Impact of Communication Motives and Online Communication on Language Learning: A Mediating Study through Task Technology Fit

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Abstract
Technology plays a key role in the education and learning of students at the higher education level. It is vital to identify the factors that can develop alignment among the learning objectives of the students and technology. Therefore, the objective of this paper is to examine the effect of factors such as Task Technology Fit, online communication, technology characteristics and communication motives on continuance intention to use technology and perceived impact on language learning. This study also aimed to examine the mediating effect of Task Technology Fit as well. The data was collected from the students studying in the higher education institutions of KSA. In this study, cross sectional research design was preferred. The response of students was gathered on questionnaire developed in Likert scale. The questionnaire was distributed among respondents using a simple random sampling technique. Around 63.80% of the collected data was usable which was analysed through smart PLS 4. The findings of the study revealed that Task Technology Fit has a significant effect on the perceived impact on language learning and continuance intention. The results also confirmed that task technology fit is positively impacted by online communication, technology characteristics and communication motives. The results also supported the mediating role of Task Technology Fit in the proposed framework. Furthermore, these results are helpful for decision-makers of the higher education sectors in making policies that are helpful for language learning.

Introduction

The advancement of digital technology has impacted every sector of life including education. Language learning is one of the important factors for students at the higher education level. The language learning capability of the student directly affects the effectiveness and well-being of the teacher, thus improving the student-teacher relationship and communication (Žefran, 2020). For the learning of the language, communication and collaboration are necessary factors. They become more important when a virtual environment is used by the students for the learning purpose. Learning of students takes place when technology and social elements are well integrated (Muñoz Carril et al., 2024).

Language learning is mainly affected by the student's motivation to learn the language (Lăpădat & Lăpădat, 2023). The concept of student motivation to learn the language is a very dynamic and complex. The student's motivation level for language learning must be high to establish good communication with faculty members. In this matter, social learning can play a very important role. Students can communicate with others by using discussion boards through online learning platforms. This technology can also be used by teachers to communicate with students (Gruber et al., 2022).

Several technological characteristics are vital for the language learning of the students (Shahbaz et al., 2023). The task assigned to students becomes very easy and simple because of the technology. There are unique characteristics of digital technologies like edit ability, embeddedness, generativity and others (Kreuzer et al., 2022). Some of the studies mentioned non-materiality reprograms ability and self-preferentiality as part of unique characteristics as well. These factors help to implement the digital technologies in education sector for all stakeholders (Muchenje & Seppänen, 2023).

Online communication (ONL COM) is dominant in current times for all the members of society. Everyone around the globe participates in communication through internet and computers. E-communication is also used by the students as a vital study tool (Rahmawati & Sujono, 2021). By using ONL COM, a user can easily communicate with a person who is miles away. The message can be sent to anyone easily who can reply later at their convenience. ONL COM is one of the fastest ways to send messages in which there is no bounding of location and time. One of the disadvantages of using E-communication is that when a person communicates using electronic mediums, the depth of face-to-face communication is lost (Breek, 2024). However, ONL COM is important for the students in their language learning.

Technology plays a vital role in developing communication and fulfilling the vital needs of the users. Moreover, the technology must be effective in performing the tasks. Factors of technology and tasks are vital to explain the usage of technology. The concept of task-technology fit (TTF) states that for services to be successful, changes in technology must be willingly accepted by users. Scholars have suggested that technology must be adjusted among technology capabilities and requirements of the tasks (Nguyen & Thi Dao, 2024). TTF also affects users' intention towards technology for longer time period (Kim & Song, 2022).

The digital infrastructure is developing and expanding rapidly at the global level. Therefore, more and more online technologies have been introduced in the last two decades that allow users to communicate easily and access information from multiple sources. The usage of these technologies by students has also increased who use different internet-based technologies to learn or acquire a second language (Yan et al., 2021). Different mobile applications are being introduced by the developers to make the tasks easy for the students. Thus, integration of new applications is based on the acceptance of technology by the users to make learning of the language successful. Therefore, it is integral to understand the factors that can impact the continuance intention of the students towards language learning. This investigation will also help in understanding the factors that can help in learning a language from the perspective of the students (Huang et al., 2024). The purpose of this paper is to evaluate the effect of factors such as TTF, ONL COM, technology characteristics (TECH CHAR) and communication motives (COM MOT) on continuance intention to use technology and perceived impact on language learning in the context of students studying in the educational institutions of KSA.

Literature Review

Task Technology Fit: Relationship with Perceived Impact on Language Learning and Continuance Intention

The concept of TTF was first time introduced around three decades ago as the factor of information system research also known as IS research. Studies have discussed this concept as a tool to gauge performance in the context of information technology (Howard & Hair Jr, 2023). The theoretical background of TTF has widely use in the research of human resources, the Internet of Things, and medical fields. But, little research has discussed TTF from the perspective of the student learning process (Pal & Patra, 2021). The research by Weilbach (2019) discussed the influence of TTF on learning management systems.

TTF is discussed as the level to which the technology provides assistance to the individuals in completion of their tasks (Spies et al., 2020). In other words, IT assistance will be taken by an individual when support is needed for the completion of assigned activities. Some of the studies have referred it as the linkage among technology function, ability of the individuals and requirement of the tasks. The TTF model creates a balance between task requirements and the usage of technology (Elçi & Abubakar, 2021).

Scholars have mentioned that a user can adopt a technology when functionality fulfils the needs of a certain task. Thus, studies proposed that TTF is vital to examine the relationship among technology, tasks and individuals (Chen et al., 2024). Scholars have suggested that the adoption of IT technology by the user must be based on the needs of the user. There must be a linkage between the need for technology and

Characteristics of the IT. It is proposed that TTF has a significant effect on positive learning of language and technological usage (Lin et al., 2020).

In literature, continuance intention for the technology usage is referred as the willingness of the learner to participate in the course regularly (Huang et al., 2024). If a learner has a desire to use a certain platform that can impact their learning, they will develop motivation to use that technology. Continuance intention ensures that the users will use that technology regularly. The continuance intention of the learner is impacted by the attitude, and social motivation. Some of the studies have discussed the effect of TTF on continuance intention (Franque et al., 2023). On the other hand, perceived usefulness also has a significant impact on language learning regularly. The continuity of learning language has the main role to play in predicting learning process commitment and engagement. According to Huang et al. (2024), strong technological support is needed to improve engagement among learners who have low level of continuance intention.

Researchers pointed that continuance intention of students is positively effected through TTF (Sabah & Altalbe, 2022). In the presence of alignment among the needs and tasks of the users, the technology will likely be efficient as well as useful for the user. As a result of this positive experience, the intention to use technology again in future becomes stronger (Rahi et al., 2021). In the context of education, TTF plays a very important role in engaging the users. It plays a key role in preventing the user from using the system again. If the users have a feeling that technology is helping them to complete tasks efficiently and effectively, they will develop long-term commitment to use the system (Jo & Bang, 2023). Thus we hypothesise that

H1: *Task Technology fit has a significant effect on continence intention.*

Studies have discussed Perceived impact on language learning as the way teachers and students examine the importance of certain experiences or methods while acquiring language (Sinambela & Ernawati, 2021). Technology plays key role in developing or improving certain perception. The advancement of technology has altered the way a student practices and acquires new language (Zhao & Lai, 2023). The aim of new technology introduction is to provide convenience to students by making learning easy. Some of the studies have mentioned the impact of technology on learning of the students (Su & Zou, 2022). Scholars mentioned that learning is one of the elusive aspects and hard to measure.

According to studies regarding TTF, technology is useful for students when they can effectively fulfil their academic needs (Jo & Bang, 2023). While discussing TTF application in the language learning, the concept of TTF applies when different digital tools help the students to learn different language learning tasks including grammar exercises, pronunciation practice and vocabulary drills. In this situation, students perceive it as a useful tool that can be used to learn the language. As a result of this perceived fit, overall learning outcome, motivation and engagement of the students are enhanced. Thus, the study by Sabah and Altalbe (2022) mentioned that TTF has a positive impact on learning.

H2: *Task technology fit has a significant effect on the perceived impact on language learning.*

Communication Motives and Task Technology Fit

In literature, COM MOTs are defined as factors because of which an individual communicates with others (Saputra, 2021). In some studies, motives are discussed as the justification of the individual or students because of which they speak to the instructor. The students need to understand the importance of their interaction with their teachers. The classroom is a very important setting where communication among students and teachers takes place (Agustina & Setiawan, 2020). Scholars have discussed five main reasons for which students communicate with their teachers including dialogue purpose, participatory motives, functional and excuse-making motives, relational motives and research motives (Parsons, 2023). There can be several motivators that force students to use technology to communicate within the class.

Students around the globe use several technologies for learning. These technologies provide these students with a sense of autonomy in terms of collaboration, reading and accessing the research through online sources. Moreover, students also feel a sense of competence by using different technologies. Past scholars have mentioned that motivation factors are key antecedents of learning outcomes. The digital learning environment is also one of the important motivators for students to use technology (Negoescu & Mitrulescu, 2023). Technology usage has a positive influence on the performance of the students. Researchers also mentioned that students will be involved in meaningful communication if they are motivated. As a result, COM MOTs have a significant effect on the TTF for the students (Al-Rahmi et al., 2023). Factor of motivation will lead to effective collaboration, sharing ideas and seeking help on a long-term basis for the students. With the help of active communication, students can improve their usage of technology (Idaryani & Fidyati, 2021). Over time, students will better understand the usage of technology improving their alignment between tools and tasks (Darling-Hammond et al., 2020). As a result, students will feel motivated to use the technology to meet their learning objectives. Therefore, the study by Al-Rahmi et al. (2023); Haleem et al. (2022) mentioned in their study that COM MOTs have a significant effect on TTF.

H3: *Communication Motives have significant effect on task technology fit.*

Online Communication and Task Technology Fit

In the present decade, most of the individuals use online mediums to communicate with others. ONL COM is one of the most effective and efficient ways to communicate that motivates the students. This motivation in turn affects the level of engagement of students with education. The attitude of the students is also shaped through ONL COM mediums that are vital to communicate. The study by Elçi and Abubakar (2021) mentioned that the cognitive attitude of the students is significantly altered by ONL COM.

In the context of higher education, the courses being taught are teacher-centred. In these courses, the lecture is delivered by the instructor and a task is assigned that needs to be performed after the class (Hafeez, 2021). Later, the instructor also conducts tests on the students as well. In this setting, the process of learning is dependent upon the way communication is developed by the instructor with the students (Munna & Kalam, 2021). In the case of online settings, the learning activities are performed through the learning management system. This LMS refers to the technological aspect that engages the students by developing the student-student and student-teacher communication.

Studies pointed out that TTF has positive association with ONL COM among students (Al-Rahmi et al., 2023). It enables efficient problem-solving, collaboration and information exchange allowing students to perform several online activities. These activities include resource sharing, discussion to clarify doubts, and solving problems through the discussion. All these activities help the students use available digital tools in a more effective way (Yadegaridehkordi et al., 2017). Also, the students can quickly understand new technology and tools through online platforms. So, ONL COM develops a learning environment having a high level of TTF for the students (Butt et al., 2021).

H4: *Online communication has a significant effect on task technology fit.*

Technology Characteristics and Task Technology Fit

Technology characteristics play an important role in task accomplishment of the students. These technologies help individuals to complete their assigned tasks. The performance of the user is significantly affected by the use of different TECH CHAR (Outcault et al., 2022). As a result, TTF is affected by the TECH CHAR. The general perception regarding TTF is impacted by the TECH CHAR (Marikyan & Papagiannidis, 2023).

Scholars mentioned in past studies that the aim of TTF must be broad enough to affect the whole or a particular system through the policies and services through information system (Ratna et al., 2020). Moreover, the electronic learning system has a direct relationship with the TTF (Cheng, 2019). The technology being used must be suitable for the users so they can complete their tasks effectively and efficiently. Some of the applications provide efficient services even based on geographical location, helping the user to focus on the assigned task and save time (Ulfa et al., 2024). Thus, characteristics of the technology affect the TTF by supporting the technology to meet the task demands and needs of the users. The overall performance, productivity and satisfaction of the user are increased as a result of high fit among task requirements and technology support. Studies revealed that the effectiveness of the user to perform the task is dependent upon the support received by the technology. In essence, the studies by Hidayat et al. (2021) and argued that TECH CHAR have a positive effect on TTF.

H5: *Technology characteristics have a significant effect on task technology fit.*

The mediating role of task technology fit.

Literature has statistically reported the mediating role of TTF (Chen et al., 2022; Howard & Rose, 2019; Omotayo & Haliru, 2020). It plays the role of bridge between ONL COM and language learning by developing alignment among language learning tasks and technology. In terms of online language learning, TTF is referred as support provided by different tools of communication to complete language acquisition tasks (Lim & Lee, 2021). The online tools of communication include language learning applications, messaging platforms, and video conferencing. Whereas language learning tasks include collaboration, listening and speaking etc. In the case of the high level of TTF, it is believed that online tools are effective in facilitating the tasks of language learning.

Therefore, TTF plays a vital role to mediate between ONL COM and perceived impact on language learning. It means that ONL COM improves language learning among students in the presence of TTF. Past studies have discussed the mediating role of TTF, such as Chavarnakul et al. (2024) revealed a positive mediating role of TTF among TECH CHAR and behavioural intention. Thus, we hypothesise that.

H6: *Task technology fit mediates online communication and perceived impact on language learning.*

TTF ensures the alignment among motivation to communicate with the user and usage of the technology. There must also be a linkage among objectives to communicate and technology usage (Faqih &

Jaradat, 2021). The student may have different motives to communicate within the class including collaborative learning, developing fluency in language or discussing any academic topic. Whereas, improving the skills related to language is mainly dependent on fit among the tasks of the students and the technology being used by the students for this purpose.

Scholars mentioned that the motives to communicate can be assisted by the effective use of different technology tools including online applications (Ahmad & Cavus, 2019). If interaction is provided by the technology to the students and support the motives to communicate, it will have impact on language learning. Thus, TTF mediates among motivation of the students and language learning. Likewise, the study of Al-Maatouk et al. (2020) also discussed the mediating role of TTF among the social characteristics of students and satisfaction. Therefore, we hypothesize that.

H7: *Task technology fit mediates between communication motives and perceived language learning.*

The role of technology is very important to achieve academic tasks assigned to students. The characteristics of technology including adaptability, accessibility and usability are important to engage students in technology usage for the learning of language. Thus, TTF ensures that features of technology are aligned with tasks assigned to students (Muchenje & Seppänen, 2023). Students can use different characteristics of technology including instant feedback showing high involvement of TTF for different language learning exercises such as vocabulary building (Ali et al., 2023).

In this scenario, the perceived impact on language learning is also very high. As a result of favourable characteristics of technology, TTF impacts significantly on perceived language learning. Chavarnakul et al. (2024) showed a positive mediating role of TTF among individual characteristics and utilization. Demonstrating TTF as a potential mediator between the characteristics of technology and learning acquisition.

H8: *Task technology fit mediates between communication characteristics and perceived language learning.*

Technological characters are directly linked with technological usage rate of the students (Ubaidillah et al., 2020). Scholars mentioned that different characteristics of the technology include ease of use, speed of technology and interactivity while using different platforms of digital communication (Uzuegbunam, 2020). In case when there is alignment among the TECH CHAR and tasks assigned to the students, the TTF factor will be high (Park, 2019). In other words, if student feel that different digital collaboration tools fulfill their communication needs, the TTF will be high leading to long-term usage of the technology tools. In this case, students will also develop a continuance intention. In other words, if there is linkage between the features of the technology and the assignment task, the TTF will remain high impacting user's intention. Thus, TTF mediates between TECH CHAR and continuance intention. On the same ground, the study by Rahi and Abd Ghani (2021) also reported mediating role of TTF among task characteristics and perceived usefulness. So it is hypothesized

H9: *Task technology fit mediates among communication characteristics and continuance intention.*

TTF factors make sure that different tools of communication can provide effective support in completing the assigned tasks to the students. Various higher education institutes use online tools such as video conferencing for purposes such as social interaction and education (Chugh et al., 2023). However, the long-term usage of the technology depends upon the fit among requirements of the users and ONL COM.

TTF helps students in the completion of specific tasks including real-time discussions. As a result, students perceive that online tools are beneficial for the students. Therefore, students prefer to use the tools for a longer period. In case if important features of communication are available in the technology, it will lead to development of TTF. As a result, students will like to use the online tools again in future. The study by (Chen et al., 2022; Howard & Rose, 2019; Omotayo & Haliru, 2020) also discussed the mediating role of TTF among various variables. Thus, we hypothesize that:

H10: *Task technology fit mediates between online communication and continuance intention.*

Research suggests that TTF has a key role in shaping the language learning capabilities of students. Scholars mentioned that the student's results can be improved through TTF if there is alignment between the students' learning objectives and technology. In other words, language learners will use digital tools when these tools are fulfilling their language learning goals. It is ensured by the TTF that the students can easily meet their learning goals and objectives effectively. It also ensures that the learning process is efficient.

As a result of this alignment, students remain engaged with the technology improving progress of language learning. Therefore, TTF plays the role of bridge between COM MOTs and perceived impact on language learning. Literature suggests that TTF is discussed as a mediating variable in past as well (Omotayo & Haliru, 2020). Thus, this study hypothesises that

H11: *Task Technology fit mediates among communication motives and Continuance intention.*

Figure 1: *Framework.*

Research Methodology

Positive research paradigm was adopted in this study as proposed by Yamin (2020). Scholars pointed out that empirical investigation is required for quantitative research. Thus, fresh observation from the students is needed for this type of analysis. For the collection of data, a research questionnaire is needed for which items were adapted from past studies. In this research, Likert scale method was adopted for the questionnaire development. The items on Perceived Impact on Language Learning were adapted from (Sabah & Altalbe, 2022); the research question on Continuance intention was adapted from (Chang, 2013); the scale of COM MOTs was adapted from (Caniëls et al., 2015); items of ONL COM was adapted from (Hung et al., 2010); items of TECH CHAR was adapted through Tam and Oliveira (2016) and the items of TTF were adapted by the study of (Rahi & Abd Ghani, 2021).

We collected data from 315 students of universities of KSA by using simple random sampling was used. We received 201 usable questionnaires from the students. Around 63.80% of responses were usable which were analysed using SPSS and Smart PLS 4.0. For analysis, the structural equations modelling (SEM) technique was used as proposed by Ringle et al. (2015) by using Smart PLS 4 as the tool. The analysis of smart PLS is based on the two steps (Bader & Mohammad, 2019).

Demographic analysis shows that 71.18% of respondents were male and 28.82 % of the remaining respondents were females. While discussing the age of the respondents, the statistics reported more than 40% of students were among 18 to 29 years, above 31.2% students had age between 30 to 39 years and remaining had age of more than 40 years. Also, 26.11% of the students were married as per statistical figures.

Data Analysis

The first step of the Smart PLS analysis is a measurement model that confirms key factors. The convergent validity examines the AVE and reliability of the data (Hair et al., 2014). On the other hand, Henseler et al. (2009) revealed that the values of CR and α must be more than 0.60 for the conformation of construct reliability. Whereas Chin (1998) mentioned that the value of factor loading should be more than 0.60.

Table 1: *Factor Loading.*

	COM MOT	CONT INT	ONL COM	PIOLL	TECH CHAR	TECH TASK FIT
COM MOT1	0.859					
COM MOT2	0.861					
COM MOT3	0.913					
COM MOT4	0.885					
CONT INT1		0.876				
CONT INT2		0.84				
CONT INT3		0.853				
ONL COM1			0.919			
ONL COM2			0.898			
ONL COM3			0.908			
PIOLL1				0.871		
PIOLL2				0.846		
PIOLL3				0.875		
PIOLL3				0.861		
TECH CHAR1					0.772	
TECH CHAR2					0.666	
TECH CHAR3					0.756	
TECH CHAR4					0.72	
TECH TASK FIT1						0.924
TECH TASK FIT2						0.813
TECH TASK FIT3						0.828
TECH TASK FIT4						0.922

The values of factor loading in Table 1 show that all values are more than 0.60. The items having values less than 0.69 were deleted before further analysis.

Moreover, the values of CR and α are more than 0.60, meeting the criteria as given in Table 2. Moreover, AVE values given in Table 2 are more than 0.50. All these factors show that constructs have adequate convergent validity as mentioned by (Hair et al., 2014). All values of CR, α, AVE and factor loading showing adequate convergent validity and construct reliability.

Table 2: *Validity and Reliability Results.*

	α Values	COMP. REL	AVG. VAR. EXT
COM MOT	0.903	0.932	0.774
CONT INT	0.821	0.892	0.733
ONL COM	0.894	0.934	0.825
PIOLL	0.886	0.921	0.745
TECH CHAR	0.715	0.819	0.532
TECH TASK FIT	0.895	0.928	0.763

Further, this study examined Fornell and Larcker (1981) criteria and the HTMT method was used for confirmation of discriminant validity. Discriminant validity is achieved through Fornell and Larcker approach (As per Table 3).

Table 3: *Discriminant Validity.*

	COM MOT	CONT INT	ONL COM	PIOLL	TECH CHAR	TECH TASK FIT
COM MOT	0.88					
CONT INT	0.584	0.856				
ONL COM	0.695	0.67	0.908			
PIOLL	0.628	0.623	0.5	0.863		
TECH CHAR	0.474	0.203	0.394	0.337	0.73	
TECH TASK FIT	0.679	0.627	0.622	0.758	0.429	0.873

Whereas, Gold et al. (2001) and Kline (2023) proposed the HTMT values to be less than 0.90 for the confirmation of discriminant validity through HTMT criteria. This criterion is fulfilled as given values in Table 4.

Table 4: *(HTMT).*

	COM MOT	CONT INT	ONL COM	PIOLL	TECH CHAR	TECH TASK FIT
COM MOT						
CONT INT	0.674					
ONL COM	0.775	0.783				
PIOLL	0.703	0.725	0.564			
TECH CHAR	0.572	0.253	0.483	0.43		
TECH TASK FIT	0.753	0.715	0.693	0.849	0.504	

The R^2 values mentioned in Table 5 show that CONT INT is affected by 39.4%, PIOLL is affected by 57.5% and TECH Task Fit is affected by 51.5% by the proposed independent variables of the study. Now present research will proceed to structural model evaluation.

Table 5: *R square.*

	R-square
CONT INT	0.394
PIOLL	0.575
TECH TASK FIT	0.515

The bootstrapping procedure is adopted for the structural model evaluation. As per the statistical figures, COM MOTs have a positively influence TTF with t=3.024. Likewise, ONL COM has a positive effect on TTF as well having t=2.312. Furthermore, results show that TTF is a positive significant predictor of CI with t=8.279. In the end, results show that TTF has a significant effect on PIOLL having t=14.218 (Table 6).

Table 6: *Direct Results.*

	B	STD. DEV	T. ST	P. ST	
COM MOT -> TECH TASK FIT	0.433	0.143	3.024	0.003	Supported
ONL COM -> TECH TASK FIT	0.275	0.119	2.312	0.021	Supported
TECH CHAR -> TECH TASK FIT	0.115	0.094	1.222	0.222	Not Supported
TECH TASK FIT -> CONT INT	0.627	0.076	8.279	0.000	Supported
TECH TASK FIT -> PIOLL	0.758	0.053	14.218	0.000	Supported

In terms of mediating results, statistical findings show that TECH TASK FIT, mediates the relationship among COM MOT and PIOLL as the t value of the relationship is 2.65. Furthermore, TECH TASK FIT mediates among COM MOT and PIOLL as per the statistical findings mentioned in Table 7 as t=2.854. Additionally, TECH TASK FIT also mediates among ONL COM and CON INT with t=2.076. In the end, TECH TASK FIT mediates among ONL COM and PIOLL as t=2.305. On the other hand, the results show that TECH TASK FIT does not mediate between TECH CHAR and PIOLL, and TECH CHAR and CONT INT.

Table 7: *Mediating Results.*

	β	STD. DEV	T. ST	P. ST	
TECH CHAR -> TECH TASK FIT -> PIOLL	0.087	0.07	1.248	0.212	Not Supported
COM MOT -> TECH TASK FIT -> CONT INT	0.272	0.103	2.65	0.008	Supported
COM MOT -> TECH TASK FIT -> PIOLL	0.328	0.115	2.854	0.004	Supported
ONL COM -> TECH TASK FIT -> CONT INT	0.173	0.083	2.076	0.038	Supported
ONL COM -> TECH TASK FIT -> PIOLL	0.209	0.091	2.305	0.021	Supported
TECH CHAR -> TECH TASK FIT -> CONT INT	0.072	0.054	1.349	0.177	Not Supported

Discussion

Language learning and communication have evolved rapidly over time. In recent years, both have become increasingly dependent on technological factors. Advancements in technology have made it easier for students to communicate and learn different languages for academic purposes. Therefore, we examined the influence of COM MOTs, ONL COM, TECH CHAR, and TTF on CONT INT, as well as their perceived impact on language learning within the context of the higher education sector in the KSA.

According to the statistical figures, COM MOTs has a positive influence on TTF. The possible reason for these findings is that students believe their ability to obtain information from both peers and teachers improves through the use of technology. Moreover, students feel that technology has enhanced their ability to share information with others, including their teachers and friends. This exchange of information plays a significant role in their academic growth and progress. Additionally, students reported that their ability to respond to the information gathered from other students and faculty has improved. They can quickly and easily share their feedback regarding academic information using information technology. Respondents also mentioned that using the internet is enjoyable, as it has made it easier for them to connect with all stakeholders through new technology. They perceive the process of using the internet as both efficient and pleasant. Overall, their experience of using the internet and the latest technology for language learning has been highly enjoyable (Al-Rahmi et al., 2023).

The statistical outcomes revealed that ONL COM positively influences TTF. Students who participated in the study reported feeling confident when using ONL COM for educational purposes. The online tools used by these students include e-learning portals and emails, which help them share important information related to language learning. They also feel confident expressing humor and emotions through text in these online tools, which are effective in conveying their feelings to other stakeholders. Moreover, during online discussion sessions, students feel confident asking questions related to language learning. They also believe that digital platforms effectively meet their needs for efficient and collaborative language learning. The demand for tasks is better fulfilled through the alignment of technology enabled by TTF. Additionally, ONL COM supports real-time work by minimizing delays, making it easier for students to manage tasks through TTF. The study of Butt et al. (2021) also revealed similar findings in their study.

Furthermore, results shows that TTF has a significant positive influence on CONT INT Jo and Bang (2023) as well. The respondents of the study believe that online learning and academic services are both appropriate and real-time. They also feel that online education services adequately meet students' needs and are sufficient to fulfill their requirements. Additionally, some students mentioned that online education services include a proper education management system. Furthermore, the institute offers convenient payment options to facilitate students in managing their payments easily.

There may be other possible reasons for these findings in the study. The respondents believe that e-learning technology effectively supports various assigned learning tasks. It provides valuable resources, such as grammar exercises, pronunciation practice questions, and vocabulary-building activities. This reduces frustration among students and enhances their satisfaction. The respondents also feel that the technology they use fosters interest by offering customization options. For example, adaptive quizzes adjust their content based on the student's proficiency level, which motivates students and keeps them engaged with the new technology. Furthermore, this engagement strengthens students' commitment to the technology platform as they see progress in their language learning. As a result, the respondents believe they will continue using the technology for an extended period. They also expressed willingness to

recommend the technology to other stakeholders, including faculty members, to improve their skills and to students to enhance their language learning capabilities.

Moreover, TTF has a significant positive influence on PIOLL. The study of Sabah and Altalbe (2022) also showed similar findings in their study as well. The respondents of the research believe that the technology they use is helping students achieve their language learning goals. They feel that their language learning objectives are effectively met with the assistance of technology. This success fosters positive attitudes and enhances motivation toward using technology. Some respondents mentioned that the applications they use for language proficiency provide real-time language tests for practice, a feature that aligns closely with students' needs. As a result, they find these applications and other technological tools very useful for their studies. A few respondents also stated that technology helps clarify concepts they struggle to understand through other sources. They view technology as a valuable and essential resource for language learning. By using different technological applications, students can easily achieve their language learning goals. Consequently, the intention to use technology is positively influenced by the strong alignment between language learning tasks and the capabilities of the technology. The results shows that technology characteristics has insignificant effect on task technology fit. The students are of the view that certain technology characteristics do not affect TTF as they do not support technology to fulfil their language learning needs.

The findings also confirm the mediating role of TTF in the relationship between communication motives and continuance intention. This may be because students perceive the use of technology for educational purposes as enjoyable. The respondents expressed that they intend to continue using technology, as it effectively fullfills their language learning objectives. Thus, TTF ensures that learning objectives are achieved efficiently and effectively. The statistical results further supported the mediating effect of TTF between communication motives and perceived intention in language learning. This is because the interaction facilitated by technology enhances communication motives, which subsequently impact language learning outcomes (Ahmad & Cavus, 2019).

The results indicate that TTF mediates the relationship between online communication and continuance intention. Respondents mentioned that their institutes offer various online tools for educational and social interaction purposes, as the administration believes there is a fit between online communication and students' requirements. Consequently, students intend to use online communication tools for extended periods (Chugh et al., 2023). The mediating effect of TTF is also supported in the relationship between online communication and its perceived impact on language learning. Students believe that various communication tools assist in achieving language learning tasks, thereby fostering TTF. When TTF is high, online tools become more effective in helping students achieve their language learning goals. In the end, the results do not support the mediating effect of TTF between technological characteristics and continuance intention, nor between technological characteristics and their impact on online communication. A possible explanation is that students perceive certain technological characteristics as insufficient for meeting their language learning goals. As a result, they may turn to other factors to achieve their language learning objectives.

Limitations and Future Suggestions

Similar to other empirical studies, the present study also has a few limitations. Firstly, the responses were gathered from students based in KSA, making the data collection geographically limited. Future studies could collect data from multiple countries, which would provide opportunities for comparative analysis. Secondly, this study used Smart PLS 4 as the tool for data analysis. It is suggested that future studies employ other statistical tools, such as STATA or AMOS, to gain deeper insights and enhance data presentation. Thirdly, this study included two dependent variables, namely PIOLL and CONT INT, which made the proposed model relatively complex. It is recommended that similar studies in the future use one moderator and one dependent variable to simplify the model.

Fourthly, this study examined the effect of technology on students' language learning outcomes. Given the significant influence of social media in the current era, it is suggested that future researchers include variables that analyze the impact of social media on language learning. Finally, the data in this study was collected using a five-point Likert scale. It is recommended that researchers consider using a six-point Likert scale in future studies, as it may make it easier for respondents to provide more precise answers to the questions.

Theoretical and Practical Implications

There are very few studies that have explored the mediating role of TTF in previous research. This study addresses this gap by analyzing the mediating effect of TTF among the proposed independent variables (IVs) and dependent variables (DVs). Furthermore, limited knowledge exists about the combined

effect of ONL COM, COM MOTs, and TECH CHAR as IVs within a single framework. This theoretical gap is also bridged by the present study, which examines these variables as independent variables.

In terms of practical implications, this research emphasizes the importance of technology in enhancing students' learning outcomes. The alignment between technology and students' learning objectives can positively influence their motivation to use technology. Moreover, the study highlights factors such as ONL COM in fostering alignment between students' objectives and technology. These findings are valuable for researchers conducting future studies and for policymakers in the education sector of KSA, helping them develop policies to improve language learning among students.

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