

## ARTICLE

# Technological Innovative Practices in English Language Teaching among Higher Education Institutions in Basilan, Philippines

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## ABSTRACT

Effective teachers are essential for successful language learning in schools, as they play an important role in facilitating comprehension, promoting engagement, and enhancing students' language proficiency. Their ability to employ innovative instructional strategies using technology and adapt to different learning needs significantly influences students' academic outcomes and overall language competence. This descriptive-comparative study was interested in understanding English teachers' technological innovative practices among higher education institutions (HEIs) in Basilan, Philippines. Exploring technological innovative practices amid the challenges of limited technology access in rural areas is essential for enhancing the quality of language learning. English language teachers ( $n = 179$ ) were selected from HEIs in the province, through total enumeration sampling. The findings revealed that English language teachers HEIs in Basilan frequently integrate technological innovations into their teaching practices, including Second Life for immersive simulations, smartphones for accessing resources and promoting multimedia learning, social media for enhancing engagement and building learning communities, and chat/messages for communication, instruction, and feedback—all of which are consistently practiced to motivate students, encourage participation, and develop their language skills. However, training and professional development opportunities were essential in improving the competence of university teachers as disparity was observed in their technological innovative practices. Future studies could explore the long-term impact of these practices on student performance and examine the effectiveness of professional development programs in equipping teachers with advanced technological skills.

**Keywords:** Digital Competence; English Language Learning; Technological Innovative Practices; Technology Use

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# 1. Introduction

In recent years, the use of technology into education has profoundly transformed language teaching and learning. With continuous technological advancements and the growing accessibility of digital resources, teachers have begun adopting innovative strategies to enrich language learning experiences. One emerging focus is technology-assisted language learning, which involves leveraging digital tools and platforms to facilitate and enhance language instruction and practice <sup>[1]</sup>.

For Ningsih <sup>[2]</sup>, teachers must exhibit creativity and innovation in delivering instructional content. To maximize the effectiveness of language learning opportunities given to students, there is a need for analyzing the innovative practices of teachers in using technology <sup>[3]</sup>. In that sense, this paper was to analyze the innovative practices of university teachers in rural areas, particularly in Basilan, Philippines, where access to technology is limited. Abdul-Ajid <sup>[4]</sup> emphasized the need for comprehensive training for teachers in the province, particularly in the use of technology for developing instructional and assessment materials. Such training would enable educators to create more engaging, accessible, and culturally responsive learning experiences.

For example, Reyes <sup>[5]</sup> conducted a descriptive-cross-sectional study examining the ability, attitude, and acceptance of high school teachers in the Division of Pampanga, Philippines, toward distance learning during the 2022–2023 academic year. The findings revealed that teachers demonstrated limited proficiency in resolving hardware and software issues or accessing technical support when encountering technical difficulties. Similarly, their skills in file compression, conducting online classes, utilizing online management systems, and modifying or adding content through electronic learning management systems were also found to be at a low level.

Furthermore, access to technology remains limited, particularly in rural and provincial areas, where infrastructure and digital resources are often insufficient. Sianipar and Hutasuht <sup>[6]</sup> explored the challenges in English writing classes in rural areas in North Tapanuli, North Sumatra, Indonesia. Their findings indicate that students face challenges such as financial constraints and limited technological proficiency, while teachers encounter difficulties in using digital assignments, along with the demand for continuous professional development and time and budgetary limitations. In addition, universities grapple with slow internet speeds and insufficient access to projectors, exacerbating the obstacles experienced by faculty members.

Entong <sup>[7]</sup> discovered that the faculty members for English language in Basilan Province demonstrated adaptability in modifying their assessment approaches to align with both student needs and institutional requirements, reflecting a heightened sensitivity to rich linguistic and

cultural diversity in the region. However, the research also highlighted areas for enhancement in assessment practices, especially in the development of culturally responsive materials and the integration of technology, as these efforts were often hindered by limited resources and infrastructure.

This paper believed that navigating challenging situations requires individuals to be creative and innovative. Innovation in language instruction is essential for a successful and engaging language education program <sup>[8]</sup>. As education and technology continuously evolve, teachers constantly seek new strategies to enhance the quality of their instruction. Innovative language teaching goes beyond simply using modern tools—it involves promoting active learning, critical thinking, and cross-cultural understanding <sup>[9]</sup>. Numerous studies have highlighted the beneficial effects of incorporating innovative practices in the instruction of linguistics, social sciences, humanities, leading to the cultivation of highly skilled and competitive professionals capable of performing complex research, applied, and creative tasks <sup>[10,11]</sup>.

Limited studies were conducted about technological innovative practices in English language teaching in rural areas in the Philippines. One study from Jolo, Sulu, Philippines emphasized that teachers value Information and Communication Technology (ICT) training, acknowledge the use of sustainable development concepts into the elementary school curriculum, and recognize the significant role of ICT in strengthening student engagement in elementary education <sup>[12]</sup>.

This study aimed to address the limited understanding of technological innovative practices in English language teaching, particularly in rural areas of the Philippines, with a specific focus on Basilan Province. The study provided empirical evidence that could inform educational policies and support the professional development of language educators in rural areas. Essentially, the findings could help higher education institutions in Basilan redefine their curricula and teacher training programs to promote more effective and engaging language instruction.

## 2. Literature Review

### 2.1. English Language Learning

English is widely acknowledged as one of the most prevalent and preferred languages in the context of cultural globalization <sup>[13]</sup>. In recent years, its increasing adoption as a medium of instruction has become a prominent trend in educational systems worldwide, including in countries where English serves as a second language <sup>[14]</sup>. This shift is particularly evident in developing nations such as Indonesia and the Philippines, where policymakers and educational institutions have actively integrated English into the curriculum across various academic levels.

The promotion of English instruction is driven by the belief that proficiency in the language equips learners with globally competitive skills, enhancing their socio-economic mobility and boosting international employability [15,16]. Notably, a survey among United Nations member states revealed that the majority supported the use of English as the primary language in their embassies, highlighting its growing acceptance and influence in global communication [17].

## 2.2. Technology and Language Learning

Given the pervasive influence of technology in modern life, it is essential to reconsider its integration into the curriculum and its application in teaching to enhance the learning experience. With the use of technology, teachers can broaden their instructional methods and access a wider array of tools for English language instruction [18]. For example, using English-language videos or music relevant to the lesson can promote in-depth understanding and provide students with strong foundation of the subject matter [19]. Solikhah [20] emphasized that incorporating technology into teaching enhances students' understanding and knowledge acquisition by encouraging positive motivation. The use of computers and internet-based tools in the learning process enables students to participate in more meaningful and effective educational experiences [21].

Given the landscape of English language learning in the Philippines, this paper would like to explore the application of accessible technology in language teaching. With the integration of technological tools such as computers, multimedia projectors, virtual platforms, and mobile devices, teachers can deliver more engaging and personalized lessons, which helps in catering to students' diverse learning styles and needs [22,23]. Several studies emphasize that technology empowers teachers by enabling them to diversify teaching strategies, access extensive educational resources, and promote interactive learning environments [24,25]. Computer-assisted language learning has proven effective in boosting students' motivation, confidence, and autonomy by providing immediate feedback and facilitating self-directed learning [26]. This learner-centered approach encourages students to take a more active role in their education, promoting both language proficiency and digital literacy [27].

This paper was particularly interested in understanding how accessible technology, like smartphones, social media, chat/messages, and Second Life. For example, mobile technology has become increasingly influential across various aspects of human life, including education as its development has significantly enhanced learning accessibility and quality [28-30], particularly in developing countries and remote areas, where access to educational resources is often limited. Through smartphones, tablets, and other mobile devices, students and teachers can conveniently access course materials, information, and digital content

anytime and from anywhere, eliminating geographical and infrastructural barriers [31-33].

## 2.3. Technology Use as a Marker of Innovativeness

Literature frequently associates the use of technology with the adoption of innovative educational practices. According to the Diffusion of Innovations Theory, innovation refers to an idea, practice, or object that is perceived as new by an individual or a group adopting it [33]. This concept also emphasizes the practical application of innovation in real-world contexts [34].

When an innovation is primarily driven by or significantly centered on the use of digital technologies, it is classified as a "technological innovation" [35]. In academic institutions, technological innovation involves dynamic changes aimed at enhancing the educational process and yielding measurable improvements in learning outcomes [36]. It extends beyond merely incorporating new tools or devices; it involves novel pedagogical strategies and interconnected processes that fundamentally reshape teaching and learning practices.

Technological innovation performance is essential in enabling organizations to remain competitive, especially in dynamic environments marked by intense competition, rapid advancements, and widespread technological adoption [37]. Grimpe and Hussinger [38] emphasized that the transfer of knowledge and technology significantly enhances innovation performance. In recent years, there has been a surge in research exploring technological applications across various academic disciplines [39], emphasizing the role of both organizational and employee adaptability to technological changes. Scholars argue that employees' ability to adjust to new IT systems can directly influence the efficiency of IT-driven operations and contribute to the overall performance of the organization [40].

In education, effective use of technology requires several competencies and the process of acquiring them is essential for identifying the core abilities required for teacher educators' professional development [41]. This highlights the importance of equipping faculty members with the necessary digital skills to develop relevant and engaging assessment materials, engage students in language learning, and increase their learning motivation. While technology use is widely regarded as an innovative practice, its successful integration into reading assessments depends heavily on the professional capacity of teachers to navigate and utilize these tools effectively [42,43].

Koster et al. [44] identified four key categories of teacher educators' competencies: (1) content knowledge, (2) communication skills, (3) reflective practice, and (4) organizational and pedagogical expertise. Similarly, Smith [45] gathered the perspectives of Israeli teacher educators on the qualities of effective teacher educators, highlighting several

key competencies: promoting learner reflection, encouraging self-awareness and continuous professional growth, demonstrating patience, empathy, assertiveness, and confidence, engaging in research and publication, collaborating effectively with colleagues, and upholding professional ethics. This study believed that even in the age of technological advancements, these competences were still relevant as it helps in developing effective technological innovative practices for English language learning.

## 2.4. Relevant Predictors of Technology Use

Digital literacy refers to the ability to effectively use information and communication technologies to search for, assess, create, and share information. This encompasses both intellectual and practical skills, including the ability to engage with various forms of media across multiple digital platforms. The use of digital technologies has expanded communication channels and enabled individuals to stay informed and more attuned to the latest environmental trends [46–48].

Studies indicate that experienced teacher educators generally have limited digital skills due to their programs placing minimal emphasis on ICT as a pedagogical tool [49]. Likewise, younger and less experienced teacher educators demonstrate a greater willingness to use ICT; however, their integration of technology is hindered by insufficient facilities, time constraints per class period, and heavy teaching workloads, resulting in infrequent ICT usage in their instruction [50,51].

Furthermore, Adeoye [52] examined the impact of gender differences on teachers' digital literacy skills in teaching STEAM subjects in secondary schools in Kaduna State, Nigeria. Findings revealed that male teachers had more digital skills and access to technology than female teachers, with challenges such as lack of school support, limited time, and poor internet access affecting digital skill usage in teaching. In contrast, Nurzhanova et al. [53] observed no significant difference between male and female pre-service teachers in terms of their knowledge of the internet and its use, as well as their use of technology for teaching purposes. However, a significant difference was observed in computer use, with male pre-service teachers demonstrating higher levels of computer usage and technology skills compared to their female counterparts.

These factors are crucial for understanding technology innovation practices as they highlight the disparities in digital literacy and access to technology among educators. Teachers' varying levels of digital skills, shaped by factors such as experience, gender, and institutional support, directly influence the integration of technology into their teaching practices. Furthermore, external challenges like insufficient resources, limited time, and heavy workloads exacerbate these disparities, affecting how effectively technology can be used to enhance instruction.

## 3. Objectives

This study holds significant value as it addresses a critical gap in the existing literature concerning technological innovative practices in English language teaching, particularly within rural areas of the Philippines. While prior studies—such as those by Amin [12] in Jolo, Sulu—have highlighted the importance of ICT training and its role in promoting student, there remains a scarcity of research focusing on the integration of innovative assessment and instructional practices in English language programs at the tertiary level in similarly underserved contexts.

In addition, the findings of Reyes [5] in the Division of Pampanga reveal the ongoing challenges that high school teachers face in effectively utilizing digital tools, particularly due to limited technical skills and support.

Consequently, this study analyzed the technological innovative practices of university teachers in Basilan, Philippines, in language learning. Below are the specific objectives established to guide the analysis.

- (1) Determine the technological innovative practices of teachers in English language learning among HEIs in Basilan for the use of Second Life, smartphones, social media, and chat/messages.
- (2) Determine whether there is difference on technological learning innovative practices of English teachers among HEIs in Basilan, Philippines, based on their demographic profiles.

## 4. Methods

### 4.1. Research Design

This study employed a quantitative research design to systematically examine the technological innovative practices of teachers in Basilan. This approach was appropriate for investigating interactions and identifying patterns between the variables of interest through the collection of numerical data. As noted by Thomas and Zubkov [54], quantitative research involves the use of structured instruments, such as surveys with closed-ended questions, to gather data that can be statistically analyzed. Specifically, descriptive-comparative design was adapted to analyze the interactions between variables of interest. A descriptive-comparative design is a type of quantitative research design used to describe and compare characteristics, behaviors, or outcomes between two or more groups without manipulating variables [55]. It aims to identify similarities and differences by examining naturally occurring variations rather than establishing causal relationships [56].

### 4.2. Participants and Sampling

The study was conducted across HEIs in Basilan

Province, involving both public and private universities and colleges, to provide a representative sample of the region's educational landscape. It aimed to examine the technological innovative practices of 179 teachers during the Academic Year 2024–2025. The respondents were drawn from institutions such as Basilan State College ( $n = 65$ ), Universal College ( $n = 25$ ), Hardam Furigay College Inc. ( $n = 35$ ), and

several others (see **Table 1**). The study employed a census de jure sampling design, which included the entire population of English language faculty members in the province. This approach enabled the researchers to describe their perspectives, contributing to a thorough analysis of the local educational practices and informing potential areas for institutional policy enhancement <sup>[57]</sup>.

**Table 1.** Number of participants in each institution in Basilan.

Institution	Sample
Basilan State College	65
Universal College	25
Hardam Furigay College Inc.	35
Juan S Alano College Inc.	5
Mindanao Autonomous College Foundation, Inc.	19
Claret College of Isabela	10
Global Institute College	10
ComTech College of Isabela	10
<b>Total</b>	<b>179</b>

### 4.3. Instrumentation

The research instrument used in this study comprised two sections: (1) socio-demographic profiles and (2) technological innovations. The first section aimed to gather the socio-demographic profiles of the respondents, including their age, gender, length of service, and educational attainment. This background information provided essential context for understanding the study population. The second section focused on the technological innovative practices employed by the respondents. This part of the instrument was adapted from Aysu to ensure its relevance to the specific context of the study <sup>[58]</sup>.

### 4.4. Data Collection

The researchers formally sought permission from the Dean of the School of Graduate Studies at Sulu State College to conduct the study. Upon securing the dean's approval, authorization was subsequently requested from the college presidents of various HEIs in Basilan. Once consent was

granted, the researchers conducted an orientation session for the participating English language faculty members, clearly explaining the purpose, objectives, and significance. Following the orientation, the survey questionnaires were personally distributed to the respondents during in-person sessions to ensure clarity and address any potential inquiries. This direct engagement facilitated a higher response rate and ensured that the faculty members thoroughly understood the survey content.

### 4.5. Data Analysis

This study employed both descriptive and inferential statistics to analyze the data. Jamovi version 2.5.4 was utilized for numerical analysis. The weighted mean was applied to evaluate teachers' technological innovative practices and their teaching performance, which were interpreted using value intervals shown in **Table 2**. The Likert scale was weighted to assign numerical values to the responses, allowing the means of the responses to be interpreted descriptively.

**Table 2.** Descriptive interpretation based on mean intervals.

Mean Intervals	Descriptors	Interpretation
<b>Innovative Practices</b>		
4.50–5.00	Always Practiced	The practice is consistently applied.
3.50–4.49	Often Practiced	The practice is frequently applied.
2.50–3.49	Sometimes Practiced	The practice is occasionally applied.
1.50–2.49	Rarely Practiced	The practice is seldom applied.
1.00–1.49	Never Practiced	The practice is not applied at all.

Furthermore, one-way Analysis of Variance (ANOVA) was used to assess whether there were significant differences on teachers' technological innovative practices for English language learning based on their demographic

profile (i.e., sex, age, educational background, and length in service). Post-hoc analysis using Tukey test was carried out to identify which of the pairwise comparisons were significant.



## 5. Results

### A. Objective 1: Determine the technological innovative practices of teachers in English language learning among HEIs in Basilan for the use of second life, smartphones, social media, and chat/messages

**Table 3** presents the descriptive results about technological innovative practices of English teachers among HEIs in Basilan, Philippines, based on four metrics: Second Life, smartphone use, social media use, and chat/

messages use.

As presented in **Table 2**, English teachers *often practiced* Second Life with a mean score of 4.2760 and a standard deviation of 1.0265. The English language faculty in Basilan extensively integrate virtual reality platforms into educational settings to create immersive simulations and environments for experiential learning, enabling students to practice language skills in realistic, educator-designed scenarios. Specifically, they often practiced using Second Life to enhance students' motivation in language learning, encouraging active participation, making lessons more engaging, and developing students' English language skills in speaking, writing, listening, and reading.

**Table 3.** Technological innovative practices of university teachers in Basilan.

Technological Innovative Practices		Mean	S.D.	Rating
<b>Second Life</b>				
(1)	I use second life in language teaching to increase my student's motivation.	4.3128	1.0290	Often Practiced
(2)	I use second life innovation to make my students active in the language learning process.	4.3128	1.0344	Often Practiced
(3)	I use second life innovation to make the lessons more enjoyable.	4.3073	1.0549	Often Practiced
(4)	I use second life to develop my students' speaking skill in English	4.2849	1.0665	Often Practiced
(5)	I use second life to develop my students' writing skill in English	4.2067	1.0896	Often Practiced
(6)	I use second life to develop my students' listening skill in English	4.2291	1.0747	Often Practiced
(7)	I use second life to develop my students' reading skill in English	4.2514	1.0591	Often Practiced
(8)	I use second life to develop my students' vocabulary in English	4.2626	1.0617	Often Practiced
(9)	I use second life as important source to learn about culture of target language	4.2737	1.0641	Often Practiced
(10)	I use second life to facilitate effective communication with the people speaking target language.	4.3184	1.0516	Often Practiced
<b>Composite</b>		<b>4.2760</b>	<b>1.0265</b>	<b>Often Practiced</b>
<b>Smart Phones</b>				
(11)	I use smart phone in language teaching to increase my student's motivation.	4.3240	0.95166	Often Practiced
(12)	I use smart phone innovation to make my students active in the language learning process.	4.3520	0.93864	Often Practiced
(13)	I use smart phone innovation to make the lessons more enjoyable.	4.3631	0.92225	Often Practiced
(14)	I use smart phone to develop my students' speaking skill in English	4.3184	0.96235	Often Practiced
(15)	I use smart phone to develop my students' writing skill in English	4.3240	0.93978	Often Practiced
(16)	I use smart phone to develop my students' listening skill in English	4.3408	0.89384	Often Practiced
(17)	I use smart phone to develop my students' reading skill in English	4.3631	0.91614	Often Practiced
(18)	I use smart phone to develop my students' vocabulary in English	4.3240	0.91555	Often Practiced
(19)	I use smart phone as important source to learn about culture of target language	4.3240	0.89067	Often Practiced
(20)	I use smart phone to facilitate effective communication with the people speaking target language.	4.3575	0.90292	Often Practiced
<b>Composite</b>		<b>4.3391</b>	<b>0.86728</b>	<b>Often Practiced</b>
<b>Social Media</b>				
(21)	I use social media in language teaching to increase my student's motivation.	4.2961	0.86540	Often Practiced
(22)	I use social media innovation to make my students active in the language learning process.	4.3184	0.83750	Often Practiced
(23)	I use social media innovation to make the lessons more enjoyable.	4.3073	0.88082	Often Practiced
(24)	I use social media to develop my students' speaking skill in English	4.2570	0.94862	Often Practiced
(25)	I use social media to develop my students' writing skill in English	4.2458	0.91549	Often Practiced
(26)	I use social media to develop my students' listening skill in English	4.2905	0.93284	Often Practiced
(27)	I use social media to develop my students' reading skill in English	4.3073	0.93045	Often Practiced
(28)	I use social media to develop my students' vocabulary in English	4.2793	0.95997	Often Practiced
(29)	I use social media as important source to learn about culture of target language	4.3184	0.90209	Often Practiced
(30)	I use social media to facilitate effective communication with the people speaking target language.	4.3575	0.90912	Often Practiced

Table 3. *Cont.*

<b>Composite</b>		<b>4.2978</b>	<b>0.85709</b>	<b>Often Practiced</b>
<b>Chat/Messages</b>				
(31)	I use chat/messages in language teaching to increase my student's motivation.	4.3408	0.90010	Often Practiced
(32)	I use chat/messages innovation to make my students active in the language learning process.	4.3073	0.98329	Often Practiced
(33)	I use chat/messages innovation to make the lessons more enjoyable.	4.2570	1.0005	Often Practiced
(34)	I use chat/messages to develop my students' speaking skill in English	4.2514	1.0323	Often Practiced
(35)	I use chat/messages to develop my students' writing skill in English	4.2514	1.0485	Often Practiced
(36)	I use chat/messages to develop my students' listening skill in English	4.2067	0.98115	Often Practiced
(37)	I use chat/messages to develop my students' reading skill in English	4.1955	0.99481	Often Practiced
(38)	I use chat/messages to develop my students' vocabulary in English	4.1844	1.0081	Often Practiced
(39)	I use chat/messages as important source to learn about culture of target language	4.2011	0.99086	Often Practiced
(40)	I use chat/messages to facilitate effective communication with the people speaking target language.	4.3128	0.90094	Often Practiced
<b>Composite</b>		<b>4.2508</b>	<b>0.936</b>	<b>Often Practiced</b>

Legend: 4.50–5.00 = Always Practiced, 3.50–4.49 = Often Practiced, 2.50–3.49 = Sometimes Practiced, 1.50–2.49 = Rarely Practiced, and 1.00–1.49 = Never Practiced.

English teachers *often practiced* Smartphone use with a weighted mean score of 4.3391 with a standard deviation of 0.86728. English language faculty in Basilan extensively use smartphones, equipped with internet connectivity and multimedia functions, to access educational resources, facilitate communication with students, and integrate multimedia content into their teaching practices. Notably, often practiced smartphones to enhance students' motivation in language learning, promote active participation, make lessons more engaging, and develop students' English language skills in speaking, writing, listening, and reading.

English teachers also *often practiced* Social Media use with a computed weighted mean score of 4.2978 with a standard deviation of 0.857. They often extensively use online platforms and applications that enable users to create, share, and interact with content to enhance student engagement, facilitate discussions, and build learning communities. They positively rated several practices, including using social media to boost students' motivation in language learning, promote active participation, make lessons more engaging, and develop students' English language skills in speaking, writing, listening, and reading.

Lastly, English teachers *often practiced* Chat/Messages for language teaching with a total weighted mean score of 4.2508 with a standard deviation of 0.935. They believed that English language faculty in Basilan extensively use digital communication platforms, such as email, chat applications, and learning management systems, to convey information, clarify instructions, and provide feedback to students. They often practiced instructional strategies for English language learning like using chat and messaging tools to support their students in writing, speaking, reading, and learning new vocabulary. They use chat and messages to actively engage students in language learning processes.

## **B. Objective 2: Determine whether there is difference on technological learning innovative practices of English teachers among HEIs in**

### **Basilan, Philippines, based on their demographic profiles.**

In **Table 4**, among the four demographic profiles (e.g., age, gender, educational attainment, and length of service), only age and educational attainment yielded significant differences. Specifically, only Second Life ( $F = 4.024$ ;  $p = 0.008$ ) and Social Media ( $F = 4.696$ ;  $p = 0.004$ ) differed according to teachers' age. In addition, Second Life ( $F = 4.791$ ;  $p = 0.009$ ), Smartphones ( $F = 5.624$ ;  $p = 0.004$ ), Social Media ( $F = 6.972$ ;  $p = 0.001$ ), and Chat/Messages ( $F = 8.282$ ;  $p = 0.000$ ) differed based on teachers' educational attainment.

Tukey test shown in **Table 5** was used to identify which of the pairwise comparisons differed. English language teachers of ages  $\leq 30$  years old ( $MD = 2.137$ ;  $p = 0.018$ ) often practice using Second Life in teaching compared to teachers of ages  $\geq 51$  years old. However, teachers aged between 41 and 50 years old ( $MD = 0.500$ ;  $p = 0.023$ ) often practiced the use of Social Media in language teaching than teachers of ages  $\leq 30$  years old. These findings suggested that younger teachers were more inclined to adopt immersive virtual platforms, whereas middle-aged teachers prefer social media as a teaching tool.

Pairwise comparison in educational attainment revealed significant differences in the use of Second Life, Smartphones, Social Media, and Chat/Messages. Specifically, teachers with bachelor's degree and master's units ( $MD = 0.501$ ;  $p = 0.013$ ) and those who finished a master's degree ( $MD = 0.519$ ;  $p = 0.040$ ) often use Second Life in language teaching compared to those teachers who graduated with bachelor's degree. Similarly, teachers with master's degree often use Smartphones ( $MD = 0.585$ ;  $p = 0.003$ ), Social Media ( $MD = 0.650$ ;  $p = 0.001$ ), and Chat/Messages ( $MD = 0.769$ ;  $p = 0.000$ ) compared to teachers with only a bachelor's degree. These findings indicate that educators with advanced qualifications are more likely to integrate diverse and contemporary technological tools into their teaching methodologies, potentially reflecting

greater familiarity, confidence, or pedagogical competence with digital resources.

**Table 4.** Inferential statistics summary for variation in technological innovative practices based on teachers' demographic profiles.

	Source of Variation	Sum of Squares	df	F	Sig.
<i>Age</i>					
Second Life	Between Groups	12.105	3	4.024	0.008*
	Within Groups	175.482	175		
	Total	187.587	178		
Social Media	Between Groups	9.742	3	4.696	0.004*
	Within Groups	121.017	175		
	Total	130.759	178		
<i>Educational Attainment</i>					
Second Life	Between Groups	9.686	2	4.791	0.009*
	Within Groups	177.901	176		
	Total	187.587	178		
Smartphones	Between Groups	8.042	2	5.624	0.004*
	Within Groups	125.844	176		
	Total	133.886	178		
Social Media	Between Groups	9.599	2	6.972	0.001*
	Within Groups	121.160	176		
	Total	130.759	178		
Chat/Messages	Between Groups	13.406	2	8.282	0.000*
	Within Groups	142.442	176		
	Total	155.847	178		

\* Significant at  $p < 0.05$ .

**Table 5.** Post-hoc analysis for pairwise comparisons.

Pairwise Comparison			Mean Difference	Standard Error	Sig.
<i>Age</i>					
Second Life	≤30 Years Old	31–40 years old	−0.10274	0.17359	0.934
		41–50 years old	−0.29968	0.20885	0.479
		≥51 years old	2.13750	0.72061	0.018*
Social Media	≤30 Years Old	31–40 years old	−0.23463	0.14416	0.366
		41–50 years old	−0.50023	0.17344	0.023*
		≥51 years old	1.19464	0.59842	0.193
<i>Educational Attainment</i>					
Second Life	Bachelor's Degree	Bachelor's w/master's units	−0.50103	0.17456	0.013*
		Master's degree	−0.51880	0.21127	0.040*
Smartphones	Bachelor's Degree	Bachelor's w/master's units	−0.32468	0.14682	0.072
		Master's degree	−0.58547	0.17769	0.003*
Social Media	Bachelor's Degree	Bachelor's w/master's units	−0.24785	0.14406	0.200
		Master's degree	−0.65014	0.17436	0.001*
Chat/Messages	Bachelor's Degree	Bachelor's w/master's units	−0.30065	0.15620	0.135
		Master's degree	−0.76880	0.18905	0.000*

\* Significant at  $p < 0.05$ .

## 6. Discussion

This study observed very high engagement in technology among the English language teaching in Basilan, Philippines. Findings indicated that teachers often practice technological innovative initiatives to support their students, provide them with learning opportunities, and maximize

their potential. The reviewed studies supported the effectiveness of integrating technological tools, such as virtual reality, smartphones, social media, and chat platforms, in enhancing language learning and promoting student engagement. For example, some studies emphasize how virtual worlds like Second Life encourage social interaction and collaborative learning<sup>[59,60]</sup>, which significantly enhance



student motivation and engagement. This corresponds with the English language learning technological innovative practices in Basilan, where the use of Second Life is perceived as highly effective in creating immersive learning environments that could develop students' speaking, writing, listening, and reading skills.

The integration of smartphones into language instruction is also well-supported by literature. Studies highlight the effectiveness of mobile-assisted language learning (MALL) in improving linguistic competencies by providing access to educational resources and facilitating communication <sup>[61,62]</sup>. This is consistent with the faculty practices in Basilan, where smartphones are used to enhance student motivation, participation, and skill development. Gm et al. <sup>[63]</sup> emphasize how smartphone applications create interactive and personalized learning experiences. English teachers in Basilan Province also believed on this as they feel that the use of mobile devices could potentially build students' reading, writing, listening, and speaking skills among HEIs in Basilan, Philippines. To enhance students' motivation and engagement, the faculty could implement interactive language learning applications, such as Duolingo or Memrise, which offer gamified exercises that make lessons more enjoyable.

Furthermore, some studies highlight how platforms like Facebook and Twitter create interactive learning environments that promote student engagement and collaboration <sup>[64,65]</sup>. In Basilan HEIs, social media is used to facilitate discussions, share multimedia content, and build learning communities, thereby strengthening students' language competencies. Similarly, Tariq <sup>[66]</sup> emphasized the benefits of social media, noting that its informal nature makes learning more accessible and enjoyable, which faculty in Basilan recognized as effective in increasing student participation and making lessons more enjoyable.

Lastly, innovative use of chat and messaging applications further reinforces teachers' effectiveness in language learning, with studies examining how chat platforms increase student motivation by providing real-time feedback and promoting authentic language use <sup>[67]</sup>. In Basilan HEIs, faculty members use chat and messaging tools to develop students' communication skills and encourage active participation. Belda-Medina <sup>[68]</sup> further demonstrates that synchronous communication platforms enhance language practice through immediate interaction and peer collaboration. For example, an English language faculty member in Basilan universities might use chat and messaging platforms, such as WhatsApp or Telegram, to enhance students' language skills and engagement. To develop writing skills, the faculty could assign group activities where students collaborate through chat, composing sentences or short paragraphs on a given topic. During speaking exercises, students could be asked to record and share voice messages, allowing the faculty to provide feedback on pronunciation and fluency. To improve listening

comprehension, the faculty could send short audio clips via chat, followed by comprehension questions for students to answer.

However, disparities were prominent about English teachers' technological innovative practices in Basilan, Province. Similar to the observations of Kalinga and Ndibalema <sup>[49]</sup>, the study found that younger teachers were more inclined to adopt advanced technological tools like immersive virtual platforms, while older teachers preferred more traditional methods such as social media. In addition, teachers with higher qualifications, such as a master's degree, were more likely to integrate a range of digital tools like smartphones, social media, and messaging platforms into their teaching practices, reflecting greater familiarity and confidence in using digital resources <sup>[51]</sup>. These results support the idea that both experience and educational background significantly influence how teachers engage with and implement technology in the classroom.

With effective use of technological tools, teachers can deliver personalized feedback, encourage collaborative learning, and promote critical thinking, enhancing their instructional capabilities. The ability to manage digital learning spaces, engage in real-time communication, and lead collaborative activities reflects a shift toward modern, adaptive teaching practices. This is particularly significant in Basilan HEIs, where digital literacy and technological proficiency are increasingly essential for both educators and students. Consequently, this means there is a need for integrating technology-focused professional development into teacher training curricula. Through workshops, seminars, and hands-on training, educators can build their instructional, communication, and classroom management skills in technology-enhanced environments. This ensures that teachers remain innovative, adaptable, and prepared to leverage technology for more effective and engaging language instruction.

## 7. Limitations

One limitation of the study was the reliance on total enumeration sampling, which may not have fully captured the diversity of technological innovative practices across different types of HEIs in Basilan, potentially limiting the generalizability of the findings to other regions or institutions with different contexts and resources. The study primarily focuses on self-reported data from teachers, which may be subject to biases such as social desirability or overestimation of their technological practices, thus affecting the accuracy of the findings. Another limitation is the cross-sectional nature of the study, which does not allow for the examination of long-term effects or changes in teachers' practices over time. Furthermore, the study did not explore the barriers teachers face in adopting innovative technologies, such as lack of infrastructure, technical support, or time constraints, which could provide a more comprehensive understanding

of the challenges involved. To address these limitations, future studies could employ a more diverse sampling method, such as stratified or random sampling, to enhance the representativeness of the data. Longitudinal studies should also be conducted to evaluate the sustained impact of technological innovations on student performance and learning outcomes. Lastly, exploring the specific barriers faced by teachers in adopting technology, along with assessing the effectiveness of targeted professional development programs, could provide valuable insights into improving technology integration in language teaching.

## 8. Conclusion

The findings of this study revealed positive innovative practices for English language learning in Basilan, Philippines, highlighting the effectiveness of integrating virtual reality, smartphones, social media, and messaging platforms into language instruction. The use of these tools could enhance student motivation, engagement, and language competencies, while improving teachers' instructional effectiveness by facilitating real-time communication, personalized feedback, and interactive learning experiences. Teachers who use smartphones and chat applications strengthened students' speaking, writing, listening, and reading skills through authentic language use and collaborative activities. Their use of social media and messaging platforms promoted participation, enriched classroom communication, and built inclusive and dynamic learning environments.

In addition, there was still a need for professional development and training for English teachers as disparity in their digital skills was prominent. There were age-related differences in the use of technological tools, with younger teachers being more inclined to adopt immersive platforms like Second Life, while middle-aged educators favored social media for language instruction. This suggests that age-specific training programs may be beneficial to address the varying technological competencies across generations. In addition, disparity in technology usage based on educational attainment indicated that teachers with advanced qualifications are more likely to integrate diverse and innovative tools, such as smartphones, social media, and chat applications, into their teaching practices. This may reflect their greater exposure to pedagogical advancements and higher confidence in using digital resources. These insights highlighted the importance of enhancing digital literacy and technological competence through ongoing skills development programs, ensuring that teachers—regardless of age or educational background—are equipped to effectively utilize emerging technologies in language instruction.

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## Institutional Review Board Statement

Ethical review and approval were waived for this study because it involved the collection of non-sensitive, anonymous data through a voluntary survey with adult participants.

## Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

## Data Availability Statement

The data is unavailable due to privacy concerns and ethical restrictions.

## Conflicts of Interest

The author declares no conflict of interest.

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