
RESEARCH ARTICLE

Investigating Challenges of using some digital technologies as EFL learning resources from the perspectives of tertiary-level professors

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ABSTRACT

The study aimed to reveal the challenges experienced by EFL students in using digital technologies due to some poor infrastructure and educational environment, with the end phase of investigating the barrier that stands beyond these difficulties from the perspectives of the tertiary-level professors who took part in showing their viewpoints towards the questionnaire designed for collecting data to complete the current study. The researchers employed a quantitative research approach to carry out this investigation. Thirty-six research participants representing tertiary-level professors were chosen randomly during the academic year 1446–1447. Their participation in a ten-item questionnaire was accomplished via a link designed through the Google Forms application and sent to various WhatsApp groups at both Qassim and Prince Sattam Bin Abdulaziz universities in Saudi Arabia. Among the main conclusions are the study participants' affirmation that inadequate infrastructure has a detrimental effect on the EFL educational system, in addition to the fact that most of them think that solar panel installation is expensive for some parents and that using it as a substitute power source in an EFL school is challenging.

KEYWORDS

Poor infrastructure, educational system, EFL, challenges

ARTICLE INFORMATION

ACCEPTED: 15 October 2025

PUBLISHED: 30 November 2025

DOI: 10.32996/jweep.2025.7.5.1

1. Introduction

The following are among the most instructional digital technology tools: fixed phones, mobile phones, laptop computers, as the extensive literature analysis demonstrates that various linked (Middleton and Chambers, 2010, Varallyai et al., et al., 2015). The study also displays that digital technology usage as a teaching and learning method for languages is employed to help present, reinforce, and evaluate the content to be learnt, typically with an integral interactive component. Thus, the utilization of integrating information and communication technologies can equip students to be competent individuals who can manage the digital transition of the twenty-first century, particularly in settings such as blended learning. The effectiveness of these technological tools can suit different educational levels, as they become even more apparent as educational institutions aim at embracing online learning as a delivery mechanism during the COVID-19 pandemic. The study aimed to identify the obstacles EFL students face when utilizing digital technologies, particularly in such settings associated with inadequate infrastructure and the educational environment. The final phase of the study investigated the barriers beyond these obstacles from the perspectives of the professors who provided their opinions on the questionnaire created to gather the requested data for conducting the current study.

1.1 Research Problem

Different educational institutions with their different levels of education need technology infrastructure, including different devices and tools that facilitate Internet connections and screens for showing the outcomes of the Internet. Unfortunately, these digital devices are rarely adopted in developing countries due to a wide variety of reasons, from poverty to the high cost of these techniques, as stated by Liu, et al (2021). As a result, Saputri, et al (2022) confirmed that this situation leads to a technological access gap between developed and developing region. There is no doubt that the field of language teaching is very diversified and includes a variety of techniques used to convey the message of language acquisition to the learners in such a way that it necessitates the interaction between the teachers and language learners. The introduction of electronic media into the general education field and teaching made a substantial revolution in the process. They enhanced the application of comprehensive skills used in teaching. And this is a right for every student worldwide to receive better education as usual. Still, unfortunately, this right is unattainable due to different circumstances that affect the ability to obtain knowledge with up-to-date digital learning tools. These factors are diverse and can be arranged according to their importance as a hindrance and an obstacle to student development. First, the poor infrastructure negatively impacts the overall EFL educational system. Multimedia facilitates text, graphics, audio, and motion video integration in various combinations, allowing learners to fully interact with textual, aural, and visual media in multiple formats. Therefore, this study sought to reveal educational institutions' challenges in using digital technologies.

1.2 Research Objectives:

1. To determine EFL students' most important challenges in using digital technologies as learning resources.
2. Determine what action plan can be achieved based on the challenges encountered by the students in using digital technologies.
3. To examine how poor infrastructure negatively impacts the EFL educational system.

1.3 Research Questions

To ascertain the challenges experienced by EFL students in using digital technologies due to some poor infrastructure and educational environment, the current study aims to understand such encounters according to the perspectives of the study subjects. Thus, to accomplish the goals, the researchers work to find answers to these queries:

1. What challenges do EFL students face in using digital technologies in learning?
2. What action plan can be achieved based on the challenges encountered by the students in using digital technologies?
3. How does poor infrastructure negatively impact the overall EFL educational system?

2. Literature review

The literature review shows digital technology is defined as a method of teaching and learning languages that uses computers to help present, reinforce, and evaluate the content that has to be learnt. It typically includes an important interactive component, various linked technologies, including fixed phones, mobile phones, laptop computers, and wi-fi, are included in educational digital technology tools (Middleton and Chambers, 2010; Varallyai et al., et al., 2015). According to Levy (1997) computer-assisted language learning, is generally refers to using various instructional technologies, multimedia, and CD-ROMs that combine text, images, audio, and video clips to teach English as a foreign language (EFL). The literature reviewed interestingly displayed the implementing digital technology applications depended solely on the available infrastructure. In other words, the degree to which we can use and implement information and communication technology (ICT) depends mainly on the available infrastructure (Srinuan & Bohlin, 2011). As found by Steele (2019), computer proficiency is now a prerequisite for many vocations to gain a high degree of expertise. Given, modern gadgets with instructional apps such as laptops and tablets, are required by students for advanced learning. However, the author affirmed that, in comparison to kids in industrialized nations, students who are computer-retarded may receive insufficient teaching and receive subpar grades. Consequently, they will not have the required abilities for their future profession. As stated clearly by (Struzak, 2010; Srinuan & Bohlin, 2011; and Varallyai et al., 2015), people who inhabit a metropolitan areas advantage from easier and less expensive access to ICT infrastructure because the costs of installing are affordable in relation to population size and density rise. Moreover, Dondiego (2016), states that while urban centres are continuously evolving and expanding high-bandwidth networks, such as cable, fibre, digital subscriber line (DSL), and satellite connections. Many rural and isolated areas, on the other hand, are overlooked due to the high cost and complexity of wiring these locations, which is frequently costly and pointless.

Additionally, Caumont (2013), believes that residents of people in rural areas who have less access to the internet are less likely to use it compared to residents of urban or suburban areas. As a result, there is a slight difference in figures of offline users when comparing urban and suburban-rural areas to those in rural areas. On the other hand, Bliss et al. (2014) thinks that lacking

connectivity in rural areas may be linked to higher installation and service costs as a minority of people reside there makes it unprofitable for businesses to expand their connections. The literature review also displays that the digital divide, or digital gaps, is significantly influenced by socioeconomic position (Srinuan & Bohlin, 2011; Varallyai et al., 2015).

Therefore, we can say that both poverty and low income are the primary causes of the digital gap in accessing and using digital technologies. As a result, these factors will make it challenging for underdeveloped nations to raise enough money for buying telecommunications equipment and infrastructure (Dondiego, 2016). In other words, socioeconomic position greatly affects the advantages and the rights of adopting digital learning tools. On the other hand, access is restricted for low-income families based on factors such as income; housing and accommodations which are more prioritised over digital learning tools since students must either share the cost or incur additional expenses beyond their budget. Thus, students in developing nations are prevented from accessing digital learning resources due to the limited income. People in wealthy households are far more likely to use email and the Internet compared to those in developing nations as highlighted by Caumont (2013) and Bliss et al. (2014). Moreover, Schumacher and Kent (2020) conducted additional research in the Philippines and found that (19%) variation of people with higher and lower incomes in using of digital devices.

Additionally, Steele (2019) states that family income considerably influences the widening digital divide. On other words, it goes without saying that wealthier families provide their members with more up-to-date educational resources and faster internet connections compared to impoverished ones. Likewise, the impoverished families view the acquisition and use of digital learning resources as a luxury rather than a necessity in such a critical circumstance, Steele (2019). On a global level, the author noted that, most developing nations prefer technical education, however, their less productive graduates correlate with the inadequate training brought on by the digital divide, which is exacerbated by a lack of internet access and appropriate training tools.

The literature review also shows that Srinuan and Bohlin (2011), highlighted three key factors affect the adoption of digital technology devices as follows: (1) content that is appropriate for the user's needs will reduce the digital divide; (2) English is a mean of the digital divide, especially for the Internet; and (3) the individual's cultural background and his perceptions towards information communication technology will result in varying usage rates. Motivation, engagement, and interest in using digital technologies are other issues that users of these devices encounter; these issues differ relying on age, English language capability, and handicap. Zickuhr (2011), concluded that age plays a meaningful role in the expanding digital divide.

3. Methodology

The researchers gathered the necessary data for this study through a quantitative data collection method that entails obtaining and analyzing numerical data to perform a statistical evaluation. In the academic year 1446–1447, (36) professors have shown their viewpoints towards a ten-item questionnaire. A link created using the Google Forms application was emailed to different WhatsApp groups at Qassim and Prince Sattam Bin Abdulaziz universities in Saudi Arabia, allowing them to complete a ten-item survey. To guarantee the effectiveness of the participants' answers to the questionnaire items, which were crucial for collecting the necessary data, the researchers answered their questions about the research inquiries favorably before they began sharing their opinions.

3.1 instrument

Using a five-point Likert-type scale, the researcher initially created and disseminated a questionnaire with answers ranging from "Strongly Agree" to "Strongly Disagree." Before delivering the questionnaire to study participants, the researchers evaluated it and made a few small structural changes. Each survey asked for a response that gauged the respondents' thoughts on the topic. After the data was collected and analysed, the most significant findings were thematically investigated and presented, as the accompanying tables and charts demonstrate.

4. Discussion Results

As stated ahead, the current study aims to reveal the challenges experienced by EFL students in using digital technologies due to some poor infrastructure and educational environment as clearly shown by the following graphs. To achieve the objectives above, the author seeks to answer the following questions:

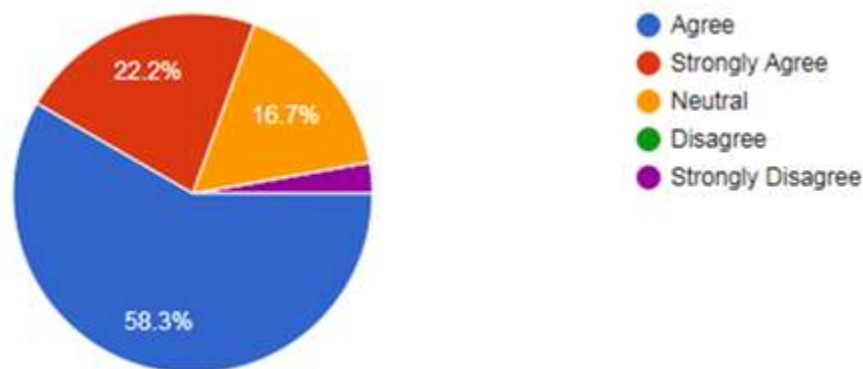
1. What challenges do EFL students face in using digital technologies in learning?
2. What action plan can be achieved based on the challenges encountered by the students in using digital technologies?
3. How does poor infrastructure negatively impact the overall EFL educational system?

Graph (1) displays the percentage of the first questionnaire item, "**The poor infrastructure negatively impacts on the overall EFL educational system.**"



As displayed by the above graphs, the present study aims to investigate how low infrastructure can prevent students from using some effective learning applications such as You Tube and WhatsApp in today's digital world. With reflection on the percentage and frequency tables and the chart, we can summarize the most important findings in the following points: When responding to the first item, "**The poor infrastructure negatively impacts the overall EFL educational system,**" The data demonstrate an average percentage of (87%) of participants who support the concept of questionnaire item and think that *the poor infrastructure negatively impacts the overall EFL educational system*, and given, in such situation low internet connection will be common which results into the prevention of using multiple social applications as learning tools either inside or outside classrooms settings.

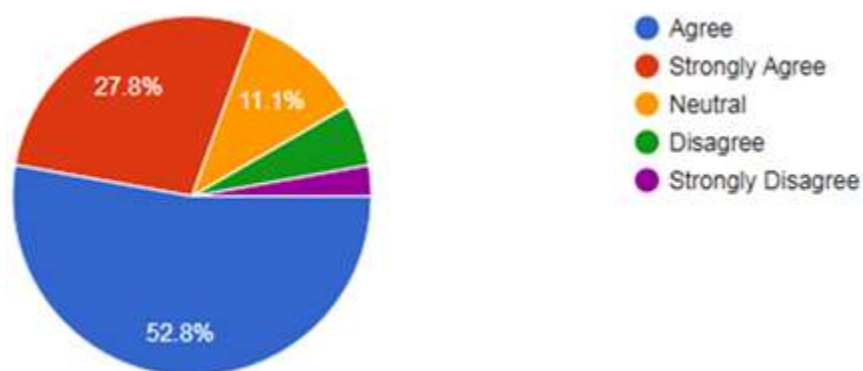
Graph (2) shows the percentage of the second questionnaire item "**Alternative power, such as installing solar panels, enables me to use social media applications as learning tools in EFL classes**"



Regarding the second questionnaire item, "**Alternative power, such as installing solar panels, enables me to use social media applications as learning tools in EFL classes.**"

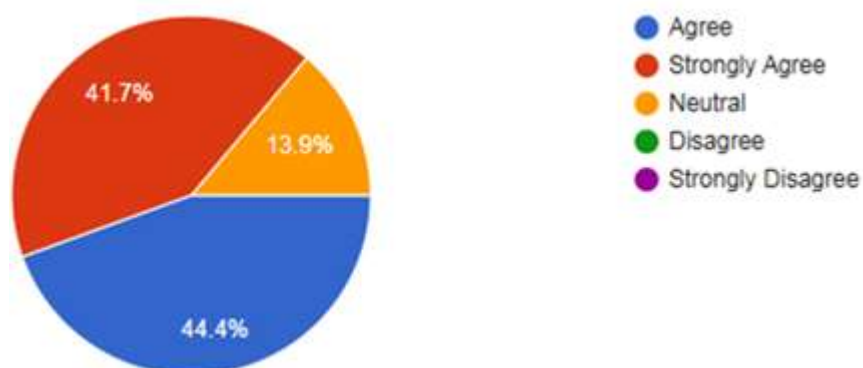
The chart indicated a percentage of (72%) who reinforced the reality of the item. Consequently, the study subjects tended to agree with the questionnaire item, which displays the correlation between installing solar panels as alternative power or substitutions today and using some vital social media applications as learning tools in EFL classes.

Graph (3) illustrates the percentage of the third questionnaire item, "**Renewable energy is costly for some parents, and it is then difficult to use it as an alternative power source in an EFL educational institution.**"



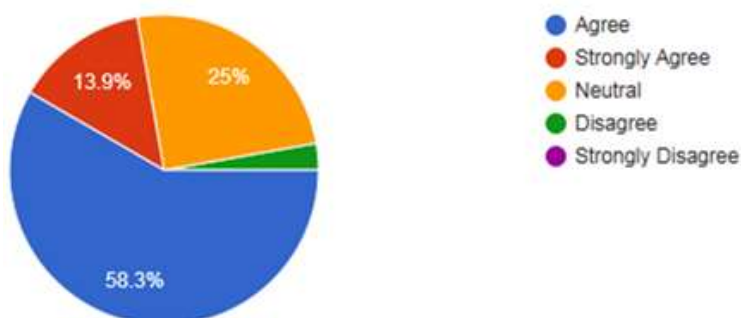
Even though today solar panels can be used as alternative power, some parents find it costly to install them simply because it requires buying different components and paying expenses for their installation and regular maintenance. This point is clearly stated by the following questionnaire item in which a considerable number of the panelists (89%) agreed with the item "**Renewable energy is costly for some parents, and it is then difficult to use it as an alternative power source in an EFL educational institution.**"

Graph (4) explains the percentage of the fourth questionnaire item, "**The high cost of installing solar panels may convert the educational system into a private and social class one.**"



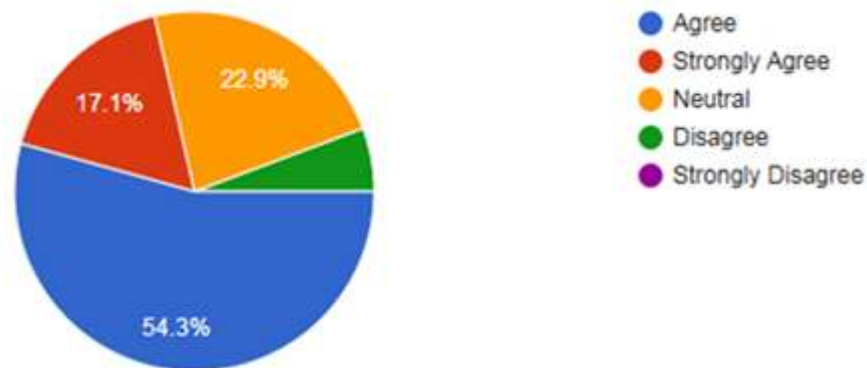
As a result, a considerable number of the panelists, almost a ratio approaching (81%) agree that education might be converted into a social class one since some parents are not able to support their children, particularly when the learning environment is impoverished which is represented by power outages for long hours, and low internet connections as clearly stated by the following questionnaire item "**The high cost of installing solar panels may convert the educational system into a private and social class one.**"

Graph (5) explains the percentage of the fifth questionnaire item, "**It also prevents me from joining online speaking classes.**"



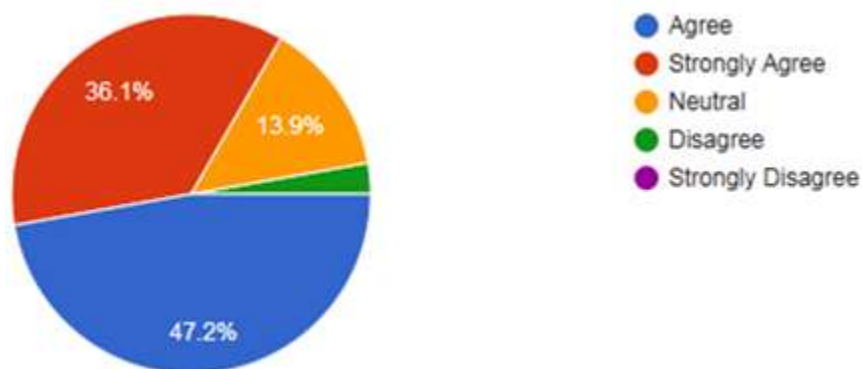
The study also shows that many participants (71%) agreed that a poor learning environment and a low internet connection could prevent students from joining online classes to improve their speaking skills. Such courses are standard today as several applications, such as the Duolingo app, are a significant way to learn language globally by having a strong virtual rapport with language learners from different backgrounds. This point is clearly affirmed by the following questionnaire item: ***"It also prevents me from joining online speaking classes."***

Graph (6) shows the percentage of the fifth questionnaire item, ***"The poor learning environment can prevent some EFL students from having better job opportunities after college."***



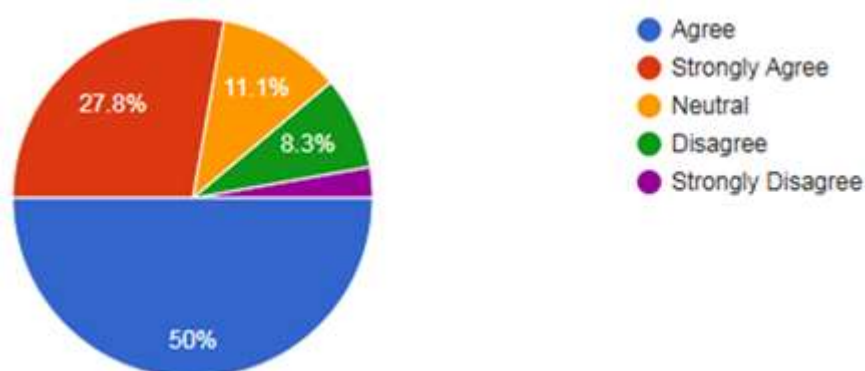
Furthermore, the chart shows that (82%) of study subjects agreed with the following item: ***"The poor learning environment can prevent some EFL students from having better job opportunities after college"***. The subjects believe that a poor learning environment can directly impact on the overall language competencies and, thus, indirectly affect students' future trajectory by reducing the inclusive learning outcomes that enable them to compete with others when it comes to job hunting opportunities where qualifications and skills play a vital role besides other necessary tools.

Graph (7) shows the percentage of the fifth questionnaire item, ***"The poor learning environment can prevent some EFL students from having better job opportunities after college."***



When asked about the negative impact of the low internet connection as well as the effects of the poor learning environment in general on conducting virtual classes, most of the subjects almost (78%) of the participants tended to agree with the following questionnaire item, ***"It can also make it difficult for EFL students to take virtual classes."***

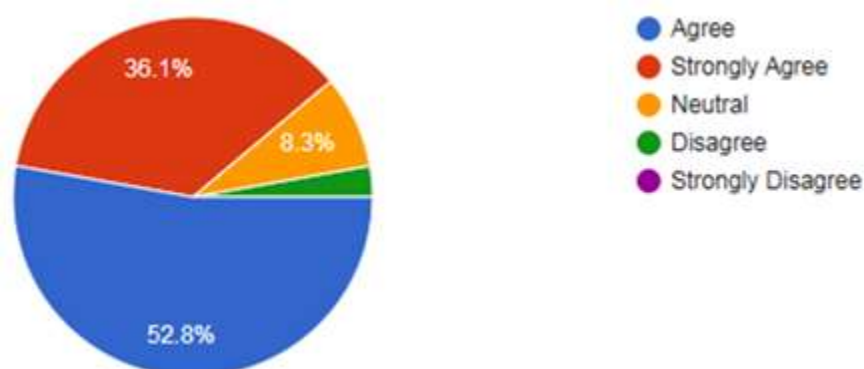
Graph (8) displays the percentage of the eighth questionnaire item, ***"It can also make it difficult for EFL students to take virtual classes."***



Additionally, many subjects think that a regular internet connection can prevent students from using eLearning resources, which are common in today's digital world. The subsequent questionnaire item raises this viewpoint, ***"Regular internet connection problems prevent me from using my smartphone efficiently as a learning source during EFL classes."***

Graph (9) displays the percentage of the ninth questionnaire item ***"Regular Internet connection problems can also prevent some EFL students from using some eLearning resources and references"***

"



Finally, many subjects think that internet connection challenges can prevent students from using some learning resources. The last questionnaire item raises this viewpoint, ***"Regular Internet connection problems can also prevent some EFL students from using some eLearning resources and references."***

5. Conclusion

In conclusion, the study displays that *poor infrastructure associated with low internet connection negatively impacts the overall EFL educational system*. For instance, it was found that many participants (71%) agreed that a poor learning environment and a low internet connection could prevent students from joining online classes to improve their speaking skills. Additionally, the study subjects believe that using solar energy as an alternative power is vital even though it is installation is costly, as affirmed by the vast majority of the participants; almost (89%) of the subjects agreed with the questionnaire item, but even though it is expensive, (72%) of the subjects reinforced the reality of the following item in following ***"Alternative power, such as installing solar panels, enables me to use social media applications as learning tools in EFL classes."***

5.1. Recommendations

1. Enhancing the use of digital technologies as well as social media applications in EFL classes is vital, as they are more effective in developing overall language skills.
2. It is essential to encourage students to use multiple learning resources regardless of the cost of their availability.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

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