

Research Article

Computer-Assisted Language Learning and English Learning in Cihan University: A Mixed-Methods Study

Balachandran Vadivel ¹, Nawroz Ramadan Khalil ¹, Muhammad Asif ²
and Bemnet Ajanil ³

¹Department of English, Cihan University, Duhok, Kurdistan Region, Iraq

²Department of English, International Islamic University, Islamabad, Pakistan

³Bahir Dar University, Bahir Dar, Ethiopia

Correspondence should be addressed to Bemnet Ajanil; bemnet.ajanil@gmail.com

Received 7 July 2022; Accepted 9 August 2022; Published 24 August 2022

Academic Editor: Mehdi Nasri

Copyright © 2022 Balachandran Vadivel et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

The total research work is prepared to present the idea about the implementation of computer-based technology for learning the English language. English is a global language and is highly required to be learnt whether as a second language or first. Research has been performed about the same issue. The cynosure for the whole research will be to understand different methods to boost the English learning procedure. The significant viewpoints of different writers and researchers can be highlighted easily in this research. A mixed methodology is followed up in this research work so that a result related to the study can be drawn. The different approach is being determined through a mixed approach for research for understanding the study. Teachers' and students' perspectives on learning the English language is being understood through this study. Data collection and analysis are performed in this study and a proper discussion is formed on its basis. This data analysis is performed for a certain number of individuals related to education, mainly students so that a view of a certain section of people can be drawn. Data analysis plays a major role in finding the results. Finally, the study presents a brief conclusion that determines the whole research and outcomes for the betterment of learning the English language.

1. Introduction

The popularity of the English language has spread evenly throughout the world. It is one of the most spoken languages in the world. The number of English learners has substantially increased in recent years. However, the difficulty still lies related to two factors which are the methods of learning and the motivation for learning. Among university students, the motivation for learning English is majorly decided with the help of three factors or initiatives, which are learning that is test-oriented, career-oriented learning, and aimless learning. Many scholars have included in the discussion that learning that is hobby-driven is the best alternative [1–3]. Students around the world nowadays prefer applying methods that are not characterized by in-depth understanding and practical application. This result in

inappropriate learning that affects the efficiency of the students. One of the important concerns related to English learning is the mode of learning. It has been observed that the students are passive acceptors of knowledge, learning, and information when the traditional model of learning is used [4, 5]. The students generally do not react positively to the traditional modes of learning. This restricts their self-learning capacities and fails to strengthen their practice to mitigate their weak points. Therefore, it becomes important to design a system of learning to provide the students with an efficient system of English learning through a test environment. In today's world, network computer technology has found its wide application in the educational sector [6, 7]. The accessibility of the advanced techniques used in this type of learning system improves the overall effects of self-learning. This study mainly analyses the English learning

requirements of university students and studies the impact of implementing computer systems on enhancing English learning.

2. Literature Review

2.1. An Unplugged Approach. Dewey and Piaget have suggested that learning is an active process with the help of which the students construct meaningful information and knowledge for them to learn, connect, and explain what is already known. The computer system plays an important role in this type of learning process and also involves active participation of the students in critical thinking and problem-solving influenced by the teaching skills. Experiential learning is this time of the constructive learning process, which lays down certain activities that engages the students directly. Working with tangible things is the epicenter of effective learning [8]. The use of computer systems provides a basis for the learners to actively participate in the process of learning. In a way, the use of computer systems in English learning provides opportunities of getting in touch with kinesthetic activities. These activities majorly stimulate the understanding of the concepts in a very practical and concrete way. Previous research shows that the method of learning plays an important role in the overall motivation of students to learn for knowledge [8, 9]. Besides, test-oriented learning makes the overall process of learning more efficient. Not only this, it involves the students actively participating in the test and beginning extraordinary learning. The use of a computer system in English learning has revolutionized the way the process was being undertaken in schools and universities [10, 11]. However, the use of systems requires certain practices both at the student's end and the teacher's end to undertake appropriate learning.

2.2. Implantation of Computational Thinking. The key consideration of using a computer System in English learning requires the implantation of computational thinking. Recent studies indicate that teachers who apply English learning through computer systems are required to be skilled with certain abilities for prompt problem-solving and designing the system. Proper knowledge about the systems and human behavior can help to promote effective learning [12]. A proper guideline was developed for computational thinking and the application of computer systems in the learning process. The use of appropriate methods to include the motivation among the students to participate in the learning process is a very important phenomenon in using a computer system. For example, showing them the creative side of the learning system can help them to become more interested. Besides, considering the scenario where English learning is undertaken on a self-basis, in such situations, the students are required to abide by the general requirements of using the system in the learning process. Inappropriateness in the process of learning and the use of the system can restrict the applicability and effectiveness of such a system in the learning process [13].

2.3. The Perspective of the Teachers. The implementation of computer systems in the process of English learning requires the practice of the teachers both in the knowledge of the subject and the knowledge of using the system in practice [14, 15]. The introduction of technology within classrooms characterizes that there is an intersection point between the knowledge, culture, and beliefs of the teacher and the same concerning the system. The changing scenario may expose the teachers to certain challenges related to the use of systems. Besides, the curriculum change brought in due to the adoption of technology can expose them to certain extrinsic and intrinsic challenges [16]. The intended aim of implementing the curriculum can be affected by improper interpretation of the method of use of the system. For example, showing them the creative side of the learning system can help them to become more interested. The studies show that the application of computer systems requires proper training for the teachers for fruitful interpretation of the methods or the guidelines and appropriate imparting of knowledge [16, 17]. It is also important to implement effective strategies to enter into the face of education when majority of the students are learning through a computer system. Considering the scenario of self-learning, the students who apply computer learning for English knowledge have to equip themselves with proper guidelines and methods such as good studying material and ample time to devote to learning to successfully undertake the process of learning [18, 19]. Any inappropriate interpretation of the guidelines or methods can lead to inefficient learning among the students.

2.4. Research Methodology. This is one of the important chapters of the research work. This lays down a discussion of the choice of methodologies used by the researcher to undertake the overall research on the topic. This chapter lists down a choice of research approach, research methodologies, and others.

2.5. Outline of the Chosen Method. This mainly incorporates two major techniques that are qualitative and quantitative. The data collection method technique that has been chosen here is the secondary and primary techniques [20].

2.6. Research Strategy. The research strategy used for this research is both qualitative and quantitative research strategy. The qualitative strategy is used to provide the core understanding of the opinions of the writers and scholars. The quantitative research strategy is used to identify the opinions of the respondent who participate in the survey [21].

2.7. Choice of Selected Research. For this purpose of the research, the survey has been chosen. The survey has been conducted for the students who are interested in computer-based learning. The survey method has been used to develop a questionnaire that would include questions in the form of "do you agree," "how far," "how long, etc. The survey helps to identify the opinions of a greater number of people, their

attitudes, and ideas on how machine-assisted learning has an impact on the students as well as the tutors [22]. The amalgamation of the ideologies of the respondents and the scholar provides a good basis to understand the importance of the research work as a whole.

2.8. Data Collection Technique. There are majorly two data collection techniques that are primary and secondary data. Both data techniques have been used for this research work. The secondary data technique has been used to gather data for the literature review section. The primary data technique has been used to gather the information for the data analysis and findings. For secondary data, the sources used were scholars, journals, and articles of the previous researchers. For primary data collection, a survey has been conducted [23].

2.9. Questionnaire Design. The questionnaire has been prepared to keep the objectives of the research paper in mind. The questionnaire consists of 10 questions with relevant options for choice and has been asked to the sample students [24]. None of the questions were interrelated to each other.

2.10. Data Analysis Technique. Both qualitative and quantitative methods of data analysis have been applied to analyze the data gathered throughout the research. The quantitative data analysis technique has been used to analyze the data gathered from the responses of the respondents. The qualitative data analysis method has been used to analyze the data that have been gathered from secondary sources in the literature review chapter [25].

2.11. Sample Size. The questionnaire has been developed and distributed among 50 respondents who are into education and have an interest in English learning [26]. Students between 15 and 30 years have been chosen to form the sample for the research. The primary data were collected by emailing the questionnaires to the respective respondents.

3. Results

This section of the research lays down the discussion on the overall research that has been undertaken. This is one of the most important chapters of the research paper. In this part of the research paper, the discussion and the analysis of the questionnaire are presented by the researcher.

Question 1: what is your age?

- (1) 16–20 years
- (2) 21–25 years
- (3) 25–30 years

Based on Table 1, out of the 50 respondents, 30 respondents belong to the age group of 16–20 years, 15 respondents belong to the age group of 21–25 years, and the remaining 5 belong to the age group of 25–30 years. The frequency is also depicted in Figure 1. This implies that

TABLE 1: Response to question 1.

| | No. of respondents |
|-------------|--------------------|
| 16–20 years | 30 |
| 21–25 years | 15 |
| 25–30 years | 5 |

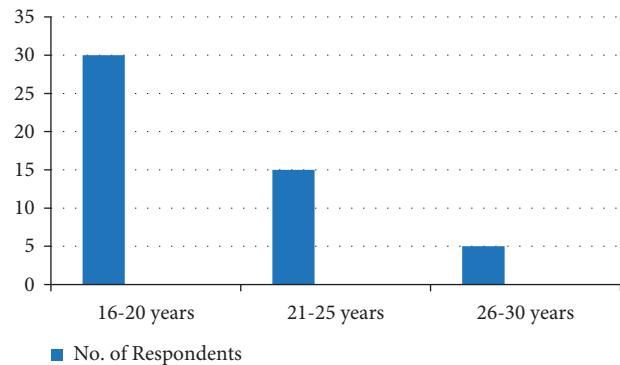


FIGURE 1: Age of the participants.

people belonging to a young age are more interested in learning through the computer system.

Question 2: what is your gender?

- (1) Male
- (2) Female
- (3) Neuter

Based on Table 2 and Figure 2, out of the 50 respondents, 25 were females and the remaining 25 were males.

Question 3: from where did you initially learn English through an online mode?

- (1) School
- (2) Self

As shown in Table 3, out of the 50 respondents, 35 students responded “school” and the remaining 15 respondents responded “self.” This implies that the majority of the respondents had a background from school and knowledge about the application of computer systems in English learning (Figure 3).

Question 4: have you ever come across computer learning earlier?

- (1) Yes
- (2) No

According to Table 4 and Figure 4, out of 50 respondents, 35 responded with “Yes” and the remaining 15 responded with “No.” This implies that the majority of the respondents have an interest in computer learning.

Question 5: do you like to learn English through online mode with the use of a computer?

- (1) Yes
- (2) No

TABLE 2: Response to question 2.

| | No. of respondents |
|--------|--------------------|
| Male | 25 |
| Female | 25 |
| Neuter | 0 |

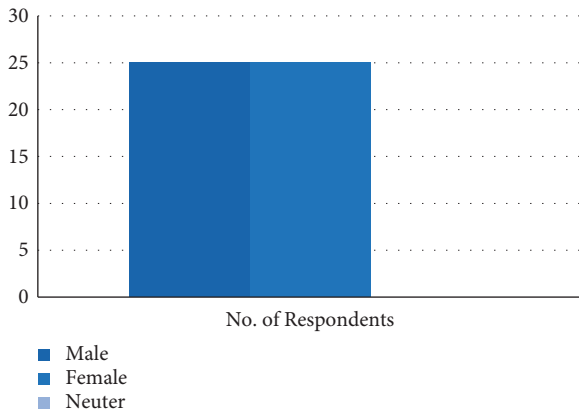


FIGURE 2: Gender of the participants.

TABLE 3: Response to question 3.

| | No. of respondents |
|--------|--------------------|
| School | 35 |
| Self | 15 |

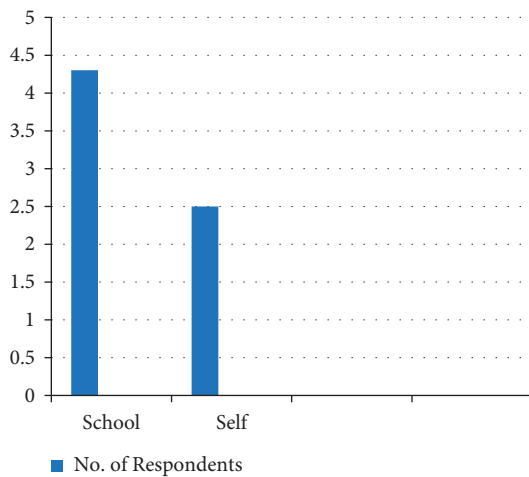


FIGURE 3: The initial place of learning English.

- (3) Not so much
- (4) Not at all

Table 5 indicates that out of the 50 respondents, 25 respondents responded “yes”, 10 responded “no”, 10 responded “partially”, and the remaining 5 respondents responded “not at all.” This implies that the majority of the respondents are interested in learning online with the help of a computer system (Figure 5). This also shows that it motivates the students to undertake a new form of learning.

TABLE 4: Response to question 4.

| | No. of respondents |
|-----|--------------------|
| Yes | 35 |
| No | 15 |

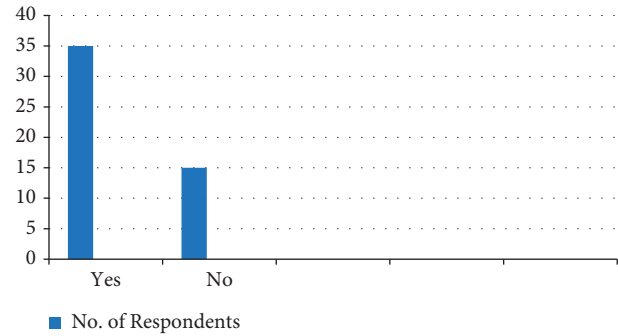


FIGURE 4: Prior knowledge about computer learning.

TABLE 5: Response to question 5.

| | No. of respondents |
|------------|--------------------|
| Yes | 25 |
| No | 10 |
| Partially | 10 |
| Not at all | 5 |

Question 6: do you think computer implementation boosts English learning?

- (1) Yes
- (2) No
- (3) Partially
- (4) Not at all

Table 6 shows that out of the 50 respondents, 30 respondents responded with “yes”, 5 responded with “no”, 13 responded with “partially”, and the remaining 2 responded with “not at all”. This implies that the majority of people believe that a computer system boosts the learning process [27]. Besides, it provides a more practical based approach to learning as well as testing the knowledge at the same time. The respondents who think that this does help in boosting learning might not be very accustomed to system-based learning (Figure 6).

Question 7: have you ever participated in an online test over the computer system?

- (1) Yes
- (2) No

According to Table 7 and Figure 7, out of the 50 respondents, 35 responded with “Yes” and the remaining 15 respondents responded with “No.” Therefore, this implies that the majority of the students have participated in the online test. This also shows that practical participation is actively undertaken by the students. It is easily accessible and grows the interest among the students [28].

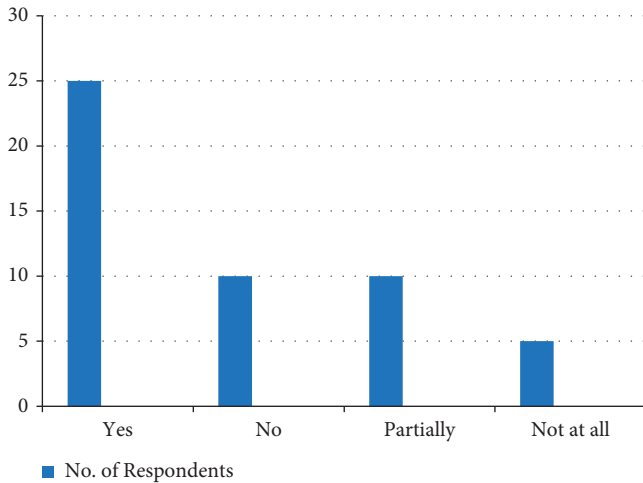


FIGURE 5: Learning English through computer.

TABLE 6: Response to question 6.

| | No. of respondents |
|------------|--------------------|
| Yes | 30 |
| No | 5 |
| Partially | 13 |
| Not at all | 2 |

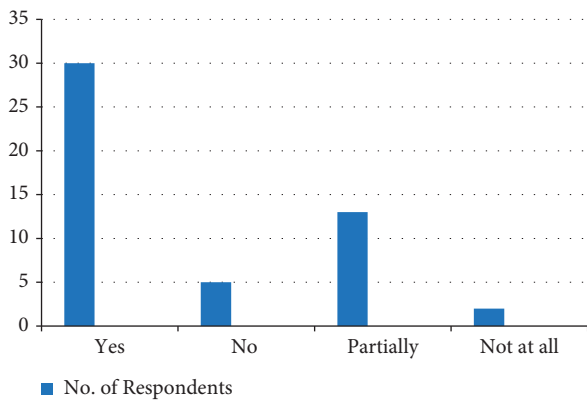


FIGURE 6: Using computer to boost English learning.

TABLE 7: Response to question 7.

| | No. of respondents |
|-----|--------------------|
| Yes | 35 |
| No | 15 |

Question 8: do you think that the computer system has helped you enhance the scope of English learning?

- (1) Yes
- (2) No

A careful look at Table 8 and Figure 8 shows that out of the 50 respondents, 35 respondents responded with “Yes” and the remaining 15 respondents responded with “No.”

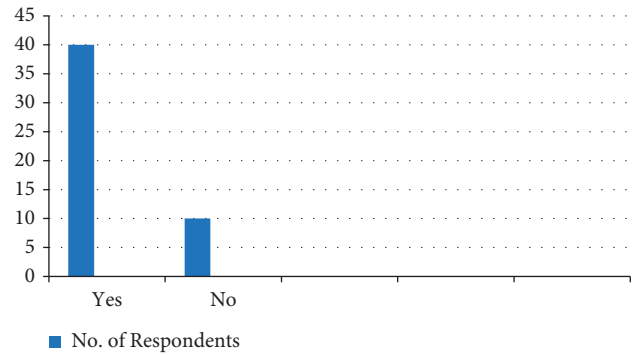


FIGURE 7: Prior participation in computerized tests.

Therefore, it is evident that computer-based learning has enhanced the scope of education in English [29]. This not only grows interested among the students but also provides a practical method of the undertaking learning process.

Question 9: do you agree that computer-based learning motivates you to learn better?

- (1) Agree
- (2) Disagree
- (3) Highly disagree
- (4) Highly agree

Out of the 50 respondents, 28 responded to “Agree”, 7 responded to “Disagree”, 13 responded to “Highly Disagree”, and the remaining 2 responded to “Highly Agree” (Table 9; Figure 9). This implies that the level of motivation that computer-based learning imbibes among students is much more than the existing traditional methods [30]. Therefore, students nowadays prefer computer-based English learning over traditional methods.

Question 10: do you think the process of English learning through a computer system has provided you an opportunity to learn better?

- (1) Yes
- (2) No

Based on Table 10, out of the 50 respondents, 35 responded to “Yes” and 15 responded to “No.” This implies that the contribution of computer systems to English learning has been immense (Figure 10). This also implies that this system of learning has fairly contributed to the enhanced level of English learning for the students [31].

4. Discussion

The purpose of undertaking this research was to identify the importance of using computer systems to boost English learning. It is a doubtful fact that the application of computer systems improved through the method of imparting knowledge among students. However, this discussion is always arguable because not all those students undertake this method are efficient in it [32]. Therefore, the responses of the students applying this method for learning can be the best possible way of identifying whether the use of a computer

TABLE 8: Response to question 8.

| | No. of respondents |
|-----|--------------------|
| Yes | 35 |
| No | 15 |

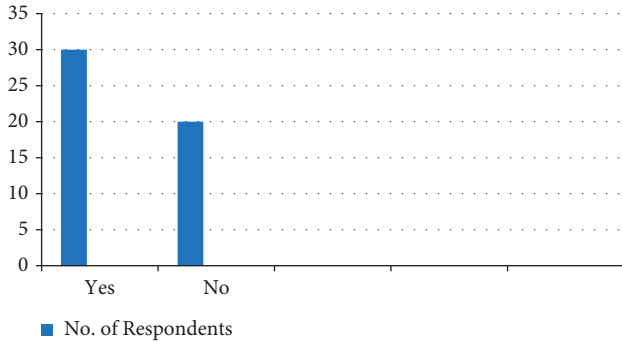


FIGURE 8: Using computers to enhance the scope of English learning.

TABLE 9: Response to question 9.

| | No. of respondents |
|-----------------|--------------------|
| Agree | 28 |
| Disagree | 7 |
| Highly disagree | 13 |
| Highly agree | 2 |

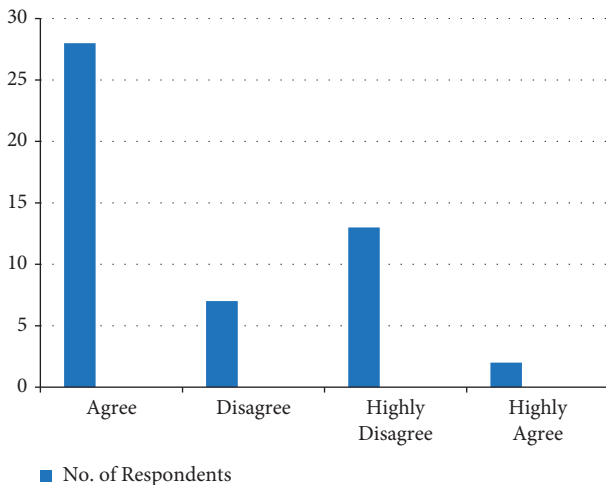


FIGURE 9: Using computer-based learning to increase motivation.

system influences the knowledge of the students in the English language. The research was undertaken consisting of 50 respondents who have distributed to a similar set of questionnaires. The responses of the respondents have been quantified and analyzed to identify how much influence the computer system has on the students. The respondents who participated in the survey belong to the age group of 16–20 years. Besides, there was equal participation of both male

TABLE 10: Response to question 10.

| | No. of respondents |
|-----|--------------------|
| Yes | 35 |
| No | 15 |

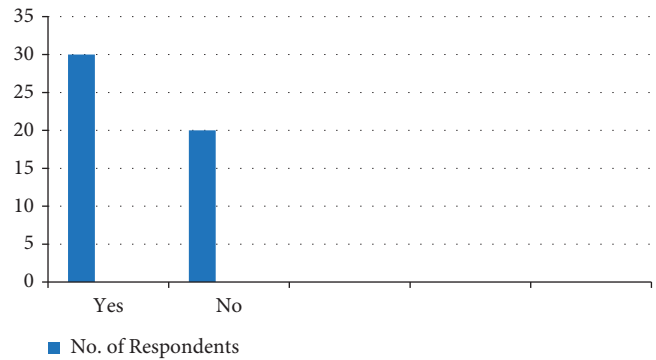


FIGURE 10: Learning better through computers.

and female students in their survey. The ratio of the gender was equal, and it also helped to gain an insight into how the boys and girls behaved differently concerning computer-assisted language and self-learning with the same. This implies that the majority of the respondents are young and are more interested in undertaking this type of processed English learning. The survey has also shown that males are more interested in learning with machines than females. The majority of the respondents had initially learned computer-based English. Very few people had undertaken the learning through self-mode and most of them learned it from school. This shows that most of the respondents lacked interest or were unaware of the learning methods. The majority of the respondents had undertaken computer-based learning more than once in life [33]. This shows the interest of people in computer-based learning. The majority of the respondents have shown their liking for learning through computer-based systems. The growing interest among people is the main reason behind the growing need for computer-based learning [30]. The majority of positive responses along with the participation in the survey show that computer-based English learning has been helping the students to boost their learning capabilities. Besides, the active participation of almost 50% of respondents shows that this method of learning has been helping the students to fasten their overall process of learning. This is identified from the overall survey that computer-based learning is undoubtedly helping the students to grow interested in the learning process. Besides, this method of learning has been motivating the students to self-check their abilities and check with priority-based learning. The majority of the respondents also agree with the fact that the opportunity to self-test through online-based testing helps them monitor the level of learning and knowledge that they are absorbing from the overall process. Therefore, it is implied that the students have been actively participating in this type of learning process, which has been

boosting their learning motivation and giving them the best experience. However, the same concept has certain limitations such as system failure. System failure is one of the major drawbacks of overall computer-based learning.

5. Conclusion

The purpose of the research study is to analyze whether the computer system boosts English learning among students. The entire research shows that the computer system has revolutionized the method of learning. The respondents are also of the opinion that this mode of learning has been motivating the students to indulge themselves in this popular form of learning. The active participation of the students has also increased the popularity of this type of learning method. Instant learning with a click of a mouse has made it easy for students to take the benefits of quick learning. Not only this, the students are now motivated to self-check their learning abilities. Besides, the use of systems to survey topics in English for more in-depth learning is one perk of using the computer system. However, it is equally important for the students to equip themselves with proper skills and systems. For getting a better grasp of the concept, the students can frequently take help for their projects and assignments from the computer. Using it for communication with peers and tutors is also a good method to frequently use the computer and learn from it. This might not be possible for all the students around the world. Therefore, the shared benefits of such an application might not be available to all students around the world. Considering the limitations of the research, it can be said that the researcher had to undergo the limitations of time, funds, and scope for the research work. The researcher was required to complete the assignment within a limited time and with very little funds; therefore, the scope is also restricted from that end.

Like all studies, this study had limitations and could not include all the issues related to the topic. They are as follows:

- (1) One limitation is that the study included only participants that were 16 to 30 years old. So, the results cannot be generalized to the other age groups.
- (2) The population was limited to 50 people. Therefore, this cannot be generalized either.
- (3) This study was conducted at Cihan University; thus, the results may not be generalized to other contexts.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

- [1] Z. Azizi, E. Namaziandost, and A. Rezai, "Potential of podcasting and blogging in cultivating Iranian advanced EFL learners' reading comprehension," *Heliyon*, vol. 8, no. 5, Article ID e09473, 2022.
- [2] T. Pujiani, P. Akbar Wibawa, N. Azzizatun Zahro, and I. Fadilah Iryaninda, "The implementation of English language skills teaching and learning during the pandemic of COVID-19," *J-LEE-Journal of Law, English, and Economics*, vol. 3, no. 1, pp. 143–154, 2021.
- [3] Sutarto, I. Dwi Hastuti, D. Fuster-Guillén, J. P. Palacios Garay, R. M. Hernández, and E. Namaziandost, "The Effect of problem-based learning on metacognitive ability in the conjecturing process of junior high school students," *Educational Research International*, vol. 2022, Article ID 2313448, 10 pages, 2022.
- [4] A. Rezai, E. Namaziandost, and S. Rahimi, "Developmental potential of self-assessment reports for high school students' writing skills: a qualitative study," *Teaching English as a Second Language Quarterly (Formerly Journal of Teaching Language Skills)*, vol. 41, no. 2, pp. 163–203, 2022.
- [5] R. Zhang and D. Zou, "Types, purposes, and effectiveness of state-of-the-art technologies for second and foreign language learning," *Computer Assisted Language Learning*, vol. 35, no. 4, pp. 696–742, 2020.
- [6] L. Hsu, "To CALL or not to CALL: empirical evidence from neuroscience," *Computer Assisted Language Learning*, vol. 35, no. 4, pp. 792–815, 2020.
- [7] E. Namaziandost, M. H. Razmi, R. M. Hernández, Y. Ocaña-Fernández, and M. Khabir, "Synchronous CMC text chat versus synchronous CMC voice chat: impacts on EFL learners' oral proficiency and anxiety," *Journal of Research on Technology in Education*, pp. 1–18, 2021.
- [8] M. Y. Abdullah, S. Hussin, and K. Ismail, "Implementation of flipped classroom model and its effectiveness on English speaking performance," *International Journal of Emerging Technologies in Learning*, vol. 14, no. 9, p. 130, 2019.
- [9] P. Abedi, E. Namaziandost, and S. Akbari, "The impact of flipped classroom instruction on Iranian upper-intermediate EFL learners' writing skill," *English Literature and Language Review*, vol. 5, no. 59, pp. 164–172, 2019.
- [10] K. Adiyarta, D. Napitupulu, R. Rahim, D. Abdullah, and M. I. Setiawan, "April. Analysis of e-learning implementation readiness based on integrated ELR model Journal of Physics: conference Series," *Journal of Physics: Conference Series*, vol. 1007, no. 1, Article ID 012041, 2018.
- [11] A. Hashemifardnia, E. Namaziandost, and S. Shafiee, "The effect of implementing flipped classrooms on Iranian junior high school students' reading comprehension," *Theory and Practice in Language Studies*, vol. 8, no. 6, pp. 665–673, 2018.
- [12] S. Aldabbus, "Project-based learning: implementation & challenges," *International Journal of Education, Learning and Development*, vol. 6, no. 3, pp. 71–79, 2018.
- [13] M. Al-Emran, V. Mezhuyev, A. Kamaludin, and M. AlSinani, "Development of M-learning application based on knowledge management processes," in *Proceedings of the 2018 7th International Conference on Software and Computer Applications*, pp. 248–253, New York, NY, USA, February 2018.
- [14] M. Mailizar, A. Almanthari, S. Maulina, and S. Bruce, "Secondary school mathematics teachers' views on e-learning implementation barriers during the COVID-19 Pandemic: the Case of Indonesia," *Eurasia Journal of Mathematics, Science and Technology Education*, vol. 16, no. 7, Article ID em1860, 2020.
- [15] B. Vadivel and P. V. Beena, "The impact of multimedia in English language classroom of undergraduate students in

- engineering colleges,” *International Journal of Advanced Science and Technology*, vol. 28, no. 2, pp. 194–197, 2019.
- [16] J. Burston and A. Athanasiou, “Twenty-five years of MALL experimental implementation studies: what do we know about it?” in *Recent Tools for Computer-And Mobile-Assisted Foreign Language Learning*, pp. 35–59, IGI Global, Hershey, PA, USA, 2020.
- [17] B. Vadivel, E. Namaziandost, and A. Saeedian, “Progress in English language teaching through continuous professional development—teachers’ self-awareness, perception, and feedback,” *Frontiers in Education*, vol. 6, Article ID 757285, 2021.
- [18] F. A. Chafshoh, “The implementation of e-learning to teach English t the second-grade students at man 2 Nganjuk,” 2022, <https://repo.uinsatu.ac.id/id/eprint/24833>.
- [19] F. Liu, B. Vadivel, F. Mazaheri, E. Rezvani, and E. Namaziandost, “Using games to promote EFL learners’ willingness to communicate (WTC): potential effects and teachers’ attitude in focus,” *Frontiers in Psychology*, vol. 12, p. 4526, 2021.
- [20] L. Efriana, “Problems of online learning during a Covid-19 pandemic in EFL classroom and the solution,” *JELITA*, vol. 2, pp. 38–47, 2021.
- [21] T. Nur Fitria, “Implementation of institution’s E-learning platform in teaching online at ITB AAS Indonesia,” *EDUTECH: Journal of Education And Technology*, vol. 4, no. 3, pp. 493–503, 2021.
- [22] N. Hockly, “Blended learning,” *ELT Journal*, vol. 72, no. 1, pp. 97–101, 2018.
- [23] B. Juraboev, “Development of multimedia teaching materials and online resources in foreign languages and their implementation in the educational process,” *Academic research in educational sciences*, vol. 2, no. 8, pp. 80–83, 2021.
- [24] J. Jusamzilah and M. Vianty, “The Role of MGMP in OGAN ILIR district in supporting the implementation of online learning: the perception of high school english teachers,” Doctoral Dissertation, Sriwijaya University, Palembang, Indonesia, 2022.
- [25] Y. Kawamura, C. Chen, and R. Hou, “Implementation and evaluation of language learning support module applying speech recognition,” *IEICE Technical Report*, vol. 119, no. 468, pp. 63–67, 2020.
- [26] E. M. McTigue, O. J. Solheim, W. K. Zimmer, and P. H. Uppstad, “Critically reviewing GraphoGame across the world: recommendations and cautions for research and implementation of computer-assisted instruction for word-reading acquisition,” *Reading Research Quarterly*, vol. 55, no. 1, pp. 45–73, 2020.
- [27] P. I. Puspitasari, N. K. A. Suwastini, G. W. K. A. A. Blangsinga, G. R. Dantes, and I. J. C. Tuerah, “Boomers’ perception towards the implementation of online learning amidst the Covid-19 outbreak,” in *Proceedings of the 2nd International Conference on Technology and Educational Science (ICTES 2020)*, pp. 128–134, Atlantis Press, Amsterdam, Netherlands, April 2021.
- [28] S. Seok, B. DaCosta, and R. Hodges, “A systematic review of empirically-based universal design for learning: implementation and effectiveness of universal design in education for students with and without disabilities at the postsecondary level,” *Open Journal of Social Sciences*, vol. 6, no. 5, pp. 171–189, 2018.
- [29] T. S. Silvana, I. G. P. Buditjahjanto, T. Rijanto, and L. Nurlaela, “Study of the implementation of online learning models in vocational schools,” *Journal of Physics: Conference Series*, vol. 1810, no. 1, Article ID 012066, 2021.
- [30] A. Syakur, Sugirin, and Widiarni, “The effectiveness of English learning media through google classroom in higher education,” *Britain International of Linguistics Arts and Education (BIO LAE) Journal*, vol. 2, no. 1, pp. 475–483, 2020.
- [31] N. Tymoshchuk, “The Implementation of E-learning to support learning and teaching foreign language: a case study in Ukrainian higher education,” *Arab World English Journal (AWEJ)*, vol. 2, pp. 233–244, 2022.
- [32] C. P. Utami and D. Anggani L Bharati, “Teachers’ perceptions, planning, and implementation of game-based learning in English extracurricular program (A case of smp 40 semarang),” *English Education Journal*, vol. 10, no. 3, pp. 307–320, 2020.
- [33] L. Vitoria, M. Mislinawati, and N. Nurmasiyah, “September. Students’ perceptions on the implementation of e-learning: helpful or unhelpful? Journal of physics: conference series,” *Journal of Physics: Conference Series*, vol. 1088, no. 1, Article ID 012058, 2018.