

Evaluating the Perceived Effectiveness of Online Learning Tools for English language in Hard-to-Reach Areas

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Abstract

This study assessed the effectiveness of online learning systems introduced in Higher Education Institutions for teaching English language courses in Khyber Pakhtunkhwa province of Pakistan. The objective was to identify the loopholes and issues faced by students of hard-to-reach areas and to assess their level of satisfaction with the online learning system in comparison to traditional classroom learning methods. Cross-sectional data were collected from 270 students from seven randomly selected universities through an online survey, using adapted questionnaires. Data were analyzed using descriptive and comparative analytical techniques. The results indicated that classroom systems were perceived as more effective than online systems for learning English language in Khyber Pakhtunkhwa province of Pakistan, mainly because of ineffective learning technology and unconducive learning environments for online education. This study has important implications for stakeholders and policymakers.

Keywords: *Online Learning Systems, Higher Education Institutions, COVID-19, Attitude towards Learning, Classroom Learning.*

Introduction

The outbreak of coronavirus during the last quarter of 2019 changed the existing norms and work patterns, forcing the entire world to adopt an unplanned change of total digitalization. As reported by (Amankwah-Amoah et al., 2021). COVID-19 has speeded the adoption of digital technologies by several years and that many of these changes could be here for the long haul". The new normal is totally different from what we had before the pandemic as the world has learned efficient ways of working online. The educational institutions led this transformation, as they were pioneers in adopting the online methods of teaching and learning and now it is being frequently used along with face-to-face interactions even after the pandemic (Lee et al., 2021). However, the effectiveness of this blended system is totally dependent on availability of technological resources, uninterrupted electricity and internet and the quality of devices along with skills and training to use these for educational purposes. Therefore, it was not equally beneficial for students coming from different geographical regions and enrolled in different disciplines. Especially for students coming from hard-to-reach areas, this unplanned change and sudden shift from class room to online learning had serious challenges and implication (Al-Kumaim et al., 202; Shohel et al., 2022).

The Khyber Pakhtunkhwa province of Pakistan is the land of beautiful tall mountains, and The World's second tallest mountain K-2 (Karrakoram-2), is situated in the same region.

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These mountainous areas are away from the central urbanization of the province. The land and technological infrastructure suffer badly because of rapidly changing weather, frequent snow storms, and land-slides, posing challenges for the government and other service providers. Therefore, the residents of these areas have limited access to modern technologies. Consequently, the quality of electricity and mobile/internet signal is also affected by the rapid weather changes and height of mountains (Rahiem, 2020). Moreover, people living in these areas are highly conservative and their attitudes towards learning a non-native language is another serious challenge (Ahmed et al., 2022).

During the last decade, with increased governmental focus on tourism and education, the level of education has increased in the province and more and more students are getting enrolled in higher education. Students of these villages who opt to receive higher education, come to main cities (like Peshawaer, Sawabi, Rawalpindi, Islamabad etc..) for education and mostly live in hostels. However, during COVID-19 when online learning was introduced, these students faced serious issues (Wu & Ali, 2020). The primary language of these areas is Pushto, however Urdu and English is used as instructional language in higher education (Gul et al., 2021). For rural students learning English language is a fairly difficult task as they do not find ample opportunities to learn and practice within their own vicinity and therefore rely on the teacher for learning support (Ullah et al., 2021). This situation worsened during the pandemic when they were forced to learn online, with limited internet access and unscheduled power breakdowns. Especially for students of English language, it was a real challenge to learn and understand without support of a teacher/mentor. Although, researchers (Gupta et al., 2021; Yu et al., 2022; Agung & Surtikanti, 2020) have considered various elements of online and class room learning in different contexts, there is a paucity of literature on online English language learning in hard-to-reach areas, especially in the context of KPK province of Pakistan.

Previously researchers like Tao and Gao (2022) concluded on the basis of a detailed meta-analysis that teaching and learning a non-native language online is challenging as it requires active support from various stakeholders including students, teachers and parents. Especially they stressed upon the indispensable role of parents who are responsible to provide an enabling environment to their children to learn and practice the language. Their socio-economic status is another important factor that enables them to provide technological support and ensure availability of devices for online learning (Tao & Xu, 2022). Additionally, various studies (Blasi et al., 2022; Lin et al., 2021;; Gao & Zhang, 2020) have highlighted the cognitive features of online language teaching and learning. These include the need for active communication and socialization among learner communities, teacher and student interactions the role of multiple stakeholders like educators, parents, government etc. This is another fact that these issues may worsen in case of online language learning in hard-to-reach areas of developing countries like Pakistan. However, we have not been able to find any such study on perception of students from hard-to-reach areas of KPK on the effectiveness of online English learning.

Therefore, researchers (Basilaia, & Kvavadze, 2020; Demuyakor, 2020; Tao & Gao, 2022) recommend a detailed investigation to identify the key issues related to the quality of online learning systems during COVID-19 (Chung et al., 2020) especially for learning a non-native language (Irshad, 2022). In particular, it is necessary to assess the performance of students in such a system in terms of their academic achievements. In this context, a comparison between online and classroom learning is considered beneficial (Hodges et al., 2020). Similarly, Zulfikar et al. (2019) highlighted the need for detailed investigation to assess the effectiveness of online learning systems (Xu & Jaggars, 2013). Therefore, the current study was designed to obtain data from HEIs' students of English language on the effectiveness of previously implemented classroom learning and the recently introduced online learning systems in KPK province of Pakistan. The main objective was to identify the key issues in this regard and assess their level of satisfaction

with the newly introduced system for learning English language in hard-to-reach areas, which is the need of the hour during the COVID-19 pandemic.

Online learning is a safer alternative to classroom learning and is a futuristic approach (Jena, 2020). It is not a one-time solution to educational problems and issues related to this mode of learning needs to be explored and addressed. Therefore, this study is important for various stakeholders, including policymakers, institutions, teachers, students, and educational researchers. It will not only assess the level of perceived effectiveness of learning English language through online learning systems, also provide an indigenous view of higher education students from hard-to-reach areas. Additionally, this study provides research-based recommendations on whether a hybrid system can be introduced in the future to enhance learning effectiveness in hard-to-reach areas.

Literature review

During the recent pandemic, the world has witnessed a paradigm shift from a conventional system to ITC-based interactions in all types of institutional and official matters. However, such a technology-based learning system remains a challenge for developing nations in terms of resource constraints. The U.S. Department of Education has defined online learning as “learning that takes place partially or entirely over the Internet. It covers a wide range of applications and processes such as web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It mainly comprises the delivery of content via the Internet, intranet/extranet (LAN/WAN), audio and videotape, satellite broadcast, interactive TV, and CD-ROM (U.S. Department of Education, 2010).

The effectiveness of a learning system can be assessed by obtaining students’ feedback on course satisfaction, course design, course support, course interaction (Arias et al., 2018), learning experience, and performance (Ni, 2013). Johnson et al. (2000) included teachers’ teaching methods, course instruction and evaluation systems (ICES), and support in evaluation as additional parameters. Ni (2013) also included grade records to compare the effectiveness of online and classroom learning methods, and found no significant differences (Byun et al., 2020). Martin et al., (2020) suggests that teachers need to focus on instruction, content, motivation, relationships, and mental health, especially during online classes. Similarly, competence in the use of online learning technology for teacher-student interactions also affects learning effectiveness. Other parameters include assessment methods, task differentiation, and the extent of social contact between the two systems, which provide grounds for comparison (Konig et al., 2020). Dhawan (2020), while discussing issues linked with online learning systems during the COVID-19 pandemic, also suggests that teachers make their teaching-learning process more joyful and interesting for students. However, it is slightly more sensitive from the perspective of learning a non-native language in an online system.

Learning English as a non-native language is based of mutual interactions that build confidence and also help students to align their gestures and body language while communicating in English (Ke & Cahyani, 2014; Perniss, et al., 2020). Similarly, as noted by Agung et al. (2020), online learning is purely dependent on availability of reliable, strong and stable internet and communication technology. On the other hand, online learning can be very useful and convenient in learning English language if the required technologies are available. Online learning systems are more flexible and therefore more convenient in terms of time management. However, unreliable internet services and family issues have hampered the effectiveness of these classes during COVID-19 (Adnan & Anwar, 2020; Rahiem, 2020). Other issues linked with online learning include a shortage of physical and financial resources, lack of interaction with teachers and classmates, and knowledge of technological use, which is particularly common in developing countries (Dost et al., 2020). The best technique for future institutions could be a learning method in which innovative techniques, such as technology-based learning, are used along with traditional classroom learning to enhance the effectiveness (Kongkiti & Hao, 2021).

Turan and Akdag-Cimen (2020) suggested that both classroom learning and online course content need to be redesigned. In particular, teacher education courses must incorporate the latest research-based teaching tools and techniques to improve their performance and enhance their efficiency and effectiveness in classes. However, in both classroom and online learning systems, the effectiveness of knowledge transfer depends on the provision of an enabling environment for students to think critically and find creative ways to solve their problems. For this purpose, the foremost strategy is to remove the communication gap between the instructor and the student to achieve better results. As indicated by Pathan et al. (2018), cognitive development of a student to learn a language is dependent on several socio-cultural factors. From this perspective, the socio-cultural theory provides a strong theoretical base for explaining the process of learning a non-native language in online settings. The theory provides signals for studying the dynamic role of social, cultural and historical backgrounds of student in his/her cognitive development towards learning a new language.

Learning effectiveness can be measured in terms of the outcome or achievement of academic goals. Most researchers (Basnet, 2021) consider the final grade performance of students to be an effective indicator of their learning performance. However, as indicated by Dewey (1997), learning occurs through participation in activities, rather than teaching only. This is the sociocultural perspective (Vygotsky, 1978) of language learning that emphasizes the use of tools to increase the effectiveness. The sociocultural theory of learning is an extension of Piaget's theory of learning that humans are born into and develop within a framework of interaction with other people and society. This helps in identifying the role of social interactions and culture in the development of higher-order thinking skills and learning capabilities. Therefore, they must focus on the learning process, skills, and values that shape a society as a whole. Sociocultural theory focuses on the acquisition and use of practical and intellectual tools that enhance interactions within society and this is particularly applicable in language learning where intense interactions are required. Hence, it is much higher than the grade performance. The current study revolves around the same phenomenon that online language learning strategies need to incorporate more objective and effective student-student, student-instructor, and student-content interactions to become more effective.

The current study adopted a quantitative approach to assess the perceived English learning effectiveness by measuring students' objective and subjective performance in online and classroom settings. Objective performance was based on grade performance in classroom and online learning system. Subjective performance was assessed against multiple indicators identified in two main studies. Barnard, Paton, & Lan (2008) consider learning as effective if students are able to set goals for their learning achievements and evaluate their performance against those criteria on regular basis. They should be able to manage time and space to work efficiently; seek help from instructors, family, and classmates; and develop effective strategies to accomplish their tasks. Similarly, Kintu and Zhu (2016) consider learning to be effective if students' behavior towards learning has improved. They believe that effective student-student, student-instructor, and student-content interaction lays the foundation for effective learning. Moreover, the quality of teaching tools and technology, their effective use, and students' motivation to learn and achieve are key determinants of effective learning systems (Pham et al., 2021). Based on these, the present study adapted a twelve-dimensional approach to measure learning effectiveness for English language courses.

In this regard the main hypothesis for the study was proposed as following:

H1: Class room learning is perceived as more effective to learn English language as compared to online systems in Higher Education Institutions of Khyber Pakhtunkhwa province of Pakistan.

The following sub-hypotheses were developed for testing during the course of this study:

H1a: Class room learning is perceived more effective when compared with online learning in terms of students' attitude towards learning English language.

H1b: Students' goal setting to learn English language is perceived more effective during class room learning as compared to online classes.

H1c: Students' interactions during English language courses are perceived as more effective in class room learning as compared to online classes.

H1d: Teachers' use of learning tools and resources to teach English language courses is perceived as more effective during class room learning as compared to online classes

H1e: The quality of technology is perceived more effective in teaching English language during class room learning in comparison with online classes.

H1f: Time management to learn English language is perceived more effective in the class room in comparison with online classes.

H1g: Self-evaluation during English language courses is perceived more effective in class room learning as compared to online classes

H1h: Help seeking behavior is perceived as more effective in class room learning as compared to online classes to learn English language.

H1i: Environmental structure to learn English language is more perceived as more effective in class room learning as compared to online classes

H1j: Students' motivation to learn English language is more effective in class room learning as compared to online classes

H1k: Task strategies to learn English language are perceived more effective during class room learning in comparison with online classes

H1l: Students grades in English language courses are better in class room learning as compared to online classes

Research methodology

We adopted multi-stage simple random sampling technique to identify 10 out of 35 universities registered with the Government of KPK and offer English language courses. We sent a request letter to all heads of English departments of selected institutions and requested them to provide access to their students who were coming from hard-to-reach areas and were enrolled in English language course. On receipt of their consent, we identified 350 students using the purposive sampling technique. On receipt of their consent, we sent them an online questionnaire to give their opinion on English learning effectiveness during classroom and online learning modes. After a month's time, (March, 2022) we received 290 replies indicating a response rate of 82%. After sifting incomplete questionnaires, we found 270 useful responses for final analyses. Approximately 62% of the respondents were male and 38% female. The average age of participants was 25.5 years. 70% students represented public and 30% private sector institutions in Pakistan.

Measures/instruments

To measure six out of twelve dimensions, namely, goal setting, environment structuring, task strategies, time management, help seeking, and self-evaluation, the Online Self-regulated Learning Questionnaire (OSLQ) developed by Barnard, Paton, and Lan (2008), was used. The composite reliability of the scale was 0.94, whereas it in the range of 0.72 to 0.86 for the current study. This value was in the acceptable range, as indicated by Hair et al., (2010). Remaining five dimensions, Teaching Tools and Resources (α :0.85), Interactions (α :0.79), Technology Quality, Attitudes towards Learning (α :0.76) and Motivation (α :0.72) were measured with tools adapted from the study of Kintu & Zhu,

(2016). Responses were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). To assess the objective performance, students' Cumulative Grade Performance Aggregate (CGPA) for the last two semesters were considered out of which the first was taught and evaluated in online classes. Table 1 provides a detailed description of the tools and measures used in the current study.

TABLE 1- DESCRIPTION OF TOOLS

Dimensions	Source	No. of items	Cronbach's Alpha	Sample item
1. Attitudes towards Learning (ATL)	Kintu & Zhu (2016)	4	0.876	The structure of our English language course is logical and effective
2. Goal setting (GS)	Barnard, Paton, & Lan (2008)	05	0.862	I keep a high standard for my English language learning in my online courses
3. Interactions (Int)	Kintu & Zhu (2016)	4	0.799	I am satisfied with the level of student-student interaction in my English language class
4. Teaching Tools and Resources (TT&R)	Kintu & Zhu (2016)	3	0.854	I am satisfied with the navigation of teaching tools and resources during my English language class
5. Technology Quality (TQ)	Kintu & Zhu (2016)	5	0.738	The learning tools and technologies were easily available to me during my English language course
6. Time management (TM)	Barnard, Paton, & Lan (2008)	4	0.784	I allocate extra studying time for my online English language course because I know it is time-demanding
7. Self-Evaluation (SE)	Barnard, Paton, & Lan (2008)	3	0.784	I find someone who is knowledgeable in English language course content so that I can consult with him/her when I need help
8. Help seeking (HS)	Barnard, Paton, & Lan (2008)	7	0.828	I am persistent in getting help from the instructors during my English language class.
9. Environment structuring (ES)	Barnard, Paton, & Lan (2008)	3	0.809	I find a comfortable place to learn English language.
10. Motivation (Motv)	Kintu & Zhu (2016)	4	0.742	I enjoy my English learning experience during my class
11. Task strategies (TS)	Barnard, Paton, & Lan (2008)	4	0.724	I solve extra problems in my English learning online class in addition to the assigned ones to master the course content.

Validity Analyses

To check the validity of selected tools/measures and their items in a new cultural context, confirmatory factor analysis (CFA) was conducted using AMOS version 24. Results (Table 2) indicate acceptable values (CMIN/df=2.629, RMR=.065, IFI=0.915, TLI=0.905, CFI=0.915, RMSEA=0.05) of model fit, as described by Byrne (2010).

Results and interpretation

The data collected from public and private sector universities of KPK were analyzed to compare the perceived effectiveness of online learning system with the traditional classroom learning method to learn English language. For this purpose, students were asked to give their opinions on both systems against various items. Moreover, their grades were compared before and during the COVID semesters to ascertain their objective performance. Results were compared through a paired-sample t-test using SPSS version 24. Table 3 presents the results of the t-tests.

The first comparison was conducted to check the difference in students' attitudes towards learning (ATL) English during classroom (before COVID-19) and online instructional (during COVID 19) methods. There were significant and positive differences between the two methods ($p=0.000<0.001$) and students were found more satisfied with the classroom learning methods in terms of their attitudes towards learning English language. Similar results were found for goal setting (GS), interaction (Int)", "teaching tools and resources (TT&R), technology quality (TQ), time management (TM), self-evaluation (SE), environmental structure (ES), motivation (Motv) and task strategies (TS). To measure the objective performance of students, their cumulative grade average (CGPA) obtained during classroom and online learning were compared. There were significant and positive differences (mean diff=0.5293, $t=2.238$, $p=0.026<0.05$) as the respondents scored relatively higher grades during the classroom in comparison with online learning systems. However, when students were asked whether they were able to seek help (HS) from subject specialists, instructors, and classmates, they gave slightly different and interesting responses. Results indicated greater satisfaction with online learning methods in this regard (mean diff=-.7993, $t= -11.766$, $p=0.000<0.001$). The highest difference (mean diff = -1.152) was found for the item pertaining to the availability of classmates for online meetings at any time to resolve the problems they faced in learning a language. Therefore, all hypotheses, except H1h, were accepted as true.

TABLE 2- DESCRIPTIVES

Variables	Face-to-Face		Online	
	Mean	SD	Mean	SD
Attitude towards learning (ATL)	3.18	1.14	2.38	0.87
Goal setting (GS)	2.88	0.95	2.21	0.80
Interactions (Int)	3.20	1.11	2.43	1.24
Teaching tools & resources (TT&S)	3.15	1.14	2.41	0.89
Time management (TM)	3.09	1.04	2.49	0.82
Technology quality (TQ)	3.26	1.22	2.42	1.01
Self-evaluation (SE)	3.14	1.08	2.5	0.87
Help seeking (HS)	1.47	1.10	2.27	0.71
Environmental structuring (ES)	2.92	1.17	2.3	1.00
Motivation (Motv)	2.89	0.93	2.49	0.71
Task strategies (TS)	3.09	1.07	2.42	0.88
Grades	3.50	0.39	2.97	1.04

Table 3-Paired sample T-test

		95% Confidence					T	df	Sig (2-tailed)
		Std. Mean	Std. Deviation	Std. Error	Interval of the Difference				
					Lower	Upper			
Pair 1	ALTB_CRL - ALTB_OL	0.81	1.14	0.07	0.67	0.94	11.64	269	.000
Pair 2	GS_CRL - GS_OL	0.67	0.95	0.06	0.56	0.79	11.57	269	.000
Pair 3	Int_CRL - Int_OL	0.77	1.11	0.07	0.64	0.90	11.38	269	.000
Pair 4	TT&R_CRL - TT&R_OL	0.74	1.14	0.07	0.61	0.88	10.69	269	.000
Pair 5	TM_CRL - TM_OL	0.60	1.04	0.06	0.47	0.72	9.47	269	.000
Pair 6	TQ_CRL - TQ_OL	0.84	1.22	0.07	0.70	0.99	11.35	269	.000
Pair 7	SE_CRL - SE_OL	0.64	1.08	0.07	0.51	0.77	9.72	269	.000
Pair 8	HS_CRL - HS_OL	-0.80	1.10	0.07	-0.93	-0.67	-11.96	269	.000
Pair 9	ES_CRL - ES_OL	0.62	1.17	0.07	0.48	0.76	8.68	269	.000
Pair 10	Motv_CRL - Motv_OL	0.40	0.93	0.06	0.51	0.29	7.17	269	.000
Pair 11	TS_CRL - TS_OL	0.67	1.07	0.07	0.54	0.80	10.20	269	.000
Pair 12	Grades_CRL - Grades_OL	0.05	0.39	0.02	0.01	0.10	2.24	269	.026

Notes:

N = 270

TM: Time management

CRL=class room learning

ATL: Attitude towards learning

GS: Goal setting

Int: Interactions

TT&R: Teaching tools & resources

OL: Online Learning

SE: Self evaluation

TQ: Technology quality

HS: Help seeking

ES: Environmental structuring

Motv: Motivation

TS: Task strategies

Discussion

Online learning systems have become the need of hour since COVID-19, as it is more convenient and efficient in terms of time and cost saving. However, its effectiveness to learn a new language is a debatable topic (Ya & Ni, 2013; Kara et al., 2019). Students in developing countries with limited teaching-learning technologies and frequent power breakdowns face serious issues when adopting this modern way of learning. Especially, to learn a language, students need alignment of words with the body language for better comprehension, which is a missing link in online classes especially when teachers are required to take large classes in one sitting (Adnan & Anwar, 2020). In line with the findings of Ain (2020), our study found that online learning is not equally beneficial for students coming from different geographical backgrounds and disciplines. Language learning requires repetitive practice with people who know the language. Additionally, it requires state-of-the-art technological structure and ITC facilities to ensure smooth processes. Consequently, in areas surrounded with high mountains the internet and mobile signal quality is not conducive and reliable. Although HEC has significantly collaborated with institutions to adapt technology-based learning systems, still there is much to be done.

Previously, researchers such as Basilaia and Kvavadze (2020), had also recommended that the effectiveness of online learning systems is dependent on various factors and the technology quality is the most important of these. The current study was investigated

issues linked with learning English language through online modes and compared its perceived effectiveness with classroom learning methods. As hypothesized, the respondents indicated serious concerns about the effectiveness of the online system introduced as an impulsive strategy without proper planning. Students indicated the effectiveness of online systems to learn English language is significantly less than classroom learning in terms of goal setting, environmental structuring, time management, motivation, and task strategies. Additionally, their grade performance also significantly declined during the online sessions. They indicated special concerns regarding the quality of technology available to them, to teachers, and the LMS, introduced by their respective institutions (Hodges et al., 2020; Maldonado et al., 2017; Jena, 2020; Mhandu et al., 2021).

The novel coronavirus has created an unprecedented and unpredictable situation that may last for some time. Even after this situation, the new normal is very different from the one we had before the pandemic. As institutions have equipped themselves with online teaching learning technologies, they can rely on mixed methods and blended learning systems in the future. Although respondents in the current study showed dissatisfaction towards online learning, the new blended learning system is in vogue, despite its limitations. It is expected that future institutions will utilize blended learning technologies and methods, with more effective and advanced learning processes, especially in teaching a non-native language. These findings are also in line with views of the sociocultural theory of effective learning that explains the interdependence between individual and social processes in the construction of knowledge (Steiner & Mahn, 1996). As perceived by students of HEIs in Pakistan, the newly introduced online learning system is significantly different from the classroom learning process especially for learning English language. They perceived classroom learning as more effective. Especially, students of hard mountainous areas face several issues including frequent power failures, internet speed and connectivity, availability of high-quality mobile and computer technology, family matters, cultural issues such as acceptance of online classes at home by family members, and non-availability of desired hardware/software technologies due to financial reasons. Additionally, while learning a non-native language they have to put extra effort and require a community of similar people where they could easily practice the language. Therefore, online learning was perceived as less effective by the students of KPK in comparison with classroom learning to take English language classes.

Implications

This study is a useful knowledge contribution with important implications for multiple stakeholders as discussed below.

At institutional level the study highlighted serious concerns and issues in terms of the availability of necessary infrastructure in HEIs for online classes. In most cases, the learning management systems introduced by these departments did not work properly; therefore, both teachers and students faced serious issues. This study proposes that the ITC departments of HEIs in Pakistan should be highly resourceful with complete access to the latest research-based technology. They should be kept up-to-date with refresher courses from time to time so that they are in a position to introduce any change relating to development in the field. The institutional capacity-building departments should have skillful, learned, and experienced people capable of imparting knowledge to faculty members on the usage of the new technology. Moreover, the management of these institutions should respond promptly to unprecedented and sudden changes that may occur in the environment. A blended learning system should be made mandatory for all institutions (Dziuban et al., 2018) so that both students and teachers are comfortable with both systems and may utilize them to achieve optimal performance. Moreover, research- and development-related activities in the field should be encouraged.

This study has special implications for policymakers and Federal/provincial governments. Students of hard-to-reach areas had been facing infrastructure-related issues such as provision of uninterrupted electricity, speedy internet service with no distraction, and availability of requisite resources at affordable prices. The government must ensure that regular and uninterrupted electricity is available in these areas or at least an appropriate schedule should be provided for load shedding. Moreover, Internet services are available at affordable prices. In addition, policymakers may also make necessary legislation to make the blended learning system a regular learning process for all in normal situations.

In addition the current study relied on perception of students only, whereas teacher's perception on effectiveness of online English learning can help identifying issues from their perspective. Single source cross-sectional data can have the method bias, which can be minimized in multilevel analysis of multisource data obtained from students, teachers and parents. Moreover, teacher training and institutional support can enhance the effectiveness of learning process. Therefore, the moderating mechanism of this variable should be explored in the future. Additionally, a qualitative inquiry can help further exploring the indigenous issues in online English learning.

Conclusion

This study was conducted to compare the perceived effectiveness of online and classroom modes for learning English language. Results found that students of KPK perceive online learning as less effective in comparison with classroom to learn English language. The results highlight several shortcomings in the current governmental and institutional policies and infrastructure. However, online method is a useful technique in other parts of the world as a best available option for tackling crises. Therefore, in the future, institutions must incorporate online and blended learning systems as part of their regular processes. However, strategies should be adopted to ensure equitable learning opportunities for students from various geographical backgrounds and disciplines.

References

- Agung, A. S. N., & Surtikanti, M. W. (2020). Students' Perception of Online Learning during COVID-19 Pandemic: A Case Study on the English Students of STKIP Pamane Talino. *SOSHUM : Jurnal Sosial Dan Humaniora*, 10(2), 225–235. <https://doi.org/10.31940/soshum.v10i2.1316>
- Al-Kumaim, N. H., Mohammed, F., Gazem, N. A., Fazea, Y., Alhazmi, A. K., & Dakkak, O. (2021). Exploring the Impact of Transformation to Fully Online Learning During COVID-19 on Malaysian University Students' Academic Life and Performance. *International Journal of Interactive Mobile Technologies (IJIM)*, 15(05), 140. <https://doi.org/10.3991/ijim.v15i05.20203>
- Amankwah-Amoah, J., Khan, Z., Wood, G., & Knight, G. (2021). COVID-19 and digitalization: the Great Acceleration. *Journal of Business Research*, 136(136), 602–611. <https://doi.org/10.1016/j.jbusres.2021.08.011>
- Basnet, P. (2021). From Face-to-Face to Online Mode: Nursing Students' Learning Experiences during COVID-19 Pandemic. *Scholars' Journal*, 190–202. <https://doi.org/10.3126/scholars.v4i1.42479>
- Batdı, V., Doğan, Y., & Talan, T. (2021). Effectiveness of online learning: a multi-complementary approach research with responses from the COVID-19 pandemic period. *Interactive Learning Environments*, 1–34. <https://doi.org/10.1080/10494820.2021.1954035>
- Gao, L. X., & Zhang, L. J. (2020). Teacher Learning in Difficult Times: Examining Foreign Language Teachers' Cognitions About Online Teaching to Tide Over COVID-19. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.549653>

- Gupta, J., Bavinck, M., Ros-Tonen, M., Asubonteng, K., Bosch, H., van Ewijk, E., Hordijk, M., Van Leynseele, Y., Lopes Cardozo, M., Miedema, E., Pouw, N., Rammelt, C., Scholtens, J., Vegelin, C., & Verrest, H. (2021). COVID-19, poverty and inclusive development. *World Development*, 145, 105527. <https://doi.org/10.1016/j.worlddev.2021.105527>
- Lee, K., Fanguy, M., Bligh, B., & Lu, X. S. (2021). Adoption of online teaching during the COVID-19 Pandemic: a systematic analysis of changes in university teaching activity. *Educational Review*, 74(3), 1–24. <https://doi.org/10.1080/00131911.2021.1978401>
- Rahiem, M. D. H. (2020). Technological Barriers and Challenges in the Use of ICT during the COVID-19 Emergency Remote Learning. *Universal Journal of Educational Research*, 8(11B), 6124–6133. <https://doi.org/10.13189/ujer.2020.082248>
- Ullah, A., Ashraf, M., Ashraf, S., & Ahmed, S. (2021). Challenges of online learning during the COVID-19 pandemic encountered by students in Pakistan. *Journal of Pedagogical Sociology and Psychology*, 3(1), 36–44. <https://doi.org/10.33902/jpsp.2021167264>
- Adnan, M., & Anwar, K. (2020). How Students' Perspectives about Online learning Amid the COVID-19 Pandemic? *Journal of Pedagogical Sociology and Psychology*, 2(1), 45–51. <http://www.doi.org/10.33902/JPSP.2020261309>
- <http://dx.doi.org/10.31940/soshum.v10i2.1316>
- Ahmed, Q. W., Rönkä, A., & Perälä-Littunen, S. (2022). Rural children's perceptions of parental involvement in their education in Pakistan. *Education Sciences*, 12(5), 323. <https://doi.org/10.3390/educsci12050323>
- Ain, N. ul. (2020, March 20). Is online education the new future of Pakistan? | Daily Times. Is Online Education the New Future of Pakistan? <https://dailytimes.com.pk/579663/blessing-in-disguise-is-online-education-the-new-future-of-pakistan/>
- Alsubaie, M. A., Alzarrah, L. N., & Alhemly, F. A. (2022). Faculty members' attitudes and practices: How they responded to forced adoption of distance education?. *SAGE Open*, 12(3), <https://doi.org/10.1177/21582440221108165>.
- Arias, J. J., Swinton, J., & Anderson, K. (2018). Online Vs. Class room learning : A Comparison of Student Outcomes with Random Assignment. *Journal of Business Education & Scholarship of Teaching*, 12(2), 1–23.
- Barnard, L., Lan, W. Y., To, Y. M., Paton, V. O., & Lai, S. L. (2008). Measuring self-regulation in online and blended learning environments. *The internet and higher education*, 12(1), 1-6. <https://doi.org/10.1016/j.iheduc.2008.10.005>
- Basilaia, G., & Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research*, 5(4),1-9.
- Blasi, D. E., Henrich, J., Adamou, E., Kemmerer, D., & Majid, A. (2022). Over-reliance on English hinders cognitive science. *Trends in cognitive sciences*. 26 (12), 1153-1170 <https://doi.org/10.1016/j.tics.2022.09.015>
- Bürki, Y. (2020). Connecting micro and macro sociolinguistic processes through narratives. A glottopolitical Gaze. *Journal of multilingual and multicultural development*, 41(1), 12-24. <https://doi.org/10.1080/01434632.2019.1621876>
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: basic concepts, applications, and programming (multivariate applications series)*. New York: Taylor & Francis Group, 396, 7384
- Byun, J., Jeon, H. C., & Hwang, S. J. (2020). Study on difference in coronavirus-19 related anxiety between class room learning and non-class room learning classes among university students in South Korea. *International Journal of Current Research and Review*, 12(16), 145–150. <http://dx.doi.org/10.31782/IJCRR.2020.12161>
- Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online learning Readiness among University Students in Malaysia amidst COVID-19, *Asian Journal of University Education*, 2020-Jul. *Asian Journal of University Education (AJUE)*, 19, 46–58. <https://doi.org/10.24191/ajue.v16i2.10294>

- Demuyakor, J. (2020). Coronavirus (Covid-19) and online learning in higher institutions of education: A survey of the perceptions of Ghanaian international students in China. *Online Journal of Communication and Media Technologies*, 10(3),1-9. <https://doi.org/10.29333/ojcm/8286>
- Dewey, J. (1997). My pedagogic creed. In D. J. Flinders & S. J. Thornton (Eds.), *The curriculum studies reader* (pp. 17-23). New York, NY Routledge.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Dost, S., Hossain, A., Shehab, M., Abdelwahed, A., & Al-Nusair, L. (2020). Perceptions of medical students towards online teaching during the COVID-19 pandemic: A national cross-sectional survey of 2721 UK medical students. *BMJ Open*, 10(11), 1–10.
- Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended learning: the new normal and emerging technologies. *International Journal of Educational Technology in Higher Education*, 15(1), 1–16. <https://doi.org/10.1186/s41239-017-0087-5>
- Gul, N., Ali, M., & Sabih-Ul-Hassan, S. (2021). An investigation into the challenges faced by the secondary level students in speaking English in district Kohat KPK Pakistan. *Pakistan Journal of Social Research*, 4(2), 1018-1027. <https://doi.org/10.52567/pjsr.v4i2.596>
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010). *Multivariate Data Analysis* (7th Ed.), Pearson, New York.
- Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). The difference between emergency remote teaching and online learning. <https://doi.org/10.3389/feduc.2022.921332>.
- Iqbal, S. A., Ashiq, M., Rehman, S. U., Rashid, S., & Tayyab, N. (2022). Students' perceptions and experiences of online education in Pakistani Universities and Higher Education Institutes during COVID-19. *Education Sciences*, 12(3), 166. <https://doi.org/10.3390/educsci12030166>
- Irshad, S. (2022). Examining The Role Of Self-Regulation In Online Learning For Non-Native English Language Learners. *Journal of Positive School Psychology*, 159-181.
- Jena, P. K. (2020). Impact of pandemic COVID-19 on education in India. *International journal of current research (IJCR)*, 12.
- Johnson, S. D., Aragon, S. R., & Shaik, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of interactive learning research*, 11(1), 29-49.
- John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: A Vygotskian framework. *Educational psychologist*, 31(3-4), 191-206. <https://doi.org/10.1080/00461520.1996.9653266>
- Kara, M., Erdogdu, F., Kokoc, M., & Cagiltay, K. (2019). Challenges Faced by Adult Learners in Online Distance Education: A Literature Review. *Open Praxis*, 11(1), 5-22. <https://doi.org/10.5944/openpraxis.11.1.929>
- Ke, I. C., & Cahyani, H. (2014). Learning to become users of English as a Lingua Franca (ELF): How ELF online communication affects Taiwanese learners' beliefs of English. *System*, 46, 28-38. <https://doi.org/10.1016/j.system.2014.07.008>
- Kintu, M. J., & Zhu, C. (2016). Student Characteristics and Learning Outcomes in a Blended Learning Environment Intervention in a Ugandan University Mountains of the Moon University and Vrije Universiteit Brussel. *The Electronic Journal of E-Learning Volume*, 14(3), 181–195.
- Kintu, M. J., & Zhu, C. (2016). Student characteristics and learning outcomes in a blended learning environment intervention in a Ugandan University. *Electronic Journal of e-Learning*, 14(3), pp181-195.
- Kongkiti, P., & Hao, Y. H. (2021). Shaping the future learning environments with smart elements: challenges and opportunities. *International Journal of Educational Technology in Higher Education*, 18(1). <https://doi.org/10.1186/s41239-021-00254-1>

- Konig, J., Jager-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*, 43(4), 608–622. <https://doi.org/10.1080/02619768.2020.1809650>
- Lin, S. L., Wen, T. H., Ching, G. S., & Huang, Y. C. (2021). Experiences and Challenges of an English as a Medium of Instruction Course in Taiwan during COVID-19. *International Journal of Environmental Research and Public Health*, 18(24), 12920.
- Martin, F., Stamper, B., & Flowers, C. (2020). Examining student perception of readiness for online learning: Importance and confidence. *Online Learning Journal*, 24(2), 38–58.
- McKinsey. (2020, October 5). COVID-19 digital transformation & technology | McKinsey. [www.mckinsey.com. https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever](https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever)
- Mhandu, J., Mahiya, I. T., & Muzvidziwa, E. (2021). The exclusionary character of remote teaching and learning during the COVID-19 pandemic. An exploration of the challenges faced by rural-based University of KwaZulu Natal students. *Cogent Social Sciences*, 7(1). <https://doi.org/10.1080/23311886.2021.1947568>
- Motala, S., & Menon, K. (2022). The hill we climb: In search of a new pedagogy. *Southern African Review of Education with Education with Production*, 27(1), 140-159.
- Muhammad, S., Siddiqui, B. N., Khan, F. U., & Khan, N. (2021). Self-perceived constraints of extension field staff affecting their working efficiency in Khyber Pakhtunkhwa, Pakistan. *Sarhad J. Agric*, 37, 64-70. <http://dx.doi.org/10.17582/journal.sja/2021/37.1.64.70>
- Mushtaha, E., Dabous, S. A., Alsyouf, I., Ahmed, A., & Abdraboh, N. R. (2022). The challenges and opportunities of online learning and teaching at engineering and theoretical colleges during the pandemic. *Ain Shams Engineering Journal*, 13(6). <https://doi.org/10.1016/j.asej.2022.101770>
- Ni, A. Y. (2013). Comparing the Effectiveness of Classroom and Online Learning: Teaching Research Methods. *Journal of Public Affairs Education*, 19(2), 199–215. <https://doi.org/10.1080/15236803.2013.12001730>
- Ortega-Maldonado, A., Llorens, S., Acosta, H., & Coe, C. (2017). Class room learning vs On-line: An analysis of Profile, Learning, Performance and Satisfaction among Post Graduate Students. *Universal Journal of Educational Research*, 5(10), 1701–1706. <https://doi.org/10.13189/ujer.2017.051005>
- Pathan, H., Memon, R. A., Memon, S., Khoso, A. R., & Bux, I. (2018). A critical review of Vygotsky's socio-cultural theory in second language acquisition. *International Journal of English Linguistics*, 8(4), 232. <https://doi.org/10.5539/ijel.v8n4p232>
- Perniss, P., Vinson, D., & Vigliocco, G. (2020). Making sense of the hands and mouth: The role of “secondary” cues to meaning in British Sign Language and English. *Cognitive Science*, 44(7). <https://doi.org/10.1111/cogs.12868>
- Pham, P. T., Nguyen, M. T., Nguyen, T. H., Nguyen, M. T., Yen, D. T. H., Ho, T. Q., ... & Nguyen, D. B. (2021). Blended Learning In Action: Perception Of Teachers And Students On Implementing Blended Learning In Ctu. *Multicultural Education*, 7(4). [10.5281/zenodo.4728153](https://doi.org/10.5281/zenodo.4728153)
- Rahiem, M. D. (2020). The emergency remote learning experience of university students in Indonesia amidst the COVID-19 crisis. *International Journal of Learning, Teaching and Educational Research*, 19(6), 1-26. <https://doi.org/10.26803/ijlter.19.6.1>
- Shohel, M. M. C., Roy, G., Ashrafuzzaman, M., & Babu, R. (2022). Teaching and Learning in Higher Education in Bangladesh during the COVID-19 Pandemic: Learning from the Challenges. *Education Sciences*, 12(12), 857. <https://doi.org/10.3390/educsci12120857>
- Tao, J., & Gao, X. A. (2022). Teaching and learning languages online: Challenges and responses. *System*, 107. <https://doi.org/10.1016/j.system.2022.102819>

- Tao, J., & Xu, Y. (2022). Parental support for young learners' online learning of English in a Chinese primary school. *System*, 105. <https://doi.org/10.1016/j.system.2021.102718>
- Turan, Z., & Akdag-Cimen, B. (2020). Flipped classroom in English language teaching: a systematic review. *Computer Assisted Language Learning*, 33(5-6), 590-606. <https://doi.org/10.1080/09588221.2019.1584117>
- U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, Washington, D.C., 2010. <https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press
- Wu, X., & Ali, S. (2020). The novel changes in Pakistan's party politics: Analysis of causes and impacts. *Chinese Political Science Review*, 5, 513-533. <https://doi.org/10.1007/s41111-020-00156-z>
- Xu, D., & Jaggars, S. S. (2013). The impact of online learning on students' course outcomes: Evidence from a large community and technical college system. In *Economics of Education Review* 37, 46–57. <https://doi.org/10.1016/j.econedurev.2013.08.001>
- Yu, Z., Xu, W., & Yu, L. (2022). Constructing an online sustainable educational model in COVID-19 pandemic environments. *Sustainability*, 14(6), 3598. <https://doi.org/10.3390/su14063598>
- Zulfikar, A. F., Muhidin, A., Pranoto, Suparta, W., Trisetyarso, A., Abbas, B. S., & Kang, C. H. (2019). The effectiveness of online learning with facilitation method. *Procedia Computer Science*, 161, 32–40. <https://doi.org/10.1016/j.procs.2019.11.096>