

**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 communication competence of students. Using an adapted survey questionnaire implemented electronically through Google Forms, the data was gathered from the senior high students enrolled in the 1st semester academic year 2023 – 2024 of 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 that students' English language problems were moderate ( $\bar{x}=2.85$ ). Students' communication competence was high ( $\bar{x}=3.59$ ), and their use of smartphone apps in ESL learning were high ( $\bar{x}=4.15$ ). 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 apps use in ESL learning and communication competence ( $r=.328$ ,  $p<0.001$ ). The negative relationship between English language problems and smartphone apps use in ESL learning ( $r=-.034$ ,  $p=.518$ ), however, was not statistically significant. Furthermore, Medgraph and Sobel  $z$ -test revealed that smartphone apps 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 on the discussion of the ubiquitous role of smartphone apps in ESL learning and its implications to communication competence.

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

## 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; Pangket2019). In addition, the recent study of 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 one of the prime factors that increases an individual's employability and career advancements opportunity (Ting et al.,2017). Hence, it is important 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 about student's 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 and Wahab2018). 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 includes 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, which made technology a vital part of the teaching and learning process. 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 the use of smartphone apps to enhance classroom activities, particularly in the learning of English. In addition, Darsih and Asikin(2020) claimed that students perceived English smartphone application as useful, which help aid their learning and relatively simple to use. It was also reported that students use smartphone apps to aid their learning which includes Kamusku, 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 the use of smartphone apps in language learning optimizes the student's communication skills (Morsidi et al., 2021). Similarly, statistical results from the study of Kusmaryani et al. (2019) showed improvement on student's critical thinking skills and communication skills after using smartphone apps in ESL learning. Informal learning in smartphone apps such as YouTube also revealed to be helpful in 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 remains ambiguous to researchers, teachers, school administrators, and students. There has been an increasing concern regarding the emergence of problematic use of smartphones and its 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) showed correlation between smartphone addiction and poor academic achievement. They claimed that students use smartphones mostly for gaming, chatting, and socializing which in turn impedes learning. Another study supplemented these previous studies, emphasizing the direct connection of maladaptive use of smartphone and cognitive failures. Maladaptive use of smartphone negatively 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 technology is a barrier to student learning. Smartphones allow students to multitask, switching attention from one app to another. Consequently, this divides the attention of the students disrupting the classroom intended tasks and losing concentration and decreasing their participation. In addition, Pulliam (2017) claimed teachers do not believe that 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's prohibition 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 important to clarify the interrelationship of smartphone apps, language learning process and communication development. The interrelationship among these variables can be clarified using Vygotsky's Activity 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. For students to achieve goals, students need to use tools that mediate in the knowledge construction. These tools can be either conceptual or physical (Chen, 2022; and Vygotsky, 1980).

In this context, smartphone apps in language learning are considered as physical tools that mediate the language learning and acquisition of the students, which alleviate student's problems in language resulting to communication competence. In addition, smartphone apps in ESL learning can also be considered as a scaffold that support student in reaching potential development in language learning. Previous studies indicated the application of technological

factors in delivering efficient scaffolding support in 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 proposes 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.

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

The premise of Distributive Cognition Theory is parallel to the core principles of Connectivism Learning Theory. This theory was first introduced in 2005 by George Siemens and Stephen Downes. Siemens (2005) argued that learning is a process of connecting various nodes of information which includes nonhuman appliances that supports lifelong learning. Through smartphone apps like social networks, mobile dictionary, discussion platforms, mobile forums, and podcasting students have the access to a network of information sources and chances for communication skills development (Jinot, 2019).

Crucially, Canale and Swains' Model of Communicative Competence plays an important role in clarifying the relationship between English language problems and communication competence. Canale and Swain identified four components of communicative competence which are 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.

Discourse competence includes students' ability to use language in producing coherent and cohesive spoken or written texts. While strategic competence refers to compensatory strategies that aid students to cope 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 on the adequate use of 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 correlates with communication competence; smartphone apps use in ESL learning minimizes English language problems; while smartphone apps use in ESL learning improves communication competence. These assumptions are illustrated in Figure 1., which shows the conceptual framework of this study that illustrates the interrelationship of three variables in the study, specifically, English

language problems, communication competence, and smartphone apps 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 Pawapatcharandom (2006) which includes the four macro skills as indicators namely, listening, speaking, reading, and writing skills. 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.

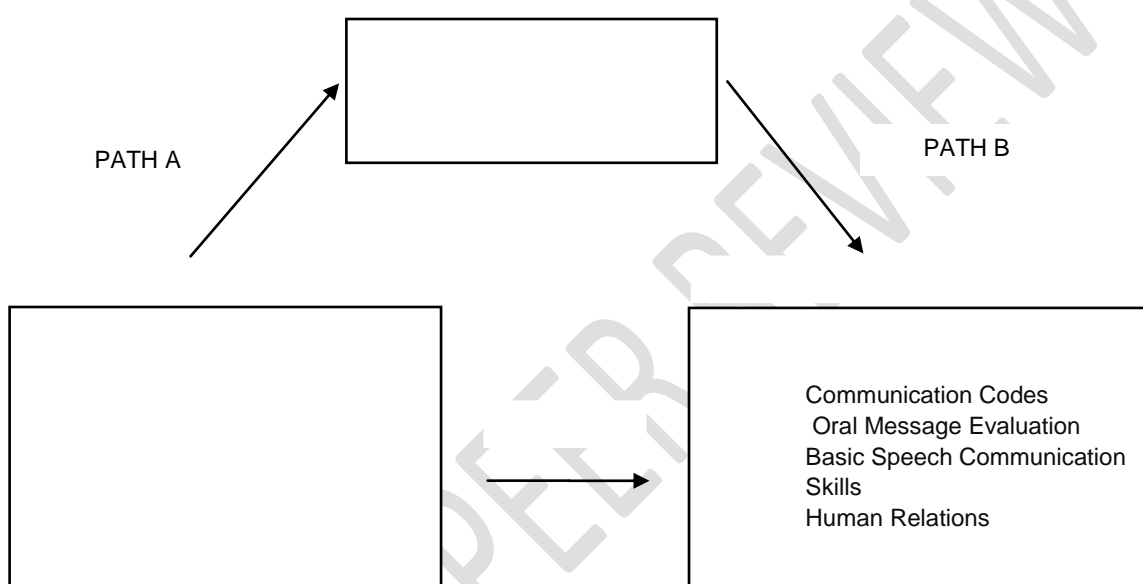


Figure 1. The Conceptual Framework of The Study

The criterion variable, communication competence pertains to an ability to select from a variety of communicative actions to achieve one's own 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 codes refers to the students' ability to use and understand spoken English and nonverbal signs. Oral Message Evaluation refers to the students' ability to assess oral messages and their effects. Basic Speech Communication Skills refers 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 type of language learning and teaching tools that runs in smartphones provide learners with specific benefits; it includes 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 a 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 these many technologies in mobile phones that can be used to facilitate language learning process 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 in the language.

Notwithstanding the ample literature and theoretical underpinnings on English language problems, smartphone apps use in ESL learning, and communication competence, there has been no study that determines the mediating role of smartphone apps in language 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 development creates a conundrum leaving area of uncertainty on the use of smartphone apps and their implications in ESL learning. Hence, it is of paramount importance to address this urgent concern which demands urgent action.

In lieu of this concern, study aims to investigate the mediating role of smartphone app in 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 of listening problems, reading problems, writing problems, speaking problems. Second, ascertain the communication competence of Senior High school students in terms of communication codes, oral message evaluation, basic speech communication skills, and human relations. Third, measure the level of smartphone apps use in ESL learning of Senior High school students.

In addition, the study also aims to determine the significant relationship between the English language problems and communication competence; English language problems and smartphone apps use in ESL learning; and smartphone apps use in ESL learning and communication competence, and discover the significant mediating role of smartphone apps, use in ESL learning on the relationship between English language problems and communication competence of Senior High students.

In addition, the study adapted the following null hypotheses, which was tested at a 0.05 level of significance: there is no significant relationship among smartphone app use in ESL learning, English language problems, and communication competence; and smartphone apps use in ESL learning has no significant mediating role on the relationship between English language problems and communication competence.

The investigation of the interrelationship between smartphone app use in ESL learning, English language problems and communication competence significantly contribute 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 learning is beneficial for ESL learners. It furthers the corpus of research by 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 all 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 idea about the status of students' communication competence as well as the specific English language problems they are encountering. Likewise, academic institutions and school authorities can use the findings of this study to decide whether or to reform or create policies regulating the usage of smartphones apps 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 allows them to be informed about the role of smartphone app use on English language learning and communication competence, which enables them to adjust their language learning strategies. Above all, the knowledge presented in this study may be used to supplement future research of researchers.

## METHOD

### Research Respondent

The population of this study was composed of grade 11 and 12 senior high school students enrolled in the 2<sup>nd</sup> semester of the academic year 2023-2024 from three private academic institutions in Davao City. The three private academic institutions were coded as school 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 C had a total of 1920 students. The Raosoft sample calculator was used to compute the sample size of the study. With a 5% margin of error, a 95% confidence level, and a 50% response distribution, the computed sample was 363 respondents.

The computed acceptable sample size was 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 are represented, as this sampling technique reflects the true proportion in the population of individuals with certain characteristics (Creswell & Creswell, 2017).

The respondents included both 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 under the printed modular learning modality for the 2<sup>nd</sup> semester of A.Y. 2022-2023 were excluded from this study because of their lack of access to the internet or to any 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 smartphone. 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 can 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 is not required to do so.

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 a study has yet to be conducted 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 a three-part survey instrument for data collection. Close ended statements and questions were used to determine the students' smartphone apps 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 the study of Ahn, 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 such as age, smartphones ownership, experiences of using smartphone apps for English learning, and type of apps they use on their smartphones.

The first part also included 16 self-report items to describe students' perception on the usefulness, convenience, and self-management of smartphone apps in ESL learning. The adapted instrument revealed to be internally consistent with an adequate Cronbach alpha coefficient of .88.

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

The third part of the instrument was adapted from Rubin's Communication Competence Self-report, which is composed of 19 items. It assessed the students' behavioral communication competence which pertains to an ability to select from a variety of communicative actions to achieve one's own 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 namely: Communication Codes (CC), Oral Message Evaluation (OM), Basic Speech Communication Skills (BS), and Human Relations (HM). The adapted instrument revealed to have an excellent internal consistency with a Cronbach alpha coefficient of .93.

To interpret students' response in smartphone apps use, English language problems, and communication competence, the following rating scale were utilized. Means from 4.20 - 5.00 is described as *Very High*. This implies smartphone apps use, English language problems, and communication competence are always manifest and/or 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/or 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/or 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/or observed. While means from 1.00 - 1.79 is described as *Very Low*. This implies smartphone apps use, English language problems, and communication competence are almost never or never manifest and/or observed.

The adapted instrument was modified to fit the study's objective and was then subjected to validation process from the rosters of expert validators of University of Mindanao Professional Schools. Four internal validators and one external validator verified the validity of the instrument. The result of validation process showed an overall mean of 4.5, indicating a strong validity.

## **Design and Procedure**

The study utilized quantitative 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 provided an objective and unbiased assessment of the strength and direction of 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 procedure that bring about the strength of correlation between English language problems and communication competence through the mediating variable, smartphone apps use in ESL learning.

The data were gathered through strict and proper procedures. The researcher secured certification 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 study was then sent to the Offices of the Principal of the three private academic institutions. The researcher waited for the school principals' affixed signature and approval. To obtain the for population of senior high school students enrolled in the A.Y. 2023-2024 in the respective institutions, the researcher worked with registrar.

Before conducting the research survey, the researcher ensured that the respondents were fully informed about the research, and their rights. A briefing and debriefing session was conducted with the help of the schools' senior high supervisors, and class advisers. For ease and safety of both respondents and researcher, the data collection was done using Google Forms and Google Mail. The first section of the Google Form included the informed consent, minor assent, and parents' consent which were pre-requisite documents to be signed before proceeding to take the 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 gathered data from the three private academic institutions were tallied through the guidance from the statistician. As one of the study's objectives is to know respondents' level of smartphone apps use in ESL learning respondents were screened to ensure that respondents use smartphone apps. Only the respondents who responded, they own and use smartphones apps in ESL learning, were used for the analysis. Subsequently, the statistician analyzed and evaluated the data in relation to the study's research objectives. The data gathered was subjected to the subsequent statistical tools: Mean, Pearson product moment correlation coefficient, 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, Pearson product moment correlation coefficient was used to summarize the characteristics and ascertained 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 mediates the relationship between English language problems and communication competence of students.

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 study was approved and granted a compliance certificate with UMERC-2023-227 certification number by the University of Mindanao Ethics Review Committee on June 7, 2023.

## RESULTS AND DISCUSSION

### Level of English Language Problems

Presented in Table 1 is the level of English language problems of senior 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 of the English language problems were also *moderate*, speaking with the mean of 3.25, writing with a mean of 2.94, and listening with a mean of 2.65. While 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
<b>Overall</b>	<b>0.85</b>	<b>2.85</b>	<b>Moderate</b>

The overall *moderate* level of respondents' English language problems implied that students occasionally have English language problems specifically in speaking, writing, and listening. Consistent with a present study, senior high school students from private academic institutions in Davao City occasionally had 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 claim that Philippines' English atmosphere was getting better as students were able to 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 with Manuel's (2022) study where students revealed to be proficient users of English and excelled on reading comprehension specifically in under literal level, students have the tendency overly estimate their proficiency. Particularly, in the study of Ong and Villegas (2021) where majority of the students were unaware of using English incompetently.

In addition, Blas et al. (2018) pointed out that many of public senior high school students were still having 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 and self-esteem and interest (Aranda, 2022; Blas, 2018). This suggests that English language problems of senior high school students in that Philippine varies in 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. The overall level of communication competence of students 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 of 3.66, 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 often perceived 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
<b>Overall</b>	<b>0.66</b>	<b>3.59</b>	<b>High</b>

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

The overall result of the study corresponds with the previous studies where students displayed advanced communication competence (Bautista & Del Valle 2023; Panday et al., 2022). Dizon et al. (2022) also found that senior high school students were college-prepared in terms of their communication competence, specifically in the aspects of content, oral communication, behavioral, 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 are also aware of the appropriate use of basic grammar rules with occasional errors.

The students' *moderate* level of basic communication skills is worth noting as this reflects their behavior in presenting their ideas clearly and concisely. Students can also occasionally express their ideas in an understandable manner and defend their position on topics. These skills are crucial for effective communication, as competent communicators are those who can effectively articulate thoughts and ideas and engage 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 use in 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
<b>Overall</b>	<b>0.64</b>	<b>4.15</b>	<b>High</b>

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

In addition, students showed willingness to often use (4.17) and to 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 were predicted through students' behavioral intention. Hence, the perception of students on their use of smartphone apps was deemed 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 students displayed positive attitudes on smartphone apps use in ESL learning (Bui et al., 2023; Nuraeni et al., 2020). Senior high school students perceived that smartphone apps in ESL learning to be useful for it can always be accessed anytime and anywhere. Accessibility and portability of smartphone apps

in ESL learning were valuable affordances in students' English language learning process (Bui et al., 2023).

Connectivism Learning Theory supports 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. Smartphone apps in ESL learning were always considered by students' respondents as useful (4.25) and offered varieties of good learning materials (4.26).

### **Relationship between English Language Problems and Communication Competence**

As exhibited in Table 4, English Language Problems showed statistical 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 increases, students' communication competence decreases. This suggests that students' perceived communication competence were negatively affected by their difficulties they faced in English language. In lieu of this analyzed findings, the hypothesis stating that there is no significant relationship between English Language Problems and Communication Competence is, therefore, rejected.

Table 4

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

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

From the gleaned results, speaking problems had a significant negative correlation between all 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 skills revealed to have a significantly negative relationship ( $r = -.163$ ,  $p < .05$ ), basic communication skills showed insignificant correlation for the remaining constructs of English language problems.

Accordingly, the results were consistent with the previous studies. English language problems were suggested to have an inverse correlation with communication competence (Al Riyami, 2021; Sarwari & Wahab, 2018). It implies that students' problems in English language may contribute to their inability

to communicate effectively. Sarwari and Wahab (2018) claimed that proficient level of English language enables students to effectively participate in communicative activities inside and outside the classroom. Equally, students were inclined to exhibit unwillingness to participate in classroom discussion or casual conversation due to English 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 paralinguistic elements in various contexts (Canale and Swain, 1980). Students with inadequate vocabulary and grammatical knowledge are more likely to communicate defectively (Al Riyami, 2021). In a 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 in Table 5 is the relationship between English language problems and smartphone apps use in ESL learning. The overall result showed a negative relationship 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 hypothesis, no significant relationship between English language problems and smartphone apps in ESL learning, was accepted.

Table 5

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

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

The negative relationship between English language problems and smartphone apps use in 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 in the environment and the tools that we use (Hutchin, 2004). In this light, students with problems in 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 to be useful in ESL

learning, their views of smartphone apps as an instant solution for their English language problems were not aligned. It highlights tight policies on smartphone use inside the classroom. Particularly, Department of Education's order 83, S. 2003. In addition, teachers were firm in believing that smartphones should not be used in the classroom as it may negatively affect the entire class and 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 use of 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). Ifeanyi's (2018) study for instance, students' academic performance was negatively affected by smartphone usage because they are mostly distracted in one way or the other while using smartphones.

Overusing smartphones for non-academic purposes can diminish productivity, lead to poor time management, and make it harder to concentrate on important academic activities (Punir, 2023). While senior high school students often recognized that 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 increases as they use 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

<b>Smartphone Apps Use in ESL Learning</b>	<b>Communication Competence</b>				<b>Overall</b>
	<b>Basic Communication Skills</b>	<b>Communication Codes</b>	<b>Oral Message Evaluation</b>	<b>Human Relation</b>	
	.226**	.308**	.301**	.266**	<b>.328**</b>
	.000	.000	.000	.000	<b>.000</b>

Connectivism Learning Theory validates the study's finding as it underscores the involvement of nonhuman devices that support communication competence development (Siemens, 2005). Smartphone apps in ESL learning empower 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 skill and critical thinking. It further confirmed Lutfiana et al. (2021) findings on smartphones apps specifically

YouTube as an informal learning tool where students acquired English communication competencies on pronunciation, 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 students' use of WhatsApp in ESL learning scaffolded vocabulary learning, which proved to be 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 to English language problems with a standardized coefficient of -0.186 and a p-value of less than 0.001.

Table 7

Regression analysis on influence of English language problems on communication competence as mediated by smartphones apps use in ESL learning of senior high school students.

Step	Path	B	S.E.	$\beta$
1	c	-.145	.040	-.186 <sup>***</sup>
2	a	-.026	.040	-.034 <sup>NS</sup>
3	b	.333	.051	.332 <sup>***</sup>
4	c'	-.137	.038	-.176 <sup>***</sup>

\* p<0.05

Meanwhile, in Step 2, English language problems showed no significant effect with the mediating variable, smartphone apps use in ESL learning ( $\beta = -0.34$ ;  $p > 0.05$ ). Step 3 established a direct significant effect of communication competence to the mediating variable; smartphone apps use 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 after mediated by smartphone apps 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 of effect of smartphone apps in ESL learning to the relationship between English language problems and communication competence which involved Sobel-z test. In traditional mediation analysis, significant effects from independent variable to dependent variable, independent variable to mediating variable, mediating variable to dependent variable were required to establish mediation (Baron&Kenny, 1986).

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

The mediation analysis through medgraph and Sobel-z test revealed that smartphone apps use in ESL learning had no significant mediating effect on the



support the use of nonhuman devices in enhancing human life. In this context, smartphone apps used in ESL learning scaffolded the communication 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 for fixing 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 use 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 problems on smartphone apps use in ESL learning suggests that regardless of how much or how little problems students have in English, they may not necessarily perceive smartphone apps in ESL learning as an immediate solution to their language problems. This corroborates the sentiments of extant studies where students and teachers expressed challenges in integrating smartphone apps in language courses (Barett et al, 2020; Metruk, 2022; Zhang, 2016). It is at par with Abugohar et al. (2019) where despite of teachers and students' positive perception on the use of smartphone apps in ESL learning actual use and effective integration in classroom revealed insufficient and weak.

Crucially, smartphone apps used in ESL learning showed no significant effect on the relationship between English language problems and communication competence. This result not only challenges the theoretical underpinnings of Activity Theory and Distributive Cognition Theory, but also underscores the inherent challenges of using smartphone apps in ESL learning. It further sheds light on its difficulties in providing a balanced support across language skills and communication competencies (Jurkovič, 2019; Metruk, 2022; Nami, 2022). Most smartphone apps are inline towards receptive skills development resulting to unequal language skills development (Jurkovič, 2019). However, communication and language skills encompass a broad range of subskills, thus, to develop them requires practice tailored to individual subskills.

In addition, this also underlines that smartphone, along with their educational benefits, also harbor applications that may serve as potential distractions to language learning and communication development, specifically, when use 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 in general allow students to multitask, switching attention from one app to another. This was true in the study of Lancaster (2023) where smartphones divide the attention of the students disrupting the classroom intended tasks and losing concentration and decreasing 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.

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## CONCLUSION AND RECOMMENDATIONS

In the light of the analyzed results, this section presents the conclusion and offers recommendations. In sum, Senior high school students' level of English language problems is *moderate*, and communication competence and smartphone apps use in ESL learning were *high*. Academic institutions may craft programs to enhance language skills and communication competency through teachers' trainings, extra-curriculars, and promoting a culture of tolerance that encourages students to communicate. Students and teachers may collaborate to cultivate language and communication competencies by engaging in language tasks slightly more advanced to their level through school curricular and co-curriculars. Future studies may continue to monitor how the English language and communication competence are sustained in the Philippines considering the context of public and private schools throughout the student's educational journey.

As students regard smartphone apps in ESL learning as useful, teachers may incorporate them in lessons. In addition, the positive correlation of smartphone apps use in ESL learning, and communication competence highlights their roles in communication skills development. 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 lieu of this, DepEd and academic institutions may offer training, allocate resources, and establish guidelines for appropriate use of smartphone apps emphasizing the pedagogical uses while enhancing the framework regulating their cautious integration. Further, as English language problems negatively influence communication competence it is crucial for teachers to assess the difficulties of their students in language. It is suggested for teachers to pay attention to students' language problems by creating a supportive and open environment. Teachers may then use varieties of teaching strategies to lessen students' English language problems while cultivating their communication skill, this can be done through differentiated instructions to meet students' needs.

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 more comprehensive examination. Therefore, to fully comprehend the role of smartphone use in ESL learning, future researchers may examine its holistic implications, encompassing the challenges and opportunities they present. This finding provides a route for future researchers. As study recognized that students' perceptions of their competence, problems, and smartphone apps usefulness, may inadvertently deviate from their actual behavior, future researchers may investigate comprehensively using a more inherently objective approach. Future studies may also investigate the pedagogical integration or restriction of smartphones in ESL classrooms for it could be possible that its restriction or integration may affect language learning.

Teachers should pay attention to the language problems as it affects communication competence. They may provide platforms for students to engage in communication tasks and encourage them to join in different co-curricular and curricular activities focusing on communication skills improvements.

Integrating student's preferred smartphone apps in ESL learning is also recommended for teachers, however, establishing clear guidelines on its appropriate pedagogical integration is imperative. Overall, to the students as primary beneficiary of this study, they may practice proactive and open dialogue with their peers, teachers, and parents particularly when having language learning difficulties. They may also leverage their skills in English language and communication by participating in real-world communication engagement. Furthermore, it is crucial for students to be cautious when using their smartphone apps in ESL learning, understanding both the advantages and risks that could emerge. When used judiciously, students may harness smartphones apps as effective tools for lifelong language learning.

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