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Increasing the effectiveness of educational technologies in the foreign languages learning process by linguistic students (comparative analysis of Russian, Indonesian and Egyptian experience)

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The aim of the study is to investigate the effectiveness of educational technologies in the foreign language learning process by linguistic students. The focus is to compare the experiences of Russia, Indonesia, and the Egyptian language experience regarding effective of educational technologies. The role of educational technologies has gained significant importance recently; therefore, considering this aspect, the study focused on a comprehensive discussion on this aspect using previous literature and argues what has been examined previously. The rationale and significance of the study are provided, along with the brief structure of the research. Besides, the study opts for a quantitative methodology to present empirical insights into the use of educational technologies in the foreign language learning process by linguistic students in Russia, Indonesia and Egypt. To analyze and interpret the research data, a descriptive technique is used where data was collected from 90 students (30 from each country). The collected data was analyzed using statistical tools, namely SPSS, where descriptive analysis was used to determine the effectiveness of educational technologies in the foreign language learning by Russian, Indonesian, and Egyptian students. The data findings revealed that the use of educational technologies in foreign language learning facilitated the learning process for the students with the integration of various technologies ranging from computer-assisted activities and audio-visual devices to online resources and social media. The findings also revealed that the utilization of technology-assisted tools proliferated the foreign language learning, making the language learning process highly engaging and interactive, while enabling the students to have better control and autonomy over their learning, wider

resource accessibility, helping improve the pronunciation, and enabling to interact with native speakers. Hence, the study concluded that technology positively contributed to the language learning experience of the students, irrespective of the location.

KEYWORDS

educational technologies, linguistic students, foreign languages learning, education effectiveness, competencies

Introduction

Traditionally, foreign language learning (FLL) was perceived as an imitating practice or habit of individuals for transcribing new information. However, a grounded *Behaviorist Theory* proposed the need to consider the quality and quantity of language being learned. In this regard, fluency in language conversation became very important, and FLL became a rule-governing activity for learners (Moeller and Catalano, 2015). However, language development for linguistic students is a complex mechanism and is associated with phonology, syntax (grammar), semantics (meaning), and pragmatics (pattern usage) of the language. The problems may also incur since linguistic students can face difficulty or changes in linguistic elements compared to their first language while learning the foreign language. This is so because the difference between the two languages is found in terms of lexical (single word composition) and syntactical elements (grammatical changes; Kasim and Raisha, 2017). The experience can therefore differ for different language development.

The experiences of three pronounced languages, Russian, Indonesian, and Egyptian, have been discussed in the literature. The choice of these language analyses lies in their significance for development. According to the report of the British Council, *Language for Future* proposed that Russian, Indonesian, and Egyptian (Arabic) languages come among the top 10 growing languages around the world. These are the areas of higher growth markets contributing significantly to the world's economy (British Council, 2013). A study reported the socio-cultural adaptation of the Russian language in foreign language students individually where Kamalova et al. (2020) elaborated on the effectiveness of the linguistic and sociocultural adaptation through role-playing, brainstorming activities, case methods, and interactions, which led to improved psychological state of the migrates and their engagement and learning capability of the foreign language. A huge inflow of students in Russia and the complexities of language learning for cultural adaptation showed the need for learning acquisition (Kamalova et al., 2020). Likewise, the development of the Indonesian language also has linguistic challenges that signify the importance of comprehensive learning, e.g., in phonology, where “infixes” words are mostly reduplicated. Some structural constraints in the language are also found (Al-Rawafi, 2019).

Apart from these, Egyptian language learning has also become substantial. Unlike traditional destinations of learning abroad and language learning, the present analysis found non-traditional destinations for students, including the Middle Eastern region and North Africa (Egypt). In addition, the growing tourism industry in Egypt has necessitated language learning for foreign residents (Trentman, 2012). The direction of learning among linguistic students is prompted by enhancing unlimited interactions with Egyptian cultures during education.

The impact of such changes resulted in the diverse cultures in the hybrid environment where foreign learners entail the need to learn these foreign languages. Apart from this, the role of educational technologies has become more apparent in the modern era of digital transformation (Sassin, 2020). Similarly, the changing pedagogical dilemmas have changed the experiences of language learning. The factors associated with incurring educational technologies and their development intensify the learning process of the foreign language, which gives a different experience of learning (Pilat et al., 2014). Similarly, experiences of learning technology-based language development for both Indonesian and Egyptian languages differ across the developmental perspectives (Warschauer, 2002; Suparsa et al., 2017). In this regard, the need to compare the experiences of different technology-based language learning for Russian, Indonesian, and Egyptian languages is imperative. For this purpose, this study has undertaken a comparative analysis where the data was collected from 90 students (30 from each country, i.e., Russia, Indonesia, and Egypt) to analyze the effectiveness of educational technologies in the foreign language learning by Russian, Indonesian, and Egyptian students.

Based on the background of research and rationale of language development, the following aims of the qualitative research have been proposed to thematically analyze the experiences of learning foreign languages.

- To assess the experiences of educational technology for developing the learning process for Russian, Indonesian, and Egyptian as foreign languages.
- To compare the experiences of different language development based on educational technologies through thematic qualitative analysis.

The research has a significant contribution towards fulfilling the knowledge gaps in the literature. No studies have systematically and thematically analyzed the experiences of multiple language development associated with a technological enhancement in the educational process. The significance lies in developing a comparative understanding of the different experiences of learning foreign languages. The research has theoretical, contextual, and practical implications. For the theoretical knowledge, the present study will add knowledge value in the research domain where educational technologies will be clearly understood for their role in learning. In addition, the learning processes of linguistic students will be investigated, which will provide a grounding basis for future research directions (Abdurakhimova, 2020).

In the contextual part, technology has long been searched and evident in the literature for foreign language development (Roby, 2013). Many studies individually assessed the different learning outcomes in Russian, Indonesian, and Egyptian language education (Farrag, 2012; Saddhono et al., 2019; Azimov, 2020). In this regard, a comprehensive and combined piece of evidence will be produced for three important languages and their learning process and experiences to demonstrate the comparison. The practice will allow simultaneous determination of the differences and outcomes. The practical significance of the research is reflected in facilitating pedagogies and learners about the role and accurate incurrence of strategic changes in technology for foreign language development. The process of learning will become feasible by identifying the needs and areas of development (Rozak et al., 2022).

Literature review

Effectiveness of educational technologies

Educational technology is defined as the concept of applying technology and resources to improve and facilitate the learning process in education (Januszewski and Molenda, 2013). The use of technology in the pedagogical process has become imperative with their incurrence in different areas of knowledge such as pedagogy, psychology, and didactic teaching (Lazar, 2015). The technology uses sophisticated tools, including hardware, softwares, and tools of communication. It involves various alliances, audio-visual aids, instructional technology (computer-based), and tele texting. The concept of instructional technology guided the decision-making and understanding of media methods for teaching and learning. The effective instructions are usually provided through strategic demonstration, description, lecture, gaming strategy, and special instructions are given with auto-instruction and programmed instructions. For example, audio-visual instruction materials, tape, projectors, charts and diagram models are used for giving instructions (Mangal and Mangal, 2019).

For the language learning process within education, technology, such as audio aids, is provided to students in the form of CD tape and recorders. The device is installed with material containing instructions and lessons for language learning, and every individual is separately provided with an audio aid for listening to the lesson at a suitable decibel (Mangal and Mangal, 2019). Apart from this, technology is also used to develop the writing quality of language. Writing is the most prior step to developing learning skills for second language learning. According to Xu et al. (2019), technology such as Facebook and Google docs can improve the writing of language learners. Most importantly, word processing software (MS Word) can improve writing skills and give experiences of collaborative writing to effectively learn the language. The example of English language learning using such technological tools was proposed as the best example to demonstrate the effectiveness of technology for English learning (Xu et al., 2019). Another study reported that for pedagogies' practice of teaching language using technology, PowerPoint is the most frequently used medium for conveying language lessons (Li, 2014). Their practice ensures simultaneous understanding and engagement for language learners. Linguistic knowledge is very important and features phonology, lexical, and grammatical aspects of language, which differ across cultures (Li, 2014). In this regard, technology develops an environment within the classroom for intercultural awareness.

The use of technology not only facilitates the development of language but also ensures the formation of communication skills for students (Kulieva et al., 2019). Especially for linguistic students, communication competence is a significant element of their professional development. Similarly, the learning of a foreign language as a second language incurs challenges, and students undergo the international experience of learning during the process. Considering the challenges of the modern era, the use of technology in the dimension of learning international language facilitates distance learning, master classes, blended learning, and webinar technologies (Kulieva et al., 2019; Sassin, 2019). Tools of information and communication technology (ICT) such as multimedia are imperative for distance learning. Group-based online learning and master classes and conducting online seminars reflect effective learning to prevent barriers to education. Educational technology is highly submerged in the field of learning, and for linguistic students, it has more opportunities for improvement in language development.

Comparative analysis of educational technologies in the foreign language learning process

The use of technology as described earlier is continuing to develop within the classroom environment and remote learning. In modern times, Generation Z (1995–2011) and Generation Alpha (2011–2025) anticipate the use of technology-based learning processes in their education (Ahmad et al., 2019). In

addition, foreign language learning is a rigorous and conscientious process. The languages such as Russian, Indonesian, and Egyptian have separate origins and are cultivated in different environments influencing their experience of development among linguistic students using technological aid.

Learning Russian, Indonesian, and Egyptian would entail differential experiences. The choice of the languages for analysis has already been justified. In the comparative analysis, these languages will be studied in detail for their composition and process of learning. Shagiyeva (2020) studied the role of educational technology in developing the Russian language. Russian language students need additional support for learning, writing, hearing, and speaking to experience effective language skills. It was further investigated that each language skills have different opportunities for using technology in their learning process. Russian language skills incorporate input and output skills for learning the language. In this regard, computer-aided voice audio and internet audio chatting are commonly used among learners to receive a good experience of listening to the Russian language (Shagiyeva, 2020). The ICT-based visual and audio instructions are the common experiences of international linguistic students learning Russian as a second language.

ICT-based learning is also inclusive within the context of learning Indonesian as a foreign language. The development of skills in the Indonesian language differs from what is observed in the Russian language. Saddhono et al. (2019) reported that in the real classroom environment for learning the Indonesian language, students tend to show less interest and are not proactive. ICT-based learning is usually provided through computers. The experiences of linguistic learners are different for this language with a difference in technology being used. The recent development of interest in learning Bahasa Indonesia among foreign learners provided BIPA ICT-based learning assistance that is used for conveying these topics. BIPA is a language learning program for foreign students in Indonesia. The common apps used for communication skills are Squelene, and Italki. BIPALOKA website is designed for students to view display schedules and choose packages and language tutors. The common ICT-based tools used in learning the Indonesian language involved student and staff portals, educational forums, websites, language games, and video conversations for developing students' interests (Maulana et al., 2020). In the social media context, Facebook was found as the most used tool and communication platform for learning a language (Figure 1).

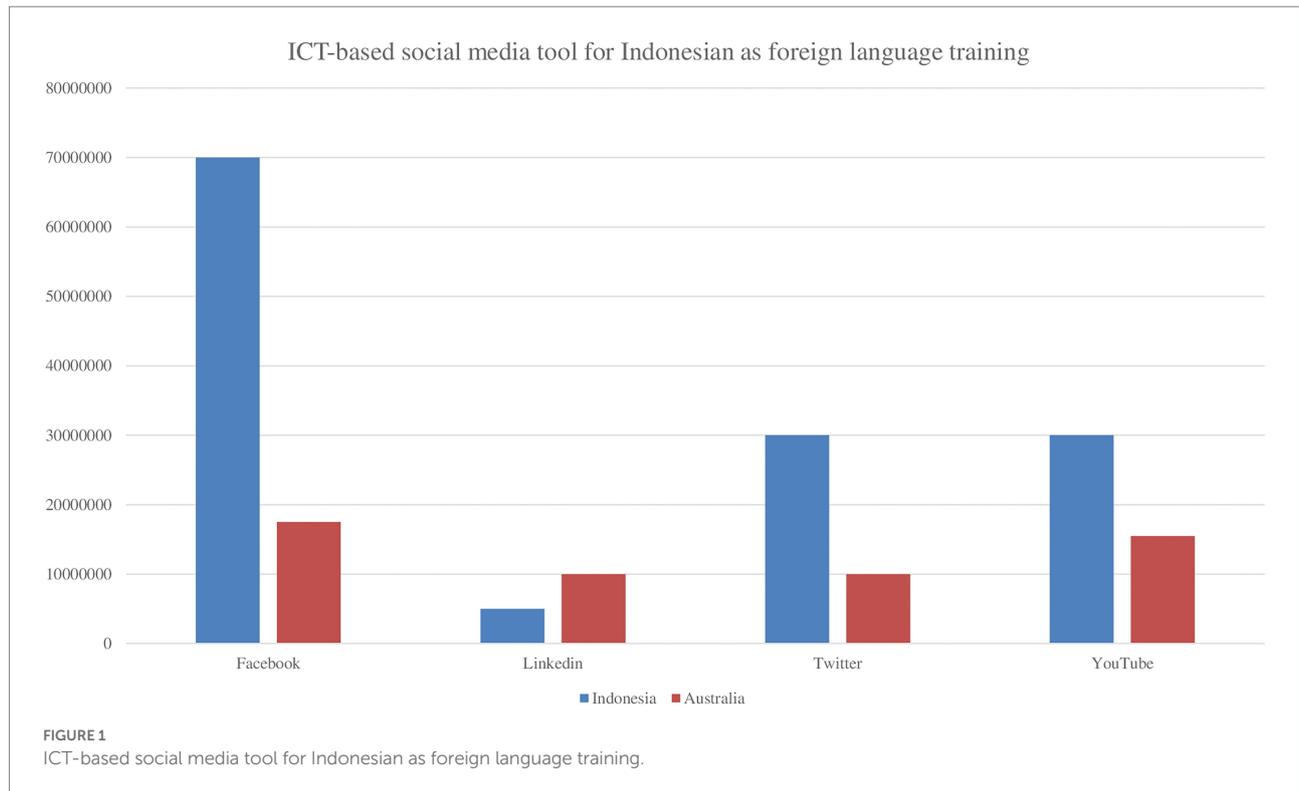
Apart from this, using technology to learn Egyptian is a more different experience where the Egyptian language refers to Arabic as an official language in Egypt. Arabic has grown to list among the critical languages specifically being learned in international and non-Muslim countries. Compared to other language learning process, Arabic seems to rely mainly on talk and memorization methods. For the integration of effective technology to facilitate such learning, Arabic classrooms are provided with computer-assisted and blended learning. In the Arabic language, phonology and accurate use of words are very important. The learning

environment is going paperless in Arabic language classrooms, and Google Classrooms have been effectively used as open platforms for learning this language (Mohd et al., 2019). Sardi et al. (2017) studied an interactive mobile application for Arabic teaching and learning. This application was found as a promotive tool with combined multimedia effects of graphics, images, text, audio, dialogue videos and animation. The app enables learners and educators to select a topic for the acquisition of language lessons (Sardi et al., 2017). For the Arabic language, linguistic students require more self-motivation and direction for engaging in self-engaging activities in the virtual environment. An ADDIE instructional model-based web design has been investigated for years to understand the needs of Arabic foreign learners and their language competence (Ghani and Daud, 2018).

Furthermore, during a pandemic, learning these languages with educational technology is a topic of common interest. The technological development of educational learning varies during a pandemic. Because of the effective lockdowns across the countries, the countries introduced ICT-based learning in one or the other way. The technology development for Russian as FLL, effective communication is much anticipated. The online courses for Russian language learning engage the student to spend more time on the process of learning. Some online platforms such as "Kraski" as communication media has been developed where students get access to Russian grammar, speech, and audio and video content (Berardi, 2021).

On the other hand, pandemic crises emerge as challenges in communication learning while learning Bahasa Indonesia. Distant learning strategies currently used involve instructors making videos for teaching and students' experience of self-making videos for practicing Bahasa Indonesia. The instructor provides instruction for students to compose a self-speaking video about the language (Haiyudi and Art-In, 2021). Foreign learners can learn from e-learning platforms such as Edmodo and Facebook, and Line, which are of common use for the Indonesian language. Students got the chance to engage in self-assessment learning and have a good experience of learning with technological assistance (Mahibur Rahman, 2020; Haiyudi and Art-In, 2021).

However, for Arabic learning, students usually seek guidance from distant learning models such as Whatsapp interactive groups, Google classrooms, and zoom meetings (Ahmadi and Ilmiani, 2020). Apart from the distance learning model, the blended learning model is also experienced by the students learning Arabic during a pandemic. Blended learning provides more opportunities to combine online learning and the feel of classroom-based learning experiences. Students are encouraged to use audio and video records and live Google classroom, where chat and query facilities are also available. Students are given awareness of the good experience and outcomes of the blended learning environment. Students equally receive guidance on how to effectively present phonology of language through video and audio and improve their vocabulary through online material and helping resources (Hilmi and Ifawati, 2020).



The learning experiences of a second language or foreign language must have the technology assistance of audio and video-based learning. It has also been investigated that language composition has a great role alongside the educational technologies for language development. The Russian linguo-didactic tool for FLL and linguistic audio-video models for Bahasa Indonesia have been proposed in the literature for learning with an understanding of language structure (Novelti et al., 2018). The phonology of words (pronunciation) and meanings of vocabularies facilitated by media-based learning enhances communication. For the Arabic language, detailed and specified meaning to the word context is needed. Most of the learning in a language course is related to the Al-Qur'an learning material. In addition, because of the extensive length of history of Arabic language culture, the Arabic language has more meaning to learning and the use of appropriate technological assistance (Ritonga et al., 2020). The effect of the flipped classroom (blended learning) has been widely studied in language learning in Arabic among foreign students (Aburezeq, 2020).

Most importantly, the self-regulated engagement of non-native speakers has been studied to play a component factor in developing positive cognition skills for learning Arabic (Di et al., 2022). The discussion of educational technologies for learning different languages revealed more than one aspect of learning. It is shown that educational technology is not only about facilitating remote learning but blended learning as well. In addition, the use of different apps and resources has been observed that vary with the type of foreign language being studied. Lastly, language composition has an influence on the use of technology for learning a second language among linguistic students. Studies need

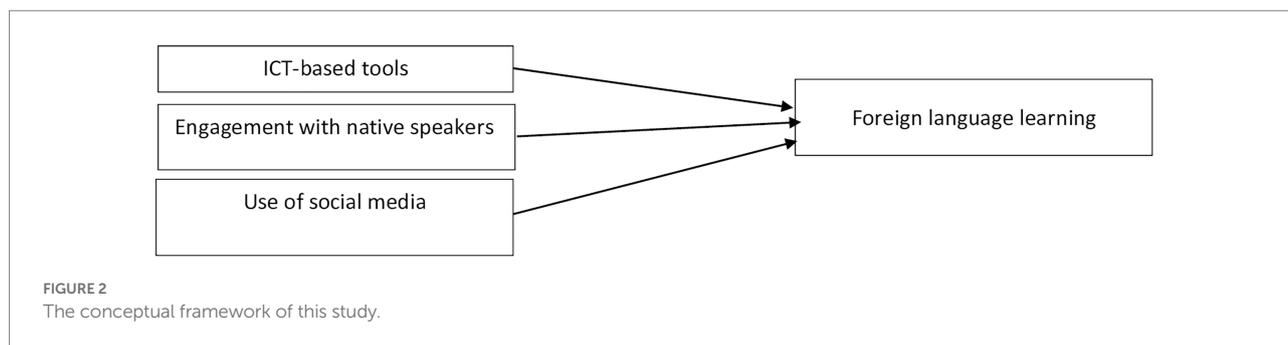
directed evidence to elucidate different experiences of learning different languages with the incurrence of technology.

Based on the literature, the conceptual framework of this study is shown in Figure 2.

Materials and methods

Research philosophy

The philosophy of the research is essentially metaphysics or beliefs set, which represent the worldview of the researcher, the world's nature, the place of the individual in it, and the probable relationships' range towards that world. The research philosophy tends to be society-based or scientific. In research, interpretivism and positivism are the two commonly known philosophies that are utilized for guiding research analysis and methods. Commonly attached to quantitative research as well as experiments, positivism is an empiricism form/progression that is based on the belief that knowledge must not be biased and should be objective, which is free from the researcher's beliefs and values (Alharahsheh and Pius, 2020). Ontologically, it is believed by the positivist researchers that truth is the facts, which are possible to be disproven or proven, measures along with observations define reality, and reality is similar for every individual. On the other hand, it is argued by interpretivism that knowledge, as well as the truth, is subjective, historically or culturally situated on the basis of lived experiences and their understanding (Chowdhury, 2014). A researcher could never be separate from his/her own beliefs and



values completely, which describes the ways in which the collection, interpretation, and analysis of data takes place. With regard to both the research philosophies, it is described by [Saunders et al. \(2015\)](#) that the philosophy of the study is based on the objective of the research. Thus, for the present research, which aims to investigate the educational technologies' effectiveness within the foreign language learning process by linguistic students, the positivist philosophy is adopted. This research philosophy is appropriate as the researcher's reliance will be upon the information that the linguistic students would provide who belongs to different nations.

Research approach

The overall framework of the research is grounded on the approach, which is categorized into qualitative as well as quantitative research approaches. Simply, the research approaches' implementation mainly relies upon either the usefulness of these approaches for attaining the particular research's aim or the problem statement of the research ([Allwood, 2017](#)). The quantitative approach of the research is surrounded by positivism in which a greater trust extent is placed by the researcher within statistical measurements along with numerical values ([Haig, 2013](#)). Grounded upon the positivist philosophy of the research, the quantitative approach is suitable for the current study. Even though the quantitative approach of the research restricts the thorough collection of data and is complex, the statistical evidence is generated by it with the help of universally acceptable as well as reliable measures ([Arghode, 2012](#)). Also, the design and the sample could be controlled by the research by implementing sophisticated and precise measures in order to generate greater transparency.

Method of data collection

According to [Zikmund et al. \(2013\)](#), credible sources of data must be utilized in the research to generate reliable information so as to extract valid findings and conduct effective research. The data is generated by the researchers through secondary as well as primary sources data. Secondary data is defined as second-hand data, which some researchers have already gathered as well as

recorded for their purpose, whereas primary data is the first time collected data through personal evidence or experiences, specifically for individual research ([Windle, 2010](#)). The current study is based on primary data collection sources in which the investigator will be directly involved with the respondents to evaluate the problem of the study. The participants of the given research are linguistic students who belong to Egypt, Russia, and Indonesia. The collection of data through primary sources is preferred due to the fact that it is helpful for the researchers in gaining additional control over the gathered information.

Research instrument

For the given study, the instrument of data collection is a survey-based questionnaire. Self-administered surveys will be administered as well as distributed to the linguistic students through electronic communication means, and the respondents will complete them. The researcher utilized this questionnaire because it makes the procedure of data collection quick and flexible ([Oei and Zwart, 2016](#)) and makes the researchers capable of simultaneously focusing on other steps of methodology, for example, targeting the study's other participants to reach a pre-developed size of the sample.

Sample size

Sampling is viewed as an important aspect of conducting research as it defines the requirement of selecting a proportion of the population to represent the overall population. The target populace for this research is the linguistic students who belong to Russia, Indonesia, and Egypt and use educational technologies in their studies. With the help of a pre-defined strategy of sampling, the current research aims to reach a sample size of 90 students (30 from each country).

Analysis of data

Data analysis is one of the important steps that make the researchers capable of addressing the aims along with the

objectives of the research. For this study, descriptive statistics are utilized to analyze the gathered information from the participants, i.e., linguistic students. Descriptive statistics are utilized for describing or summarizing the data set or sample's characteristics, for example, the variable's frequency, mean, or standard deviation (Kaur et al., 2018). This method of analyzing data is used for presenting quantitative explanation within a manageable form, which helps in simplifying an extensive data amount sensibly. A significant amount of data is reduced by descriptive statistics in a simpler summary.

Ethical consideration

The research credibility is questioned easily when the primary study is conducted as it pertains to different problems, such as disrespecting the values as well as needs of the respondents, privacy breaches, and researcher bias. Grounded upon such problems, during the procedure of research, it is considered that in-depth information must be provided to the participants related to the survey's aim, which they will fill. Moreover, it is ensured that the selection of the students is made on a voluntary basis. The data of the students is saved within a file that is password-protected to prevent it from being misplaced or misused.

Results and discussion

Demographic statistics

The data in Table 1 was collected from 90 students in total (30 from each case country). According to the collected

demographic data from Russia, the majority of the linguistic students were aged between 21 to 25 years (76.7 percent), while the remaining 23.3 percent were aged 20 years and below. The majority of the Russian linguistic students that participated in the study were at the intermediate level (53.5 percent), followed by upper intermediate (20 percent) and advanced level (13.3 percent), with a few enrolled in other levels. Considering the proportion of male and female participants, it can be noted that the majority of the linguistic students were male, with 70 percent presence.

In the case of Indonesia, again, the majority of the linguistic students were aged between 21 to 25 years with a 56.7 percent participation rate, followed by 33.3 percent of participants aged 20 years and below, while the remaining 10 percent of the participants were aged between 26 to 30 years. In terms of language learning level, the majority of the participants in the study were from upper-intermediate level (46.7 percent) and intermediate level (43.3 percent), with a few pre-Intermediate, advanced and mastery levels (3.3 percent each). Taking into account the gender of the participants, the majority of the participants were found to be females (56.7 percent). Nonetheless, a considerable representation of males is also reported (43.3 percent).

Lastly, in the case of Egypt, an equal representation of both males and females has been reported (50 percent participation by both). Similar to the case in Russia and Indonesia, the majority of the students were aged between 21 to 25 years (56.7 percent), followed by 26.7 percent aged 20 years and below, while the remaining 16.7 were aged between 26 to 30 years. In terms of language learning level, the majority of the participants in the study were from Pre-intermediate (26.7 percent), intermediate (26.7 percent) and upper-intermediate levels (23.3 percent). 16.7

TABLE 1 Demographic stats of the participants.

		Russia		Indonesia		Egypt	
		Frequency (N=30)	% Percent	Frequency (N=30)	% Percent	Frequency (N=30)	% Percent
Gender	Male	21	70.0	13	43.3	15	50.0
	Female	9	30.0	17	56.7	15	50.0
Age	20 and under	7	23.3	10	33.3	8	26.7
	21 to 25 years	23	76.7	17	56.7	17	56.7
	26 to 30 years	0.00	0.00	3	10.0	5	16.7
	31 to 35 years	0.00	0.00	0.00	0.00	0.00	0.00
	Above 35	0.00	0.00	0.00	0.00	0.00	0.00
Language learning level	Beginner	1	3.3	0.00	0.00	1	3.3
	Pre-Intermediate	1	3.3	1	3.3	8	26.7
	Intermediate	16	53.3	13	43.3	8	26.7
	Upper-Intermediate	6	20.0	14	46.7	7	23.3
	Advanced	4	13.3	1	3.3	5	16.7
	Mastery	2	6.7	1	3.3	1	3.3
Total		30	100	30	100	30	100

percent of participants were from advanced levels a few were from mastering and beginners' levels (3.3 percent each).

Descriptive statistics

The section presents the survey results regarding the effectiveness of educational technologies in the foreign language learning of Russian, Indonesian and Egyptian students. For uniformity and simplicity, English language students were surveyed from the three countries. The same self-administered questionnaire was used to survey the linguistic students of the three countries. The survey was comprised of the first 6 questions to determine if the students use various technologies in their language learning process or not. In contrast, the remaining 9 questions were to assess the effectiveness of the educational technologies in facilitating the English language learning experience of the linguistics students.

Table 2 presents the descriptive statistics for the effectiveness of educational technologies in the foreign language learning experience of Russian linguistic students.

The results of the descriptive statistics show that the responses for all the items in the questionnaire reported a standard deviation lower than that of their mean values. It is worth noting that the

mean value is regarded as the central tendency (central point) of the data. In this regard, a higher standard deviation would demonstrate that data points are scattered away; meanwhile, a lower standard deviation value demonstrates that all the data points are located close to the mean (Berry et al., 2021). This implies that as data points are close to the mean, the responses received for the survey do not possess any significant variation and are consistent.

The data also shows that the minimum value of most of the responses is 3 (a few have 1, and only one response has a value of 2), while the maximum value for all the responses is 5. Moreover, the arithmetic mean of most of the responses was above 4, while four of the responses reported a mean of above 3.5. This implies that the reported data shows skewness on the right side of the scale. In simpler terms, almost all the linguistic students marked high rating points, 4 or 5 (agree or strongly agree) to the survey items. This means that Russian linguistic students demonstrate a high agreement with the effectiveness of the use of educational technologies in facilitating their English language learning. The students agreed to all the items pertinent to its use as well as its effectiveness in making their learning more interactive, engaging, easy and useful.

Table 3 presents the descriptive statistics for the effectiveness of educational technologies in the foreign language learning experience of Indonesian linguistic students.

TABLE 2 Survey results of Russian linguistic students.

Items	N	Min	Max	Mean	SD
We use a variety of digital technologies to facilitate English language learning in the classroom	30	3.00	5.00	4.5333	0.62881
My language instructor/teacher uses various computer/technology-based activities to facilitate English language learning in the classroom	30	3.00	5.00	4.2000	0.80516
We use the internet for accessing various resources related to the English language curriculum	30	3.00	5.00	4.2000	0.61026
We use various digital devices such as pc laptops, and mobile devices in the English language learning process	30	2.00	5.00	3.7000	0.79438
Our teacher uses various technological audio-visual aid (e.g., CDs, DVDs, Projectors, films, online videos etc.) to facilitate English language learning	30	1.00	5.00	3.8333	0.87428
We actively use social networking platforms to learn and interact with the native English speakers	30	1.00	5.00	3.0333	1.12903
The use of technology in learning enables us to access various books, resources and publications pertinent to the English language curriculum	30	3.00	5.00	4.1333	0.77608
I can easily search the internet for accessing various English language learning resources	30	3.00	5.00	4.1667	0.64772
The use of the internet allows me to learn new words and phrases in the English language faster	30	3.00	5.00	4.3333	0.66089
The use of various technology (e.g., audio-visual aid) in English language learning has helped me in improving my English language pronunciation	30	3.00	5.00	4.2333	0.72793
The use of the internet and social media allows me to interact with native English speakers that improve my speaking skills	30	3.00	5.00	4.1333	0.68145
Using technology enables me to have better control over my language learning	30	1.00	5.00	3.5667	0.97320
The use of technology (e.g., digital devices and the internet) enables me to learn English language skills anytime and anywhere	30	3.00	5.00	4.2000	0.66436
The use of technology in the classroom makes English language learning interactive and engaging	30	3.00	5.00	4.0667	0.63968
I believe that the use of technology in English language learning is more effective than using the traditional approach for language learning	30	3.00	5.00	4.1333	0.77608
Valid N (listwise)	30				

TABLE 3 Survey results of Indonesian linguistic students.

Items	N	Min	Max	Mean	SD
We use a variety of digital technologies to facilitate English language learning in the classroom	30	2.00	5.00	3.6333	0.80872
My language instructor/teacher uses various computer/technology-based activities to facilitate English language learning in the classroom	30	2.00	5.00	3.4333	0.89763
We use the internet for accessing various resources related to the English language curriculum	30	2.00	5.00	3.4667	0.62881
We use various digital devices such as pc laptops, and mobile devices in the English language learning process	30	2.00	4.00	3.3333	0.71116
Our teacher uses various technological audio-visual aid (e.g., CDs, DVDs, Projectors, films, online videos etc.) to facilitate English language learning	30	2.00	4.00	3.3000	0.70221
We actively use social networking platforms to learn and interact with the native English speakers	30	1.00	5.00	2.9333	1.14269
The use of technology in learning enables us to access various books, resources and publications pertinent to the English language curriculum	30	2.00	5.00	3.7000	0.83666
I can easily search the internet for accessing various English language learning resources	30	1.00	5.00	3.2667	1.17248
The use of the internet allows me to learn new words and phrases in the English language faster	30	1.00	5.00	3.5000	1.00858
The use of various technology (e.g., audio-visual aid) in English language learning has helped me in improving my English language pronunciation	30	1.00	5.00	3.1333	1.33218
The use of the internet and social media allows me to interact with native English speakers that improve my speaking skills	30	1.00	5.00	2.6667	1.09334
Using technology enables me to have better control over my language learning	30	1.00	5.00	3.7333	1.11211
The use of technology (e.g., digital devices and the internet) enables me to learn English language skills anytime and anywhere	30	3.00	5.00	4.1333	0.50742
The use of technology in the classroom makes English language learning interactive and engaging	30	1.00	5.00	3.7667	0.85836
I believe that the use of technology in English language learning is more effective than using the traditional approach for language learning	30	2.00	5.00	3.6000	0.81368
Valid N (listwise)	30				

Analyzing the results of the descriptive statistics, it can be seen that the value of standard deviation for all the items is lower, demonstrating that all the data points are located closer to the mean values. Thus, consistent responses were received and were free from significant variation. The results show that the minimum value of most of the responses is either 2 or 1, while the maximum value for all the responses is 5. The mean value for the majority of the responses is above 3.5, which means that the data is skewed on the right side, showing that students agreed to the given statements. This means that the Indonesian linguistic students learning the English language actively use educational technologies and have found these technologies to be effective in their foreign language learning experience. However, it is also noted from the collected data that for two items, the arithmetic means the value is found to be below 3, which means that the responses are skewed on the left side. This implies that linguistics students in Indonesia do not use social media platforms to learn and interact with native English speakers, and thus, they could not assess the effectiveness of social media usage in their English language learning experience. Apart from that, they have been using various other educational technologies, such as audio-visual aids, projectors, laptops etc., in their English language learning and agree with the effectiveness of technology in facilitating their foreign language learning process.

Lastly, Table 4 presents the descriptive statistics for the effectiveness of educational technologies in the foreign language learning experience of Egyptian linguistic students.

The results of the descriptive stats of the survey of Egyptian students also demonstrate lower values of the standard deviation than that of the arithmetic mean of the items, which means that all the data points (responses) are located in close proximity to the mean. Thus, the responses were consistent and free from significant variation. Analyzing the responses, it can be seen that the minimum value of almost all the observations is between 1 and 3, while the maximum value of almost all the observations is 5. The arithmetic means the value of all the items is found to be between 3.5 and 4, showing that the data is skewed on the right side. This means that almost all the Egyptian linguistic students in the study marked “agree” as their choice of response. Thus, all in all, the linguistic students in Egypt agree with the use of educational technologies in their English language learning process and found the technology to be effective in their overall foreign language learning experience.

Generally, the findings of the present study affirm the findings and the proposition of the previous studies relevant to the present research subject. Based on the findings of the survey involving Russian, Indonesian, and Egyptian students, their foreign language learning experience in relation to technology use was found to be quite similar. This implies that the use of educational technologies in foreign language learning has been proliferating

TABLE 4 Survey results of Egyptian linguistic students.

Items	N	Min	Max	Mean	SD
We use a variety of digital technologies to facilitate English language learning in the classroom	30	3.00	5.00	3.8667	0.62881
My language instructor/teacher uses various computer/technology-based activities to facilitate English language learning in the classroom	30	2.00	5.00	3.7000	0.65126
We use the internet for accessing various resources related to the English language curriculum	30	2.00	5.00	3.6667	0.66089
We use various digital devices such as pc laptops, and mobile devices in the English language learning process	30	3.00	5.00	3.7333	0.58329
Our teacher uses various technological audio-visual aid (e.g., CDs, DVDs, Projectors, films, online videos etc.) to facilitate English language learning	30	1.00	4.00	3.2333	0.72793
We actively use social networking platforms to learn and interact with the native English speakers	30	3.00	5.00	3.9333	0.73968
The use of technology in learning enables us to access various books, resources and publications pertinent to the English language curriculum	30	3.00	5.00	4.3333	0.66089
I can easily search the internet for accessing various English language learning resources	30	3.00	5.00	4.0333	0.66868
The use of the internet allows me to learn new words and phrases in the English language faster	30	3.00	5.00	3.9667	0.66868
The use of various technology (e.g., audio-visual aid) in English language learning has helped me in improving my English language pronunciation	30	1.00	4.00	3.1333	0.89955
The use of the internet and social media allows me to interact with native English speakers that improve my speaking skills	30	3.00	5.00	3.9000	0.66176
Using technology enables me to have better control over my language learning	30	3.00	5.00	4.2333	0.56832
The use of technology (e.g., digital devices and the internet) enables me to learn English language skills anytime and anywhere	30	3.00	5.00	4.0000	0.69481
The use of technology in the classroom makes English language learning interactive and engaging	30	3.00	5.00	4.0667	0.63968
I believe that the use of technology in English language learning is more effective than using the traditional approach for language learning	30	3.00	5.00	4.1333	0.68145
Valid N (listwise)	30				

with the integration of various technologies, from computer-assisted activities and audio-visual devices to online resources and social media. This is found to be in line with the propositions of the extant literature. According to [Mangal and Mangal \(2019\)](#), the use of technology such as audio and visual aids has been assisting the students in the language learning process. In addition, [Xu et al. \(2019\)](#) asserted that technology can also assist in the development of the writing language, which is the most basic step in language learning. For instance, Facebook and Google Docs can improve the writing of language learners. Students often use various technological tools to improve their English language written proficiency. Thus, the use of technology has become a major part of foreign language learning by linguistic students, which is evident across the institutes of Russia, Indonesia, and Egypt.

Moreover, it is also deduced that the use of technologies in foreign language learning makes the language learning process more engaging and interactive, enables the students to have better control over their learning, access a wide variety of resources, helps improve the pronunciation, and enables to interact with native speakers. These findings also correlate with the findings of the previous studies. For instance, it was found from the review of the extant literature that, as communication skills are an integral part of professional development, especially for language students, the use of technology in the foreign language learning experience can facilitate the formation of communication skills in students ([Kulieva et al., 2019](#)). It was also found from the analysis of the

same study that learning a foreign language as a second one presents challenges, and students gain an international learning experience along the way. Given contemporary challenges, the use of technology in the dimension of learning international languages facilitates distance learning, masterclasses, blended learning, and webinar techniques ([Kulieva et al., 2019](#)). This way, the use of technology makes the language learning process easier and more convenient for students. This finding was confirmed by the results of the present survey as all of the linguistic students in the survey agreed with the fact that the technology enables them to have better control over their language learning experience and develop English language skills anytime and anywhere. The use of technology positively contributes to the language learning experience of linguistic students, regardless of the location.

Conclusion

Key findings

The paper attempted to analyze the effectiveness of educational technologies in the foreign language learning process. In this regard, a comparative analysis of the linguistic students learning the English language in Russia, Indonesia and Egypt was conducted to analyze how the use of educational technologies contributes to their language learning process. Succinctly, it is

found that the use of educational technologies in foreign language learning has become a common phenomenon, evident by the responses of the Russian, Indonesian and Egyptian students that have been using a wide variety of technologies in their English language learning process; in the classroom and personally. Moreover, it is found that the use of technology has increased the effectiveness of the language learning process of linguistic students regardless of their location and linguistic background. The use of technology enables the students to access various pertinent to the English language curriculum, learn new words and phrases, improve pronunciation, interact with native speakers, have greater control over their language learning, learn anytime and anywhere and make classroom learning interactive and engaging.

Strength and limitations

The study proved to be quite valuable with the generation of empirical findings and insights about the use of educational technologies in the foreign language learning process. The findings of the study can be of value for educational policymakers as they can integrate the use of more innovative technologies to further enhance the effectiveness of the foreign language learning process. The use of primary data has enabled the researchers to collect and report the latest insights pertinent to the status of technology use in foreign language learning. Nonetheless, despite these strengths, the study has certain limitations as well, which are the factors that were not in the researchers' control. These limitations may have affected the results of the study. In particular, one of the major limitations was the limited time available for data collection, due to which the researchers collected data from a small number of students from a few universities in the three countries. This may have impacted the results.

Recommendations and future scope

As established that the researcher was faced with time constraints due to which data was collected from a small number of students from a few universities in the three countries. This limits the ability of the study to generalize the results. In this recognition, it is recommended that future researchers seeking to work on a similar topic collect data from a wide number of universities in Russia, Indonesia and

Egypt to get a clearer picture of the status of technology use in the foreign language across the three countries and assess its effectiveness.

Data availability statement

The original contributions presented in the study are included in the article/[Supplementary material](#); further inquiries can be directed to the corresponding author.

Author contributions

MP: conceptualization. RR: editing and reviewing. MK: project administration. TB: writing and investigation. TR: visualization and calculations. NS: literature review. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2022.1011842/full#supplementary-material>

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