & Aghabarari, M. (2024). The Impact of Virtual Reality Assisted Listening Instruction on English as a Foreign Language Learners' Comprehension and Perceptions. *International Journal of Technology in Education, 7*(2), 239-258. https://doi.org/10.46328/ijte.741

Robin, B. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory into Practice, 47*(3), 220-228.

Sagarra, N. & Zapata, G. C. (2008). Blending classroom instruction with online homework: A study of student perceptions of computer-assisted L2 learning. *ReCALL, 20*(2), 208-224. DOI: https://doi.org/10.1017/S0958344008000621

Sang, G., Valcke, M., Van Braak, J., Tondeur, J., & Zhu, C. (2011). Predicting ICT integration into classroom teaching in Chinese primary schools: exploring the complex interplay of teacher-related variables. *Journal of Computer Assisted Learning*, *27*(2), 160-172. https://doi.org/10.1111/j.1365-2729.2010.00383.x

Sartayeva, Z. & Kulnazarova, G. (2017, June 12-13). Kipchak (Kazakh) words entered into the Egyptian dialect. In *Proceedings of the International Scientific Conference Central Asia - Arabic World: Mutual Relation of History And Culture* (pp. 140–143). Almaty.

Shin, J. H., & Albers, P. (2015). An analysis of the effect of a cyber home learning system on Korean secondary school students' English language achievement and attitude. *TESL Canada Journal*, *32*(2), 45-45. https://doi.org/10.18806/tesl.v32i2.1207

Sitora, B. (2023). The role of information technology in learning foreign languages. *Science and Innovation*, *2* (Special Issue 7), 54-56. https://cyberleninka.ru/viewer_images/19764690/f/1.png

Stockwell, G. (2007). A review of technology choice for teaching language skills and areas in the CALL literature. *ReCALL, 19*(2), 105-120. https://doi.org/10.1017/S0958344007000225

Stockwell, G. (2016). Mobile language learning. In *Language Learning Beyond the Classroom* (pp. 146-155). Routledge. https://doi.org/10.4324/9781315657899

Stopar, K., & Bartol, T. (2019). Digital competences, computer skills and information literacy in secondary education: Mapping and visualization of trends and concepts. *Scientometrics, 118*(2), 479-498. https://doi.org/10.1007/s11192-018-2990-5

Sun, P., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education, 50*(4), 1183-1202. https://doi.org/10.1016/j.compedu.2006.11.007

Takacs, Z. K., Swart, E. K., & Bus, A. G. (2015). Benefits and pitfalls of multimedia and interactive features in technology-enhanced storybooks: a meta-analysis. *Review of Educational Research, 85*(4), 698–739. https://doi.org/10.3102/0034654314566989

Taole, M. (2024). ICT Integration in a Multigrade Context: Exploring Primary School Teachers Experiences. *Research in Social Sciences and Technology, 9*(1), 232-252. https://doi.org/10.46303/ressat.2024.13

Tapscott, D. (1998). Growing up digital: The rise of the net generation. McGraw Hill.

Yen, T. V. M., & Nhi, N. T. U. (2021). The practice of online English teaching and learning with microsoft teams: From students' view. *AsiaCALL Online Journal, 12*(2), 51-57. Retrieved from https://asiacall.info/acoj/index.php/journal/article/view/41

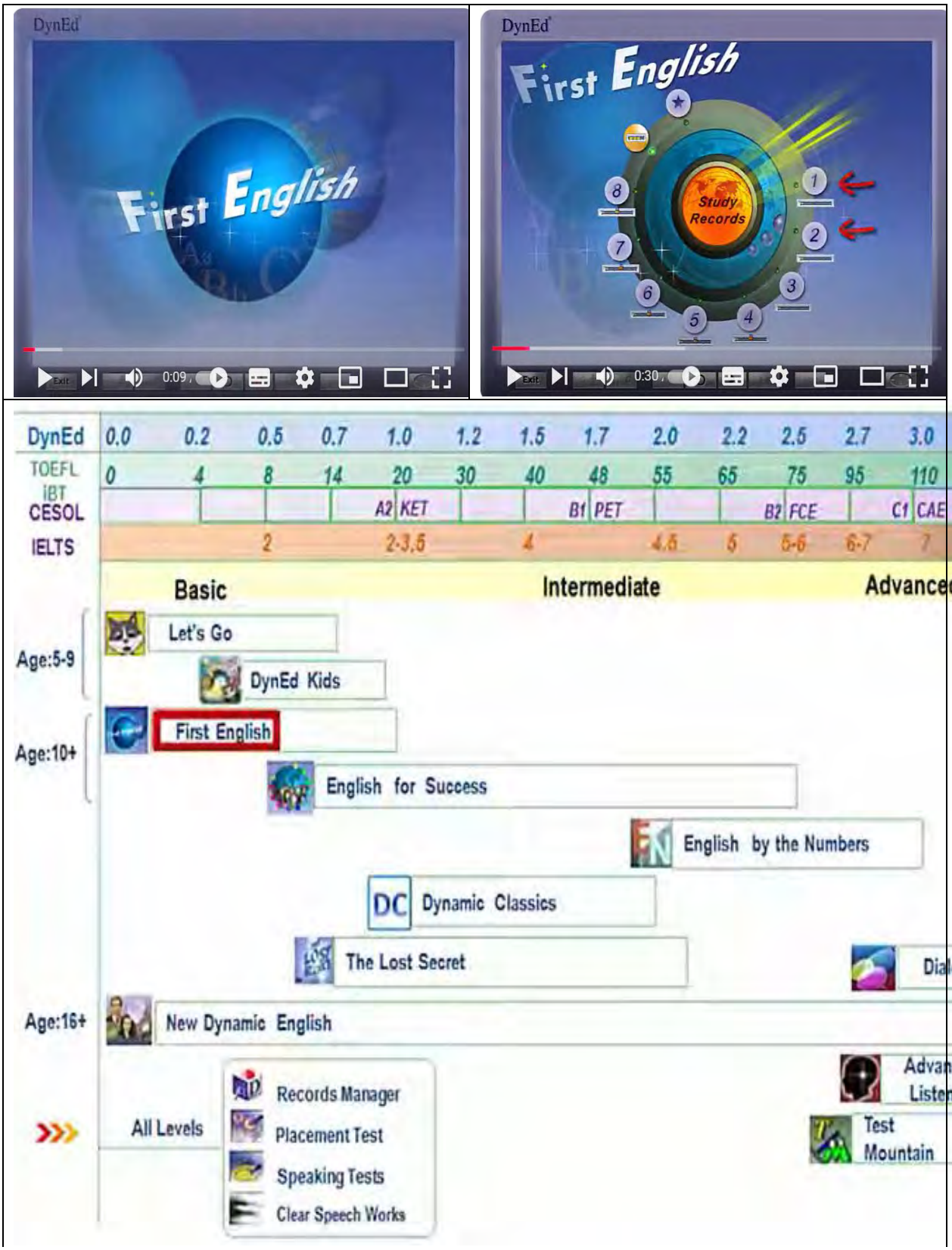
Villafuerte, J., & Romero, A. (2017). Learners' Attitudes toward Foreign Language Practice on Social Network Sites. *Journal of education and learning*, *6*(4), 145-158. http://doi.org/10.5539/jel.v6n4p145

Wilkinson, M. (2016). Language learning with ICT. *English language teaching today: Linking Theory and Practice*, 257-276. https://doi.org/10.1007/978-3-319-38834-2_18

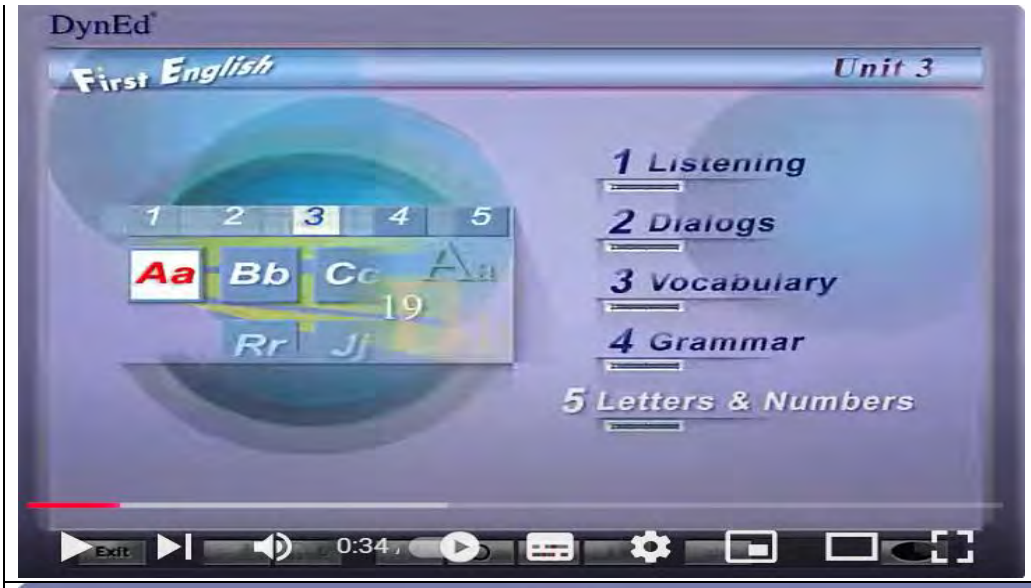
Yoshii, M. (2006). L1 and L2 glosses: Their effects on incidental vocabulary learning. Language Learning and Technology, 10(3), 85-101. http://llt.msu.edu/vol10num3/yoshii/

Zhang, R., & Zou, D. (2022). Types, purposes, and effectiveness of state-of-the-art technologies for second and foreign language learning. *Computer Assisted Language Learning*, *35*(4), 696–742. https://doi.org/10.1080/09588221.2020.1744666

APPENDIX 1


DynEd
First English
0:09
DynEd
First English
Study Records
0:30
DynEd 0.0 0.2 0.5 0.7 1.0 1.2 1.5 1.7 2.0 2.2 2.5 2.7 3.0 3.5
TOEFL iBT 0 4 8 14 20 30 40 48 55 65 75 95 110
CESOL A2 KET B1 PET B2 FCE C1 CAE
IELTS 2 2-3.5 4 4.5 5 5-6 6-7 7
Basic
Intermediate
Advanced
Age:5-9
Let's Go
DynEd Kids
Age:10+
First English
English for Success
English by the Numbers
Dynamic Classics
The Lost Secret
Dialogue
Age:16+
New Dynamic English
Advanced Listening
All Levels
Records Manager
Placement Test
Speaking Tests
Clear Speech Works
Test Mountain

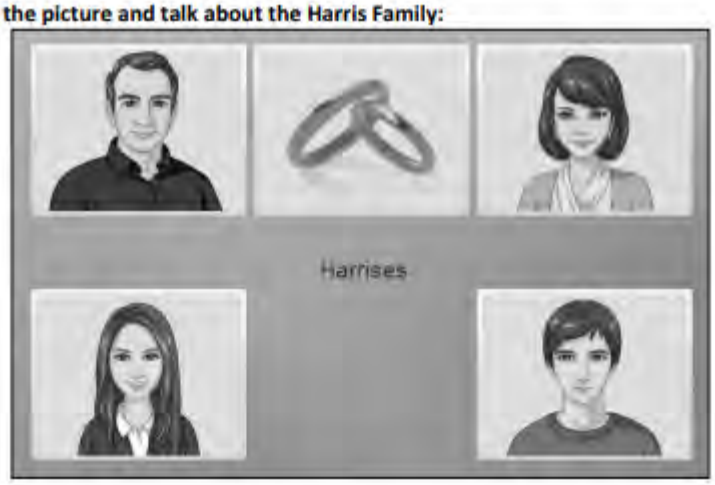
APPENDIX 2


DynEd
First English
Unit 3
1 Listening
2 Dialogs
3 Vocabulary
4 Grammar
5 Letters & Numbers
1 2 3 4 5
Aa Bb Cc
19
Rr Jj
Exit
0:34


DynEd
First English
Yes, she does.
No, she doesn't.
Jj Kk Ll
0:45
lives

Activity F

Look at the picture and talk about the Harris Family:



"This is the Harris Family. The Harris Family is a family of four...."

Ask your partner:

1-Who is married? 2-What's Bob's wife's name? 3- What's Sandra's husband's name? 4- How many children do they have? 5- What's their son's name? 6- What's their daughter's name?

Your family

Now, talk to your partner about your own family: your parents' names, how many brothers and sisters you have and how many people are in your family.

Are you married? Do you have children? If yes, how many children do you have? If not, how many children do you want?

Now, it's your turn! Ask your partner questions about his/her family.

Exercise G: Know your way around DynEd City

Map A

Help your partner find the missing places.

Use Map A One student takes the next page and helps student (A) to name the missing places.

Now student (A) takes this page and helps student (B) find those missing places.

You are A and have Map A.

These places are not on your map:

Hospital
Travel Agency
Restaurant
Subway
Public Restrooms

Ask your partner where they are.

Write the name of each place on the correct location.

Then answer B's questions.

Exercise G: Know your way around DynEd City

Map B

<u>You are B and have Map B.</u>

These places are not on your map:

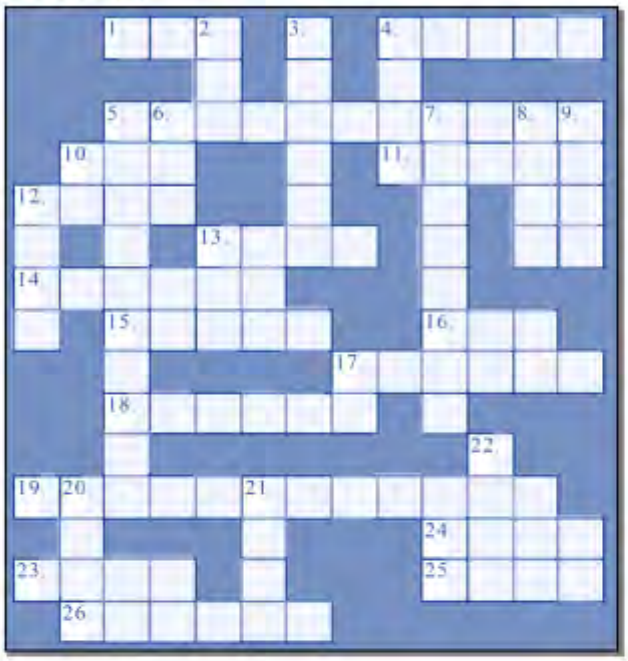
Police Station
Gas Station (Petrol Station)
Cafe
Drugstore (Chemist)
University

Ask your partner where they are.

Write the name of each place on the correct location.

New Dynamic English 3 ▪ Unit 2 Locations

Exercise H – Location Crossword



ACROSS

1. to pay for something
4. the opposite of *left*
5. you need this before you go to a hotel
10. coffee or _____
11. what you do to a car
12. The sun rises in the _____.
13. The sun sets in the _____.
14. you buy these at the post office
15. the opposite of *over*
16. cars need this to run
17. they stop fast drivers
18. on the outside
19. where two streets cross
23. the opposite of *entrance*
24. How much does it _____?
25. the opposite of *to*
26. you need this to go on the subway

DOWN

2. The opposite of *no* is ____.
3. It's _____ the street from the museum.
4. Another word for street is _____.
5. a place where you pay to eat
6. what you do with food
7. a shape with three sides
8. The opposite of *under* is _____.
9. It's not far. It's _____.
12. The opposite of *difficult* is _____.
20. very close, beside
21. It's on the same _____ of the street.
22. Please open it so we can go inside.

Activity K

Activity: *In pairs or small groups, ask and answer questions about all these characters. Before reading this, review the lesson in the lab and listen to the dialogs several times.*

Which person isn't American?

Who is this?

-Hi! My name is Zork. I come from...

Please listen to *Zork* again and answer these questions:

Is *Zork* from our world? Where does *Zork* come from?

Look at the picture. What is it? Maybe it's a UFO.

Do you believe in UFOs? Ask your partner if he or she believes in UFOs and ask where Zork comes from.

Questions

1. Kathy, Max and Pierre are from different cities. Where are Max and Kathy from?

   _____

2. Does Zork come from your country?

   _____

3. Who comes from France and who isn't from Europe?

   _____