

Effect of Using Digital Media for Language Learning on Reduction of Anxiety and Boost of Proficiency among Immigrating Students: A Case Study

Reza Gholami*, Sima Salahshour

E-One Immigration Company, Iran

Corresponding author: Reza Gholami, E-mail: eonevisa@gmail.com

ARTICLE INFO

Article history

Received: August 14, 2024

Accepted: January 22, 2025

Published: January 31, 2025

Volume: 13 Issue: 1

Conflicts of interest: None

Funding: None

ABSTRACT

With its constant advancements, technology has altered teaching and learning in certain ways in the modern era. One of the most widely used technology-based teaching strategies that has been overly popular in recent years is the use of digital media in English language training. Yet, anxiety is one of many emotional states that are significantly impacted by the changes in education brought about by the use of digital media and computer-based learning. Particularly, there is a gap in the literature on the level of anxiety among immigrating students planning to study abroad while trying to learn English in an EFL context. To address these, the current study was formulated to explore the effect of using digital media for language learning on reducing anxiety and boosting language proficiency of immigrant students in Iran. To suit the study objectives, a one-group pretest-posttest design was adopted and using a purposive sampling method, 12 male and female students were finally selected. Beck Anxiety Inventory and World English Placement Test were distributed among them in the pretest to determine their anxiety level, and language proficiency, respectively. A teaching protocol of 10 sessions, each lasting 90 minutes was adopted, and at the end of the experiments, the two instruments were distributed to determine the posttest scores of anxiety and language proficiency. The data were collected and transferred to SPSS Version 27 for further statistical analysis and interpretation. The results proved that the participants had sever anxiety level in the pretest, which was reduced to a significantly lower levels after using digital media for language learning. Moreover, it was found that there was a significant difference in the pretest and posttest scores of language proficiency of the immigrating students after using digital media for learning English, showing a significant improvement. Finally, it was found that there was a significant difference in the mean scores of males' and females' anxiety in the pretest but after the experiment, although both males and females showed significant reduction in their level of anxiety compared to the pretest, there was not a significant difference in the mean scores of the two groups. Overall, using digital media can assist in enhancing literacy skills among immigrant students in diverse aspects such as digital literacy, resulting in better literacy outcomes and further literacy development.

Key words: Anxiety, Digital Media, Language Learning, Technology, Immigrating Students

BACKGROUND

The current technologies of the digital age have significantly changed how individuals communicate with one other (Yadav et al., 2018; Zhao et al., 2022). The hierarchy of requirements, which includes the needs for communication and teaching, has been impacted by the quick changes in technology use and widespread Internet use. Students now have many opportunities to behave effectively at this age because of the use of technology in the educational system (Suwastini et al., 2020; Puspitasari et al., 2021; Zhao, Wang, Ismail, Hasan, and Hashemifardnia, 2022). With its constant advancements, technology has altered teaching and learning in certain ways in the modern era (Hollands & Escueta, 2019). Technology has given EFL students numerous

chances to communicate with native speakers in an effortless manner (Reinders & Benson, 2017). Technology integration into educational settings has given teachers and students excellent opportunities to increase the efficacy of pedagogical processes (Yenkimaleki & van Heuven, 2019). Accordingly, Spector and Yuen (2016) defined instructional technology as the theory and practice of creating, assembling, applying, and evaluating educational tools and procedures. Students learn more flexibly and comprehend that there are other places besides traditional classrooms to learn and teach the English language thanks to the availability of technological tools and digital media like social media applications and online instruction (Dantes et al., 2019; Putra et al., 2020; Puspitasari et al., 2021; Utami et al., 2021).

One of the most widely used technology-based teaching strategies that has been overly popular in recent years is the use of digital media in English language training (Zhao, et al., 2022). Incorporating digital media and web-based materials into language education allows students to share their own content as well as engage with that of the other users through sharing, like, and commenting on it (Smith, 2017; Masrom et al., 2021). E-learning, according to the European Commission (2001), is the process of using new multimedia technologies and the internet to enhance the quality of education by making information and services easier to access and enabling remote cooperation and exchanges. While Horton (2006) thinks that e-learning promotes the development of information and computer technology learning experiences, Rosenberg (2001) claimed that e-learning allows data saving, sharing, and updating. It is significant to note that all definitions concur that the use of computer technology to support and improve learning is a fundamental component of e-learning (Shahi, 2016). According to Zengin and Aksu (2017), technical advancements including the internet, email, computers, digital games, mobile devices, and apps have an impact on education. According to Boo et al. (2015), using technology like computers is essential to the multimodal collection of texts, sounds, images, videos, animations, and hypermedia in order to provide scenarios that are relevant and quicken language acquisition. Consequently, it can be said that it is well acknowledged that digital tools aid in learning achievement (Zhao, et al., 2022).

According to Zhao et al. (2022), anxiety is one of many emotional states significantly impacted by the changes in education brought about by the use of digital media and computer-based learning. Anxiety is characterized as situation-specific, trait-specific, and state (MacIntyre, 2007). Scenario-specific anxiety is the experience of feeling anxious in a particular scenario; trait anxiety is the tendency for people to become concerned; and state anxiety is transient and pertains to worries we have at a certain time. However, recent research has shown that situation-specific and trait concerns might be associated with one another, suggesting that these three types of anxiety may not always be separate factors (Dewaele, 2013; Galante, 2018). Anxiety makes inexperienced EFL students behave badly when they are learning the language. Examining EFL instruction that can lessen anxiety is crucial since anxiety is an affective element that can hinder students from improving their language acquisition (Dornyei, 2005; Zhao, et al., 2022). Zhao and Yang (2023) have revealed that anxiety plays a crucial role as an emotional component when it comes to learning a foreign language (FL). Anxiety's role in L2 learning has been the subject of L2 study for a long time (Horwitz, et al., 1986; Sahoo & Sinha, 2020; Gok et al., 2021; Zhao & Yang, 2023). Furthermore, it is asserted that anxiety can provide a number of challenges for learners of foreign languages as it can impede the process of learning, retaining, and producing the target language (MacIntyre & Gardner, 1991).

Furthermore, elements impacting students' achievement in FL lessons include their motivation, attitudes, and anxiousness (Zhao & Yang, 2023). Thus, in a classroom with varied language proficiency, teachers must strike a balance between

providing support and challenge for all students while meeting the requirements of worried learners who may retreat or display frustration (Nilsson, 2019). Additionally, due to migration and differing levels of extramural English exposure, there is a significant growth in diversity in classrooms (Nilsson, 2019; Sundqvist & Sylvén, 2016). Thus, a deeper comprehension of affective and attitude formation processes, as well as potential strategies for ensuring successful learning outcomes and efficient methods in elementary language teaching, will be required (Mihaljević Djigunović, 2015). Considering all these, this study was designed to determine whether employing digital media for teaching and practicing could reduce the anxiety among the immigration EFL learners due to the rapid improvements in technology that are affecting the educational sector, particularly in the area of English language acquisition.

STATEMENT OF THE PROBLEM AND THE RESEARCH OBJECTIVE

The burden of public communication chances is something that both businesspeople and students must deal with in the global period (Kim, 2018; Kim, 2017). The increasing demand for improved knowledge of student characteristics that impact learning and the efficient design of online instruction is being driven by the expanding usage of online technologies for teaching and learning. Numerous facets of scientific research have been greatly impacted by the development and use of computers. As a result, computer-assisted language learning, or CALL, is crucial to instruction that emphasizes interaction and customized instruction (Shahi, 2016). By substituting two-way language instruction for traditional one-way approaches, CALL can compensate for their deficiencies. CALL has the advantage of combining text, sound effects, and visuals to boost learning efficiency by motivating students to learn, which increases the diversity of teaching (Shahi, 2016).

Por and Fong (2019) contend that in the meantime, digital engagement is becoming more widely recognized as a characteristic that distinguishes excellent instruction and learning in online learning environments. Digitally engaged learners can take an active role in their education, dedicate more time to assignments, and exhibit greater motivation and interest in the subject matter. As such, previous research has indicated a robust relationship between achievement and engagement (Por & Fong, 2019). Students that actively participate in digital learning are more likely to be involved in learning activities on a behavioral, emotional, and cognitive level. As a result, engaged learners put up more effort, feel happier, and pay closer attention to what they are learning than less engaged learners do (De Villiers & Werner, 2018). As a result, the design and development of interface presentation is very important since it deals with many ways to show information in order to effectively engage learners using text, voice, video, animation, and other media. The data is saved, communicated, and analyzed digitally after being represented in a variety of formats using a variety of sensory modalities (Por & Fong, 2019).

Accordingly, it is argued that a variety of digital media formats could overcome the limitations of traditional instruction by catering to the different needs of second language learners (Barrot, 2018, 2020). These formats are also useful

for fostering the development of communicative competence, cultural awareness, and other abilities and components (Reinhardt, 2019). Nonetheless, when it comes to L2 learning, some scholars have questioned the value of using digital media, social media, e-learning materials, and similar resources for educational purposes (Wang & Vásquez, 2014; Aloraini, 2018; Hsu & Beasley, 2019; Zhao & Yang, 2023). It has been shown that new technologies have a significant impact on learners' emotional states; among many other emotional states, anxiety is one of these (Zhao, et al., 2022). Regarding this, Krashen (1981) divided affective filters in the learning of a second language into three groups: anxiety, motivation, and self-confidence. Many empirical and theoretical research studies in the affective realm have been conducted since then. Furthermore, a growing number of scholars have asserted that language anxiety is a significant factor in determining how well ESL/EFL learners do linguistically (Gardner et al., 1997; Kim, 2018; Kim, 2002; Liu & Huang, 2011).

Furthermore, it is acknowledged by Young (1991) and Scovel (1978) that excessive worry can hinder language acquisition. However, it is challenging to quantify how anxiety benefits or hinders language learners. Pintrich (2000) asserts that the various learning categories are connected to and interact with one another. Learners have greater control over their attention, motivation, affect, behavior, and self-instruction when they use control and regulation techniques. Because each student can focus on a distinct assignment with the "integrated learning environment," e-learning enables students to work independently (Wu et al., 2012). Stated differently, it tackles differentiation while enabling pupils to work at their own pace. According to Nedeva and Dimova (2010), advanced learners may therefore be able to work more quickly and complete more tasks than rookie learners. As a result, students are forced to adhere to their own schedules and work from home or anywhere else. Through the many e-learning assignments and tools, students can further enhance their language skills by practicing speaking, listening, writing, and reading (Shahi, 2016). According to Doughty (2022), the learning environment is crucial for students to develop their L2 language skills, but other studies highlight the role that the environment plays in either escalating or reducing student anxiety (Kiatkheeree, 2018). Various factors in the classroom contribute to students' language anxiety, and teachers must learn to identify the behaviors of anxious students in order to create a stable and safe environment for them. High levels of language anxiety in the classroom have been linked to poorer grades, lower grade point averages, increased absences, and difficulty focusing in class (Laeringsmiljøseneteret, 2020). In particular, not much study has been done on how language learners' anxiety levels relate to the digital classroom. Although Zoom and camera use have been discussed in some recent studies (Damsgaard, 2020; Møller, 2020; Svendsen, 2021), formal research in this area has not been done much (Doughty, 2022). Because there is a lack of prior research studies in Iran on immigrant students planning to study abroad and a gap in the literature regarding the potential facilitative or deliberative effects of using digital media, the current study was designed to fill this gap by assessing whether employing digital media for

language learning can help immigrant students become less anxious and increase their proficiency.

RESEARCH QUESTIONS AND HYPOTHESES

In this study, the following research questions were formulated:

- RQ1: What is the level of anxiety among the Immigrating students who plan to study abroad?
- RQ2: Does using digital media for language learning curtail anxiety among the immigrating students?
- RQ3: Does using digital media for language learning boost language proficiency among the immigrating students?
- RQ4: Is there any significant difference in the level of anxiety among male and female students in the pretest and posttest?

Accordingly, the following three null hypotheses were formulated as well.

- H01: There is no significant difference in the pretest and posttest scores of anxiety of the immigrating students using digital media for language learning.
- H02: There is no significant difference in the pretest and posttest scores of language proficiency of the immigrating students using digital media for language learning.
- H03: There is not any significant difference in the level of anxiety among male and female students in the pretest and posttest.

LITERATURE REVIEW AND THEORETICAL UNDERPINNING

The sociocultural theory and the collaborative learning both support the use of social media and digital media in language instruction. While some scholars contend that social networking platforms can facilitate collaborative learning, encourage students to engage in more beneficial learning activities, and facilitate information sharing, group work, feedback, and teacher interactions (Al-Rahmi et al., 2020; Ansari & Khan, 2020; Astatke et al., 2021; Raza et al., 2020; Hoi, 2021; Zhao et al., 2022), others point out that knowledge is created cooperatively within social contexts and view learning as a process in which students create their own meanings from the materials and content that are presented to them, rather than trying to memorize the information (Vygotsky, 1978). The idea that learning may be built and created to be more beneficial within the confines of social processes in cognition groups is also the foundation of the sociocultural theory. Moreover, learning happens more effectively when it incorporates social viewpoints into positive and productive activities, as knowledge is a continuous process that requires development over time (Brown et al., 1989). According to the sociocultural theory, instruction and learning should focus on using content to strengthen comprehension tools, and thanks to social media and digital media, this content is easily and widely available. Similarly, the sociocultural theory maintains that contemporary technological tools can be used to gather data on social interactions, personal activities, and information (Golub, 1988).

Related Studies

Jasemi and Gottardo (2023) conducted a study using a sample of recent Iranian immigrants and refugees because they believed that because of the different resettlement policies, there are presumptions that immigrants and refugees may differ in terms of emotional well-being, social adjustment and acculturation, and second language learning outcomes. A number of questions about the participants' English language and reading proficiency, acculturation, socioeconomic standing, emotional health, and possible traumatic previous events were filled out. The correlations between these characteristics for the two groups were investigated in this study. Compared to the immigrant group, the refugees performed worse on socioeconomic status-related tests and had worse English proficiency. For immigrants, reading comprehension in a second language was correlated with both vocabulary and word reading in English; for refugees, reading comprehension was correlated solely with word reading. The number of refugees who experienced trauma was notably greater. Trauma, however, did not significantly predict any of the English competence abilities. Enculturation was adversely correlated with English vocabulary and reading comprehension for immigrants, but not for refugees. Acculturation was linked to English reading comprehension.

According to Dombou, Omonaiye, Fraser, et al. (2023), immigrant students in high-income nations encounter a number of difficulties that may worsen their mental health once they move to their new nation. As a result, they found gaps in the body of knowledge about the obstacles to and enablers of mental health service utilization in high-income nations. They came to the conclusion that there is a clear trend toward more awareness of immigrant students' mental health issues and their access to mental health assistance. However, a number of obstacles prevent them from using these services, including stigma, lack of awareness, and adherence to traditional gender roles (such as masculinity). However, some characteristics make it easier to receive mental health care, such as being a woman, feeling strongly about cultural adaptation, or having sufficient mental health literacy. Additionally, they imply that these pupils' demands are frequently unmet and that they have particular experiences. They contend that in order to enhance their mental well-being and utilization of mental health services, it is critical to take into account the obstacles they encounter, their distinct background within their particular setting, and to create specialized preventative and intervention initiatives.

Zhao and Yang (2023) used a pretest-posttest non-equivalent group quasi-experimental approach to investigate the effects of a flipped course on the writing performance and anxiety of Chinese EFL learners. The experimental group, which received instruction based on flipped writing instruction, greatly improved their writing proficiency, according to the data. Additionally, they showed that participants' writing anxiety was significantly decreased by the flipped course.

Al-Obaydi Jawad, and Rahman (2022) examined the value of communication technology in the context of the class-home connection. Specifically, they examined how this two-way communication—which necessitates an electronic interactive dialogue between educators and parents—may improve

students' academic performance in the English language and lessen their anxiety in the classroom. Thirty EFL secondary school students and their parents made up the study's sample. Two methods were employed to gather information: a structured interview with parents, observation checklists to gauge students' anxiety, and an assessment of students' academic performance to gauge their English proficiency. According to the findings, parents are generally in favor of employing communication technologies to improve the home-school link. It also shows that when parents communicate with the teacher on a regular basis, pupils' anxiety levels are significantly lower. There has also been a noticeable improvement in the students' academic performance in the English language.

Doughty (2022) used a questionnaire, eleven interviews, and responses to the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986) to investigate the effects of foreign language anxiety on upper secondary vocational students in Norwegian schools. The study involved 28 students in two different classes. According to this study, not many students are concerned about being videotaped or recorded in class. However, even those who are hesitant to demand that computers and mobile phones can be kept out of the classroom. Moreover, the majority of study participants reported medium to high levels of anxiety associated with at least some aspects of learning and using a foreign language, but many of them also reported experiencing anxiety in other disciplines. When speaking English to native speakers in a natural environment, like on vacation or online with friends, students felt less anxious than they did in the classroom when it came to speaking the language.

The effects of utilizing Telegram on the motivation, anxiety, and attitude toward studying of Iranian EFL learners in foreign languages were investigated by Zhao et al. in 2022. In this study, 60 intermediate-level Iranian EFL students were chosen with randomization to create the experimental and control groups in order to accomplish these goals. Subsequently, pretests on motivation and anxiety characteristics were administered to both groups. Following pretesting, the participants in the experimental group were treated by utilizing the Telegram app, while the ones in the control group received traditional instruction devoid of any social media use. Following an 18-session course, both groups received a post-test on motivation and anxiety. Additionally, the experimental group received an attitude questionnaire to examine their views toward the Telegram language learning program. The post-test results for the experimental and control groups differed significantly, favoring the experimental group. The results showed that the experimental group's motivation increased and their degree of foreign language fear decreased when they used the Telegram program. Additionally, the findings demonstrated that the ones in the experimental group had favorable opinions about using the Telegram app to learn English.

In an effort to broaden the scope of potential YouTube educational applications, Kim and Kim (2021) looked at how students' language and cultural diversity is enhanced by YouTube use. Results showed that students' ideas on cross-cultural understanding are broadened via YouTube. By expanding their English language proficiency and content understanding, students who used YouTube for education were also more likely

to pursue academic endeavors and become involved while studying abroad. By taking responsibility, it allowed students to further improve their understanding of English as a global language. In the end, they argued that YouTube is crucial to the academic and social advancement of Korean foreign students as they move from their home countries to their new ones.

In elementary schools in Sweden, Nilsson (2019) examined the prevalence and contributing factors of language anxiety in a supportive, non-competitive environment devoid of explicit knowledge requirements or grades. A self-report questionnaire, a modified version of the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz, & Cope, 1986), was completed by 225 students studying English as their first foreign language in order to gauge their responses to spoken classroom participation. Anxiety related to foreign languages was observed in learners on a continuum. Students were divided into three anxiety levels—low, medium, and high—in order to examine the similarities and contrasts between them. 18.2% of students were in the high anxiety group, and the majority of them felt that their anxiety was situation-specific and directly tied to how well they performed orally during English classes. Nevertheless, a lot of classroom scenarios also made other students feel anxious about language. Therefore, rather than seeing language anxiety as a negative trait of specific students, teachers can find it wise to consider common classroom behaviors that cause worry.

Por and Fong (2019) looked into how epronounce™ affected pronunciation acquisition in students with varying degrees of language anxiety. Based on their scores on the Foreign Language Class Anxiety Scale (FLCAS), 329 Primary Five students who participated in the study were categorized based on how anxious they were about language. The results demonstrated that learners with varying degrees of language anxiety did not significantly differ in their achievement scores across the three presenting formats. The learners who had medium-level anxiety in language were the most successful. When compared to the other two modes, the TSPF option produced the greatest achievement results overall. The results of this study indicate that, regardless of a learner's level of language anxiety, the online learning settings in epronounce™ foster a non-threatening, positive, and engaging atmosphere that encourages active participation in the learning activities. Based on the curvilinear link between anxiety and performance, it appears that digital involvement can raise language anxiety levels in low and high language anxiety students to a medium level for optimal learning under ideal learning conditions. As required by the social agency theory, a social relationship was also formed between the students and the onscreen narrator in TSPF mode. The quality of learning, cognitive processing, and schema activation of the learners are all enhanced by this digital engagement, which also raises the likelihood of beneficial knowledge transfer.

In order to highlight the drawbacks of employing conventional teaching techniques when instructing kindergarten pupils in English as a foreign language, Fares (2019) looked into the use of videos in this context. The results showed that teaching KG-1 pupils English as a foreign language involves a lot of video. Similarly, Kim (2018) looked into the associations between academic accomplishment and

foreign language anxiety (FLA) and language anxiety in cognitive processes (LACP) among Korean university students enrolled in an intensive TOEIC speaking program. In order to determine how students' ESA related to the Foreign Language Classroom Anxiety Scale (FLCAS) factors, their correlation with the LACP, and their effect on students' TOEIC speaking achievement over the course of the program, statistical analysis was done. In order to give students' perspectives on speaking English, this study also included semi-structured interviews between instructors and students as well as the students' introduction journals. According to the study, there is a different correlation between FLA items and LACP variables when it comes to ESA, and this has a negative impact on TOEIC speaking performance.

Shahi (2016) reported the benefits of e-learning and its role in enhancing "English Foreign Language" (EFL) students' language skills and independent learning. Shahi attempted to expose a group of Iranian students to an e-learning program and find out the effects of this exposure on their learning skills. Azad University in Iran effectively exploited e-learning, an already operational and well-established virtual learning environment. EFL (English as a Foreign Language) university students specializing in IT (information technology) and computer engineering participated in this study. Both the pretest and the posttest covered grammar, reading comprehension, hearing, and fill-in-the-blank questions with multiple choice, substitution, and written form. In the study, two classes were chosen at random to serve as the control and experimental groups. The various e-learning activities and tools have been explained along with an examination of how they might be used to help EFL students become more proficient language users and autonomous learners. The findings demonstrated the connection between learners' language acquisition and multimedia teaching methods. It was also discovered that a multimedia classroom can lessen tension and lower anxiety levels in students. Stated differently, they assert that English teachers can assist students in enhancing their English language proficiency and reducing their language anxiety by utilizing multimedia resources.

The concept that communication-related acculturative stress (CRAS) is predicted by the size and interconnection of migrants' L2 social networks was investigated by Doucerain, Varnaamkhaasti, Segalowitz, and Ryder (2015). The theory is supported by data from a study of first-generation immigrant students, which demonstrate that specific variance in CRAS, but not general acculturative stress, is explained by both the density and inclusivity of the participants' L2 network. These findings provide credence to the notion that studying the different aspects of acculturative stress would be beneficial for research on cross-cultural adaptation, and that language-related outcomes are influenced by the composition of migrants' L2 networks.

METHODOLOGY

Study Design

To address the research questions and test the research hypotheses formulated in this research, a one-group pretest-posttest

design was adopted (quantitative design). This design is widely used with the aim of recognizing the effect of a treatment or intervention on a certain sample (Ganaprakasam & Selvaraja, 2020). In fact, a one-group pretest–posttest design is known to have two main characteristics. First, a single group of participants is used meaning that all the participants are part of a single condition, receiving the same intervention. Secondly, a linear ordering requiring the assessment of a dependent variable before and after a treatment is applied. At the end, the difference between the first and the second assessment is calculated. Besides, a one-group pretest-posttest design was used to ensure that there is a single selected group under observation, with a careful measurement being done before applying the experimental treatment and then measuring after. In this research, therefore, a one-group pretest-posttest design was adopted to measure the effectiveness of using digital media in a language class on reduction of anxiety and boost of English proficiency among undergraduate EFL students in Mashhad, Iran.

The Inclusion Criteria and Sampling Method and Sample Size

To suit the objectives of the study, the participants were required to be a) candidates for any of study abroad purposes, b) were studying and preparing for English tests, c) were intermediate level learners (B1) based on the Common European Framework of Reference (CEFR). In this study, purposive sampling was recruited which is referred to as purposeful sampling too (Mweshi & Sakyi, 2020). This method is used to match the sample to the research objectives with the aim of enhancing the rigor of the study (Campbell, Greenwood, et al., 2020). Typically, a small and purposively chosen sample is selected in a quasi-experimental research design to escalate the depth of understanding (Beedell, 2021; Campbell et al., 2020; Jahja, Ramalu, & Razimi, 2021). Prior to conducting the study, the students who were planning to immigrate for a study program abroad at E-One Mohajer Raika Consultation Company were invited to participate in this study. E-One Mohajer Raika Consultation Company is a multi-purpose company mainly active in consultation for research works, immigration, and for language education. As for the latter, there are language classes which are held online and offline, using diverse digital media and technologies which facilitate learning to a great extent. In practice, the subjects selected for this study all met the inclusion criteria. All these students were candidates who were preparing to sit for one of the internationally-recognized English tests, including TOEFL, IELTS, Duolingo, and the like. Therefore, they were reached via their email addresses and WhatsApp numbers. Then an invitation link in addition to explanations for the study was sent to the students. Those willing to participate in this study were selected and the sessions for the taking the study tools and protocols were settled and arranged. Of note is that the sample size needs to be chosen with care as the single cases are representative of the whole population (Jahja, Ramalu, & Razimi, 2021; Mweshi & Sakyi, 2020). After all, For the purpose of this study, the sample which was selected reached a number of 12 male and female students.

Research Instrumentation

Beck anxiety inventory

To determine the participants' level of anxiety for the purpose of the pretest prior to administering the intervention, Beck Anxiety Inventory (BAI: Beck et al., 1993; Mukhtar et al., 2021) was administered. As reported by Ahmed et al. (2020) and Beck et al. (1988), The BAI holds a high reliability and validity. In practice, this inventory is a 21-item screening tool for assessing anxiety symptoms with intensity (Mutang et al., 2021). The BAI measures a person's experience of anxiety through physical and mental malaise experienced during the past days. The participants are asked to rate the extent to which they have been bothered by each item over the last seven days (including the day of their completion of the BAI) on a four-point scale ranging from 0 ('not at all') to 3 ('severely- I could barely stand it'). Total score ranges from 0 to 63 (Mukhtar et al., 2021; Mutang et al., 2021). As mentioned earlier, high Cronbach's alpha (0.92) and good test-retest reliability (0.75) has been reported by Ahmed et al. (2020) and many other researchers (Hui, bin Amar Foo, & binti Baktiar, 2020; Mukhtar et al., 2021; Mutang et al., 2021; Sin et al., 2020; Toledano-Toledano et al., 2020; Yüksel & Yılmaz, 2020). Scores are broken down as follows: 0-7: minimal level of anxiety, 8-15: mild anxiety, 16-25: moderate anxiety, and 26-63: severe anxiety (Beck et al., 1993).

World English placement test

For the purpose of assessing the proficiency, a placement test, designed by National Geographic Learning to test the students' proficiency through World English 3 (third Edition), which is available at <https://www.eltnl.com/sites/world-english-3e/teacher-resources/level-2/placement-test>. The test includes 12 questions to test listening and 60 questions to test vocabulary, grammar, and reading comprehension. The maximum score would be 72, if answering all the questions correctly. The time to complete this test was around 60 minutes. The mean score of the students in the pretest is to be compared with their mean in the posttest to see if any improvement is attained in the proficiency level of the students.

Procedure and Data Analysis Methods

Having selected the sample, they were invited to a briefing session in which the researchers elaborated on the research objectives, sessions' materials, and the way the lessons are taught to them. All the participants took the Beck Anxiety Inventory to determine their anxiety level at the pretest. Besides, they took the placement test to have their pretest scores recorded prior to the beginning of the research study. All the students were given access to the Student Resources on the company's website, available at <https://eone-visa.com/>, which was specifically designed with a subdomain for the participants to sign in and access the resources. The participants all participated in the session at the company, where all the required equipment including laptops, tablets, iPads, CDs, DVDs, eBooks, and the like were available to them at

their comfort. Totally, the aim was to help the students go through 10 sessions in which the first 5 units of World English 3 textbook (Third Edition) designed by National Geographic Learning were taught using digital media, and each unit was completed in two session lasting for 90 minutes. The items covered in each unit included Lesson A and Lesson C inside the class while lessons B, D, and E were skipped as the goal was to focus on vocabulary learning, grammar of the day, language expansion, as well as conversations, as in Lessons A and C. The practices and follow-up exercises were also instructed to be completed via digital media. The details of the teaching protocol in each session are listed in Table 1. Another day after session 10 was taught, the participants came to take both the Beck Anxiety Inventory and the placement test. The data were collected and transferred to SPSS Version 27 for further statistical analysis and interpretation.

RESULTS AND FINDINGS

According to Table 2, of these 12 participants, 41.7% were males versus a portion of 58.3% females. In terms of age, three categories, namely 18-21, 22-25, and 26 and above were considered. According to Table 3, a portion of around 42% ranged in age from 18 to 21 while around 33% were between 22 and 25, and finally 25% were 26 or above. Finally, as illustrated in Table 4, 67% of the participants had a high school diploma, and 33% held a bachelor degree.

Before addressing the research questions in this study, the reliability of the distributed instruments was explored to see whether they were reliable or not. In this research, Beck Anxiety Inventory was distributed among the students to identify their levels of anxiety. To explore the reliability, a Cronbach's Alpha was obtained, yielding a score of 0.757, which show an acceptable level of reliability. Table 5 reveals the reliability score related Beck Anxiety Inventory. Similar

Table 1. The teaching protocol used in the study

Session 1	Unit 1	Lesson A	Vocabulary, present perfect vs present perfect continuous,
Session 2		Lesson C	Language expansion, conversation, (so That)
Session 3	Unit 2	Lesson A	Vocabulary, infinitive and -ing forms 1,
Session 4		Lesson C	Language expansion, conversation, (could, may, might)
Session 5	Unit 3	Lesson A	Vocabulary, the passive
Session 6		Lesson C	Language expansion, conversation, past perfect
Session 7	Unit 4	Lesson A	Vocabulary, infinitive and -ing forms 2
Session 8		Lesson C	Language expansion, the passive 2
Session 9	Unit 5	Lesson A	Vocabulary, unreal conditionals
Session 10		Lesson C	Language expansion, using wish and hope

Table 2. Descriptive statistics for the gender of the participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Gender				
Male	5	41.7	41.7	41.7
Female	7	58.3	58.3	100.0
Total	12	100.0	100.0	

Table 3. Descriptive statistics for the age of the participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
18-21	5	41.7	41.7	41.7
22-25	4	33.3	33.3	75.0
26 and above	3	25.0	25.0	100.0
Total	12	100.0	100.0	

Table 4. Educational Status of the participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Gender				
Diploma	4	33.3	33.3	33.3
Bachelor	8	66.7	66.7	100.0
Total	12	100.0	100.0	

to previous studies, the BAI in this study proved to be reliable (Mukhtar et al., 2021; Mutang et al., 2021; Ahmed et al., 2020; Hui et al., 2020; Sin et al., 2020; Toledano-Toledano et al., 2020; Yüksel & Yılmaz, 2020).

Research Question One

Having attained the reliability score, the first research question of this study was addressed, which was:

- RQ1: What is the level of anxiety among the Immigrating students who plan to study abroad?

After transferring the answers given by the participants to the SPSS for further analyses, it was found that overall, the means score of the students at the beginning of the experiment in the pretest at BAI was 38.16. According to Beck et al. (1993), the obtained scores are interpreted as minimal

level of anxiety (0-7), mild anxiety (8-15), moderate anxiety (16-25), and 26-63 show severe anxiety. Therefore, it can be concluded that the immigrating students participating in this study showed a severe level of anxiety at the pretest as their mean score was 38.16 with a standard deviation of 6.08. The detailed statistical description on the anxiety levels of the participants has been delineated in Table 6. Further statistical analyses were conducted to better understand the anxiety level among the participants. As such, it was found that of the 21 given questions examining the anxiety, overall, the highest score belonged Fear of worst happening with a mean of 2.83 and a sum of 34 ($SD=0.389$), which was the highest of all. This was followed by the Feeling of choking with a sum of 33 and a mean of 2.75 ($SD=0.452$) while Hands trembling ranked the third with a sum of 32 and a mean of 2.67 ($SD=0.492$). The lowest, yet, belonged to Scared with a mean of 0.33 ($SD=0.492$). All in all, these are some of the items which indicate a severe anxiety among the immigrating students. Table 7 tabulates the descriptive statistics concerning the BAI scores of the participants.

Table 5. Reliability score of beck anxiety inventory

Cronbach's Alpha	N of Items
0.757	21

Table 6. Immigrating students' overall anxiety in the pretest

	N	Min	Max	Sum	M		SD
					Statistic	Std. Error	
Anxiety in pretest	12	29	49	458	38.16*	1.75	6.08
Valid N (listwise)							

*Mean score interpretation: 0-7: minimal, 8-15: mild, 16-25: moderate, 26-63: severe

Table 7. Detailed descriptive statistics on BAI's questions in pretest

BAI in Pretest	N	Min	Max	Sum	M	SD
Numbness or tingling	12	1	3	20	1.67	0.651
Feeling hot	12	1	2	16	1.33	0.492
Wobbliness in legs	12	0	3	16	1.33	0.778
Unable to relax	12	0	3	26	2.17	0.937
Fear of worst happening	12	2	3	34	2.83	0.389
Dizzy or light headed	12	1	3	26	2.17	0.835
Heart pounding/racing	12	2	3	31	2.58	0.515
Unsteady	12	2	3	27	2.25	0.452
Terrified or afraid	12	1	3	18	1.50	0.674
Nervous	12	1	3	24	2.00	0.739
Feeling of choking	12	2	3	33	2.75	0.452
Hands trembling	12	2	3	32	2.67	0.492
Shaky or unsteady	12	1	3	18	1.50	0.674
Fear of losing control	12	0	2	11	0.92	0.669
Difficulty breathing	12	1	3	21	1.75	0.622
Fear of dying	12	0	3	20	1.67	0.985
Scared	12	0	1	4	0.33	0.492
Indigestion	12	0	3	20	1.67	0.888
Faint/Lightheaded	12	0	3	27	2.25	0.965
Face flushed	12	0	2	15	1.25	0.622
Hot/cold sweats	12	0	3	19	1.58	0.900
Valid N (listwise)	12					

Research Question Two

After determining the students' overall anxiety score on BAI, the second research question and also the first null hypothesis of the study was addressed, too. The second research question and the null hypothesis were as follows:

- Research question two: does using digital media for language learning curtail anxiety among the immigrating students?
- H01: There is no significant difference in the pretest and posttest scores of anxiety of the immigrating students using digital media for language learning.

At the beginning, descriptive findings related to the anxiety scores in the posttest were tabulated and it was found that the mean of overall anxiety among the immigrating students after using digital media for language learning reduced to a mean of 18.41 ($SD=1.44$). Generally, there was lower anxiety among the participants in comparison with the pretest. Table 8 reveals the details of the descriptive statistics in relation to the posttest scores of anxiety among the participants.

A mean of 18.41 falls in the category of moderate anxiety in BAI as Beck et al. (1993), acknowledge that a score between 16 and 25 is a moderate level of anxiety. Apparently, using digital media influenced the anxiety level, reducing it from 38.16 in the pretest to 18.41 in the posttest. In further details, it is observed that after the experiment, the highest score in the students' anxiety score belonged to Dizzy or light headed. It was a mean of 1.92 and a sum of 23 in ($SD=0.289$). Table 9 details the information in relation with the participants' anxiety scores per item in the posttest.

However, in order to identify whether this reduction in the mean of the anxiety score in the posttest significantly differs from that of the pretest, a paired t-test was used, which is employed when each subject has a pair of measurements, such as a before and after score. In statistics, a paired t-test determines whether the mean change for these pairs is significantly different from zero. Table 10 indicates the means and other statistics for the score of anxiety in the pretest and posttest. Moreover, Table 11 reports the Paired Samples Test results, in which the means of the anxiety scores of the

Table 8. Overall anxiety scores in the posttest

	N	Min	Max	Sum	M		SD
					Statistic	Std. Error	
Anxiety in pretest	12	16	21	221	18.41	0.41	1.44
Valid N (listwise)							

*Mean score interpretation: 0-7: minimal, 8-15: mild, 16-25: moderate, 26-63: severe

Table 9. Details of anxiety scores in the posttest

BAI in Posttest	N	Min	Max	Sum	M	SD
Numbness or tingling	12	0	1	4	0.33	0.492
Feeling hot	12	1	2	20	1.67	0.492
Wobbliness in legs	12	0	0	0	0.00	0.000
Unable to relax	12	1	2	18	1.50	0.522
Fear of worst happening	12	1	2	19	1.58	0.515
Dizzy or light headed	12	1	2	23	1.92	0.289
Heart pounding/racing	12	0	1	10	0.83	0.389
Unsteady	12	1	2	18	1.50	0.522
Terrified or afraid	12	1	3	22	1.83	0.577
Nervous	12	1	2	18	1.50	0.522
Feeling of choking	12	0	1	1	0.08	0.289
Hands trembling	12	0	1	4	0.33	0.492
Shaky or unsteady	12	1	2	15	1.25	0.452
Fear of losing control	12	0	1	5	0.42	0.515
Difficulty breathing	12	0	1	5	0.42	0.515
Fear of dying	12	0	1	3	0.25	0.452
Scared	12	0	2	12	1.00	0.426
Indigestion	12	0	1	4	0.33	0.492
Faint/Lightheaded	12	0	0	0	0.00	0.000
Face flushed	12	0	2	8	0.67	0.651
Hot/cold sweats	12	0	2	12	1.00	0.426
Valid N (listwise)	12	0	1	4	0.33	0.492
	30					

Table 10. Paired Samples Statistics for the pretest and posttest score of anxiety

	N	Min	Max	Sum	M		SD
					Statistic	Std. Error	
Anxiety in pretest	12	29	49	458	38.16	1.75	6.08
Anxiety in posttest	12	16	21	221	18.41	0.41	1.44
Valid N (listwise)							

Table 11. Paired Samples Test results for the anxiety scores in the pre-post test

		Paired Differences					<i>t</i>	<i>df</i>	Sig. (2-tailed)
		<i>M</i>	<i>SD</i>	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Anxiety in pretest - Anxiety in posttest	19.75	6.32	1.82	15.73	23.76	10.81	11	0.000

students in the pretest have been compared with that of the posttest to find out if this difference in the mean is statistically significant or not. The results prove that since the *p*-value (.000) is less than the significance level (e.g., 0.05), the null hypothesis is rejected and it can be concluded that there is a significant difference in the pretest and posttest scores of anxiety of the immigrating students after using digital media for learning English.

Research Question Three

After determining the students' overall English proficiency score, the third research question and also the second null hypothesis of the study was addressed, too. The third research question and the null hypothesis were as follows:

- Research question three: does using digital media for language learning boost language proficiency among the immigrating students?
- H02: There is no significant difference in the pretest and posttest scores of language proficiency of the immigrating students using digital media for language learning.

At the beginning, descriptive findings related to the proficiency scores in the pretest and posttest were tabulated and it was found that the mean of overall proficiency among the immigrating students after using digital media for language learning boosted from mean of 49.33 (*SD*=3.57) to a mean of 65.58 (*SD*=1.22). Generally, there was a higher score of language proficiency among the participants in comparison with the pretest. Table 12 reveals the details of the descriptive statistics in relation to the posttest scores of language proficiency among the participants.

However, in order to identify whether this boost in the mean of the proficiency score in the posttest significantly differs from that of the pretest, a paired *t*-test was used. Table 13 reports the Paired Samples Test results, in which the means of the anxiety scores of the students in the pretest have been compared with that of the posttest to find out if this difference in the mean is statistically significant or not. The results prove that since the *p*-value (.000) is less than the significance level (e.g., .05), the null hypothesis is rejected

Table 12. Overall language proficiency scores in the pretest and posttest

	M	N	SD	Std. Error Mean
proficiency in pretest	49.33	12	3.576	1.032
proficiency in posttest	65.58	12	4.231	1.221
Valid N (listwise)				

and it can be concluded that there is a significant difference in the pretest and posttest scores of language proficiency of the immigrating students after using digital media for learning English.

Research Question four

The fourth research question, yet, revolved around gender difference, given below in addition to the third null hypothesis:

- Research Question Four: Is there any significant difference in the level of anxiety among male and female students in the pretest and posttest?
- H03: There is not any significant difference in the level of anxiety among male and female students in the pretest and posttest.

Table 14 demonstrates the means and other statistical details related to males and females in the pretest after the participants took the BAI. As mentioned earlier, the overall mean of anxiety in the pretest was 38.16, which showed a severe anxiety level. As such, the scores of male and female immigrating students show a mean of 33 (*SD*=3.67) and a mean of 41.85 (*SD*=4.56), respectively. Accordingly, while the overall score of anxiety showed that the immigrating students overall had a severe anxiety level, the score of men, being 33 and women being 41.85 again proves that anxiety for both groups fall in a severe category. However, in order to determine whether this difference is statistically significant, an independent sample *t*-test was conducted, and as illustrated in Table 15, the *p*-value of .000 was below the significance level (e.g., .05); therefore, the null hypothesis is rejected. As

Table 13. Paired Samples Test results for the proficiency scores in the pre-post test

<i>M</i>		Paired Differences					<i>t</i>	<i>df</i>	Sig. (2-tailed)
		<i>M</i>	<i>SD</i>	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Proficiency in Pretest proficiency in posttest	-16.25	4.65	1.34	-19.20	-13.29	-12.09	11	0.000

Table 14. Anxiety scores for male and female students in the pretest

Gender	<i>M</i>	<i>N</i>	<i>SD</i>	Sum	Min	Max
Male	33	5	3.67	165	29	38
Female	41.85	7	4.56	293	35	49
Total	38.16	12	6.08	458	29	49

Table 15. T-test results for the difference between anxiety levels of male and female students in the pretest

		t-test for Equality of Means							
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper
Anxiety in pretest	Equal variances assumed	-3.577	10	0.005	-8.85714	2.47634	-14.37477	-3.33952	
	Equal variances not assumed	-3.719	9.765	0.004	-8.85714	2.38176	-14.18138	-3.53290	

CONCLUSIONS

To address the lack of prior research studies in Iran on immigrant students planning to study abroad and their level of anxiety prior to immigration and a gap in the literature regarding the potential facilitative or deliberative effects of using digital media, the current study was designed to fill this gap. The first finding in this study was related to the level of anxiety among the participants prior to the experiment, which ranked them among the ones with severe anxiety level (mean of 38.16). moreover, it was found that the overall anxiety level among the immigrating students after using digital media for language learning reduced to a mean of 18.41 ($SD=1.44$), which was a lower anxiety level. To prove if this reduction was significant statistically, a paired t-test was conducted, showing that the p -value (.000) is less than the significance level (e.g., .05); thus, it is concluded that there is a significant difference in the pretest and posttest scores of anxiety of the immigrating students after using digital media for learning English. Apart from reduction in the level of anxiety under the effect of using digital media for teaching and learning, it was found that there was a significant difference in the pretest and posttest scores of language proficiency of the immigrating students after using digital media for learning English. Lastly, it was found that there was a significant difference in the mean scores of males' and females' anxiety in the pretest but after the experiment, although both males and females showed significant reduction in their level of anxiety compared to the pretest, there was not a significant difference in the mean score of the two groups. The results of this study show that using digital media is an expedient way to help students experience less anxiety throughout their learning programs; yet, the results cannot be generalized to all EFL learners, as in this study, only a selected group of immigrating students participated in the study. Moreover, gender difference in level of anxiety as found in this study is consistent with the previous literature, showing that the patterns of males and females in terms of the anxiety they experience need more scrutiny. That using digital media helps students achieve better and boost their proficiency is also a finding congruent with the previous literature, showing that the importance of digital media is to be taken into account while coaching the EFL students, especially the ones deciding to immigrate and study abroad.

Considering the results of this research, i.e. using digital media for language learning can curtail anxiety and boost proficiency among immigrating students, it can be emphasized that digital media enhances literacy skills among immigrant students in diverse aspects. First and foremost, it can be pinpointed that digital media tools and platforms have the potential to improve digital literacy among immigrant students, which is a crucial component of overall literacy. Besides, digital media aids in language learning, which in turn boosts literacy levels. In addition, digital media can make learning more engaging and motivating, leading to better literacy outcomes. In practice, digital media provides access to a wide range of learning resources, helping immigrant students improve their skills and also could lead to social letting and interaction, which can enhance literacy development.

REFERENCES

- Ahmed, M. Z., Ahmed, O., Aibao, Z., Hanbin, S., Siyu, L., & Ahmad, A. (2020). Epidemic of COVID-19 in China and associated psychological problems. *Asian journal of psychiatry*, 51, 102092.
- Al-Obaydi, L. H., Jawad, Z. A., & Rahman, F. (2022). Class-home Connection Using Communication Technology and its Impact on Anxiety Reduction and Academic Performance. *Al-Adab Journal*, 141, 53-66.
- Aloraini, N. (2018). Investigating Instagram as an EFL learning tool. *Arab World English Journal (AWEJ) Special Issue on CALL*, (4).
- Al-Rahmi, W. M., Yahaya, N., Alturki, U., Alrobai, A., Aldraiweesh, A. A., Omar Alsayed, A., & Kamin, Y. B. (2022). Social media-based collaborative learning: The effect on learning success with the moderating role of cyberstalking and cyberbullying. *Interactive Learning Environments*, 30(8), 1434-1447.
- Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learning Environments*, 7(1), 9.
- Astatke, M., Weng, C., & Chen, S. (2023). A literature review of the effects of social networking sites on secondary school students' academic achievement. *Interactive Learning Environments*, 31(4), 2153-2169.
- Barrot, J. S. (2018). Facebook as a learning environment for language teaching and learning: A critical analysis of the literature from 2010 to 2017. *Journal of computer assisted learning*, 34(6), 863-875.
- Barrot, J. S. (2021). Scientific mapping of social media in education: A decade of exponential growth. *Journal of Educational Computing Research*, 59(4), 645-668.
- Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, 56, 893-897.
- Beck, A. T., Steer, R. A., & Beck, J. S. (1993). Types of self-reported anxiety in outpatients with DSM-III-R anxiety disorders1. *Anxiety, stress, and coping*, 6(1), 43-55.
- Boo, Z., Dörnyei, Z., & Ryan, S. (2015). L2 motivation research 2005–2014: Understanding a publication surge and a changing landscape. *System*, 55, 145-157.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42.
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of research in Nursing*, 25(8), 652-661.
- Dantes, G. R., Suarni, N. K., Dharsana, I. K., Dantes, N., Jayanta, I. N. L., Suwastini, N. K. A., & Putra, G. J. A. (2019). Evaluation of e-learning as a learning agent. *International Journal of Innovation and Learning*, 25(4), 451-464.
- De Villiers, B., & Werner, A. (2018). The relationship between student engagement and academic success. *Journal for New Generation Sciences*, 14(1), 36–50.

- Dombou, C., Omonaiye, O., Fraser, S., Cénat, J. M., & Yaya, S. (2022). Barriers and facilitators associated with the use of mental health services among immigrant students in high-income countries: a scoping review protocol. *Systematic reviews*, 11(1), 22.
- Dombou, C., Omonaiye, O., Fraser, S., Cénat, J. M., Fournier, K., & Yaya, S. (2023). Barriers and facilitators associated with the use of mental health services among immigrant students in high-income countries: A systematic scoping review. *PloS one*, 18(6), e0287162.
- Doucercain, M. M., Varnaamkhaasti, R. S., Segalowitz, N., & Ryder, A. G. (2015). Second language social networks and communication-related acculturative stress: The role of interconnectedness. *Frontiers in psychology*, 6, 1111.
- Doucercain, M. M., Varnaamkhaasti, R. S., Segalowitz, N., & Ryder, A. G. (2015). Second language social networks and communication-related acculturative stress: The role of interconnectedness. *Frontiers in psychology*, 6, 1111.
- Doughty, A. L. (2022). *Foreign language anxiety and the digital classroom: How social media and the digitalised classroom affects student anxiety levels in upper secondary vocational studies* [Master's thesis]. University of Agder.
- Dulay, H., & Burt, M. (1977). Remarks on creativity in language acquisition. *Viewpoints on English as a second language*, 2, 95-126.
- Fares, M.Y. (2019). *The Role of Video in Teaching English as a Foreign Language to Kindergarten Students*. [Master's thesis]. Middle East University (MEU), Jordan. https://meu.edu.jo/libraryTheses/5d36aebdad5e9_1.pdf.
- Gándara, P. (2015). The implications of deeper learning for adolescent immigrants and English language learners. *Students at the Center: Deeper Learning Research Series. Jobs for the Future*.
- Gardner, R. C., Tremblay, P. F., & Masgoret, A. M. (1997). Towards a full model of second language learning: An empirical investigation. *The Modern Language Journal*, 81(3), 344-362.
- Gok, D., Bozoglan, H., & Bozoglan, B. (2023). Effects of online flipped classroom on foreign language classroom anxiety and reading anxiety. *Computer Assisted Language Learning*, 36(4), 840-860.
- Golub, J. (1988). *Focus on collaborative learning*. National council of teachers of English.
- Hui, J. L. T., bin Amar Foo, D. F., & binti Baktiar, M. A. (2020). Survey on prevalence of orthorexia nervosa and its risk factors among the undergraduate medical students in private medical college, Malaysia. *MASH Journal*, 5(1), 6-22.
- Ngoc Hoi, V. (2023). Augmenting student engagement through the use of social media: The role of knowledge sharing behaviour and knowledge sharing self-efficacy. *Interactive Learning Environments*, 31(7), 4021-4033.
- Hollands, F., & Escueta, M. (2020). How research informs educational technology decision-making in higher education: the role of external research versus internal research. *Educational Technology Research and Development*, 68(1), 163-180.
- Horton, W. (2006). *E-Learning by Design*. Wiley Publishing, Inc.
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern language journal*, 70(2), 125-132.
- Hsu, S. Y. S., & Beasley, R. E. (2019). The effects of international email and Skype interactions on computer-mediated communication perceptions and attitudes and intercultural competence in Taiwanese students. *Australasian Journal of Educational Technology*, 35(1).
- Jasemi, A., & Gottardo, A. (2023). Second language acquisition and acculturation: similarities and differences between immigrants and refugees. *Frontiers in Communication*, 8, 1159026.
- Kiatkheeree, P. (2018). Learning environment for second language acquisition: through the eyes of English teachers in Thailand. *International Journal of Information and Education Technology*, 8(5), 391-395.
- Kim, J. H. (2002). Anxiety and foreign language listening. *English Teaching*, 52(2), 3-34.
- Kim, J. O. (2017). A study on foreign language anxiety of college students in an intensive English program. *Journal of the Korean English Education Society*, 16(3), 77-93.
- Kim, J. O. (2018). Ongoing speaking anxiety of Korean EFL learners: Case study of a TOEIC intensive program. *Journal of Asia TEFL*, 15(1), 17.
- Kim, S., & Kim, H. C. (2021). The benefits of YouTube in learning English as a second language: a qualitative investigation of Korean freshman students' experiences and perspectives in the US. *Sustainability*, 13(13), 7365.
- Krashen, S. D. (1981). *Second language acquisition and second language learning*. Pergamon Press.
- Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Vol. 64, No. 1, Pergamon Press.
- Liu, M., & Huang, W. (2011). An exploration of foreign language anxiety and English motivation. *Education Research International*, 2011, 1-8.
- MacIntyre, P. D., & Gardner, R. C. (1991). Language anxiety: Its relationship to other anxieties and to processing in native and second languages. *Language learning*, 41(4), 513-534.
- Masrom, M. B., Busalim, A. H., Abuhassna, H., & Mahmood, N. H. N. (2021). Understanding students' behavior in online social networks: a systematic literature review. *International Journal of Educational Technology in Higher Education*, 18, 1-27.
- Mihaljević Djigunović, J. (2015). Individual differences among young EFL learners: age- or proficiency-related? A look from the affective learner factors perspective. In J. Mihaljević Djigunović & M. Medved Krajnović (Eds.), *Early learning and teaching of English: New dynamics of primary English* (pp. 10-36). Multilingual Matters.
- Mukhtar, F., Ding, W. E., Lye, M. S., Awang, H., & Munawar, K. (2021). Prevalence and associated factors of depression and anxiety in adolescents residing in Malay-operated non-government-run sheltered homes

- in Selangor, Malaysia. *Pertanika J. Soc. Sci. & Hum.* 29 (1), 267 – 289.
- Nedeva, V., & Dimova, E. (2010). Some advantages of e-learning in English language training. *Trakia Journal of Sciences*, 8(3), 21-28.
- Nilsson, M. (2019). Foreign language anxiety: The case of young learners of English in Swedish primary classrooms. *Ap-ples: Journal of Applied Language Studies*, 13(2).
- Linnenbrink, E. A., & Pintrich, P. R. (2000). Multiple path-ways to learning and achievement: The role of goal orien-tation in fostering adaptive motivation, affect, and cogni-tion. In C. Sansone & J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation* (pp. 195-227). Academic Press.
- Por, F. P., & Fong, S. F. (2019). Digital engagement in pro-nunciation learning: Effects on learning performances and language anxiety. *SEARCH Journal of Media and Communication Research*, 12, 149-171.
- Puspitasari, P. I., Suwastini, N. K. A., Blangsinga, G. W. K. A. A., Dantes, G. R., & Tuerah, I. J. C. (2021, April). Boomers' perception towards the implementation of online learning amidst Covid-19 outbreak. In *2nd in-ternational conference on technology and educational science (ICTES 2020)* (pp. 128-134). Atlantis Press.
- Putra, p. W. A. A., Santosa, m. H., & Saputra, I. N. P. H. (2020). Investigation of teachers' perception on the use of virtual reality as learning media in the ELT secondary school context. *Lingua Scientia*, 27(2), 77-87.
- Raza, S. A., Qazi, W., Umer, B., & Khan, K. A. (2020). In-fluence of social networking sites on life satisfaction among university students: a mediating role of social benefit and social overload. *Health Education*, 120(2), 141-164.
- Reinders, H., & Benson, P. (2017). Research agenda: Lan-guage learning beyond the classroom. *Language teach-ing*, 50(4), 561-578.
- Reinhardt, J. (2019). Social media in second and foreign language teaching and learning: Blogs, wikis, and social networking. *Language Teaching*, 52(1), 1-39.
- Rosenberg, M. J. (2001). E-learning: Strategies for deliver-ing knowledge in the digital age. *Mcgraw-Hall*.
- Sahoo, P. K., & Sinha, S. (2020). Role of anxiety in speaking skills: An exploratory study. *Language in India*, 20(2), 58-61.
- Scovel, T. (1978). The effect of affect on foreign language learning: A review of the anxiety research. *Language learning*, 28(1), 129-142.
- Sin, R. M. K., Tan, W. Y., & Yuen, J. X. (2020). *Relation-ship between anxiety, self-esteem and internet addiction among emerging adults in Malaysia* [Doctoral disserta-tion]. UTAR.
- Spector, J. M., & Yuen, A. H. K. (2016). *Educational tech-nology program and project evaluation*. Routledge.
- Shahi, M. J. (2016). The impact of e-learning on improving Iranian EFL learners' language skills: decreasing learn-ing anxiety. *Journal of Fundamental and Applied Sci-ences*, 8(3), 261-275.
- Sundqvist, P., & Sylvén, L. K. (2016). *Extramural English in teaching and learning. From theory and research to practice*. Palgrave Macmillan.
- Suwastini, N. K. A., Lasmawan, W., Artini, N. N., & Ma-hayanti, N. W. S. (2020). Mixed messages about envi-ronmental awareness in Disney's 2016 Finding Dory. *The Asian EFL Journal*, 27(4.1), 73–93.
- Toledano-Toledano, F., Moral de la Rubia, J., Domín-guez-Guede, M. T., Nabors, L. A., Barcelata-Eguiarte, B. E., Rocha-Pérez, E., ... & Rivera-Rivera, L. (2020). Validity and reliability of the Beck Anxiety Inventory (BAI) for family caregivers of children with cancer. *In-ternational Journal of Environmental Research and Public Health*, 17(21), 7765.
- Utami, L. P. R. A., Suwastini, N. K. A., Dantes, G. R., Supri-hatin, C. T., and Adnyani, K. E. K. (2021). Virtual reality for supporting authentic learning in 21-st century learn-ing. *J. Pendidik. Teknik Dan Kejuruan*, 18, 132–141.
- Velu, U. R. A. R., & Kaur, S. (2018). Convergence of visual interpretation through collective practices of masculin-ity in a Malaysian televised show. *SEARCH: The Journal of the South East Asia Research Centre*, 10(2), 115–136.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wang, S., & Vásquez, C. (2014). The effect of target lan-guage use in social media on intermediate-level Chinese language learners' writing performance. *Calico jour-nal*, 31(1), 78-102.
- Wu, B., Xu, W., & Ge, J. (2012). Experience effect in e-Learning research. *Physics Procedia*, 24, 2067-2074.
- Yadav, N., Gupta, K., & Khetrpal, V. (2018). Next educa-tion: Technology transforming education. *South Asian Journal of Business and Management Cases*, 7(1), 68-77.
- Yenkimaleki, M., & van Heuven, V. J. (2019). The relative contribution of computer assisted prosody training vs. instructor-based prosody teaching in developing speak-ing skills by interpreter trainees: An experimental study. *Speech Commun*, 107, 48–57.
- Young, D. J. (1991). Creating a low-anxiety classroom en-vironment: What does language anxiety research sug-gest?. *The modern language journal*, 75(4), 426-439.
- Yüksel, A., & Yılmaz, E. B. (2020). The effects of group mindfulness-based cognitive therapy in nursing stu-dents: A quasi-experimental study. *Nurse Education To-day*, 85, 104268.
- Zhao, X., & Yang, Y. (2023). Impact of social media-sup-ported flipped classroom on English as a foreign lan-guage learners' writing performance and anxiety. *Frontiers in Psychology*, 13, 1052737.
- Zhao, Z., Wang, X., Ismail, S. M., Hasan, M. K., & Hashem-ifardnia, A. (2022). Social media and academic success: Impacts of using telegram on foreign language moti-vation, foreign language anxiety, and attitude toward learning among EFL learners. *Frontiers in psycholo-gy*, 13, 996577.