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An Exploration of Artificial Intelligence in English Language Teaching As a Foreign Language

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ABSTRACT: The aim of this study is to analyze the technologies which are currently being used in foreign language teaching and learning English as an applied language at the university level based on the findings of the detected experimental studies. The PRISMA criteria for systematic reviews and meta-analyses were compiled in the methodology. The findings of the experimental studies shown the lack of innovative technologies, such as chatbots or virtual reality (VR) devices, which are commonly utilized in foreign language (FL) education. Furthermore, mobile apps are primarily concerned with the acquisition of foreign language vocabulary. The findings shown that foreign language teachers might allegedly understand the latest technology devices, such as neural machine translation, they do not combine them accurately in their teaching process. As a result, this study indicates that teachers should be educated and know how to employ them in their foreign language lessons as well as traditional instruction in order to determine which skills or structures of language could have been created as a result of their use. Additionally, it is suggested that further experimental studies must be conducted to explicate the evidence and how useful it is in teaching a foreign language as an applicable language.

KEYWORDS: English as a foreign language; applied language; artificial intelligence (AI)

INTRODUCTION

The digital age and its emergent technologies, including the most recent advances in artificial intelligence and big data processing, have had unprecedented effects on educational processes and pedagogy, including strategies and approaches related to teaching and acquiring a foreign language. Graduates of today are members of Generation Z, who are known for their digital literacy, technological expertise, and upbringing with digital tools.

In addition, they will shortly be followed by Generation Alpha, whose members are permanently connected and capable of making independent decisions. Based on the use of technology and the ability to manage digital identities or visuals. Thus, modern foreign language education is typically technology-based, or it should be, given that technology has become an integral part of the lives of the current generation, as well as the fact that today's language learning environment is no longer limited to the traditional or formal school learning environment.

In this regard, teachers of foreign languages confront a formidable challenge in integrating various forms of technology into their classrooms in order to meet the needs of their students. To keep up with their digitally savvy students and engage them in learning a foreign language, however, they must utilize modern technologies such as chatbots and virtual reality. They must also determine which of these technologies could have an impact in their classrooms, assess their potential, and take advantage of all the benefits they offer. In addition, they should evaluate the potential hazards posed by these technologies. In addition, teachers must always consider the added value of the selected tools for the students' learning and their learning outcomes. This is not a simple task, as research into the practical applications of digital technologies with defined pedagogical goals has not yet produced conclusive results. Results are surprisingly scarce. It should not be forgotten that, as the research emphasizes, instructors of foreign languages should promote not only their students' acquisition of knowledge in.

However, they should also strengthen the skills that appear to be essential for the 21st century, such as critical thinking, creativity, communication, and collaboration. In addition, teachers must have a positive attitude toward the use of these technologies in FL classrooms and possess the pertinent subject, technological, and pedagogical knowledge in order to motivate students to use these technologies for FL learning. For the aforementioned reasons, the purpose of this study is to provide a clear and systematic analysis of the cutting-edge empirical research on the practical use of modern technologies in FL classes, as it is presently available worldwide. Based on the findings of the identified experimental studies, the purpose of this review is to identify, compile, compare, and evaluate all of the technologies that are currently utilized effectively in foreign language teaching

and learning. In addition, it seeks to provide very specific pedagogical implications regarding the use of these technologies for the university-level acquisition of English as an applied language. Several systematic reviews have been conducted on a similar topic, but none of them provide practical ramifications that could be immediately implemented into FL education; therefore, this study aims to fill this gap in the current research. To attain the outcomes of this study, the following research questions have been developed: What are the beneficial digital tools for foreign language (FL) learning and instruction?

RESEARCH METHOD

The methodology used in the systematic review presented is PRISMA and Meta-analyses. PRISMA is a widely recognized and accepted methodology for conducting systematic reviews in various fields, including education and language learning. It involves a systematic and explicit process of identifying, selecting, and critically appraising relevant research on a given topic. The studies use the limitation for the last five years published articles from January 2018 to December 2022, it is because the technology emerged when the pandemic occurred in many countries. The review involves experimental research which mainly uses novel or modern technologies in the instructional process of English as an applied language, with a particular emphasis on their implementation in English language classes. The search eliminated theoretical, descriptive, observational, and non-experimental studies because the major goal was to uncover empirically shown findings that could be applied to teaching practices. The search eliminated the hypothetical, descriptive, observing, and non-experimental research because the primary objective was to uncover empirically demonstrated results that could be transferred to teaching practices. In systematic reviews, data collection typically involves a systematic search of relevant literature using established databases, such as Scopus and Web of Science, their abstracts, and keywords, as these were sufficient to provide a credible and adequate core of articles to be further evaluated. This review study includes only open access literature. To acquire only relevant papers that deal only with the given issue, the following guidelines for inclusion and exclusion were used. The search is conducted using specific search terms and criteria to identify studies that meet the inclusion and exclusion criteria set for the review. The identified studies are then screened and selected based on their relevance to the research question and the specific criteria outlined in the review. The selected studies are further analyzed and synthesized to extract relevant data and findings. It is important to note that the specific data collection process may vary depending on the research question, methodology, and scope of the systematic review.

2.1 Criteria of Inclusion

Only studies emphasizing on the subject of the study, i.e., the use of novel technologies for the instructional process of English as a practical applied language, with a special emphasis on how they are implemented at university English language classes, will be considered.

- Acceptable from the beginning of 2018 to the end of 2022.
- The Scopus and the Web of Science database.
- Peer-reviewed journal publications exclusively in English were included.
- Keywords for searches were used in the titles, abstracts, and keywords of the papers.
- Experiment research involving particular practical results for EFL.
- Articles that are freely accessible.

2.2. Criteria for Exclusion

• Descriptive investigations, studies of theory, proceedings from conferences, case studies, observations, book sections, articles, review articles, and meta-analyses are all examples of research.

2.3. Search Term

("Mobile apps" OR "mobile applications" OR "mobile app" OR "chatbot*" OR "IPA" OR "virtual reality" OR "augmented reality" OR "neural machine translation") AND "English language" AND "university"

The original keyword using this search term yielded 59 Scopus documents and 107 Web of Science studies. 14 studies may be included for analysis following implementing all of the criteria for inclusion and exclusion and deleting duplicates.

RESULTS AND DISCUSSION

The purpose of this study was to find out the data about the impact of new technologies on the English language learning process, and present an overview of the practical implications that could be related to the use of digital technologies and foreign language learning and teaching using technology. The initially conducted pursuit identified 43 studies, but only thirteen were determined as relevant studies due to having presented specific details on the topic and scope of the study. These relevant studies, which were identified through the inclusion and exclusion criteria presented above, with the identification of whether they provide statistically valid practical recommendations and implications for foreign language teaching learning and are not merely the perspectives of the participants. As it turned out, the majority of the survey studies had to be postponed. The other study investigations generally employed established measurement methods for outcomes, such as pre-tests and post-tests. It indicates that the test used experimental and control group designs with specific assessment before and after the treatment.

Thus, as the result, it makes the data in statistically significant and reliable results. The total number of participants varied between 20 to 500 university students. Considering the fact that the study range was rather broad, particularly those published in the last five years, almost the newest technologies included entirely mobile apps aimed to increase students' vocabulary. Furthermore, the goal of other technological tools, such as the usage of the NAO robot or machine translation, it included the growth of foreign language vocabulary.

There are several studies in the following articles which concerned the effect of mobile learning applications (apps). The different mobile learning apps were used as a tool for foreign language acquisition. However, the studies investigated many aspects in foreign language acquisition, but the results were compatible in that some vocabulary improvements were discovered and retention of vocabulary was increased, as confirmed by all of the studies. Furthermore, those who responded indicated a greater desire to learn, their impression of fun learning, better comprehension, and acceptance of mobile devices as new learning tools. In considering the pedagogical implications, teachers have been encouraged to include mobile technology into the language teaching process to assist their students in achieving higher learning outcomes. Nevertheless, the content of learning must be well arranged, understandable, and easy for users to grasp in order to attain them. Besides, there were two studies by Abdelrady and Akam (2022), and Alenezia and Bensalem (2022) which focused on the effect of a specific application (WhatsApp) on language acquisition.

According to Alenezia and Bensalem, they compared the impacts of the WhatsApp and Blackboard platforms on language learning, reported that there was no significant difference between the effectiveness of the two platforms. However, an increase in motivation to complete a task when one was using WhatsApp, was perceived by the study participants. Therefore, teachers are advised to use WhatsApp as a pedagogical tool and encourage their students to create and join WhatsApp groups in the process of language acquisition. Additionally, Adilbayev et al (2022) conducted a study to find out the effect of information and communication technology (ICT) tools, such as the Memrise platform, the Lingualeo website, the British Council website, and Google Forms on reading skills. They found that ICT tools improved the reading skills, language, and culture in the teaching learning process. However, it develops these aspects but, it requires additional evidence, and empirical study on the impact of digital technology on the development of reading competences is essential.

Regarding Chon et al. (2020), they chose google translate as the instruments of their study. They focused on the type and quality of machine translation applications (MTAs), as well as the effect on teaching learning language process. As a result, machine translation seems to be a feasible and efficient tool for attaching lexical grammatical difficulties. They assumed that this machine has a chance to reduce the gap between skilled and less skilled students on writing. By using this machine, participants were able to write more complicated phrases and were aware of the grammatical errors they made. The implementation of MTA revealed multiple weaknesses such as translation errors, but they weren't considered a significant limitation because the students' inaccuracies would have been much greater if they had not used the tool. Based on the results, they assert that teachers need to teach students to recognize errors or incorrect words in a machine, which is indisputable, but they do not explain how this impossible objective should be accomplished.

Chung and Bong (2022) conducted a study which used Google Assistant and Apple Siri as the instruments to evaluate the intelligibility test results of the artificial intelligence (AI) application and native English speakers with the objective to demonstrate the potential of AI apps in foreign language pronunciation practice and increase the intelligibility of Korean-accented English. Depending to the results, native speakers regarded Korean-accented English to be easier to comprehend than AI apps. Native speakers received quite good intelligibility scores. When it came to identify consonant sounds, consonant clusters in the beginning and intermediate emphases of a word, and vowel length variables, native speakers would have less difficulty than AI programs. Therefore, they propose that students attempt to have conversations effectively with persons using different accents during the English learning process by practicing communication with available AI apps.

Meanwhile, Banaeian and Gilanlioglu (2021) concentrated on using the NAO robot to help students enhance their foreign language vocabulary. Considering having found that there were no significant differences between the experimental and control groups, both groups increased their foreign language vocabulary. In addition, they found that the students believed the use of the NAO robot was beneficial to acquiring new vocabulary, which was only a subjective sense with no experimental validation. Additionally, Dizon (2020) explored the use of Alexa, a chatbot, in the development of listening and speaking abilities. The results of this study suggested that only speaking skills had improved. He found this new technology to be entertaining and motivating for studying English, as has been shown in previous research.

Ma (2021) investigated virtual reality technology in an immersive English teaching college setting technique based on artificial intelligence (AI) and machine learning. The results of this study indicated that immersive context teaching, which integrated constructivism theory and virtual reality (VR) technology increased English proficiency of students. The participants in the study expressed enjoyment with the VR technology as well as their own academic success. It was suggested that the context teaching approach be used in the process of language learning since it allowed students to embrace and utilize the language in a communicative environment. As a result, in order to make students learn independently, student-centered should be applied in the

teaching learning process. Eventually, Abdelrady and Akram (2022) carried out a study in order to explore the usefulness of a Class-Point tool in assessing EFL students' e-learning satisfaction. In accordance with the experiments carried out during the study, it was recommended that the ClassPoint tool could be employed to enhance the learning experiences of English foreign language students. Focusing on the states of the participants, the results demonstrate that the tool improves the learning of English foreign students.

The use of new technologies to teach English as an applied language at the university level is becoming increasingly important, and although the amount of research on its practical implications is increasing, it is still very limited and its growth is not happening at a sufficient pace compared to college level. Development of information and communication technology in other fields of study. Fundamentally, most research assumes that technology improves the quality of the language learning process. However, in many of them this statement is not fully supported by statistically reliable data. Therefore, more data are urgently needed to be processed in order to obtain reliable results that can clearly indicate the current course of development and possible trends in the near future. This systematic review examines the use of technology in the language learning process and assesses the potential of technology to improve language teaching.

This review finds that new technologies in the English classroom, especially mobile vocabulary learning apps, are helping students improve their vocabulary, as well as their ability to express themselves more fluently. I understand. These results are consistent with those of Kohnke et al. I agree with those who reported that using a mobile vocabulary learning application helped increase their students' vocabulary range. Moreover, the results of this study provided credible evidence that mobile vocabulary-learning applications have an adjunctive effect in improving students' vocabulary retention. The results of the studies conducted by Adilbayeva et al.; Alenezia and Bensalem; Jeong; Kohnke et al.; Poláková and Klímová; Zakian et al. tell us about the students' positive perception of new learning tools, increased motivation to learn, and greater involvement in the learning process. This seems to be the main advantage of all these modern tools as it provides the user with a sense of competence. Student motivation to learn is also positively affected by the use of other complementary tools such as Facebook, WhatsApp, Google Translate, virtual reality, augmented reality and artificial intelligence, and we are optimistic about the future potential of these tools. which are related to AI, chatbots, VR, AR, neural machine translation related. In general, research has shown that motivation is one of the main drivers of the learning process, and conversely, achievement of learning outcomes has a positive impact on learner motivation.

For that reason, these two variables, i.e., motivation and cognitive profit (linguistic skills), are correlated. More accurately, this is shown in a study by Poláková and Klímová, whose results told that their students (71%) felt motivated when they were using the mobile application in the progression of their education. Learning was perceived as more enjoyable and less stressful (100%), and many students reported increased motivation due to improved learning outcomes.

Some of the article's strengths derive from this. These strengths include:

1. Develop vocabulary and grammatical structures, improve reading comprehension, writing skills, and language proficiency.
2. Improve students' confidence in writing in English.
3. Improve your listening and speaking skills and comprehension of everyday conversations.
4. The positive impact of technology-enhanced language learning. However, it may be difficult to quantify the level of effect.
5. Recommendations for using these technologies as complementary tools in language learning at the university level.

These results suggest that this article provides evidence of the positive impact of new technologies on various aspects of English learning. In general, with the exception of two studies, the results of the identified research studies showed that technology-enhanced language learning was effective at some level and relatively difficult to quantify. But its positive effects are measurable and visible. Therefore, we recommend using these tools in the course of university-level language learning. However, they should be used with great caution as complementary tools, and this study should be reinforced by further studies in the future. It goes without saying that technology itself cannot fully complement teachers, as Fanenshtel and Skyba point out. Mobile vocabulary apps may claim to know words, but learners need to understand how the context of a word affects its meaning. This fact that technology is an enabling tool is confirmed by many other research studies, such as those by Be cirovi´c, Brdarevi´c-Celjo and Deli´c, Klimova and Pikhart, Lin et al. and Nagi.

Looking at the results of various studies and learners' comments on the use of new technologies in the language learning process, it can be concluded that new technologies are perceived as useful complementary tools for language learning. This is supported by essentially all research, including participant satisfaction surveys. This aspect of using digital tools appears to be an important motivator for students, reinforces subjectively positive experiences and makes them more likely to learn a foreign language or in a foreign language environment that they can unintentionally use as a learning environment. it can spend a lot of time. However, the results of the studies identified also suggest that while FL teachers are aware of modern technological devices such as neural machine translation, they are unaware of how to incorporate them into their teaching processes. This has been confirmed by Bostancioglu and Handley, who report that teachers in FL have a good knowledge of technology in general, but are unsure of how to apply that knowledge in the classroom. Increase.

Conversely, the studies found have some limitations, these limitations include:

1. Short intervention period and different numbers of subject samples.
2. Low number of the latest technologies, such as chatbots, robots, or machine translation tools, which were used to teach English as an applied language.
3. Inclusion of only open access studies, which might have left out some of those on the latest technologies.
4. Vague definition of how to use these tools adequately.

This systematic review also has limitations, one of them is open access research may omit some research on the latest technologies. Similar to the work on chatbots by Lin and Mubarok [35], but with this limitation in mind, nevertheless, a clear summary of the main ideas related to the analyzed topic is provided. These findings should provide scientists with a foundation that needs to be expanded upon. Completion of a more experimental study that disregarded the User Satisfaction Survey study.

CONCLUSION

In conclusion, the research questions within the starting of this paper were answered. Since the discoveries appeared that there was a need of the most recent innovations, such as chatbots or VR gadgets, that have been observationally investigated in FL instruction, portable apps used for the improvement of FL vocabulary have remained the foremost proficient gadgets that have been utilized for FL instructing and learning. As distant as the commonsense suggestions are concerned, the comes about of this precise review confirm that developing advances might and indeed ought to be utilized as underpins in FL education. Be that as it may, the understudies ought to be empowered to moreover utilize these gadgets outside of their FL classrooms because the understudies appear to be propelled to memorize a remote language when they are utilizing such gadgets, and they can accomplish superior learning comes about with them, as is upheld by the inquire about discoveries. In expansion, the instructors must be prepared and pedagogically guided on how to intentionally actualize them in their FL classes in order to know what aptitudes or dialect structures may well be created through their utilize. As the comes about affirm, FL lexicon, for occurrence, can be created when one is using mobile apps or neural machine interpretation. Talking aptitudes can be upgraded by the utilize of chatbots or VR gadgets, and perusing comprehension can be upgraded through the use of various websites.Furthermore, the discoveries of this audit consider ought to be of intrigued to all stakeholders, such as innovation engineers, arrangement producers, instructors, as well as the conclusion clients who should work on the improvement, usage, and utilize of such apparatuses in FLL in arrange to make them more viable, solid, and safe.

Overall, more experimental studies are required to clearly prove their usefulness in educating a outside language as an connected language, as the current discoveries that are available are more instinctive, instead of being factually important and by and large substantial.

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