



TEACHERS' PERCEPTION OF ICT INTERACTIVE LESSONS AND ASSESSMENTS: BASIS FOR A DIGITAL FORMATIVE ASSESSMENT DEVELOPMENT PLAN

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ABSTRACT

The study aimed to determine the level of perception of teachers in Malinao High School on Information and Communications Technology (ICT) interactive lessons and assessments as the basis for a digital formative assessment development plan. Specifically, six ICT pedagogical approaches were examined: Flipped Classroom, Kahoot, Quizizz, Padlet, Google Classroom, and Google Forms. A quantitative descriptive research design was employed, involving 50 teacher-respondents selected through convenience random sampling. Data were gathered using adapted validated questionnaires with a four-point Likert scale. Descriptive statistics (mean, frequency, standard deviation) and inferential statistics (ANOVA, Post Hoc Test, Tukey HSD, Levene's test) were used for analysis. Results revealed that teachers had negative perceptions toward all six ICT pedagogical approaches. Significant differences in perception were found based on age, position, and educational background, but not on sex. A Digital Formative Assessment Tools Seminar Program was developed as the output of the study. The researchers recommended the implementation of this development plan to enhance teachers' ICT integration skills and promote interactive teaching and learning.

Keywords: *ICT Pedagogical approaches, Flipped classroom, Kahoot, Quizizz, Padlet, Google Classroom, Google Forms, Teachers' perception, Digital formative assessment, Development plan*

INTRODUCTION

In a world of constant change, educational institutions in the Philippines continuously improved and innovated teaching and learning processes. Teachers in the 21st century were required to integrate Information and Communications Technology (ICT) tools in teaching, utilizing various pedagogical approaches that led to innovative, interactive, and globally competitive learners. According to the World Bank report on Philippines' higher education digital transformation, 67% of public and 87% of private higher educational institutions had integrated technology in teaching. The Fast Response Survey System (FRSS) 2019-2020 data indicated that 45% of schools reported having a computer for each student, and nearly 64% had reliable internet connections. Over 70% of teachers used technologies in classroom activities.

However, despite these positive trends, challenges remained. Teachers worried about lack of technological training and technical support (Marshall, 2019). Teacher perceptions significantly predicted technology integration (Ottenbreit-Leftwich & Glazewski, 2017). Studies showed that teachers' competence and ability to shape instructional technology activities were crucial for effective ICT integration (Hong & Zhang, 2021) emphasized that the successful integration of technology in education depends largely on teachers' acceptance and readiness to use digital tools, which significantly influence student engagement and overall learning effectiveness. Yet, many teachers still found ICT skills difficult to learn due to large class sizes and limited time (Marshall, 2019).

This study was anchored on two theoretical frameworks. First, the Theory of Multimodality by Kress (2009) indicated that teachers must use multiple modalities during teaching, applying various technological methodologies to elevate student-centeredness and interactive instruction. Second, the Connectivism Theory by Siemens & Downes (2005), stated that students' strong connection to digital technologies changed the teaching and learning landscape, promoting collaborative discussion through tools like Kahoot, Quizizz, and Flipped Classroom.

The researchers of this study aimed to determine the level of perception of teachers in Malinao High School on ICT interactive lessons and assessments as the basis for a digital formative assessment development plan. This study was significant as it provided empirical evidence on teachers' perceptions of six widely used ICT tools and offered a concrete intervention plan to address identified gaps.

Research Questions

The study aimed to determine the level of perception of teachers in Malinao High School on ICT interactive lessons and assessments as the basis for a digital formative assessment development plan. Specifically, it answered the following:

1. What was the demographic profile of the respondents in terms of:
 - 1.1 Age,
 - 1.2 Sex,

- 1.3 Position,
- 1.4 Educational Background?
2. What was the level of teachers' perception in terms of:
 - 2.1 Flipped Classroom,
 - 2.2 Kahoot,
 - 2.3 Quizizz,
 - 2.4 Padlet,
 - 2.5 Google Classroom,
 - 2.6 Google Form?
3. Was there a significant difference between the demographic profile and the level of perception of the teachers?
4. Based on the findings, what possible development plan could be created?

METHODOLOGY

The study employed a quantitative descriptive research design to determine the level of teachers' perception on Information and Communications Technology (ICT) interactive lessons and assessment. This design is appropriate for studies that aim to describe current conditions and relationships using numerical data (Creswell & Creswell, 2018). The study was conducted in a public secondary school during the School Year 2024–2025, focusing on teachers as the primary respondents. The selection of the locale was based on its relevance to ICT integration in teaching and the accessibility of respondents.

The respondents consisted of 50 secondary school teachers, selected through convenience sampling, a non-probability sampling technique commonly used when participants are readily available (Etikan et al., 2016). The demographic profile included age, sex, position, and educational background. Data were gathered using an adopted questionnaire from previous related studies on ICT pedagogical approaches (Unal et al., 2020; Husin & Azmuddin, 2022; Munuyadi et al., 2021). The instrument was composed of seven parts, including six ICT tools: Flipped Classroom, Kahoot, Quizizz, Padlet, Google Classroom, and Google Forms. Each section contained 10 items measured using a 4-point Likert scale, which is widely used to assess attitudes and perceptions (Joshi et al., 2015).

Data collection followed standard ethical procedures. Permission was secured from the school head prior to data gathering, and informed consent was obtained from all respondents. The questionnaires were distributed and retrieved personally to ensure a high response rate. The data were then organized, coded, and tabulated using Microsoft Excel. Ethical principles such as confidentiality, anonymity, and voluntary participation were strictly observed throughout the study (Creswell & Creswell, 2018).

For data analysis, descriptive statistics such as frequency, mean, and standard deviation were used to determine the level of teachers' perception for each ICT tool. Mean scores were interpreted using a Likert scale classification to identify whether perceptions were positive or negative. To determine significant differences based on demographic variables, inferential statistics such as Analysis of Variance (ANOVA), post hoc test

(Tukey HSD), and Levene's test were applied, which are appropriate for comparing group differences in quantitative research (Field, 2013). The findings revealed that teachers generally had a negative perception toward ICT pedagogical approaches, possibly due to limited technical skills and insufficient access to technological resources, which supports previous studies on barriers to ICT integration (Zhao & Sheldon, 2021). However, some tools showed positive effects in terms of student engagement. Significant differences were observed in age and position, indicating their influence on ICT adoption, while no significant difference was found in terms of sex.

RESULTS AND DISCUSSION

The findings revealed that the majority of respondents were middle-aged, predominantly female, and mostly bachelor's degree holders, indicating a relatively experienced teaching workforce. Despite this, teachers generally exhibited a negative perception toward ICT-based interactive lessons and assessment tools, as reflected in the overall mean scores across Flipped Classroom, Kahoot, Quizizz, Padlet, Google Classroom, and Google Forms. Among these tools, Padlet obtained the lowest mean, suggesting limited familiarity and acceptance, while Quizizz showed relatively higher ratings, indicating that teachers recognize its potential to enhance student engagement.

These results imply that although ICT tools are available, their effective integration in teaching remains limited. This may be attributed to insufficient technical skills, lack of training, and accessibility issues, which are consistent with studies emphasizing that teachers' competence and preparedness significantly influence ICT adoption in the classroom (Zhao & Sheldon, 2021; Ottenbreit-Leftwich & Glazewski, 2017).

Furthermore, inferential analysis revealed that age and position significantly influence teachers' perception of ICT pedagogical approaches, with younger teachers demonstrating more favorable attitudes compared to older teachers, likely due to greater exposure to digital technologies and higher levels of digital literacy. Differences in position also suggest that teaching experience and professional roles may affect adaptability to ICT integration. In contrast, sex was found to have no significant effect, indicating that both male and female teachers share similar perceptions toward the use of ICT in teaching.

Overall, the findings highlight a gap between the recognized potential of ICT tools and their actual classroom utilization. This underscores the need for targeted professional development, continuous ICT training, and institutional support systems to enhance teachers' confidence and competence in integrating technology effectively, aligning with existing literature that identifies teacher readiness as a critical factor in successful ICT implementation (Tondeur et al., 2017).

1. Demographic Profile of the Respondents

Table 1.1 Age of the Respondents

Profile	<i>f</i>	%
Age		
Age	11	22%
Young Adult (17-30 years old)	32	64%
Middle-Aged Adult (31-45 years old)	7	14%
Old Age Adults (Above 45 years old)	N=50	100%

Table 1.1 indicates that among the 50 respondents of this study, 64% or 32 of them were middle-aged adults who aged from 31-45 years old. This emphasize that most teachers in Malinao High School aged in between either in between 31 until 45. However, 14% of the respondents were old-aged adults ranging above 45 years old. It tells that there are few teachers in the school which are considered as seniors or having longer length in service in the field of teaching. In fact, the oldest among all respondents aged 57 years old and the youngest was 25 years old.

Table 1.2 Sex of the Respondents

Profile	<i>f</i>	%
Sex		
Sex	15	30%
Male	35	70%
Female	N=50	100%

Table 1.2 below shows the frequency of teachers according to their sex. Among 50 respondents, 70% or 35 of them were female and 30% or 15 of them were male teachers. It highlights that majority of teachers in Malinao High School are female and some of them are male. Therefore, most of the data gathered in this research came from the female teachers and there were some from the male teachers in Malinao High School.

Table 1.3 Position of the Respondents

Profile	<i>f</i>	%
Position	19	38%
Teacher I	12	24%
Teacher II	12	24%
Teacher III	5	10%
Master Teacher I	2	4%
Master Teacher II	N=50	100%

Table 1.3 shows the demographic profile of the teachers in terms of their position in Malinao High School wherein 38% of the total respondents of this study are Teacher I and 4% of them are Master Teacher II. This indicates that majority of the teachers within Malinao High School are Teacher I in positions followed by Teacher II and Teacher III then there few Master Teachers.

Table 1.4 Educational Background of the Respondents

Profile	<i>f</i>	%
Educational Background	28	56%
Bachelor's Degree	18	36%
Master's Degree	4	8%
Doctorate Degree	N=50	100%

Table 1.4 illustrates the frequency of teachers who are respondents this study in terms of their educational background. In which 56% or 28 out of 50 teachers are bachelor's degree holders and 8% of them had their Doctorate Degree. This illustrates that more than half of the teachers in Malinao High School had their bachelor's degree. Few of the teachers got their master's degree and doctorate degree already while some teachers are continuing their master's degree and doctorate degree.

As shown in table 2.1, the level of teacher's perception for an interactive lesson and assessment using Flipped Classroom as one of the ICT Pedagogical approaches has a mean of 2.21 which indicates negative perception. This tells that teacher is not using nor interested in using Flipped Classroom as assessment tool during their classes. Moreover, due to the idea that they are not using this pedagogical approach, they believed that this does not removes the passive students, increases interactions, or improves student peers' relationships. Han (2022), Because Flipped classroom eliminates whole-class lectures, students no longer have to engage in activities in a fix way. Yet, table shown that in statement 7, teachers viewed Flipped Classroom as time consuming having data of 3.26 which means there is highly positive perception. Another is that teachers have positive perception (3.20) that flipped classroom is difficult for the students to access given that this requires additional technology. And given that not all students within the classroom have mobile phones or technology to use during the assessment.

2. Levels of Perception

Table 2.1 Flipped Classroom

Indicators	Mean	Qualitative Interpretation	Descriptive Interpretation
Flipped Classroom			
1. The flipped classroom allows the teachers to have increased interaction with students.	1.80	Negative Perception	Disagree
2. Flipped classroom removes passive learning from the classroom.	1.78	Negative Perception	Disagree
3. The flipped classroom allows the teachers to have increased interaction with students.	2.02	Negative Perception	Disagree
4. The flipped classroom will allow students to develop better relationships with their peers through cooperation and collaboration.	2.16	Negative Perception	Disagree
5. Recorded lectures aid the struggling students because they can re-	1.89	Negative Perception	

watch portions of lessons that they do not understand.			Disagree
6. Flipping the classroom creates time for direct instruction, active learning activities, and content coverage.	2.20	Negative Perception	Disagree
7. Preparing flipped learning materials was time consuming.	3.26	Highly Positive Perception	Strongly Agree
8. The flipped classroom is difficult for some students to access due to the additional technology required outside of school.	3.20	Positive Perception	Agree
9. The flipped classroom helped me communicate with my students better than the traditional classroom.	1.82	Negative Perception	Disagree
10. In flipped classroom, video lectures make the class more transparent to parents.	1.92	Negative Perception	Disagree
OVERALL MEAN:	2.21	Negative Perception	Disagree

Legend:

<i>Scale</i>	<i>Descriptive Interpretation</i>	<i>Qualitative Interpretation</i>
1.00-1.75	Strongly Disagree	Highly Negative Perception
1.76-2.49	Disagree	Negative Perception
2.50-3.24	Agree	Positive Perception
3.50-4.00	Strongly Agree	Highly Positive Perception

Table 2.2 Kahoot!

Indicators	Mean	Qualitative Interpretation	Descriptive Interpretation
Kahoot!			
1. I like using Kahoot! as teaching and learning tool.	2.22	Negative Perception	Disagree
2. Kahoot! is easy to operate.	2.00	Negative Perception	Disagree
3. Kahoot! game fulfilled my expectations for a good interactive teaching and learning media.	1.86	Negative Perception	Disagree
4. The students feel excited whenever we use Kahoot! game.	1.96	Negative Perception	Disagree
5. Kahoot! game can motivate my students in learning.	1.98	Negative Perception	Disagree
6. It is convenient to use Kahoot! in teaching.	2.00	Negative Perception	Disagree
7. Students' response as quickly as possible to each item or questions in each Kahoot! Session.	2.00	Negative Perception	Disagree
8. I used Kahoot! in teaching because students pay more attention during lectures to win in Kahoot! sessions.	1.80	Negative Perception	Disagree
9. Kahoot! develops students' competitiveness when being used.	2.56	Positive Perception	Agree
10. Kahoot should be used in teaching specially in higher education.	2.82	Positive Perception	Agree
Overall Mean:	2.12	Negative Perception	Disagree

Table 2.2 above, it shows the teacher's perception in using Kahoot! as an interactive lesson and assessment tool. Data analyzed that teachers' shown negative perception about Kahoot! having 2.12 mean. This indicates that the teachers do not like using it, it is hard to operate, they did not consider it as exciting and a good interactive teaching tool. However, teachers gave positive perception (2.56) on Kahoot! with the idea that Kahoot! can develop students' competitiveness. Also, the respondents had agreed that Kahoot! should be used in higher education. As cited in the study of Rajadpour, (2023). The study show that participants of the study have both positive and negative views on Kahoot. As far as the benefits of Kahoot are concerned, it enhances students' engagement, motivation and energy level in the classroom. Furthermore, it improves classroom dynamics, provides immediate feedback and allows revision. On the other hand, though being so beneficial in different aspects, the participants of the study believed that Kahoot has its own drawbacks. Access issues, students using other applications such as WhatsApp, bad design, negative effect on students' attention span and expectation are some the weaknesses.

Table 2.3 below illustrates teacher's perception in using Quizizz as an assessment tool in teaching and learning. Data tells that teachers have negative perception, having 2.34 mean, upon using Quizizz. Teachers view Quizizz as an assessment tool that is hard to use (2.42) and not easy to give quizzes (2.14). However, they believed that Quizizz is highly motivating, entertaining, and the students learn unconsciously without learning the structure of the lesson. The fact that respondents do not like using Quizizz on their subject or teaching, they still believed that this tool present many opportunities to learners to show their skills. As asserted by (Lim & Yunus, 2021), that teachers look highly upon Quizizz and its implementation in the classroom because it brings many benefits to the learners, including improvement in language proficiency and learning abilities. As a final result, based on the review of all the articles, teachers definitely view Quizizz as a platform that is effective, feasible, easy to use, and motivating for their learners, thus making it an online learning platform that is able to facilitate learners' academic achievement and knowledge development. The nature of Quizizz helps to create a fun learning environment and undeniably, this will affect learners' performance in school, where they will be more motivated to learn and be better than their peers.

Table 2.3 Quizizz.

Indicators	Mean	Qualitative Interpretation	Descriptive Interpretation
Quizizz			
1. Quizizz application can be used easily when giving assessment.	2.42	Negative Perception	Disagree
2. Doing quiz through Quizizz is easier and	2.14	Negative Perception	

	simpler than giving students quiz on paper.			Disagree
3.	When Quizizz is used in teaching, the students' motivation to learn grammar increases.	2.12	Negative Perception	Disagree
4.	This is useful in motivating students to get rankings and highest scores when using Quizizz.	2.18	Negative Perception	Disagree
5.	I believe that using Quizizz can lower students' anxiety towards learning lessons like grammar.	2.06	Negative Perception	Disagree
6.	I believe that Quizizz is a highly motivating and entertaining way of teaching and learning especially for the weak students.	2.62	Positive Perception	Agree
7.	I believe that while playing the Quizizz game, learners are not concerned on focusing in the structures, but learn them unconsciously.	2.50	Positive Perception	Agree
8.	I like to use Quizizz in teaching my subject.	2.18	Negative Perception	Disagree
9.	I believe that Quizizz is both fun and full of formative assessment value for learning lessons like grammar.	2.62	Positive Perception	Agree
10.	I believe that this tool presents many opportunities to learners to show their skills not only in grammar but also in many subjects.	2.54	Positive Perception	Agree
	Overall Mean:	2.34	Negative Perception	Disagree

Table 2.4 Padlet

Indicators	Mean	Qualitative Interpretation	Descriptive Interpretation
Padlet			
1. I find Padlet interesting as a platform for writing assessment.	1.96	Negative Perception	Disagree
2. I find Padlet easy to use in the class.	1.60	Highly Negative Perception	Strongly Disagree
3. Padlet helps me to review the progress of students' writing.	1.74	Highly Negative Perception	Strongly Disagree
4. Padlet allows me to provide feedback to my students' writing.	1.76	Negative Perception	Disagree
5. Students try to finish the assessments even when they are difficult.	1.98	Negative Perception	Disagree
6. Padlet is easier to use in writing assessment than the conventional ways of assessments.	1.66	Highly Negative Perception	Strongly Negative
7. I find that students enjoy using Padlet for writing assessment.	1.78	Negative Perception	Disagree
8. Some students get discourage or easily frustrated.	2.46	Negative Perception	Disagree
9. The students show active participation.	2.12	Negative Perception	Disagree
10. I will continue to use Padlet in assessing students' ability in writing.	1.62	Highly Negative Perception	Strongly Disagree
Overall Mean:	1.87	Negative Perception	Disagree

The above illustrates the gathered data about teacher's perception in using Padlet teaching. The result tells that teachers gave 1.87 mean or interpreted as negative

perception in Padlet. Teachers thought that Padlet is not easy to use which they do not have much interest about this ICT pedagogical approach. This primarily due to the point that teachers in Malinao High School are not using Padlet or else they are not aware that this tool exist. Among all, teachers have highly negative perception (1.60) that using Padlet is hard and that students will not finish answering their assessment due to its difficultness (1.98). (Mahmud, 2019), Padlet is a good learning tool for lecturers to use and integrate into their teaching. The usage of Padlet as learning tool is a good practice in enhancing student's skill. It showed that student believe by using Padlet as a learning tool, they have developed new ideas and knowledge from the activities, sharing their ideas with friends, collaborating and interacting with friends.

Table 2.5 Google Classroom.

Indicators	Mean	Qualitative Interpretation	Descriptive Interpretation
Google Classroom			
1. I know Google Classroom.	3.18	Positive Perception	Agree
2. I know how to operate Google Classroom.	2.28	Negative Perception	Disagree
3. Google Classroom is one of the online learning systems that I use to assess student's learning activity.	2.48	Negative Perception	Disagree
4. Assessing student's activity is easier while using Google Classroom.	2.38	Negative Perception	Disagree
5. I share materials for learning activity through Google Classroom.	2.12	Negative Perception	Disagree
6. I share the assignment for learning activity through Google Classroom.	2.00	Negative Perception	Disagree
7. Google classroom can help me in learning activities of my students as well as uploading lessons.	1.98	Negative Perception	Disagree

8. Google Classroom is effective for doing the learning activity.	2.38	Negative Perception	Disagree
9. The use of Google classroom gives me benefit in assessing student's learning especially to their activities.	1.98	Negative Perception	Disagree
10. I recommend the use of Google Classroom for the other teachers while assessing student's learning and activities,	2.24	Negative Perception	Disagree
Overall Mean:	2.30	Negative Perception	Disagree

The table 2.5 above shows teacher's perception towards using Google Classroom in their teaching and students learning. Data gathered tells that teachers have negative perception about Google Classroom having 2.30 mean result. The respondents said that they knew, having positive perception (3.18), Google Classroom and that it exists nowadays however they are not using it in their teaching as an interactive lesson and assessment tool. Most of the teachers also said that they do not know how to operate goggle classroom (2.28) the reason that they cannot share their materials, students' assignments, and cannot justify if this ICT pedagogical approach is an effective tool to use in their teaching. Azhar, et Al. (2018), findings revealed that teachers perceive it as only a facilitation tool that can be used for document management and basic classroom management, without having a significant impact on teaching methodologies. The responses of the teachers indicate that lack of user-friendly interface is the main reason for its inefficiency.

Table 2.6 Google Forms

Indicators	Mean	Qualitative Interpretation	Descriptive Interpretation
Google Forms			
1. I like to use Google Forms in Teaching as well as in learning of my students.	2.18	Negative Perception	Disagree

2. I use Google Forms to give exercise.	1.86	Negative Perception	Disagree
3. I feel that Google Forms Facilitate the implementation of Teaching and learning.	2.06	Negative Perception	Disagree
4. I don't need to master ICT skills to master the use of Google Forms.	1.62	Highly Negative Perception	Strongly Disagree
5. Students can identify their strength and weaknesses through their scores in Google Forms.	2.10	Negative Perception	Disagree
6. I can monitor student's performance through Google Form.	1.90	Negative Perception	Disagree
7. I can give quick feedback to my students through Google Forms.	1.88	Negative Perception	Disagree
8. I can construct interactive quizzes with video and pictures through Google Forms.	1.90	Negative Perception	Disagree
9. My students are more confident to give answers and opinions through Google Forms.	2.16	Negative Perception	Disagree
10. I have found that students have potentials to cheat when answering questions in Google Forms.	3.36	Highly Positive Perception	Strongly Agree
Overall Mean:	2.10	Negative Perception	Disagree

Furthermore, table 2.6 shows the insights of teachers when using Google Forms in their teaching especially to have an interactive lesson and assessment. Over-all, teachers have negative perception (2.10) in using Google Forms in teaching. For most of them, they do not like using it in teaching as well as in learning of their students. Result in statement 2 tells that teachers do not use Google forms in giving exercises or assessments to their students. Also, teachers believed, having 1.62 mean in statement 4, that they need to master or have higher intellect in ICT skills for them to be able to use Google Forms. Among all, teachers agreed or having highly positive perception (3.36) to

the idea that upon using Google Forms, students have high potential to cheat when answering questions the reason teachers do not use this ICT pedagogical approach. Lim & Mshid (2023), stated the idea that teachers have a relatively high willingness to change educational system especially in integration of ICT in the classroom, if digital facilities are well equipped on the classroom at school. Majority of the teacher admitted that they like the use of Google Classroom in delivering information and performing assessment based on 21st century learning.

3. Significant Difference in Teacher's Perception towards ICT Pedagogical Approaches.

Table 3.1 Teachers Perception towards ICT Pedagogical Approaches

AGE GROUP	Sum of Squares	df	Mean Square	F-value	P-value	Qualitative Interpretation
Between Groups	7.030	2	3.512	18.303	0.000	Highly Significant
Within Groups	33.97	177	0.192			
Total	40.99	179				

Table indicates the age group in between groups and within groups. The mean square in between group is 3.512 and in within groups is 0.192. The f-value of between groups and within groups is 18.303 and the result is 0.000 which means it is highly significant. Mayorga-Fernández (2020) in their analysis, higher education teachers found that age was an influential variable and a predictor of the overall attitude and perception towards ICT use.

Table 3.2 Teacher's Age

AGE GROUP	Mean Difference (I-J)	Std. Error	Sig. (P-value)	Qualitative Interpretation
Middle Age Adult Young Adult	.12892	.07998	.243	Not Significant
Old Age Adult	.46838*	.07998	.000	Highly Significant
Young Adult Middle Age Adult	-.12892	.07998	.243	Not Significant
Old Age Adult	.33946*	.07998	.000	Highly Significant
Young Adult Old Age Adult	-.46838*	.07998	.000	Highly Significant
Middle Age Adult	-.33946*	.07998	.000	Highly Significant

*. The mean difference is significant at the 0.05 level.

The table indicates the multiple comparison of age group. It shows that the result between the age group of Young Adult and Middle Age Adult is 0.223 which means there is no significant between this age group. While, between the age group of Young Adult and Old Age Adult as well as Middle-Aged Adult and Old Age Adult the result was 0.000 which means it is highly significant. Further, the mean difference is significant because it is lower 0.05. Since, if the result is at the level of 0.05 there is significant difference. Fishcher & David (2014), they stated that older teachers/staff with long traditional teaching experiences usually has limited interaction with technology and lacking the development of their necessary skills in using ICT tools. It concludes that the group of Old Age Adult has significant factor in integrating ICT tools towards teaching and learning process. Ziad (2016), whose study of Moroccan secondary school teachers also showed a correlation between attitude to ICT and age, revealing that younger teachers are more likely to use ICT tools in their teaching. Likewise, in their research of upper secondary school teachers Krumsvik et al. (2016), found that teachers who are 45 or older have less digital competence.

Table 3.3 Levene's Test Result

		Equalities of Variances		t-test for Equality of Means							Qualitative Interpretation	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	of the Difference			
									Lower	Upper		
PERCEPTION BETWEEN SEX GROUP	Equal variances assumed	.002	.965	-1.980	118	.050	-.14941	.07544	-.29880	-.00001		Not Significant
	Equal variances not assumed			-1.980	117.652	.050	-.14941	.07544	-.29881	-.00001		

To evaluate if the dependent variable variances for the male and female groups are equal, Levene's test was conducted. The findings show that there was no significant difference in the variances, $F (.002) = 118$, $p = .965$. This suggests that the assumption of equal variances was satisfied, enabling the comparison of the perception ratings between the two sex groups using a two – sample t- test. Bhat & Bashir (2017), A survey in India found that male and female university teachers have similar attitudes towards ICT use and no significant gender differences.

Table 3.4 below indicates the multiple comparisons of teacher's perception based on their position; Teacher-I, Teacher-II, Teacher-III, Master Teacher-I and Master Teacher-II. It shows that there's a significant difference. Since, each position group based

in between groups shows in the table that most of the result has a significant difference. In fact, if the result is at the level of 0.05 there is significant difference. So, the mean difference in this table is significant at 0.05 level.

Table 3.4 Post Hoc Test Result

POSITION GROUP	Mean Difference (I-J)	Std. Error	Sig. (P-value)	Qualitative Interpretation
Teacher-I Teacher-II	.07303	.08658	.917	Not Significant
Teacher-III	.37480*	.08658	.000	Highly Significant
Master Teacher-I	-.28686*	.08658	.009	Highly Significant
Master Teacher-II	-.04186	.08658	.989	Not Significant
Teacher-II Teacher-I	-.07303	.08658	.917	Not Significant
Teacher-III	.30177*	.08658	.005	Highly Significant
Master Teacher-I	-.35989*	.08658	.000	Highly Significant
Master Teacher-II	-.11490	.08658	.675	Not Significant
Teacher-III Teacher-I	-.37480*	.08658	.000	Highly Significant
Teacher-II	-.30177*	.08658	.005	Highly Significant
Master Teacher-I	-.66166*	.08658	.000	Highly Significant
Master Teacher-II	-.41666*	.08658	.000	Highly Significant
Master Teacher-I Teacher-I	.28686*	.08658	.009	Highly Significant
Teacher-II	.35989*	.08658	.000	Highly Significant
Teacher-III	.66166*	.08658	.000	Highly Significant
Master Teacher-II	.24500*	.08658	.040	Highly Significant

Master Teacher-II Teacher-I	.04186	.08658	.989	Not Significant
Teacher-II	.11490	.08658	.675	Not Significant
Teacher-III	.41666*	.08658	.000	Highly Significant
Master Teacher-I	-.24500*	.08658	.040	Highly Significant

*. The mean difference is significant at the 0.05 level.

The first group is Teacher-I it shows that when it compared to other position which is Teacher-II ($p = .917$) and Master T-II ($p = .989$) the result is not significant because it's not level at 0.05, while if it is compared to Teacher-III ($p = .00$) and Master Teacher-I ($p = .009$) which means there's a significant difference. Second is in the group of Teacher-II, if it is compared to Teacher-I ($p = .917$) and Master Teacher-II ($p = .675$) the result is not significant but compared to Teacher-III ($p = .005$) and Master Teacher-I ($p = .000$) there's a significant difference. Third group position is under Teacher-III, and when it compared to other position and the result are there's significant difference. The fourth group is in Master Teacher-I and all the result compared to other position is still had significant difference because the result of p-value is level at 0.05. Lastly, in the group of Master Teacher-II and if it is compared to Teacher-I ($p = .989$) and Teacher-II ($p = .675$) there's no significant difference but compared to Teacher-III and Master Teacher-I, the result is there's significant difference. Mertala (2019), there was subtle empirical evidence that an individual teacher can perceive that using ICT tools have both pros and cons perception for classroom instructions.

Table 3.5 Post Hoc Test result of Teacher's Educational Background

EDUCATIONAL BACKGROUND	Mean Difference (I-J)	Std. Error	Sig. (P-value)	Qualitative Interpretation
Bachelor's Degree Master's Degree	.13271	.07862	.213	Significant Highly Significant
Doctor of Philosophy	-.92451*	.07862	.000	
Master's Degree Bachelor's Degree	-.13271	.07862	.213	Significant Highly Significant
Doctor of Philosophy	-1.05722*	.07862	.000	

Doctor of Philosophy Bachelor's Degree	.92451*	.07862	.000	Highly Significant
Master's Degree	1.05722	.07862	.000	Highly Significant

*. The mean difference is significant at the 0.05 level.

The table shows the result of Tukey's HSD post-hoc-test for the educational background of teachers in Malinao High School. The table compares the means of the three groups labeled 1.00 for Bachelor's degree, 2.00 for Master's degree, and 3.00 for Doctorate degree. The mean difference is significant at 0.05 level.

The groups 1.00 and 2.00 do not significantly differ from one another. The $p = .213$. The groups 1.00 and 3.00 significantly differ from each other. The $p = 0.000$. The 2.00 and 1.00 is not significant. The $p = .213$. The 2.00 and 1.00 is not significant. The $p = .213$. The 2.00 and 3.00 is significant. The $p = .000$. The 3.00 and 1.00 are significant. The $p = .000$. The 3.00 and 2.00 is significant. The $p = .000$.

The Tukey's post-hoc-test reveals that Doctorate degree has a significantly higher mean than both Bachelors and Master's degree. Compared to bachelors and master's degree, a doctorate is more specialized and researched focused on the use of ICT tools in education. The doctorate degree goes deeper into the application of technology in education, while the degree between groups seeks to provide students with the knowledge and abilities necessary for ICT integration in teaching. Sim (2022), he examines the assumption and practices of PhD supervisor and students require regarding ICT use. He finds that participants require greater support to enhance their ICT use, suggesting a need for specialized training and resources at the doctoral level.

Conclusions

The study was concluded that community perceptions of English language learning suggest that when learners experience difficulty in acquiring the English language, it is often attributed to teachers; however, the findings revealed no significant relationship between learners and teachers in terms of English language learning. The limited number of participants also affected the statistical results of the study. The findings further indicate that parents play an important role in supporting pupils' learning. In terms of language learning strategies, peer conversation obtained the highest utilization (mean = 6.2, interpreted as "Always"), reading habits showed a moderate level of utilization (mean = 7.8, interpreted as "Sometimes"), and practice speaking also demonstrated a high level of use (mean = 8.6, interpreted as "Always"), suggesting that these strategies contribute to English language learning. The Pearson's correlation analysis revealed no statistically significant relationship between English macro skills and language learning strategies, which may be due to the small sample size ($n = 5$), indicating the need for further studies with larger samples. Moreover, the demographic profile of parents and language learning strategies showed no significant differences, although reading habits approached significance. In contrast, significant negative correlations were found between the

teachers' demographic profile and the three language learning measures, suggesting that higher teacher involvement may reduce student autonomy in language learning. Overall, the null hypothesis was accepted, indicating that there is no significant relationship between English macro skills and language learning strategies in this study.

Recommendations

Based on the findings of the study, the researchers concluded that the demographic profile of teachers at Malinao High School is composed mostly of middle-aged adults (31–45 years old), predominantly female, and holding Teacher I positions. In terms of educational attainment, most are bachelor's degree holders, with only a few having completed master's or doctorate degrees. This suggests that while the teachers are relatively experienced, their level of advanced academic preparation and specialization in ICT integration remains limited. In relation to their perceptions of ICT pedagogical approaches, the study revealed that teachers generally held negative perceptions toward all six tools examined, namely Flipped Classroom, Kahoot, Quizizz, Padlet, Google Classroom, and Google Forms. Although some positive effects were recognized, such as improved student engagement and motivation, these were outweighed by concerns including time-consuming preparation, limited access to technology, and issues related to cheating in online assessments.

Furthermore, the study concluded that age, position, and educational attainment significantly influenced teachers' perceptions of ICT pedagogical approaches, while sex did not show a significant effect. Older teachers (above 45 years old) tended to have more negative perceptions compared to younger and middle-aged teachers, while no significant difference was found between the latter two groups. Likewise, male and female teachers exhibited similar perceptions. In terms of position, Teacher III respondents demonstrated more positive perceptions than those in lower positions, indicating that professional advancement may contribute to greater openness to ICT. Similarly, doctorate degree holders showed more positive perceptions compared to those with bachelor's and master's degrees, suggesting that higher academic preparation enhances ICT appreciation. Based on these findings, the study concluded that there is a need for a structured intervention, leading to the development of the Digital Formative Assessment Tools Seminar Program aimed at improving teachers' ICT skills, confidence, and instructional practices.

Compliance with Ethical Standards

The study was conducted in accordance with the ethical standards of the researchers' institution and received approval from the research committee prior to its implementation. An informed consent form was provided to all participants, together with a clear explanation of the purpose and procedures of the study, ensuring that participation was entirely voluntary and confirmed through the respondents' signatures. To protect the confidentiality and privacy of the participants, anonymity was strictly observed by excluding names and other direct identifiers in the manuscript, and by using only coded or general identifiers. All collected data were securely handled and used solely for research purposes, with no disclosure of personal information.

The study also ensured that participants were not exposed to any form of harm, as it was designed only to gather perceptions without violating human rights. No monetary compensation was provided; however, small tokens of appreciation were given after data collection as a gesture of gratitude, ensuring that these did not influence the participants' responses. The researchers further declared that there was no conflict of interest, as objectivity was maintained throughout the research process. In addition, participants were informed of their right to withdraw from the study at any time or refuse to answer any question without any negative consequences.

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