ENGLISH LANGUAGE PROBLEMS AND COMMUNICATION COMPETENCE OF STUDENTS: THE MEDIATING ROLE OF SMARTPHONE APPS IN ESL LEARNING

ABSTRACT

This study determined the mediating role of smartphone apps in ESL learning on the relationship between English language problems and students' communication competence.Using an adapted survey questionnaire implemented electronically through Google Forms, the data was gathered from the senior highstudents enrolled in the1st-semester academic year 2023 – 2024 at three private academic institutions in Davao City. A descriptive-correlational design was utilized.Mean, Pearson r, Linear Regression Analysis,and Medgraph using Sobel z-test were used for the data analysis. Results revealed thatstudents'English language problems were moderate ($\bar{x}$=2.85). Students'communication competence was high ($\bar{x}$=3.59), andtheiruse of smartphone apps in ESL learningwashigh ($\bar{x}$=4.15). There was a significant negative relationship between English language problems and communication competence (r=-.186, p<0.001) and a significant positive relationship between smartphone appusein ESL learning and communication competence (r=.328, p<0.001). However, the negative relationship between English language problems and smartphone apps use in ESL learning (r=-.034, p=.518) was not statistically significant. Furthermore,MedgraphandSobel's z-test revealed that smartphone app use in ESL learning had no significant effect on the relationship between English language problems and communication competence(z= -.643, p>0.01).This study contributed significant insight to the discussion of the ubiquitous role of smartphone apps in ESL learning and its implications forcommunication competence.

Keywords: *languageteaching; English language problems; communication competence; smartphone apps in ESL learning; mediation; Philippines*

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INTRODUCTION

Effective communication across a broad range of contexts is a benchmark for students to ensure their success and growth in any industry. However, many studies have stressed that students are still struggling to effectively express their thoughts, let alone communicate in English (Islam&Stapa, 2021; Hossain, 2018; Pangket,2019). In addition, a recent study by Al Riyami (2021) suggested that effective communication in English is still a challenge for most graduates, impeding their employability and career advancements. Communication competence is a prime factor that increasesan individual's employability and career advancement opportunities (Ting et al.,2017). Hence, it is crucial for students to acquire communication competence in school as it helps them maximize their future learning and career opportunities (Morsidi et al., 2021). However, empirical evidence from previous studies reflects the growing problematic concerns aboutstudents' communication competence, which needs urgent attention.

Considering this concern, previous studies have suggested that English language problems have a concerning connection to communication competence, as a low level of English proficiency negatively affects communication competence (Al Riyami, 2021; Sarwari &Wahab,2018). Both quantitative and qualitative findings from Sarwari and Wahab'sstudy (2018) indicate an undeniable connection between English language proficiency and communication competence, as higher student English language proficiency correlates with higher communication competence. Manuel(2022) also emphasized the role of

English proficiency in communication, as language proficiency results in effective communication.

Comparably, lower English language proficiency affects students' communication competence negatively. Al Riyami (2021) listed English language problems that cause ineffective communication, which include low proficiency, lack of vocabulary, persuasive skills, and inappropriate use of language. In addition, Pangket(2019) argued that English language problems such as complex structure, lack of vocabulary, and low motivation impede students' development of communication competence. Moreover, Atashian (2018) found that students'first-language interferencein learning English as a second language negatively impacts their ability to communicate in English.

On the other hand, technological advancements in the last quarter of the twentieth century have shifted the educational paradigm, making technology a vital part of teaching and learning. Smartphone applications or smartphone apps in English as second language learning (ESL) have emerged as a potential aid in the complex process of language learning and acquisition (Taj, 2016). The findings from the study of Nuraeni et al. (2020)found that most students had a positive view of using smartphone apps to enhance classroom activities, particularly in learning English. In addition, Darsih and Asikin(2020) claimed that students perceived English smartphone applications as useful, which help aid their learning and are relatively simple. It was also reported that students use smartphone apps to aid their learning, includingKamusku, Google Translate, Elsa Speak, YouTube, Zoom, and Google Meet.

Moreover, a recent study revealed that smartphone apps use in ESL learning specifically WhatsApp and communication competence have a strong linear correlation, implying that smartphone apps in language learning optimize the student's communication skills (Morsidi et al.,2021). Similarly, statistical results from the study of Kusmaryani et al.(2019) showed improvement in students' critical thinking and communication skills after using smartphone apps in ESL learning. Informal learning in smartphone apps such as YouTube was also revealed to help develop communication skills influencing pronunciation, intonation, and expressiveness (Lutfiana et al., 2021).

Although recent studies on smartphone apps in ESL learning claimed it to be beneficial, its role in language and communication development remainsambiguous toresearchers, teachers,school administrators, and students.There has been an increasing concern regarding the emergence of problematic use of smartphones and their influence on learning (Abbasi et al., 2021; Hong et al., 2020;Khan et al., 2019). While study-related use improves academic achievement, game-related use and smartphone addiction have detrimental consequences. Abbasi et al. (2021) revealed that using smartphones for leisure, social media, and gaming negatively correlates with academic performance.

Similarly,the findings of Khan et al. (2019)showeda correlation between smartphone addiction and poor academic achievement. They claimed that students use smartphones primarilyfor gaming, chatting,and socializing, which impedes learning. Another study supplemented these previous studies, emphasizing the direct connection between the maladaptive use of smartphones

and cognitive failures. Maladaptive use of smartphonesnegative affects the processing of information, leading to cognitive lapses (Hong et al.,2020; Nui et al., 2022)

Furthermore, Lancaster (2023) argued that off-task use of technologyis a barrier to student learning. Smartphones allow students to multitask, switching attention from one app to another. Consequently, this divides the students' attention, disrupting the classroom's intended tasks, and causing them to lose concentration and decrease their participation. In addition, Pulliam (2017)also claimed that teachers do not believe they can simultaneously use their smartphones and pay attention to the teaching and learning process. This perspective on smartphones further underscores the institutional policies, such as the Department of Education'sprohibition of using phones inside the classroom (DO 83, S. 2003).

As smartphone technologies continue to carve a ubiquitous shifting perspective on our educational paradigm, it is crucial to clarify the interrelationship of smartphone apps, language learning process, and communication development. The interrelationship among these variables can be clarified using Vygotsky'sActivity Theory. This theory, propounded by Lev Vygotsky in 1978, maintains that students actively create new learning as they interact with their environment(Chen, 2022; Yakar et al.,2020; Vygotsky, 1980).One of the core principles of this theory is the concept of tools that mediate human-environment interactions.Students need to use tools that mediate the knowledge construction to achieve goals. These tools can be conceptual or physical (Chen, 2022; Vygotsky, 1980).

In this context, smartphone apps in language learning are considered physical tools that mediate the language learning and acquisition of the students, alleviating students' language problems and resulting in communication competence. In addition, smartphone apps in ESL learning can also be considered a scaffold that supports students in reaching potential development in language learning. Previous studies indicated smartphone apps asscaffold active learning environments (Lin et al., 2019; Devolder et al., 2012).

The concept of mediation also shares similarities with Hutchins' Distributive Cognition Theory. This theory, developed by Edwin Hutchins in 1990, proposes that knowledge and cognition are distributed among individuals, activities, and tools in the environment rather than confined to the individual (Hutchins, 2004). As cited in Stockwell's (2014) article, Hutchins argues that human memory would not be sufficient to understand what it wants to understand, for much of its functions happen in the periphery of human memory.

Tools such as smartphone apps in ESL learning facilitate what human memory limits (Stockwell, 2014). For example, the use of a mobile dictionary helps facilitate the retrieval and storage of useful information.Students with problems with English vocabulary or pronunciation tend to use smartphone apps.As a result, problems in vocabulary learning and acquisition are lessened. Moreover, when students use smartphone apps in ESL learning, they will be engaged in a self-paced learning environment where they can practice vocabulary, pronunciation, and grammar, allowing them to gain communication competence.

The premise of distributive cognition theory parallels with the core principles of connectivism learning theory. This theory was first introduced in

2005by George Siemens and Stephen Downes. Siemens (2005) argued that learning is a process of connecting various information nodes, including nonhuman appliances that support lifelong learning. Through smartphone apps like social networks, mobile dictionaries, discussion platforms, mobile forums, and podcasting, students haveaccess to a network of information sources and chances to develop communication skills (Jinot, 2019).

Canale and Swains' Model of Communicative Competence clarifies the relationship between English language problems and communication competence. Canale and Swain identified four components of communicative competence: grammatical, strategic, sociolinguistic, and discourse (Nordquist,2019; Canale&Swain, 1980). Grammatical competence includes students' knowledge and skills in vocabulary, pronunciation, word formation, and sentence formation. Sociolinguistic competence includes students' knowledge of sociocultural considerations in communication (Whyte, 2019).

Discourse competence includes students' ability to use language inproducing coherent and cohesive spoken or written texts. In comparison, strategic competence refers to compensatory strategies that aid students in coping with any communication breakdown. In this case, when students have problems in language use, vocabulary, pronunciation, and comprehension, possible problems in communication can also occur. Thus, effective communication resides inadequately using linguistic elements in various social contexts (Vurdien, 2019; Canale&Swain, 1980).

Henceforth, based on the grounds of the theories and studies stated above, the following assumptions are formed: English language problems negatively correlate with communication competence; smartphone apps used in

ESL learning minimize English language problems; while smartphone apps used in ESL learning improve communication competence. These assumptions are illustrated in Figure 1, which shows the conceptual framework of this study and illustrates the interrelationship of three variables: English language problems, communication competence, and smartphone app use in ESL learning.

The English Language problem is the predictor variable, which pertains to the problems experienced by the students while learning a secondary or foreign language. It is adapted from the study Pawapatcharaudom(2006), which includes the four macro skills as indicators: listening, speaking, reading, and writing. Listening skills pertain to how effective students use listening skills in English. On the other hand, speaking skills pertain to how effective students use speaking skills in English. Reading skills refer to how effectively students use reading skills in English. Writing skills refer to how effectively students use writing skills in English.

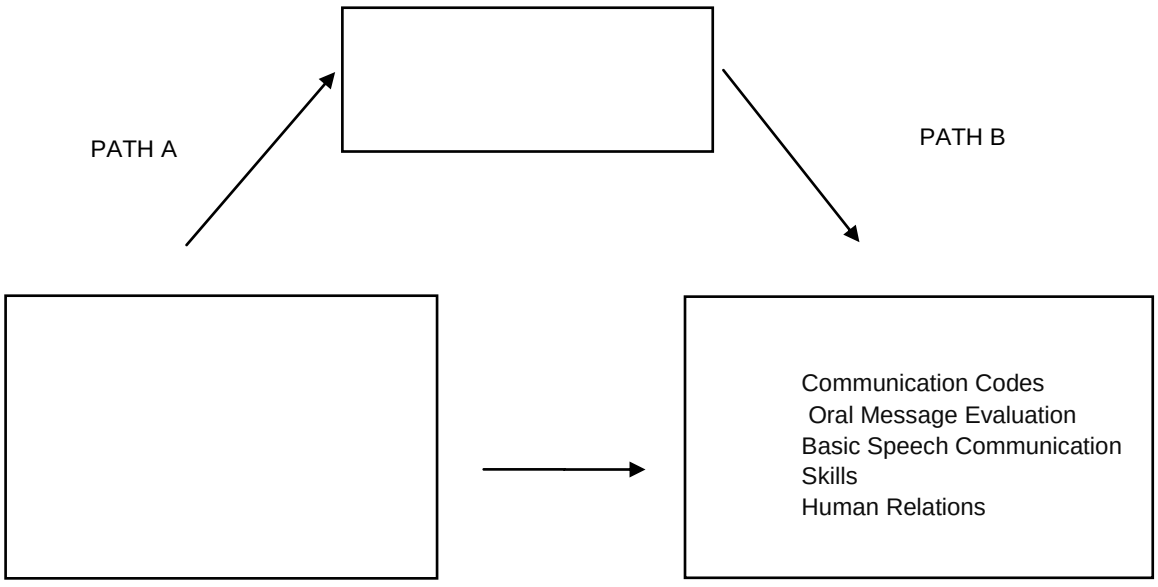


Figure 1.The Conceptual Framework

The criterion variable, communication competence, pertains to an ability to select from a variety of communicative actions to achieve one's interpersonal objectives during a conversation while retaining the face and line of other participants within the context of the interaction (Rubin, 1985; Titsworth&Okamoto, 2017). Rubin proposed a five-component of communication competence. This is characterized as having the following components: Communication Codes (CC), Oral Message Evaluation (OM), Basic Speech Communication Skills (BS), and Human Relations (HM) (Backlund, 2017;Rubin,1985; Rubin, 1982).Communication codesrefer to students' ability to use and understand spoken English and nonverbal signs. Oral Message Evaluation refers to the student's ability to assess oral messages and their effects. Basic Speech Communication Skills refer to students' ability to select and arrange message elements to produce spoken messages. Human Relations refers to the student's ability to maintain interpersonal relationships.

The mediating variable of this study is smartphone apps use in language learning.Generally, smartphone apps for ESL learning refer to any language learning andteaching tools run on smartphones. They provide learners with specific benefits including but not limited to dictionaries, translation, listening, reading, grammar, speaking, and writing (Ahn, 2018;Roy, 2022).According to Rouse (2020), an app is a clipped word for application, which means software that is meant to operate on a mobile device, such as a smartphone, tablet, or computer. Smartphone applications in ESL learning are just one of the many mobile phone technologies that can facilitate language learning at any time and in any location (Abedalla, 2015). Ahn (2018)asserted that smartphone apps can offer unique features for learning English, such as authentic pronunciation,

adaptive testing, real-time translation, and language drills that help students become more fluent.

Even with the existing wealth of literature and theoretical frameworks concerning English language problems, smartphone app use in ESL learning, and communication competence, no study has employed mediation analysis toexplore the role of smartphone apps in ESL learning on the relationship between English language problems and communication competence.In addition, the divergence of perspective on the role of smartphones in language and communication developmentcreatesa conundrum, leaving an area of uncertainty on the use of smartphone apps and their implications in ESL learning.Hence, it is paramount to address this urgent concern thatdemandsurgent action.

In lieu of this concern,the study aims to investigate the mediating role of smartphone appsin ESL learning on the relationship between English language problems and communication competence. Specifically, the study intends to attain the following objectives:

First, assess the level of English language problems of Senior High school students in terms oflistening, reading, writing, and speaking problems. Second, ascertainthe communication competence of Senior High school students in terms ofcommunication codes, oral message evaluation, basic speech communication skills, and human relations. Third, measure the level ofsmartphone app use in ESL learning by Senior High school students.

In addition, the study also aims todeterminethe significant relationship between English language problems and communication competence,English language problems and smartphone apps use in ESL learning, andsmartphone apps use in ESL learning and communication competence, anddiscoverthe

significant mediating role of smartphone apps,use in ESL learningon the relationship between English language problems and communication competence of Senior High students.

In addition, the study adaptedthe followinghypotheses: firstly, there is no significant relationship between smartphone app use in ESL learning, English language problems, and communication competence; secondly, smartphone apps use in ESL learning has no significant mediating role on the relationship between English language problems and communication competence. These hypotheses were tested at a 0.05 level of significance.

Significance of the Study

The investigation of the interrelationship between smartphone app use in ESL learning, English language problems, and communication competence significantly contributes to the current body of literature. It elucidates the contrasting findings of the previous research on the use of smartphone applications in language learning and English language problems, with a focus on the argument as to whether smartphone apps in language learningare beneficial for ESL learners. It furthers the corpus of researchby identifying specific language problems and students' perspectives on the usage of smartphone apps in language learning. Consequently, the findings of this study can also be utilized to develop solutions and policies for the usage of smartphones and smartphone apps to alleviate the language learning problems that a large population of ESL and EFL learners experience.

Furthermore, the Department of Education, academic institutions and school administrators, teachers, language learners, and future researchers benefit

from this research. The results of this study could help the Department of Education decide whether to recommend the use of smartphone apps for language learning. It provides the institution with ideasabout students' communication competence status and the specific English language problems they are encountering. Likewise, academic institutions and school authorities can use the findings of this study to decide whether to reform or create policies regulating the usage of smartphoneapps in ESL learning.It can also serve as a foundation for developing language enhancement and enrichment programs.

Teachers benefit from this research since it provides them with critical data about students' perceptions of smartphone app use in language learning, as well as their levels of problematic smartphone use and English language problems, which they may use to adjust their classroom policies, learning objectives, instructional methods, and assessment to meet the needs of the students. Furthermore, language learners are the primary benefactors of this research. This study informs them about the role of smartphone app use on English language learning and communication competence, enablingthem to adjust their language learning strategies.Above all, the knowledge presented in this study may be used to supplement future research.

METHOD

Research Respondent

The population of this study was composed ofgrade 11 and 12 senior high school students enrolled in the 2nd semester of the 2023-2024 academic year from three private academicinstitutions in Davao City. The three private academic institutions were coded as schools A, B, and C to address the privacy and confidentiality concerns. The total population combined of the three settings was 6470. School A had a total of 2050 students; school B had a total of 2500 students; and school had a total of 1920 students. The Raosoft sample calculator was used to compute the study's sample size. With a 5% margin of error, a 95% confidence level, and a 50% response distribution, the computed sample was 363 respondents.

The computedacceptable sample sizewas distributed in the three private academic institutions using stratified sampling. Hence, the sample size for school A was 115 respondents, 140 respondents for school B, and 108 respondents for school C. Stratified random sampling was used to ensure that the sample size from the settings isrepresented, as this sampling technique reflects the true proportion in the population of individuals with specific characteristics (Creswell &Creswell, 2017).

The respondents included Grade 11 and Grade 12 online learners from any of the tracks offered in the said institutions. Students with English as their native or foreign language were excluded from this study, as this study focused on English as a second language. Students using the printed modular learning modality for the 2nd semester of A.Y. 2022-2023 were excluded from this study

because they lackedinternet access or gadgets. Moreover, since one of the purposes of this study is to identify students' usage of smartphone apps in ESL learning, respondents were asked during the survey if they have smartphones. Respondents who do not own a smartphone were excluded from this study.

In addition, voluntary participation was emphasized in the study. Respondents were informed that they could withdraw anytime in some or all aspects of the research study in which they previously consented to participate.The respondents must inform the researcher before withdrawing from the study and may state the reasons for withdrawal but are not required.

The three private institutions are in the locality of Davao City, Philippines. Davao City is one of the progressive areas in the Philippines which takes pride in ensuring quality education. In addition, Davao City is recognized as the center of education in the Mindanao region, with a literacy rate of 98.7% (City Government of Davao). These institutions are selected for having blended modality programs in senior high school. Also, proximity in terms of location is considered for selecting the said institutions. Furthermore, the students' communication competence in the said institutions needs further clarification, as no study has beenconducted investigating the mediating role of smartphone app use in language learning on the relationship between English language problems and communication competence.

Materials and Instrument

The study utilized athree-part survey instrument for data collection. Close-ended statements and questions were used to determine the students'

smartphone app use in ESL learning,English language problems, and communication competence.

The first part of the instrument was the smartphone apps use in ESL learning. This instrument was adapted from Ahn's study, which explored the students' use of smartphone apps in ESL learning. In the context of this study, smartphone apps for ESL learning refer to all language learning applications, including those for dictionaries, translation, listening, reading, grammar, speaking, and writing. This instrument was composed of students' demographics suchas age, smartphone ownership, experiences of using smartphone apps for English learning, and the type of apps they use on their smartphones.

The first part also included16 self-report items to describe students'perceptions ofthe usefulness, convenience, and self-management of smartphone apps in ESL learning. The adapted instrumentwas revealed to be internally consistent, with an adequate Cronbach alpha coefficient of .88.

The second part wasadapted fromRatanaPawapatcharaudom'sstudy on Thai students' English language problems. The instrument indicated the frequency of English language problems of students in four constructs: Speaking, Listening, Reading, and Writing.The adapted instrument was also subjected to Cronbach alpha analysis with a 0.97 alpha coefficient, indicating the instrument's excellent internal consistency.

The third part of the instrumentwas adapted from Rubin's Communication Competence Self-report, composed of 19 items. Itassessed the students' behavioral communication competence, whichpertains to an ability to select from a variety of communicative actions to achieve one's interpersonal objectives during a conversation while retaining the face and line of other participants within

the context of the interaction (Iqbal &Parveen, 2020;Pascual-Ferra,2013; Rubin,1985; Wiemann,1977). The instrument was composed of four components, namelyCommunication Codes (CC), Oral Message Evaluation (OM), Basic Speech Communication Skills (BS), and Human Relations (HM). The adaptedinstrument was revealed to have an excellent internal consistency with a Cronbach alpha coefficient of .93.

The following rating scales were utilized to interpret students' responses to smartphone app use, English language problems, and communication competence. Means from 4.20 - 5.00 is described as *Very High*. This implies smartphoneapps use, English language problems, and communication competence are always manifest and observed. Means from 3.40 - 4.19 is described as *High*. This implies smartphone apps use, English language problems, and communication competence are often manifest and observed. Means from 2.60 - 3.39 is described as *Moderate*. This implies smartphone apps use, English language problems, and communication competence are occasionally manifest and observed. Means from 1.80 - 2.59 is described as *Low*. This implies smartphone apps use, English language problems, and communication competence are rarely manifest and observed. Means from 1.00 - 1.79 are described as *Very Low*. This implies smartphone apps use, English language problems, and communication competence are almost never or never manifest and observed.

The adapted instrument was modified to fit the study'sobjective. It was then subjected to a validation process from the rosters of expert validators of the University of Mindanao Professional Schools. Four internal validators and one

external validator verified the validity of the instrument.The result of the validation processshowedan overall mean of 4.5, indicating a strong validity.

Design and Procedure

The studyutilizedquantitative research, particularly descriptive-correlational research design. Descriptive-correlational design is a non-experimental research design that uses correlational statistics to describe and quantify the level of association or relationship between two or more variables or sets of scores (Creswell & Creswell, 2017; Creswell,2012). Moreover, this design providedan objective and unbiased assessment of the strength and directionof the relationship among variables (Leavy, 2022).

In addition, this study employed a mediation analysis to establish the extent to which a presumed causal variable influences an outcome variable through a mediator variable. Hence, the study design was used to distinguish and explain the component of the procedure that brings about the strength of correlation between English language problems and communication competence through the mediating variable, smartphone apps usedin ESL learning.

The data were gathered through strict and proper procedures. The researcher securedcertification and approval from the University of Mindanao Ethics Review Committee and Dean of Professional Schools. Upon receiving the certificate and approval, the letter to conduct the studywas sent to the Principal's Office of the three private academic institutions. The researcher waited for the school principals' affixed signature and approval.The researcher worked with the registrar to obtain the population of senior high school students enrolled in the A.Y. 2023-2024 in the respective institutions.

Before conducting the survey, the researcherensured that the respondents were fully informed about the research and their rights. A briefing and debriefing session was conducted with the help of the school's senior high supervisors and class advisers. The data was collected using Google Forms and Google Mail for ease and safety of respondents and researchers. The first section of the Google Form included informed consent, minor assent, and parents' consent, which were pre-requisite documents to be signed before takingthe survey. Informed consent was given to respondents aged 18 and above, while minor assent and parent consent were given to the participants aged 17 and below.

The data gathered from the three private academic institutions were tallied with guidance from the statistician.One of the study'sobjectives is to know the respondents' level of smartphone app use in ESL learning. Respondents were screened to ensure that respondents used smartphone apps.Only the respondents who responded that they own and use smartphone apps in ESL learning were used for the analysis.Subsequently, the statistician analyzed and evaluated the data in relation to the study'sresearch objectives. The data gathered was subjected to the subsequentstatistical tools: Mean, Pearson product-moment correlation coefficient, and Sobel z-test. Mean was used to quantify the level of English language problems, communication competence, and smartphone apps use in ESL learning of the senior high school students among the three institutions.

On the other hand,the Pearson product-moment correlation coefficient was used to summarize the characteristics and ascertain the strength and direction of the relationship among the following variables: English language problems and communication competence; smartphone apps use in ESL learning and English

language problems; and smartphone apps use in ESL learning and communication competence.Finally, the Sobel z-test and medgraph were utilized to examine if smartphone apps use in ESL learning mediate the relationship between English language problems and students' communication competence.

RESULTS

Level of English Language Problems

Presented in Table 1 isthe level of English language problems ofsenior high school students. The result revealed a *moderate*level of English language problems with an overall mean score of 2.85 and a standard deviation of 0.85.Three constructs ofthe English language problems were also *moderate*: speaking with amean of 3.25, writing with a mean of 2.94, and listening with a mean of 2.65. In comparison,students'reading problems were*low,*with a mean score of 2.54.

Table 1
Level of English Language Problems of Senior High School Students

Indicator	**SD**	**Mean**	**Descriptive Level**
Speaking Problems	1.00	3.25	Moderate
Listening Problems	0.94	2.65	Moderate
Reading Problems	0.97	2.54	Low
Writing Problems	0.98	2.94	Moderate
Overall	**0.85**	**2.85**	**Moderate**

The overall *moderate* level of respondents'English language problemsimpliedthat students occasionallyhave English language problems in speaking, writing, and listening. Consistent with a present study, senior high school studentsfromprivate academic institutionsin Davao City occasionallyhad English language problems (Aparece&Bacasmot, 2023). In addition, senior high school students' low level of reading problems indicated that students were rarely

having reading problems.These findings supported the claim that the Philippines' English atmosphere improved as students could use English across various social contexts (Salvador, 2022; Turmudi&Hajan,2020).

One intriguing finding was the students'*low* reading problems. While it exhibited similar results to Manuel's (2022) study, where students were revealed to be proficient users of English and excelled in reading comprehension, precisely the literal level, students tend to overly estimate their proficiency, particularlyin the study ofOng and Villegas(2021) where a majority of the studentswere unaware of using English incompetently.

In addition, Blas et al. (2018) pointed out that many public senior high school students still had English language problems in reading, writing, speaking, and listening. Common culprits of students'problems in English were anxiety (Ong&Villegas, 2021), subjects' complexity, training and knowledge, vocabulary, confidence, self-esteem, and interest (Aranda, 2022; Blas, 2018). This suggests thatthe English language problems of senior high school students in the Philippines vary in the context of private and public institutions.

Level of Communication Competence

Revealed in Table 2 is the level of communication competence of senior high school students with an overall mean score of 3.59 and a standard deviation of 0.66.Students' overall level of communication competence was high, and three out of four constructs were also high: oral message evaluation with a mean of 3.84, communication codes with a mean of3.66, and human relations with a mean of 3.50. On the other hand, basic communication skills, with a mean of 3.35,were*moderate*. Primarily, senior high school students oftenperceived themselves as competent communicators.

Table 2
Level of Communication Competence of Senior High School Students

Indicator	SD	Mean	Descriptive Level
Basic Communication Skills	0.80	3.35	Moderate
Communication Codes	0.76	3.66	High
Oral Message Evaluation	0.78	3.84	High
Human Relation	0.82	3.50	High
Overall	**0.66**	**3.59**	**High**

The result of this study implies that the students' respondents were often able to evaluate oral messages, such as recognizing facts and opinions, informative and persuasive messages, and could tell whether someone does not understand their question. In addition, the study also suggests that student respondents were often able to use and understand spoken English and nonverbal signs. It was also apparent that students could often maintain interpersonal relationships when communicating.

The overall resultof the study corresponds with the previous studies where studentsdisplayedadvanced communication competence(Bautista&Del Valle,2023;Panday et al., 2022). Dizon et al. (2022) also found that senior high school students were college-prepared regarding their communication competence, specifically in content, oral communication, behavior, and development in both English and Filipino.According to Salvador et al. (2022), students with competent communication skills can communicate clearly and comprehensively with minimal difficulty. They also know the appropriate use of basic grammar rules with occasional errors.

Thestudents'*moderate* level of basic communication skillsis worthnoting asthis reflects their behavior in presenting their ideas clearly and concisely. Students can also occasionally expresstheir ideas in an understandable manner anddefend their position on topics. These skills are crucial for effective

communication, as competent communicators are those who can effectively articulate thoughts and ideas andengage in various communication contexts (Gustiani et al.,2017; Purwianingsih et al., 2023).

Level of Smartphone Apps Use in ESL Learning

Displayed in Table 3 revealed is the level of smartphone apps use in ESL Learning of senior high school students. Students showed a *high*level of smartphone apps usein ESL Learning with an overall mean score of 4.15 and a standard deviation of 0.64. This indicated that students often use smartphone apps in ESL Learning.

Table 3
Level of Smartphone Apps Use in ESL Learning of Senior High School Students

Items	**SD**	**Mean**	**Descriptive Level**
Learning using smartphone apps improves my English proficiency.	0.76	4.18	High
Learning using smartphone apps improves the efficiency of English learning.	0.77	4.14	High
Smartphone apps offer a good variety of English learning materials.	0.77	4.23	Very High
I find smartphone apps useful in my English learning.	0.77	4.26	Very High
Learning English using smartphone apps is easy and flexible.	0.81	4.25	Very High
I find learning English using smartphone apps convenient.	0.78	4.24	Very High
I can study English anytime, anywhere, using smartphone apps.	0.82	4.33	Very High
English learning using smartphone apps is fun and enjoyable.	0.79	4.17	High
Smartphone apps make English learning interactive and motivate me to learn English.	0.83	4.06	High
I am able to manage my English study time effectively using smartphone apps.	0.91	3.97	High
I can study English at my own pace using smartphone apps.	0.84	4.19	High
I can study English regularly and independently using smartphone apps.	0.84	4.10	High
I am willing to use smartphone apps for English learning.	0.84	4.17	High

I intend to increase my use of smartphone apps for English learning.	0.92	3.88	High
I will recommend others to use Smartphone apps for English learning.	0.89	4.08	High
Overall	**0.64**	**4.15**	**High**

The data gleaned manifested that senior high school students used smartphone apps in ESL learning for their accessibility (4.33), variety of materials (4.26), ease and flexibility (4.25), and convenience (4.23). The results also suggested that studentrespondents often perceived smartphone apps in ESL learning as helpful in improving English proficiency (4.18) and efficiency (4.14). Enjoyment and fun (4.17) were also emphasized in students' use of smartphone apps in ESL Learning.

In addition, students were willingtouse (4.17) and increase their usage (3.88) of smartphone apps in ESL learning.This suggests that students have the behavioral intention to use smartphone apps. According to Lai et al. (2022),student's actual behavior in using smartphone apps in English language learning was predicted through students' behavioral intention. Hence, the perception of students on their use of smartphone apps was deemed a reflection of their usage of smartphone apps in ESL learning.

The overall result implies that senior high school students often used smartphone apps in ESL learning. This finding was consistent with the previous studies where studentsdisplayed positive attitudes on smartphone apps use in ESL learning (Bui et al., 2023;Nuraeni et al., 2020).Senior high school students perceived smartphone apps in ESL learning asvaluable because they can always be accessed anytime and anywhere. Accessibility and portability of smartphone apps in ESL learning werevaluable affordancesin students'English language learning process (Bui et al., 2023).

Connectivism Learning Theorysupports the findings. Siemens (2005) emphasized the importance of learning from a variety of sources. Using smartphone apps in ESL learning, students can customize their English learning process in line with their learning needs. Student respondents always considered smartphone apps in ESL learning as useful (4.25) and offered varieties of suitable learning materials (4.26).

Relationship between English Language Problems and Communication Competence

As exhibited in Table 4,English Language Problemsshowed a statistically negative correlation with Communication Competence,with an overall R-value of -0.186 and a p-value of 0.00.It means that as students'English language skills increase, their communication competence decreases.This suggests that students perceived communication competence was negatively affected by the difficulties they faced in the English language. In lieu of these analyzed findings, the hypothesis that there is no significant relationship between English Language Problems and Communication Competence is rejected.

Table 4
Significance of the Relationship between English Language Problems and Communication Competence of Senior High School Students

English Language Problems	**Communication Competence**				
	Basic Communication Skills	Communication Codes	Oral Message Evaluation	Human Relation	**Overall**
Speaking Problems	-.163**	-.265**	-.166**	-.167**	**-.227****
	.002	.000	.002	.001	**.000**
Listening Problems	.031	-.183**	-.191**	-.031	**-.109***
	.561	.000	.000	.557	**.037**
Reading Problems	.037	-.168**	-.177**	-.059	**-.108***
	.486	.001	.001	.258	**.040**
Writing Problems	-.093	-.218**	-.158**	-.210**	**-.203****
	.075	.000	.002	.000	**.000**
Overall	**-.056**	**-.240****	**-.198****	**-.135****	**-.186****
	.286	**.000**	**.000**	**.010**	**.000**

From the gleaned results, speaking problems had a significant negative correlationbetweenall four constructs of communication competence with an overall *r*-value of -.227 and a *p*-value of .000. The overall results of listening (*r*=-.109, *p*<.05), reading (*r*=-.108, *p*<.05), and writing problems (*r*=-.203, *p*=.000) showed significant negative correlation between communication competence. While speaking problems and basic communication skillswere revealed to have a significantly negative relationship (r=-.163, p<.05), basic communication skills showed an insignificant correlation for the remaining constructs of English language problems.

Accordingly,the results were consistent with the previous studies. English language problemswere suggested to have an inversecorrelation with communication competence (Al Riyami, 2021;Sarwari& Wahab, 2018).It implies that students'problems withthe English language may contributeto their inability to communicate effectively. Sarwari and Wahab (2018)claimed that proficient students in the English language enablestudentsto participate in communicative activities inside and outside the classroom effectively. Equally,students were inclined to exhibit an unwillingness to participate in classroom discussions or casual conversations duetoEnglish language problems (Alqurashi&Althubaiti, 2019).

Canale and Swain's Model of Communicative Competence underlines the relationship between English language problems and communication competence.According to this model, effective communication requires appropriate manipulation of language and paralanguage elements in various contexts(Canale & Swain, 1980).Students with inadequatevocabulary and

grammatical knowledge are more likely to communicatedefectively(Al Riyami, 2021).On the same note, students with English language problems tend to be less coherent and fluent.

Relationship between English Language Problems and Smartphone Apps Use in ESL Learning

Shown inTable 5 is the relationship between English language problems and smartphone apps use in ESL learning. The overall result showeda negativerelationship with an R-value of -.034. However, the relationship is not significant,with a p-value >0.05. This indicates that English language problems of senior high school students do not predict their smartphone apps use in ESL learning.Hence, the hypothesiswas accepted that no significant relationship exists between English language problems and smartphone apps in ESL learning.

Table 5
Significance of the Relationship between English Language Problems and Smartphone Apps Use in ESL Learning of Senior High School Students

English Language Problems	**Smartphone Apps Use in ESL Learning**
Speaking Problems	-.008 .878
Listening Problems	-.024 .646
Reading problems	-.050 .341
Writing Problems	-.036 .489
Overall	**-.034** **.518**

The negative relationship between English language problems and smartphone app usein ESL learning underscores Vygotsky's Activity Theory.Activity Theory posits that using tools mediates students'learning construction and achievement of goals(Chen, 2022;Vygotsky, 1980).Distributive Cognition Theory also stresses that broader cognitive processes reside not only in

the mind but also in the environment and the tools we use (Hutchin, 2004). In this light, students with problems in the English language may use smartphone apps to alleviate their difficulties.

However, it is crucial to note that the relationship between English language problems and smartphone apps use in ESL learning was not significant.Though students perceived smartphone apps as useful in ESL learning,their views of smartphone apps as aninstant solution for their English language problemswere not aligned.It highlights tight policies on smartphone use inside the classroom. Particularly, Department of Education'sorder 83, S. 2003.In addition, teachers believe that smartphones should not be used in the classroom as it may negatively affect the entire class and the quality of teaching (Alanoğlu&Karabatak, 2020; Pulliam, 2017).Lancaster (2023) indicated that teachers believed off-task use of technology hinders learning and impedes teaching effort.

Some studies also questioned the useof smartphone apps in ESL learning, such as students' unbalanced development of the four language skills (Metruk, 2022), lack of skills and knowledge in using smartphones for academic purposes (Pengnate, 2018),and maladaptive use of smartphones (Domoff et al., 2019).In Ifeanyi's (2018) study,for instance, students'academic performance was negatively affected by smartphone usage because they wereprimarily distracted in one way or another while using smartphones.

Overusing smartphones for non-academic purposes can diminish productivity, lead to poor time management, and make it harder to concentrate on critical academic activities (Punir, 2023).Whilesenior high school students often recognize smartphone apps in ESL learning as useful, the insignificant

relationship between English language problems and smartphone apps in ESL learning suggests further study.

Relationship between Smartphone Apps Use in ESL Learning and Communication Competence

Exposed in Table 6 is a statistically positive correlation between smartphone apps use in ESL learning and communication competence of senior high school students with an overall R-value of .328 and p-value of .000. This suggests that students'communication competence increasesastheyuse smartphone apps in ESL learning. The hypothesis that claimed no significant relationship between smartphone apps use in ESL learning and communication competence of senior high school students is, therefore, rejected.

Table 6
Significance of the Relationship between Smartphone Apps Use in ESL Learning and Communication Competence of Senior High School Students

	Communication Competence				
Smartphone Apps Use inESL Learning	Basic Communication Skills	Communication Codes	Oral Message Evaluation	Human Relation	**Overall**
	.226**	.308**	.301**	.266**	**.328****
	.000	.000	.000	.000	**.000**

Connectivism Learning Theoryvalidates the study's finding as it underscoresthe involvement of nonhuman devices that support communication competence development (Siemens, 2005). Smartphone apps in ESL learningempower students with access to various resources that provide opportunities for honing communication skills (Jinot, 2019).This was particularly true in the study of Kusmaryani et al. (2019), where Smartphone apps in ESL learning positively optimized students' speaking skills and critical thinking.It further confirmedLutfiana et al. (2021) findings on smartphone apps, specifically

YouTube, as an informal learning tool where students acquired English communication competencies inpronunciation, intonation, and expressiveness.

The result was also anchored on the premise of Activity Theory. In this context, smartphone apps in ESL learning were used by students as a mediating tool that scaffolded the development of their communication skills. For example, Khan et al. (2019) found that studentsusingWhatsApp in ESL learning scaffolded vocabulary learning, which proved beneficial for developing communication skills. Finally, the result further solidified Morsidi et al.'s (2021) claim on the strong linear correlation between smartphone apps use in ESL learning and communication competence.

Mediating Analysis of the Three Variables

Arranged in Table 7 is the series of regression as Steps 1 to 4. As presented, Step 1 revealed an inverse significant effect of communication competence on English language problems with a standardized coefficient of -0.186 and a p-value of less than 0.001.

Table 7
Regression analysis on the influence of English language problems on communication competence as mediated by smartphone apps uses in ESL learning of senior high school students.

Step	Path	B	S.E.	β
1	c	-.145	.040	-.186***
2	a	-.026	.040	-.034^{NS}
3	b	.333	.051	.332***
4	c'	-.137	.038	-.176***

* p<0.05

Meanwhile, in Step 2, English language problems showed no significant effect with the mediating variable, smartphone apps use in ESL learning (β= -0.34; p>0.05). Step 3 established a direct significant effect of communication competence on the mediating variable: smartphone apps used in ESL learning with a standardized coefficient of -0.176 with a p-value less than 0.001.

Furthermore, as reflected in Step 4 indicated as c', there was an inverse significant effect of English language problems on communication competence mediated by smartphone app use in ESL learning with a standardized coefficient of -0.176 and a p-value less than 0.001.

Since path c' yielded a significant result, further analysis using medgraph was considered to approximate the direct and indirect effect of smartphone apps in ESL learning on the relationship between English language problems and communication competence, which involved the Sobe-z test. In traditional mediation analysis, significant effects from the independent variable to the dependent variable, the independent variable to the mediating variable, and the mediating variable to the dependent variable were required to establish mediation (Baron&Kenny, 1986).

However, Meule (2019) argued this approach to mediation analysis was obsolete; significant relationships between independent, mediating, and dependent variables were not prerequisites for a mediation effect. Thus, to avoid a premature conclusion that there was no mediation effect, it was necessary to proceed to Steps 3 and 4.

Themediation analysis through Medgraph and Sobel-z test revealed that smartphone app use in ESL learning had no significant mediating effect on the relationship between English language problems and communication competence. Hence, the null hypothesis was accepted that smartphone apps use in ESL learning has no significant mediating role in the relationship between English language problems and communication competence.

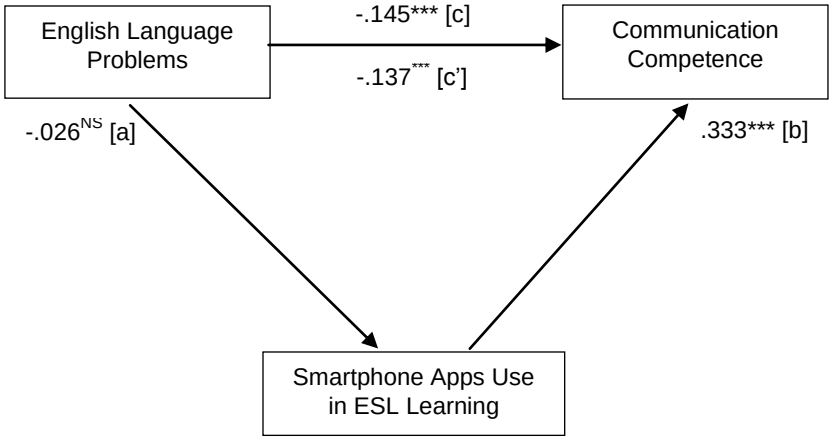
As presented in Table 8 and Figure 2, a Sobel-z value of -0.64 with a p-value greater than 0.01 suggested that the mediating effect is not statistically

significant. Likewise, 5.9% of the total effect was mediated, and approximately 0.062 is the ratio of indirect and direct effects. Accordingly, the result implied that most of the effect was due to the factor not included in the analysis, as the mediating role of smartphone app use in ESL learning is relatively weak.

Table 8
Results of statistical analysis on the presence (or absence) of mediating effect

Combination of Variables	Sobel z	p-value	Mediation
English language problems → smartphones apps use in ESL learning →Communication competence	-.643413	>0.001	No mediation

* $p<0.05$



Mediation Analysis

Sobel z	-.643413,*p*>0.01
Percentage of the total effect that is mediated	5.880328%
Ratio of the indirect to direct effect	.062477

Effect Si

Unstandardized Coefficients

Total:	-.145
Direct:	-.137
Indirect:	-.026
Ratio Index:	.1793

Figure 2.*Medgraph showing the variables of the study*

The determined findings of the studyimplied that English language problems negatively influence communication competence, consistent with Canale and Swains' Communicative Competence Model. This demonstrates that students'linguistic problems negatively affect student's communication

performance in various contexts. In addition, smartphone apps used in ESL learning positively influence communication competence, proving Siemens' Connectivism Learning Theoryand Vygotsky's Activity Theory. Both theories support the use of nonhuman devices in enhancing human life. In this context, smartphone apps used in ESL learning scaffoldedcommunication competence enhancement.

These findings were demonstrated in Chen's (2022) study, where smartphone apps for ESL learning offered automated feedback on writing evaluations and assisted students in honing their writing abilities, becoming more cognizant of their errors, and creating ways to fix them. Markedly, students having trouble with vocabulary may use smartphone apps to access mobile dictionaries and other resources to help them learn. It was highlighted in previous studies that smartphone apps used in ESL learning proved to have a positive relationship with vocabulary learning and acquisition (Alharbi, 2021; Lei, 2018;Metruk, 2021).

However,the no significant influence of English language problemsonsmartphone apps use in ESL learningsuggests that regardless of how much or how little problems students havein English, they may not necessarily perceive smartphone apps in ESL learning as an immediate solution to their language problems.This corroborates the extant studies where students and teachers expressed challenges in integrating smartphone apps into language courses (Barett et al., 2020; Metruk, 2022; Zhang, 2016). It is at par with Abugohar et al. (2019), where despite teachers' and students' positive perception of the use of smartphone apps in ESL learning, actual use and effective integration in the classroom revealed insufficient and weak.

Smartphone apps used in ESL learning showed no significant effect on the relationship between English language problems and communication competence.This resultchallenges the theoretical underpinnings of Activity Theory and Distributive Cognition Theory andunderscores the inherent challenges ofusing smartphone appsin ESL learning. It further shedslighton its difficulties in providingbalancedsupport across language skills and communication competencies (Jurkovič, 2019; Metruk, 2022; Nami, 2022). Most smartphone apps align with receptive skills development, resulting in unequal language skills development (Jurkovič, 2019). However, communication and language skills encompass a broad range of subskills; thus, developing them requires practice tailored to individual subskills.

In addition, thisalso underlinesthatsmartphones, along with their educational benefits, also harbor applications that may serve as potential distractions to language learning and communication development, precisely when used maladaptively (Hong et al., 2020; Nui et al., 2022).This is precisely true in the study of Abbasi et al. (2021),where students mostly use smartphones for leisure, social media, and gaming.The result also stresses that smartphones generally allow students to multitask, switching attention from one app to another. This was true in the study of Lancaster (2023), where smartphones divide the students' attention, disrupting the classroom's intended tasks and causing them to lose concentration and decrease their participation. In sum, smartphone apps in ESL learning were not an effective intervention for reducing English language problems as students' language problems outweighed the beneficial support of smartphone apps.

DISCUSSION and Conclussion

In sum, Senior high school student'slevel of English language problems is *moderate,* andcommunication competence and smartphone app use in ESL learning were *high*.There was a significant negative relationship between English language problems and communication competenceand a significant positive relationship between smartphone app use in ESL learning and communication competence. However, the negative relationship between English language problems and smartphone apps use in ESL learning was not statistically significant. Furthermore, smartphone app use in ESL learning had no significant effect on the relationship between English language problems and communication competence.

The positive correlation betweensmartphone apps use in ESL learning and communication competence highlights the role of these appsdeveloping communication skills.Students regard smartphone apps as useful in ESL learning,suggesting that their integration into ESL learning has the potential to stimulate students' interest. However, classroom policieshinder students from using smartphone apps in ESL classrooms. Consequently, despite students' positive perception of the use of smartphone apps in ESL learning, the actual usage and effective integration in the classroom are deemed to be inadequate and weak. This is evident in the study’s findings, which show smartphone apps use in ESL learning has no significant effect on the relationship between English language problems and communication competence.

Thus, academic institutions must take the lead in fostering innovation and crafting policies to leverage smartphone technologies for the benefit ofstudents.

Furthermore, students must be cautious when using their smartphone apps in ESL learning, understanding both the advantages and risks that could emerge.Although smartphone apps use in ESL learning has no significant effect on the relationship between English language problems and communication competence, it is crucial to outline that smartphone apps in ESL proved to be significant in improving communication competence. However, the contrasting viewpoints illuminated within the confines of this investigation necessitate a more comprehensive examination.

Ethical Approval and Consent

To uphold the integrity and credibility of this study, it was conducted in compliance with the ethical principles. Before, during, and after data collection, the researcher was compliant with the University of Mindanao Ethics Review Committee ethical standards, specifically with the appropriate consideration of the following inclusion criteria, exclusion criteria, withdrawal criteria, potential risks and benefits, voluntary participation, privacy and confidentiality, informed consent, fabrication, falsification, deceit, and conflict of interest. All these ethical standards were discussed and stipulated in the respective sections of the informed consent form, minor assent form, and parental consent form. The University of Mindanao Ethics Review Committee approved and granted the study with a compliance certificate - UMERC-2023-227 on June 7, 2023.

Limitations and Scope for Future Research

Despite the insights gained from this study, italso recognized certain limitations. Firstly, this study focuses on students from private institutions, and it is acknowledged the potential divergent results may be exhibited with the inclusion of public schools. Hence, Future studies may consider thecontext of both public

and private schools. Secondly, students' perceptions of their competence, problems, and smartphone apps' usefulness may inadvertently deviate from their actual behavior. Therefore,to fully comprehend the role of smartphone use in ESL learning, future researchers may employ behavioral observation and mixed-method approaches to mitigate the potential concern about students' perceptions and actual behavior.

Lastly, mediation analysis can only suggest causality; hence, other variables outside the study could influence the relationships between the variables.Future studies may also employ a quasi-experimental design to bolster the evidence of causality. To examine its holistic implications, encompassing the challenges and opportunities they present, future research may investigate the pedagogical integration or restriction of smartphones in ESL classrooms, for it could be possible that their restriction or integration may affect language learning.

Academic and Research Implication

Academic institutions may craft programs to enhance language skills and communication competency throughteachers'training and extracurriculars and promote a culture of tolerance that encourages students to communicate. Students and teachers may collaborate to cultivatelanguage and communicationcompetencies by engaging in language tasks slightly more advanced to their level through school curricula and co-curricular.

In addition, the Department of Education may consider potential revisions to the outdated DepEd Order 83 series of 2003, which prohibits students from utilizing smartphones within the classroom setting. In place of this, DepEd and academic institutions may offer training, allocate resources, and establish guidelines forthe appropriate use of smartphone apps,emphasizing the

pedagogical uses while enhancing the framework regulating their cautious integration. Further, it is suggestedthat teachers pay attention tostudents' language problems by creating a supportive and open environment.

Teachers may then use various teaching strategies to lessen students' English language problems while cultivating their communication skills; this can be done through differentiated instructions to meetstudents' needs.They may provide platforms for students to engage in communication tasks and encourage themto join in different co-curricular and curricular activities to improve communication skills. Integratingstudents' preferred smartphone apps in ESL learning is also recommended for teachers; however, establishing clear guidelines on appropriate pedagogical integration is imperative.

Overall, the students, as primary beneficiaries of this study, may practice proactive and open dialogue with their peers, teachers, and parents,particularly when having language learning difficulties. They may also leverage theirEnglish language and communication skills by participating in real-world communication engagement. Ultimately, the findings imply that students should be cautious when using their smartphone apps in ESL learning, understanding the advantages and risks that could emerge. When used judiciously, students may harness smartphone apps as effective lifelong language learning tools.

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