



# TECHNOLOGICAL GENERATION GAP: EXPLORING THE PERCEPTIONS OF LEARNERS TOWARDS THE USE OF DIGITAL PLATFORM IN TEACHING

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## ABSTRACT

*I found that Technologically Generation Gap is one of the recurring challenges between teachers and students worldwide. This study explores how students feel about teachers who struggle with using technology during lessons. It uses a descriptive qualitative approach, gathering data through in-depth interviews with 10 Grade 12 students and focus group discussions with another 10 Grade 12 students from City of Mati National High School. The data were analyzed using thematic analysis.*

*Findings show that students value technology for making learning more engaging. Under the theme "Technology-Driven Learning Engagement," four sub-themes emerged: classroom use, teacher qualifications, learner characteristics, flexibility and adaptability to digital education. Technology use also supports collaborative efforts, project-based assignments, and Non- academic Focus (off-campus learning).*

*I strongly recommend that teachers who struggle with technology start using it more in group activities and hands-on learning. This can help students stay engaged, learn better, and grow in all areas.*

**KEYWORDS:** *Technological Generation Gap exploring the perceptions of learners towards the use of digital platform in teaching*

## INTRODUCTION

The Technological Generation Gap, a recurring challenge between teachers and students worldwide (Lisenbee, 2016), has been widely studied (Presto et al., 2023; Josephine & Jones, 2022; Woods et al., 2021; James, 2024; Hendryx, 2008; Romanes & Viniegas, 2018; Barnes et al., 2023; Espinosa et al., 2023), with studies highlighting its impact on the classroom and teachers' ability to adapt to dynamic learning environments, and this study aims to explore learners' perspectives on their technologically lagging teachers in a public school in Mindanao.

## SIGNIFICANCE OF THE STUDY

This study aims to address the Technological Generation Gap by providing valuable insights to school administrators for curriculum improvement through policy-making and training, offering school faculty both warnings and solutions regarding the gap in their classrooms, and serving as a benchmark and inspiration for future researchers exploring education, classroom-based learning, and educational improvements.

## STATEMENT OF THE PROBLEM

**General Objective:** This study aims to explore the views of learners having technologically lag teachers in the delivery of lessons.

## Research Questions

1. What are the views of learners having technologically lag teachers in the delivery of lessons?

2. What are the insights of learners with technologically lag teachers in the classroom setting?

## Assumptions

This study which examines the perspectives of learners to their technologically lag teachers assumes that:

1. The learners struggle to comprehend the lessons delivered by their technologically lag teachers.
2. The learners easily comprehend the lessons delivered by their technologically lag teachers.
3. The learners deemed their technologically lag teachers ineffective in delivering a classroom-based learning.
4. The learners deemed their technologically lag teachers effective in delivering a classroom-based learning.

## Theoretical Lens

This study will be anchored in the Engagement Theory of Greg Kearsley and Ben Shneiderman (1998), which posits that students must be meaningfully engaged in learning through interaction with others and worthwhile tasks, with technology facilitating such engagement in ways that traditional learning approaches cannot.

This study anchored on Engagement Theory (Kearsley and Shneiderman, 1998). The theory posits three primary means to accomplish engagement: (1) an emphasis on collaborative efforts, (2) project-based assignments, and (3) non-academic focus (Kearsley and Shneiderman, 1998).

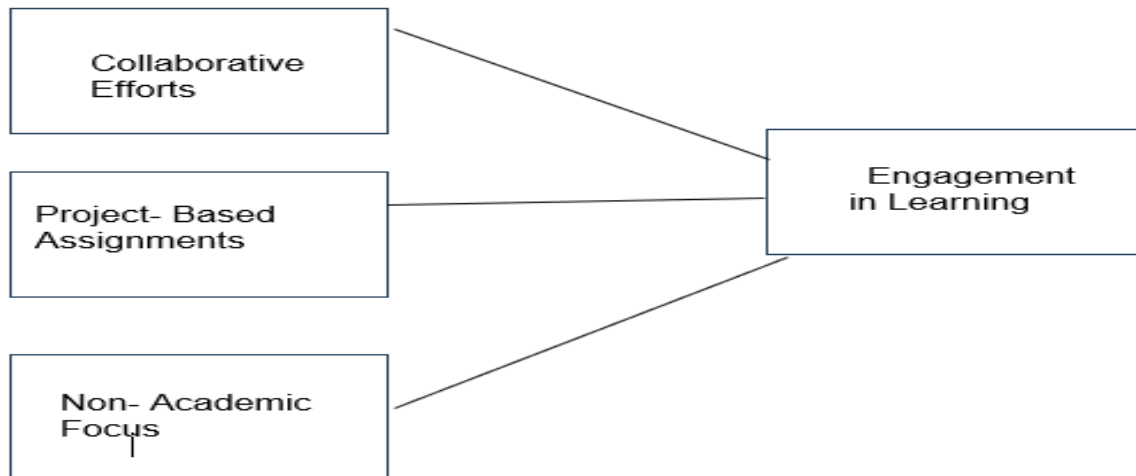


Figure 1. Illustration of the Premises of Kearsley and Shneiderman's Engagement Theory

## MATERIALS AND METHODS

The study utilized a descriptive qualitative approach to explore the experiences of Grade 12 students at City of Mati National High School in Davao Oriental. This method, as defined by Doyle et al. (2020), offers broad insights into specific phenomena by acknowledging participants' subjective perspectives. The research was conducted at a prominent senior high school in Dahican, Mati City, known for its diverse student body and comprehensive K–12 curriculum. Twenty students were selected through purposive sampling, a technique effective for studying specific cultural domains with knowledgeable participants. Data collection involved in-depth interviews and focus group discussions, guided by semi-structured, open-ended questionnaires. Thematic analysis was employed to interpret the transcribed data, identifying patterns and themes relevant to the research questions.

### *Ethical Considerations*

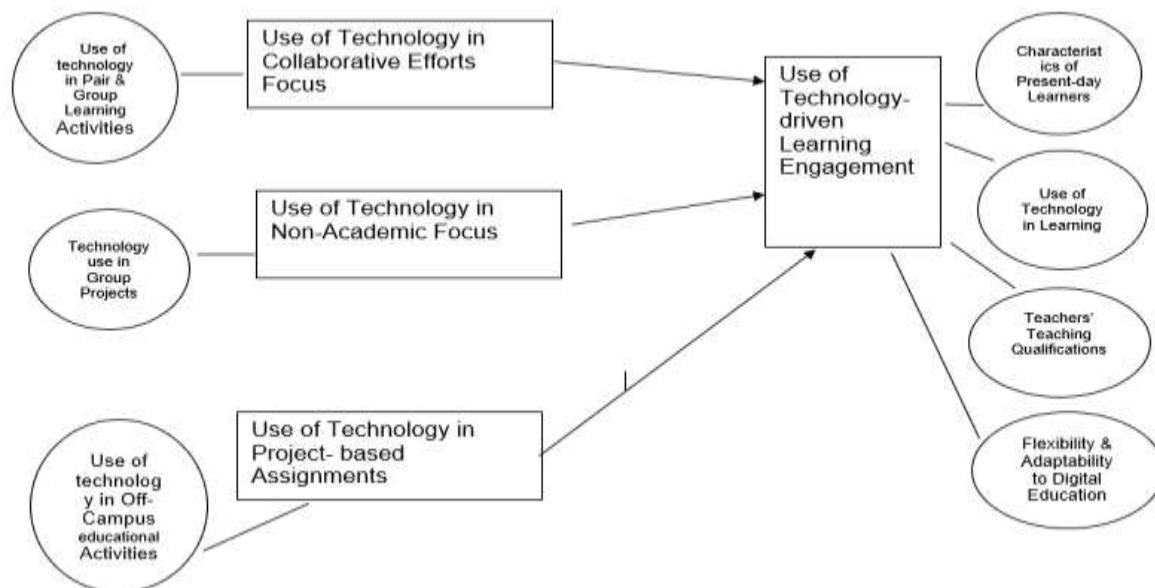
To ensure ethical standards and trustworthiness in qualitative research, the study obtained informed consent from purposively selected participants—secured with the school principal's approval—by informing them of the study's purpose, procedures, and voluntary nature, with interviews (approximately 30 minutes) and focus group discussions (1 hour and 30 minutes) designed to

explore their perspectives on technologically lagging teachers in classroom instruction.

To ensure trustworthiness in this qualitative study, the researcher adhered to the Data Privacy Act of 2012 by assigning code names to participants and maintaining strict confidentiality of all collected data. Participants were informed of their rights, including the voluntary nature of their involvement and their ability to withdraw at any time. Furthermore, the study emphasized credibility, transferability, dependability, and confirmability by validating research instruments, providing detailed contextual descriptions, documenting the research process meticulously, and maintaining objectivity throughout the analysis.

## RESULTS

The modified paradigm below presents the primary means to accomplish engagement based on the Engagement Theory of Kersley and Schneiderman. These primary means are: (1) an emphasis on collaborative efforts, (2) project-based assignments, and (3) non-academic focus. Furthermore, the theory posits that the role of technology facilitates all aspects of engagement. It provides an electronic learning environment that fosters the kind of creativity and communication needed to nourish engagement.



**Figure 2. Illustration of the Modified Paradigm**

### Use of Technology in Collaborative efforts

The use of technology in pair and group learning activities enables students to collaborate more easily—whether in the same location or remotely—by using tools like Microsoft Teams, Zoom, Google Docs, or Messenger to work on shared documents, communicate in real time, divide tasks, and stay connected, making group projects more structured, inclusive, and efficient. Use of technology in Pair and Group Learning Activities

### Technology use in Pair and Group Learning Activities

By-pair and group activities enable the learners to see the strength and weaknesses of their thoughts and ideas. Significantly, by-pair and group activities are essential in developing their bond as students, thus creates teamwork. One of the participants of the study noted:

*Naa mi activity sa una Ms., kanang magshare gud og insight sa imong partner. Gi-grupo mi adto by 2 dayon naay question and among dayong i-share among idea sa among partner dayon pagkahuman sa klase... ganahan ko adto nga activity Ms. kay magparticipate jud tanan estudyante dayon dili pud kaayo ulaw. (We had a by-pair activity before Ms., insight-sharing in pair. We were group by two (2) and we were asked to answer a question and share it to our partner and classmates... I like that activity Ms. because all the students can participate and it boost our confidence.)* IDI, P6.

From what I heard in their feedback, I felt really happy because they appreciated the lessons I gave them. There's no greater joy than knowing they learned something and enjoyed the way I taught.

It helped build confidence and made students more active in class. As a teacher, I think it was a good way to help students express themselves without feeling too shy. Another respondent of the study shared:

*Sa akong ma-alala Ms. kay nag debate and role-play mi adto da una. Usually mahilig jud magpain-ana nga activity and teachers Ms. Pero, ganahan rapud mi kay dili mi maboring ba and mas maila pa namo ang among classmates. Dayon, diha pud namo ma-enhance ang among pagkacreative. (As far as I can remember Ms., we had a debate and role-playing activity before. Actually, I like those type of activities because it helps us to know our classmates better and it helps us to enhance our creative skills.)* FGD, P4.

As a teacher of this student, I believe that activities like debates and role-playing make lessons more engaging and livelier, helping students become more active, confident, creative, and better at communicating and building relationships, while also promoting growth beyond academic learning.

*Ang isa sa mga collaborative nga activity nga gipahimo sa amo among teachers before Ms. kay kanang quiz bee. Malingaw mi ana Ms. kay daghan mi maghelp og study and answer sa question, mas dako dayon among kuha. (One of the collaborative activities that our teachers used to give us is quiz bee. It is a fun activity because we help each other in answering the questions which usually result to a better score.)* FGD, P7.

Hearing the learners' appreciation for activities like insight sharing, role-playing, quiz bees, and debates, which foster collaboration and enhance analytical, intellectual, creative, and collaborative skills, made me feel fulfilled as a teacher who struggles with technology, knowing that despite my limitations, technology and textbooks still significantly aid students in gathering materials for these activities.

### Use of Technology in Project-Based Assignments

Project-based assignments are considered essential by the study participants for developing both academic and non-academic



skills, as they encourage insight sharing, constructive feedback, and the development of leadership, cooperation, and accountability, while technology—such as laptops, phones, and apps like Google Docs, Canva, and PowerPoint—plays a crucial role in making these assignments more efficient, allowing students to research, create presentations, and collaborate seamlessly, even when not physically together.

### **Technology use in Group Projects**

The participants of the study observed that the group projects that their technology lag teachers usually given to them are research projects, film-making, and dance and singing group performances. Participants of the study shared:

*Ang mga group projects nga gihatag sa among teacher sa amo-a before Ms. kay research gyud. Dako and lisod siya nga activity Ms. dayon kailangan magtinabanga gyud ang group members kay daghan gyud kailangan buhaton. Pero, maayo pud siya nga activity Ms. kay maenhance among critical thinking, reading and comprehension, Ms. Dako pud og tabang ang internet sa amo Ms. kay dali rami makaresearch, especially og RRL. (One of the group projects that our teachers require us before Ms. is research paper. It was a big and challenging project Ms., however it helps us to develop our collaborative skills, critical thinking, reading and comprehension. Also, the internet greatly helps us Ms. in doing research paper, especially in searching for RRLs.) IDI, P5.*

I was amazed to hear one participant's reaction. Research projects are difficult but worthwhile assignments that foster students' ability to think critically, comprehend what they read, and collaborate with others. Students can now readily obtain information thanks to the internet, which makes the research process easier, particularly when reviewing related literature.

*Sa akong ma remember Ms. kay nag film-making and sing and dance presentations mi sa una. Filipino man ata to nga subject about Noli Me Tangere and sa Arts pud namo Ms. Kapoy gyud to siya nga project Ms. kay di man gud mo-participate ang ubang members ato pero, isa to siya sa memorable namo nga project, Ms. kay dugay kaayo mi makauli ato, usahay magovernight najud... gamit kaayo namo ang technology ato Ms., especially mga tutorial and videos sa YouTube. (As far as I can remember Ms., we had a film-making project and sing and dance presentation before. Those were difficult projects because not everybody willingly participated on those projects. However, it was one of my memorable experiences because we got to know our classmates better... technology help us a lot in making that project Ms., especially YouTube.) IDI, P3.*

While project-based assignments develop students' analytical, creative, and collaborative skills, with technology enhancing their work through tools for research, video editing, and sharing, participants noted that devices like phones, laptops, and social

media are essential for browsing related materials, fostering responsibility, patience, confidence, and creativity.

### **Use of Technology in Non-Academic Focus**

Aside from classroom-based learning, participants of the study shared that their technology lag teachers also give them activities that are conducted outside the classroom and off-campus. For the participants, the said type of learning activities is instrumental in building different perspectives and in fostering societal responsibility.

### **Use of technology in Off-campus Educational Activities**

The participants of the study remembered that the typical off-campus activity that their school and or teachers give to them are fieldtrips and clean-up drive activities. One of the participants expressed:

*Ang extracurricular nga activity nga akong maremember Ms. is kadtong nag fieldtrip mi sa usa ka museum. Lingaw gyud basta fieldtrip Ms. kay para dili pud pirmi nalang sa classroom ang klase, makatoon pud mi sa uban by seeing gyud and makabond pa together sa among classmates. (One of the extracurricular activities that I can remember Ms. is a museum fieldtrip. It was a fun experience because I got to learn things outside our usual classroom and I got to know our classmates better.) IDI, P6.*

As I heard his sentiment, I see how technology can enhance field trips, like the one to the museum. They can use their phones or tablets to take photos, record videos, and even access online information about exhibits, making the learning experience more interactive. After the trip, they can use apps to share their discoveries, collaborate on projects, or even create presentations, helping them connect what they learned outside the classroom. One of the participants also stated:

*In my case Ms, we had a clean-up drive before. It was actually a coastal clean-up drive. We picked and sweep the garbage near the seashore. For me, it was a new and fulfilling experience because we got to help our community and it made us realize that learning is not limited in the classroom. FGD, P10*

Off-campus activities like field trips and clean-up drives, though concerning for teachers due to safety, are essential for helping students develop collaboration, intellectual skills, societal awareness, and responsibility, as field trips broaden their knowledge through firsthand experiences, while clean-up drives engage them with community issues, fostering teamwork and a sense of responsibility.

### **Use of Technology-driven Learning Engagement**

As shown in the statements from the participants presented above, it is evident that technology is essential in fostering engagement in learning, especially in designing learning activities. In relation the result of the study shows that in achieving engagement in a classroom using technology there are several areas that have to be considered such as: learners' characteristics, use of technology in



learning, teachers' teaching qualifications, and teachers' flexibility and adaptability to digital education.

### Characteristics of Present-day Learners

In the context of classroom learning, participants revealed that they spend most of their time on social media platforms like Facebook, TikTok, Instagram, and Twitter, and prefer teachers who use technology such as laptops, TVs, and projectors during discussions, believing that videos, pictures, and graphics make it easier to digest the lesson.

*As a student, I might feel uninterested, especially since I'm part of the digital innate generation. FGD, P6.*

As their teacher, I understand that students, especially those from the digital world, might feel uninterested in traditional classroom activities. It's important for me to adapt and find ways to integrate technology in a way that keeps them engaged and makes learning more relatable. Another participant of the study corroborated the above statement:

*I believe that students lack interactions or engagement inside the class, given that most students usually rely on technology. FGD, P7.*

I believe that students often lack meaningful interactions in class because they tend to rely too much on technology. While technology offers convenience, it can sometimes reduce face-to-face engagement and hinder deeper connections between students and teachers

*I may feel that I am missing out on interactive and impressive learning experiences. FGD, P8.*

Digital natives, having grown up immersed in technology, often prefer tech-integrated learning environments, finding them more engaging and aligned with their daily experiences. Educators who rely solely on traditional methods may face challenges in connecting with these students, potentially leading to disengagement. This generational shift necessitates that teachers adapt their instructional strategies to incorporate digital tools, ensuring they meet the evolving learning preferences of today's students. Embracing technology in education not only enhances student engagement but also prepares them for a future where digital literacy is paramount.

Another notable characteristic of the present-day learners are visual learning and a short attention span. This sentiment is evident in the statement given by the participant of the study:

*For me, the teachers who do not use gadgets in the delivery of lessons lack options in making and activity design for an engaging discussion. FGD, P2.*

In the statement above, the respondent emphasized the use of technology in the delivery of lessons. The technologically lag teachers limit learners to learn and explore the new and digital ways of learning. Accordingly, in today's advent of technology, teachers should adapt to the technology-driven delivery of lessons

in order for the students to learn easily. Furthermore, one of the respondents added:

*Easy for us nga makasabot sa lesson Ms., for example ang PPT Ms. dako kaayo na og tabang sa amo-a Ms. para mapicturan or masulat ang lesson Ms. (It is easy for us to understand the lesson Ms. For example, if the teacher will provide a PPT, it is a big help for us because we can easily take a photo or write the lesson in our notebook). IDI, P3.*

The teachers who use technology in the delivery of their lessons (e.g. TV for PPT, Messenger Group Chat, and etc.) can accelerate the learning process of the students. Accordingly, if the teacher utilizes a Powerpoint Presentation (PPT) in the delivery of lessons, learners can easily copy and visualize the content of the lesson. For instance, two of the respondents shared:

*Mas effective ang gagamit og gadget Ms. kay kintahay Ms., naay PPT, naa pud silay mapakita nga video, i-deliver pud nila og maayo ang topic, mas ma explain pa gyud nila Ms. ba. (The teacher who uses gadgets in the class is more effective, especially if they use PPT, provide us with a video presentation, and excellently explain the topic to us). IDI, P6.*

As a teacher, I believe using gadgets like PowerPoint and videos can greatly enhance the learning experience, making the topic more engaging and easier to understand. When I incorporate these tools effectively, it allows me to present the lesson in a clearer and more dynamic way, helping students connect better with the material.

*Naa man goy mga subject Ms., kintahay Science dayon ang topic universe, dili na nila ma explain og tarong og dili sila mag-gamit og gadget, kanang dili ma picture out sa bata Ms. ba kung mag drawing-drawing ra ang teacher. Kung naay gadget pwede raka mag research or maghimo og imo nga PPT. (There are subjects Ms. for instance, Science and the topic is about the universe, it is hard for them to explain it if they will not use gadgets because the learners may struggle to visualize the discussion). IDI, P10.*

Meanwhile, Messenger Group Chat (GC) allows both the teacher and students to connect with each other outside and inside the classroom. On top of that, teachers can easily send their PPT to their students to study before and after class discussions. In this way, students can easily absorb the content of the lessons presented by the teacher. In addition, a respondent shared:

*Gamit man sila og PPT Ms., i-send lang nila sa GC para mastudyhan sa mga estudyante. Mao mo-taas ang among grado. (They will use PPT Ms., and they will send a copy of it to our Group Chat (GC) for us to study it in advance. It can help us to have better grades). IDI, P8.*

The above statement expresses that the use of technology in the delivery of lessons improved the academic performance of learners. This is proven effective, especially to learners who are users and surrounded with gadgets at school and in their respective home. One participant of the study expressed:



*For me, technologically lag teachers often write the lessons/important details during class discussion in the chalkboard. This technique might be effective to some students, but, for me this also causes boredom. (FGD, P10).*

The learner's insights underscore the necessity of integrating technology into education, particularly for today's "digital natives" who are accustomed to digital environments. This generation's learning styles are inherently shaped by their daily interactions with technology, making digital tools not just beneficial but essential for engagement and comprehension. Recognizing this, educators are encouraged to adapt their teaching methods, incorporating technology to align with students' preferences and enhance learning outcomes. However, it's crucial to approach this integration thoughtfully, ensuring that technology serves as a tool for meaningful learning rather than a mere supplement. By doing so, educators can foster an environment that resonates with students' experiences and prepares them for the demands of the digital age.

#### **Use of Technology in Learning**

Technologically lag teachers face challenges such as old age, limited resources, and lack of training, which hinder their ability to incorporate technology effectively, leading "digital native" learners to view their methods as outdated and less engaging.

*For me, technologically lag teachers lack options in making an activity design for an engaging discussion. FGD, P1.*

As a teacher, I've realized that without using technology, it's harder to create fun and engaging activities for students. Without digital tools, it's challenging to keep the discussion interesting, especially for students who are used to tech-based learning. Another participant of the study added:

*Ang akong negative experience Ms. kay naay instances nga wala na bitaw sa ilang knowledge Ms., ano na sila ba, di na nila kaya so, murag makulangan ang learning sa bata, kay wala silay mga pictures nga mapakita. (My negative experience Ms. was that when technologically lag teachers tend to forget their lesson and on top of that they cannot show us relevant materials like photos, therefore we acquired insufficient knowledge). IDI, P6.*

The study highlights that digital natives find traditional teaching methods demotivating and believe that technology, such as projectors and multimedia presentations, enhances lesson engagement, focus, and understanding by catering to their short attention spans and visual learning preferences.

*Mas effective ang gagamit og gadget Ms. kay kintahay Ms., naay PPT, naa pud silay mapakita nga video, i-deliver pud nila og maayo ang topic, mas ma explain pa gyud nila Ms. ba. (The teacher who uses gadgets in the class is more effective, especially if they use PPT, provide us with a video presentation, and excellently explain the topic to us). IDI, P6.*

I believe that using gadgets like PowerPoint and videos makes lessons more engaging and helps me explain the topic more

clearly, making learning easier and more interesting for students. *Naa man goy mga subject Ms., kintahay Science dayon ang topic universe, dili na nila ma explain og tarong og dili sila mag-gamit og gadget, kanang dili ma picture out sa bata Ms. ba kung mag drawing-drawing ra ang teacher. Kung naay gadget pwede raka mag research or maghimo og imo nga PPT. (There are subjects Ms. for instance, Science and the topic is about the universe, it is hard for them to explain it if they will not use gadgets because the learners may struggle to visualize the discussion). IDI, P10.*

In addition, using technology in classroom lesson delivery helps the teacher to efficiently explain the lesson. In fact, me, as a teacher may use the online sites to look for relevant videos, documentaries, photos, and others which may aid them in explaining the lesson to their students. In return, it will foster engagement with the learners during the discussion proper. Accordingly:

*I believe that the technologically lag teacher should explore and utilize the available digital resources, educational software, and online tools to widen their scope of instruction. FGD, P4.*

Furthermore, during the discussion proper, technology is also necessary to aid the teachers in explaining the subject matter to the students, especially during instances that they forgot a term or a concept. With the use of technology such as cellphones or laptops, it will be easier for them to browse the internet and search for its meaning. A participant of the study shared:

*Siguro Ms. kanang magtudlo siya nga naa pud siyay word nga wala siya kabalo, mas naa mi alam ana kompara sa iya nga naay mga cellphone. Kanang mo-ana siya nga i-search ninyo ni. (There are instances Ms. that our teacher forgot a word or concept, it is better that he/she uses the internet to easily search about its meaning.). IDI, P9.*

*Teachers can enhance classroom engagement by utilizing platforms like Google Classroom and Messenger Group Chat to share materials, allowing students to prepare and engage with the content ahead of time.*

*Gamit man sila og PPT Ms., i-send lang nila sa GC para mastudyhan sa mga estudyante. Mao mo-taas ang among grado. (They will use PPT Ms., and they will send a copy of it to our Group Chat (GC) for us to study it in advance. It can help us to have better grades). IDI, P8, IDI, P5, and FGD, P1.*

As a whole, similar to what I mentioned in the previous pages of this chapter, the above statements of the learners make me realize the use of technology in learning. Given that learners nowadays mostly rely on technology, it is also necessary to adapt and study their learning styles.

Technology is crucial for fostering engaging discussions, fun classrooms, and accessing updated learning materials through online platforms like Google, YouTube, and e-libraries.



In agreement, another participant of the study shared:

*I believe that technological lag can restrict teachers' access to valuable educational resources. FGD, P4.*

*Participants emphasized that while technology improves lesson delivery, classroom engagement, and access to updated materials, it must be combined with teachers' standard qualifications for effective learning.*

### **Teachers' Teaching Qualifications**

Participants noted that despite challenges with technology, experienced teachers can still create engaging discussions by using traditional methods such as asking questions and writing key points on the chalkboard.

*Mas prefer nako tong teacher nga wala naggamit og gadget Ms. Kay mas ma-explain man gud nila ang ilang topic or lesson kaysa magsalig sila or gadget Ms. Kaysa kanang ipakita lang bitaw nila sa amo-a ang ppt. Mas maayo pag i-explain gyud nila og tarong sa amo-a ang topic Ms. (I prefer the teacher who does not use gadgets because he or she can explain the topic or lesson well instead of relying on the information found online. I prefer them over those who only showed us their PPT. It is better that they explain the lesson excellently to their students). IDI, P9.*

In this statement, the respondent emphasizes that a technologically lag teacher who does not use or rarely uses technology in the delivery of lessons establishes a better connection and communication to the students. Through writing the significant details of the lessons to the chalkboard, thorough explanation, and an active classroom engagement, technologically lag teachers still effectively deliver their lessons to their students including the "digital natives." Another respondent of the study also noted a similar statement:

*Ang akong positive nga experience Ms. is kanang nagsalig sila sa ilang learning instead nga kanang sa internet. (My positive experience is that the teachers who do not use gadgets in the classroom heavily rely on their stock knowledge rather than the information available on the internet). IDI, P6.*

Teachers with extensive experience, even without using technology, rely on their mastery of the subject and skills to engage students directly, fostering meaningful student-teacher interactions.

*For me, ang teacher nga wala nag gamit og gadget sa iyang pag teach kay mas moexcel siya sa iyang job as a teacher because mas ma focus niya ang iyang students and lessons. (For me, the teacher who does not use a gadget in the classroom has more focus on the students, thus he or she will excel as a teacher). IDI, P1.*

*Technologically lag teachers create an engaging classroom by using non-digital tools and activities like debates and quizzes, making learning fun and effective despite limited technology use.*

*... yes Ms. kay mas matudlo niya og tama Ms., or kanang mas daghan pa siya og madiscover or explore sa iyang subject/lesson. (... I prefer the teachers who do not use gadgets in the delivery of lessons because they can teach the lesson well and they can also discover and explore more about their topic/ lesson). IDI, P9.*

Despite limited use of technology, technologically lag teachers enhance both their teaching and students' learning by relying on mastery and creative strategies that develop students' listening, writing, and critical thinking skills.

*Ang positive nako Ms. is mas nindot siya paminawon if wala siyay gadget Ms. kay mas dali rami makatoon, makasabot because naa pud silay activities nga makalingaw kintahay, Quiz Bee, Debate, World Cafe nga dili kailangan og gadget. (My positive experience with technologically lag teachers is they are better because we can easily understand the lesson. Because they also provide us with fun activities such as: Quiz Bee, Debate, and World Cafe which do not require a gadget). IDI, P2.*

Technologically lag teachers create engaging classrooms through their subject mastery and active interaction, which keeps both gadget-exposed and non-gadget-exposed students focused and attentive.

*Okay ra Ms. kay masabtan man gihapon namo Ms. kay depende man pud kung unsaon niya pag deliver sa amo ang lesson. Naa ra gyud na siya Ms. kung gi-unsang pag deliver sa teacher ang lesson Ms. (It is okay for me Ms., because we can still understand the lesson. It really depends on how they will deliver the lesson to us.) IDI, P4.*

As a teacher, I believe that the effectiveness of a lesson depends more on how I deliver it than on the tools I use. If I can explain the topic clearly and engage students, they will understand the lesson, regardless of whether I use technology or not. Another respondent of the study added:

*Depende man pud na siguro sa teacher Ms. Naa may uban nga ipatan-aw lang sa amo-a ang PPT or video. Naa puy uban nga i-explain gyud og tarong ang lesson. Kanang mangutana gyud sila. (It really depends on the teacher Ms. because there are few who only present a video to us while the others explain it to us satisfactorily). IDI, P5.*

*An engaging and fun classroom can be achieved with or without technology, but since mastery takes time, teachers should be flexible and consider adopting digital approaches.*

### **Flexibility and Adaptability to the Digital Approaches of Education**

Although some believe technologically lag teachers can still engage students, today's tech-dependent learners challenge them to adopt digital education through training and openness to new tools.



*Encourage teachers to experiment with new technologies and approaches.* FGD, P7.

As a teacher, I believe trying out new technologies and teaching methods is essential for staying connected with today's learners and making lessons more meaningful. In agreement, a participant of the study mentioned:

*Kung dili sila magamit og gadget Ms., i-master lang siguro nila ang content sa ilang lesson.* (If they will not use gadget in the classroom, they should master the lesson). IDI, P9.

The students' insights encouraged teachers to blend technology with traditional methods, highlighting that both are essential and recommending training and support to help technologically lag teachers adapt without diminishing their value.

## DISCUSSIONS

### Use of Technology in Collaborative Efforts

Collaboration in learning involves interactive student activities, supported by technologies like email and web conferencing for communication and sharing (Kearsley & Schneiderman, 1999).

### Use of Technology in Pair and Group Activities

The study reveals that collaborative activities such as by-pair and group work, Insight Sharing, role-playing, Quiz Bee, and debate promote student engagement, participation, and communication, with Koc (2018) and Burke (2011) noting that group activities motivate students and enhance interaction, while Hanh and Huyen (2024) emphasize how they improve conceptual understanding, peer learning, and confidence. Additionally, Insight Sharing (Dwigustini & Widiya, 2020; Cooper, Tanner, & Schinske, 2021), role-playing (Akhtar, 2022; Rikmasari et al., 2021), Quiz Bee (Arsakaeva et al., 2024; Slusser & Erickson, 2006), and debate (Sengul & Demirel, 2021; Kennedy, 2007) are all found to increase student motivation, creativity, critical thinking, and engagement in learning.

### Use of Technology in Project-Based Assignments

Project-oriented learning fosters classroom engagement through activities like peer research and critiques, while the web enhances collaboration by providing rapid access to diverse information (Kearsley & Shneiderman, 1998).

### Use of Technology in Group Projects

Project-based learning/group projects is a popular learning method that is usually applied in the classroom. It helps in developing the students' critical thinking, communication, creativity, and collaboration (Sugianto, 2021).

Film making, as a group activity, is shown to enhance communication skills and creativity in students (Tang et al., 2021), and provides a meaningful learning alternative that fosters self-awareness and social justice (Cromarty, Young, & Elias, 2023), aligning with the findings of this study. Additionally, Ibrahim and Rashid (2022) highlight how project-based learning cultivates collaboration among students through structured

discussions and planning, with Zhang, Shi, and Zhang (2023) noting that the cognitive awareness of both leaders and group members significantly impacts the quality of collaboration in project-based learning.

### Use of Technology in Non-Academic Focus

Non-academic focus activities, such as managing donor lists or planning computer usage in local schools, engage students through real-world, off-campus projects that provide authentic learning experiences (Kearsley & Shneiderman, 1998).

### Use of Technology in Off-campus Educational Activities

Christison (2013) highlights those extracurricular activities, such as field trips and clean-up drives, enhance students' academic success, leadership skills, time management, and self-esteem, while Furda and Shuleski (2019) confirm that participants have higher GPAs. Moreover, Menkshi and Braholi (2020), along with Franklin and Behrendt (2014), emphasize that field trips improve student engagement, interest, and motivation, and Qian (2025) shows that community service activities like clean-up drives raise awareness of societal issues and sustainability, underscoring the importance of using technology to engage today's learners.

### Use of Technology-driven Learning Engagement

#### Characteristics of Present-day Learners/Students

The learning characteristics of 21st-century learners, as described by Sumardi, Rohman, and Wahyudiati (2020), differ significantly from previous generations, with conventional teaching methods often hindering the development of higher-order thinking, and the lack of technology impeding learning progress at the primary level. Additionally, Vega et al. (2022) found that "digital natives" engage actively in social media, using it for various purposes, including learning through visual content, while Buenvinida, Rodriguez, and Sapin (2020) highlight that 21st-century educators must adapt, be lifelong learners, and develop new pedagogies to effectively teach these tech-savvy learners.

### Use of Technology in Classroom Learning

Effective lesson delivery, which requires a good lesson plan, student engagement, and pacing (Jukil, 2011), has been enhanced by the integration of technology, as it has become an essential factor in education, transforming the learning process (Romanes & Veniegas, 2018). Technologies have revolutionized education, making tasks like creating presentations and projects easier (Haleem et al., 2022), and studies by Moers (2020) and Murati and Ceka (2017) show that students find technology more engaging and helpful in completing assignments, while also fostering curiosity and improving the results of both students and teachers.

### Teachers' Teaching Qualifications

The study suggests that while technology plays a key role in fostering engagement in lesson delivery and classroom settings, it must be paired with the teaching qualifications of educators, as Emmanuel (2023) highlights that student success is largely dependent on teachers' qualifications and teaching methods.



Additionally, teachers' attitudes, including adaptability, approachability, and enthusiasm, are essential in creating an engaging learning environment that supports student performance.

### **Flexibility and Adaptation to the Approaches of Digital Education**

As technology becomes integral to modern learning, Bitar et al. (2025) emphasize the need for innovative course design strategies and comprehensive training programs for both educators and students to navigate online learning environments effectively. Additionally, Sharma (2024) highlights that the rapid technological advancements require teachers to remain adaptable, with educational leaders playing a crucial role in shaping policies that support teachers in leveraging digital tools effectively.

### **CONCLUSION**

The study reveals a digital divide between technologically lag teachers and digital native learners, with participants suggesting that while teachers can still engage students with their experience and skills, they should undergo training on using technology in learning to adapt to evolving student learning styles for more effective and engaging classroom experiences.

### **Recommendations**

The study suggests that at the national level, the Department of Education should develop or continue training programs for teachers; at the local level, school administrators should monitor faculty effectiveness and student learning styles, potentially investing in technology for quality education; and teachers should assess their teaching approaches, continue training, and explore technology integration to improve their skills and enhance student learning.

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