

The Impact of Technological Tools in Digital Literacy in Social Studies Education

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The Problem and Its Background

This chapter includes the introduction, theoretical framework, statement of the problem, hypothesis, scope and limitation, significance of the study, and the definition of terms used

INTRODUCTION

The integration of technological tools has become essential in education, particularly in fostering digital literacy. Digital literacy involves the ability to collect, analyze, and apply information using technology, while also developing critical thinking skills such as questioning, problem-solving, and decision-making. The Basic Education Act of 2013 supports this by encouraging innovative teaching methods that make learning more engaging and effective, especially in subjects like social studies.

Recent surveys highlight the growing reliance on digital tools in classrooms. A Gallup study (2019) found that most teachers, administrators, and principals prefer using digital learning tools regularly, citing benefits such as individualized learning, improved engagement, and instant access to student data. However, scholars like Kinzer & Wilber (2023) emphasize that technology alone is not enough; teachers must also be trained and prepared to integrate these tools effectively into their teaching practices.

In the modern information era, technology plays a crucial role in enhancing literacy and broadening perspectives. Studies show that digital tools help learners identify, interpret, and evaluate information more effectively, while also strengthening interpersonal connections (Bacak et al., 2022; Hardiansyah et al., 2024). Access to online resources allows students to expand their knowledge instantly, demonstrating how technology can significantly enhance literacy skills.

Despite these advancements, there is still limited understanding of how technological tools specifically impact digital literacy in Social Studies education (Espinosa et al., 2023). This study aims to explore how technology influences critical thinking, information evaluation, and content creation, while analyzing the experiences of both teachers and students. The findings are expected to provide strategies for integrating technology into classrooms and fostering collaborative learning among diverse learners.

Ultimately, this research underscores the positive impact of technology on student engagement and academic achievement. It also provides valuable insights for educators and policymakers about the importance of investing in technology resources and teacher training. In Tanauan, the increasing use of apps, Learning Management Systems, and gamification strategies among junior high school Social Studies teachers highlights the relevance of this study, making the city an ideal setting to examine the role of technology in shaping digital literacy and leadership skills.

THEORETICAL FRAMEWORK

This study is supported by theories to help the researchers locate the factors that link the impact of technological tools in digital literacy in social studies education to assist the researchers in making generalization and pertinent research findings.

Zajda (2021) asserts that incorporating technological tools in social studies education is pivotal for enhancing digital literacy among students. Constructivist theory posits that learners construct knowledge through active involvement and interactions with their environment. These tools provide opportunities for hands-on activities, discussions, and problem-solving tasks, fostering an interactive and dynamic learning experience. By engaging with technology, students can Furthermore, Zajda highlights the importance of respecting and incorporating cultural diversity within the classroom. Technological tools can support this by offering diverse perspectives and resources, making the learning experience more inclusive and enriching. This approach aligns with Zajda's principles, which advocate for an educational environment that values and leverages students' cultural backgrounds. Additionally, Zajda underscores the significance of individualized learning experiences. Technological tools can cater to different learning styles and cognitive abilities, providing personalized educational paths that accommodate individual differences. This tailored approach helps students to engage more deeply with the material and enhances their overall learning experience.

In parallel, the essential role of active participation, cultural inclusivity, and cooperative learning in crafting effective educational environments is also emphasized by Kurt (2023). Integrating technological tools in social studies instruction is crucial for boosting students' digital literacy, thereby equipping them with vital skills for active participation in the digital era. Kurt emphasizes that these digital tools facilitate practical activities, dynamic discussions, and collaborative problem-solving, enabling students to collectively build knowledge while honoring cultural differences. Additionally, technology accommodates individualized learning paths and metacognitive strategies, allowing students to become aware of their own cognitive processes and enhances their capacity for independent learning. This alignment with connectivism principles ensures that students are well-prepared for the demands of a modern, digitally connected world, fostering both personal growth and academic success.

This integrated view highlights the synergistic relationship between Zajda's constructivist theory and Kurt's connectivism principles in leveraging technological tools to enhance digital literacy

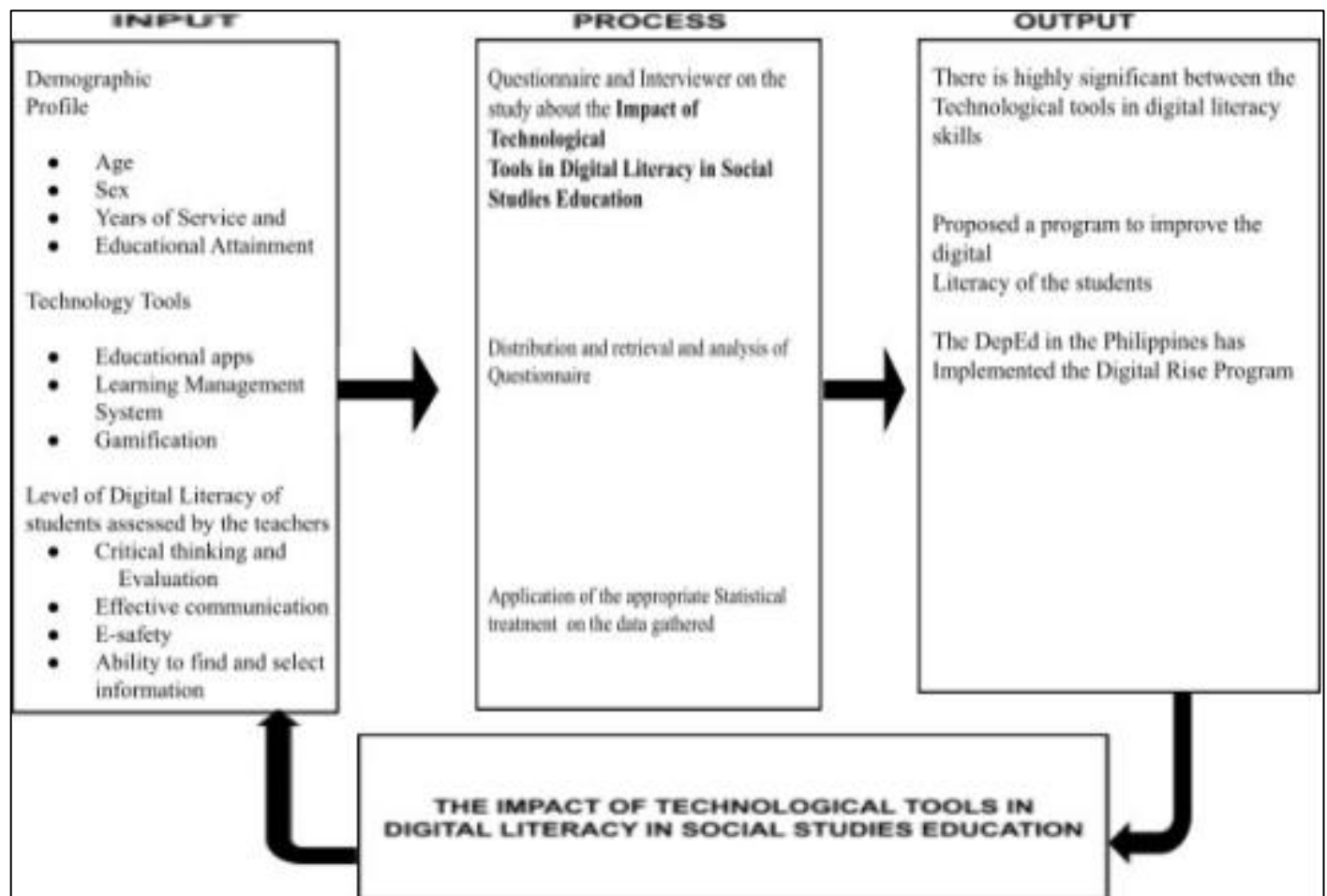


Figure 1. Paradigm of the Study

Paradigm Of the Study

The researchers applied the Input-Process-Output (IPO) Model, which organizes the essential elements of the study, the procedures undertaken, and the expected outcomes. Figure 1 illustrates how the impact of technological tools on digital literacy in Social Studies education is examined.

The first box (Input) contains the independent and dependent variables of the study. These include the demographic profile of teachers (age, sex, years of service, and educational attainment), the technological tools used in classrooms such as educational applications, Learning Management Systems (LMS), and gamification strategies, as well as the level of students' digital literacy as assessed by teachers. Digital literacy is described in terms of critical thinking and evaluation, effective communication, e-safety, and the ability to locate and select information.

The second box (Process) outlines the research procedures. This involves the distribution of questionnaires and interviews to gather data on the use of technological tools in Social Studies education. The responses are retrieved, analyzed, and subjected to appropriate statistical treatments to determine the relationship between technology integration and students' digital literacy skills.

The third box (Output) highlights the findings and implications of the study. Results show a highly significant relationship between technological tools and the development of digital literacy skills. Based on these findings, the researchers propose a program to further enhance students' digital literacy. This aligns with the Department of Education's Digital Rise Program, which promotes technology integration in Philippine schools.

The arrows connecting the boxes (Input–Process–Output) represent the continuous cycle of research, showing how teacher and student profiles, technological tools, and literacy skills are processed through systematic data collection and analysis to produce meaningful outcomes. This paradigm emphasizes the central theme of the study: The Impact of Technological Tools in Digital Literacy in Social Studies Education.

Statement Of The Problem

The purpose of this research was to examine how teachers' Technological tools affect their Digital Literacy in Social Studies Education

It is hoped that the solutions to the following questions will be found through this research.

What is demographic profile of teachers in terms of:

- 1.4 Age;
- 2.4 Gender;
- 3.4 Years of Service
- 4.4 Educational Attainment?

What are the technology tools that teachers use in improving digital literacy in terms of

- 5.4 Educational Apps;
- 6.4 Learning Management System
- 7.4 Gamification

What is the level of digital literacy of the students as assessed by the teachers in terms of:

- 8.4 Critical Thinking and Evaluation;

9.4 Effective Communication

10.4 The ability to find and select information

11.4 E-safety

Is there a significant relationship between the profile of the respondents and their level of digital literacy?

What program can be proposed to improve the digital literacy of the students?

Hypothesis

There is no significant relationship between the use of technology tools and the digital literacy skills of the teachers.

Significance of the Study

The study is focused on explaining the Impact of Technology Tools in Digital Literacy in Social Studies Education, the result of the study will be beneficial to the following:

Student- The result of the study will help students to fully understand how technological tools can impact their digital literacy in classroom

Teacher- This study will benefit the teachers since they are the main respondents in this study that focus on the skills that gradually develop. In this study, teachers will understand how technological tools can impact digital literacy in social studies.

Researcher- The results of the study will help them to conduct related studies about the impact of technological tools in digital literacy in social studies education.

Scope and limitations

This research primarily investigates the impact of technological tools on the digital literacy of junior high school Social Studies teachers in selected public secondary schools in Tanauan.

The researcher asked 41 Social Studies teachers, representing different ages, years of service, and educational attainment.

Definition of Terms

Age – The number of years of teacher respondents lived during their active teaching of Social Studies.

Critical Thinking and Evaluation – The ability to analyze information, question assumptions, and make reasoned judgments based on evidence.

Demographic Profile – The background characteristics of respondents, including age, sex, and years of teaching service.

Digital Literacy – The skill to find, evaluate, create, and communicate information using technological tools responsibly and effectively.

Educational Apps – Interactive software designed to provide personalized lessons and activities that enhance student learning.

Effective Communication – The clear exchange of information through active listening and feedback to ensure mutual understanding.

E-safety – The practice of protecting students from online risks such as cyberbullying and inappropriate content, promoting safe digital use.

Gamification – The use of game elements like points, rewards, and competition to increase student motivation and engagement.

Learning Management System – A digital platform for organizing, delivering, and tracking educational content, assignments, and student progress.

Teachers – The respondents of the study who provide data through survey questionnaires, offering insights into technology integration.

REVIEW OF RELATED LITERATURE AND RELATED STUDY

This chapter offers a summary of prior studies on knowledge sharing and networks. It presents the study's framework, which forms the central focus of the research discussed in this thesis.

Foreign

Educational apps are widely recognized in foreign literature as effective tools for enhancing digital literacy. Studies show that applications such as Google Classroom and Quizizz promote student engagement, collaboration, and independent learning, which are essential in Social Studies education (Stošić, 2015; Ali et al., 2012). These tools allow students to interact actively with lessons, thereby strengthening their ability to process and evaluate information.

Learning Management Systems (LMS) are highlighted as platforms that provide structured access to resources, promote collaboration, and enable teachers to give real-time feedback. Research emphasizes that LMS integration fosters blended learning environments, helping students develop digital competencies while engaging with Social Studies content (Salinas et al., 2020; Forssell & Hassan, 2024).

Gamification is identified as another powerful strategy in foreign studies. By incorporating points, badges, and leaderboards, teachers motivate students to participate actively in lessons. This approach enhances comprehension and problem-solving skills, which are crucial for developing digital literacy in Social Studies (Göksün & Gürsoy, 2024).

Foreign scholars also stress the importance of digital literacy in terms of critical thinking and evaluation. Systematic reviews reveal that digital literacy builds self-efficacy and competence, enabling students to analyze information critically and make reasoned judgments (Audrin et al., 2022; Gutiérrez et al., 2022).

Finally, foreign literature emphasizes effective communication, information selection, and e-safety as vital dimensions of digital literacy. Falloon (2020) and Nguyen & Habók (2024) highlight teacher competency in facilitating communication, while Sparks et al. (2016) stress the need for reliable assessment tools in information selection. Cowling et al. (2024) further advocates for integrating digital safety programs to protect students from online risks.

Local

Philippine research underscores the necessity of technological tools in classrooms, directly supporting the improvement of digital literacy in Social Studies. De Vera (2023) explains that digital resources enhance student engagement and allow teachers to tailor lessons to diverse learning styles, making classrooms more interactive and effective.

Educational apps such as Kahoot, Quizizz, and Google Jamboard are widely used in local settings. These tools foster creativity, motivation, and concept retention, helping students recall and apply Social Studies concepts more effectively (Frias, 2024; Garcia, 2017).

Gamification has been shown to motivate Filipino students through points, badges, and leaderboards. Local studies confirm that gamified activities improve comprehension and participation, encouraging active learning and strengthening digital literacy skills in Social Studies education (Tiria & Caballes, 2022; Lomibao, 2024; Perida, 2018).

Local scholars define digital literacy as the ability to evaluate information and communicate effectively (Morato, 2022). However, challenges remain integrating critical thinking and evaluation into curricula. Laguna & Santos (2019) and Cruz & Reyes (2021) highlight gaps in assessment practices, showing the need for targeted interventions in Social Studies classrooms.

Further studies reveal that Filipino students often struggle with finding and selecting credible information and practicing e-safety online. Libago et al. (2024) and Laudato & Punzalan (2021) emphasize the importance of programs to strengthen these skills, while Baterna et al. (2020) recommend comprehensive digital literacy initiatives to prepare learners for the demands of the digital age and the Fourth Industrial Revolution.

Synthesis

Foreign and local literature consistently highlight those digital tools—including educational apps, Learning Management Systems, and gamification—play a vital role in improving digital literacy and student engagement. International studies emphasize that platforms like Google Classroom and apps such as Kahoot and Quizizz foster motivation, collaboration, and retention, while gamified features encourage active participation and problem-solving (Stošić, 2015; Ali et al., 2012; Göksün & Gürsoy, 2024).

A common theme across foreign research is the importance of critical thinking and evaluation, effective communication, information selection, and e-safety as core dimensions of digital literacy. Scholars argue that teacher competency frameworks must go beyond technical skills to include communication and ethical use of technology, while assessment tools are needed to measure students' ability to select credible information and navigate digital risks (Audrin et al., 2022; Falloon, 2020; Sparks et al., 2016; Cowling et al., 2024).

Local studies in the Philippines echo these findings, showing that educational apps and gamification enhance creativity, motivation, and comprehension in Social Studies classrooms (Frias, 2024; Tiria & Caballes, 2022). LMS platforms are widely adopted but face challenges related to internet connectivity and ease of use (Garcia, 2017).

Filipino scholars emphasize that while students demonstrate basic digital literacy, gaps remain in critical thinking, information selection, and e-safety. Research reveals that many students struggle to evaluate online sources and protect themselves from digital threats, underscoring the need for targeted interventions and professional development for teachers (Libago et al., 2024; Laudato & Punzalan, 2021).

Overall, both foreign and local literature affirm that integrating digital tools enhances student engagement and literacy outcomes. However, challenges such as digital inequality, teacher preparedness, and infrastructure must be addressed to maximize the impact of technology on Social Studies education.

RESEARCH METHODOLOGY AND PROCEDURES

This chapter presents the research methods the researcher used in the study, including the chosen research design, study population, development and validation of the research instrument, data collection procedures, and statistical techniques for analyzing the data.

Research Design

This study employs a descriptive research design. The study aims to investigate how the integration of technology affects students' digital literacy skills, critical thinking, and engagement in social studies education. The study aims to describe the impact of technological tools on enhancing digital literacy in social studies by examining the extent of tool usage, assessing students' digital literacy levels, and exploring teachers' perceptions of the effectiveness of these tools in fostering digital skills (Creswell, (2014).

Respondents of the Study

The respondents of the study are 41 Junior High School Social Studies teachers in Selected Public Secondary Schools in Tanauan. One of the vital processes to keep this study successful. All of these participants are selected through random sampling. This sampling method was conducted where each member of a population had the capability to become part of the sample. The respondents and school were chosen by the researchers because they were suitable and applicable to the study.

OVER-ALL TOTAL TANAUAN PUBLIC SCHOOLS	T
Tanauan School of Fisheries	7
Balele Integrated High School	3
Tinuik National High School	7
Banjo Laurel National High School	2
Bernardo Lirio National High School	11
Tanauan City Integrated National High School	9
Pantay National High School	2
TOTAL:	41

Locale of the Study

This study was conducted in Selected Public Secondary Schools located in the Municipality of Tanauan City.



Sampling Technique

A probability sampling method, specifically systematic random sampling guided by Cochran's formula, was employed to determine the appropriate sample size from the population of Junior High School Social Studies teachers in selected public secondary schools. This approach ensured that each teacher had an equal chance of being included in the study, thereby enhancing the representativeness and reliability of the findings.

Research Instrument

Data for the study were gathered through a survey questionnaire and a checklist specifically designed for this research. The instrument consisted of 70 items, systematically divided into three parts, to capture comprehensive information from the respondents.

Part One contained a checklist of demographic information, including age, sex, educational attainment, and years of service. This section provided the researchers with background data to contextualize the responses.

Part Two focused on assessing the impact of technological tools on digital literacy in Social Studies education. It was structured using a Likert scale ranging from 1 to 4, where (1) indicated not at all, (2) not often, (3) often, and (4) very often. This scale allowed for a clear measurement of frequency and intensity in teachers' use of technological tools.

Part Three included a checklist regarding the level of digital literacy among students as observed by the respondents. This section captured teachers' perspectives on students' competencies in areas such as critical thinking, effective communication, information selection, and e-safety.

To analyze results effectively and draw meaningful conclusions about the role of technological tools in enhancing digital literacy.

Validity of The Questionnaire

The questionnaire went through several stages of validation to ensure its accuracy and relevance. An initial draft was prepared and reviewed by the adviser to confirm that the items aligned with the objectives of the study. It was then evaluated by three experts Ma'am Jolina Ramos, Ma'am Madelle Masongsong, and Ma'am Nicca Angela Piamonte who carefully examined the content, clarity, and appropriateness of each question. Revisions were made based on their feedback to strengthen the instrument.

Once validated, the questionnaires were distributed by the school principals to the respondents. Teachers were given ample time to accomplish the forms, and the researchers personally collected the completed questionnaires to guarantee accuracy and completeness of the data.

Table 1. Level of Internal Consistency of the Survey Questionnaire

Subscales	No.of Items	Cronbach's Alpha	Internal Consistency
Technological Tools			
Educational Apps	10	.905	Excellent
LMS	10	.932	Excellent
Gamification	10	.888	Good
Critical Thinking and Evaluation	10	.911	Excellent
Digital Literacy			
Effective Communication	10	.817	Good
The Ability to Find and Select Information	10	.937	Excellent
E-Safety	10	.934	Excellent

Statistical Treatment of The Data

For meaningful interpretation of the data, the following statistical treatments were applied:

Mean: This was applied to determine the responses of the teachers.

Standard Deviation: This was used to calculate the dispersion of all teacher responses in the indicators provided for each variable from the mean.

Percentage: This was used to describe the respondents' educational attainment, years of service, and sex.

Pearson's Correlation Coefficient: This was used to assess the strength and direction of the relationship between the two variables.

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

r = correlation coefficient
 x_i = values of the x-variable in a sample
 $\bar{x}$ = mean of the values of the x-variable
 y_i = values of the y-variable in a sample
 $\bar{y}$ = mean of the values of the y-variable

The formula for correlation uses several components:

r = correlation coefficient, which indicates the strength and direction of the relationship.

x_i = values of the independent variable (teachers' integration of technological tools).

$\bar{x}$ = mean of the independent variable.

y_i = values of the dependent variable (students' digital literacy outcomes).

$\bar{y}$ = mean of the dependent variable.

All analyses were conducted using statistical software, and results were interpreted according to standard correlation guidelines.

Presentation, Analysis, And Interpretation of Data

This chapter showcases the study's findings through graphical and tabular presentations and their corresponding interpretations.

Part I. Perception of Technological Tools in Digital Literacy

1. How are technological tools described in terms of:

1.1 Educational Apps

1.2 Learning Management Systems

1.3 Gamification

Table 2: presents the technology tools in terms of Educational Apps

Indicators	Mean	SD	Interpretation
As a teacher...			
1. I can easily share files with students, including documents, ppt and videos using Google Classroom.	3.24	0.97	Often
2. I stay updated on Google classroom that I can incorporate into my teaching.	3.17	1.00	Often
3. I use Canva to design presentations and visual aids for my lessons.	3.49	0.84	Very Often
4. I find Canva easy to use for designing educational materials.	3.54	0.64	Very Often

5. I use Google Classroom to provide feedback on student work.	3.12	0.84	Often
6. I consistently monitor the students' engagement with the resources and activities I post on Google Classroom.	3.27	0.95	Very Often
7. I encourage my students to use Canva to design their own materials.	3.46	0.67	Very Often
8. I use Quizlet to helps my student improve their performance on quizzes and tests	2.88	1.12	Often
9. I use Quizlet to create study sets or flashcards for my lessons.	2.66	1.13	Often
10. I use Quizlet to assess my students' understanding of the material.	2.68	1.08	Often
Overall	3.15	0.92	Often

Legend: 1.0-1.75-(Not at All/Poor Level); 1.76-2.50-(Not Often/Low Level); 2.51-3.25-(Often/High Level);3.26-4.00-(Very Often/Very High Level)

Teachers frequently use educational apps to enhance digital literacy, with an overall mean score of 3.15 (SD = 0.92). Canva emerged as the most impactful tool, allowing teachers to design visually engaging presentations and encouraging students to create their own materials. This not only improved creativity but also fostered confidence in expressing ideas digitally. Google Classroom was also highly rated, serving as a central hub for file sharing, feedback, and monitoring student engagement. Quizlet and Kahoot were used mainly for quizzes and interactive reviews, which helped reinforce knowledge but were less effective in promoting deeper critical thinking. Edmodo was observed to support collaboration, though its usage was less frequent compared to other apps. Overall, educational apps are seen as powerful tools for fostering motivation, creativity, and evaluative skills, preparing learners for a technology-driven world (Bond & Bedenlier, 2019).

Table 3: presents the technology tools in terms of Learning Management System

Indicators	Mean	SD	Interpretation
As a teacher...			
1. I use Google Classroom to provide feedback on my students' activities.	2.90	1.07	Often
2. I use Google Classroom to post assignments and resources for my students.	3.24	0.89	Often
3. Track my student submissions and completion of tasks in Google Classroom.	3.32	0.69	Very Often
4. I use Google Classroom to share multimedia resources, such as videos and slides.	3.00	0.92	Often
5. I use Google Classroom to manage announcements and assignments for my students.	2.93	0.85	Often
6. I use Google Classroom's grading tools to assess and record my students' work	2.78	0.85	Often
7. I observe that my students' complete assignments on time with the help of Google Classroom reminders.	2.98	0.76	Often
8. I notice my students seeking help or asking questions through Google Classroom's comment section.	2.88	0.87	Often
9. I observe that my students become more self-directed, using Google Classroom as a resource hub for their learning	2.80	0.84	Often
10. I observe that my students revisit posted materials on Google Classroom to support their learning.	3.32	0.57	Very Often
Overall	3.01	0.83	Often

Legend: 1.0-1.75-(Not at All/Poor Level); 1.76-2.50-(Not Often/Low Level); 2.51-3.25-(Often/High Level);3.26-4.00-(Very Often/Very High Level)

Teachers reported frequent use of Google Classroom (overall mean = 3.01, SD = 0.83) to support digital literacy. The platform was most effective for tracking submissions and encouraging students to revisit posted materials, showing its strength in organization and reinforcement of learning. Teachers also used it for posting assignments, sharing multimedia, and managing announcements, which streamlined communication and resource distribution. However, lower scores were observed in areas related to student engagement and self-directed learning, suggesting that while LMS platforms provide structure, they may not fully cultivate autonomy or initiative without additional strategies. This highlights the need for integrating interactive features and teacher guidance to maximize LMS effectiveness in fostering deeper engagement and independent learning (Padohinog, Balsicas, & Hingada, 2020).

Table 4: presents the technology tools in terms of Gamification

Indicators	Mean	SD	Interpretation
As a teacher...			
1. I observe that digital badges encourage my students to strive for specific learning achievements.	2.93	1.06	Often
2. I notice that my students enjoy the process of collecting points, which enhances their motivation to participate in learning activities.	3.02	0.99	Often
3. I notice that earning digital badges helps my students stay focused and committed to their learning tasks.	3.00	1.00	Often
4. I observe that providing digital badges for completing assignments reinforces my students' learning.	3.32	0.79	Often
5. I use digital badges to encourage collaboration among my students to finish the task.	3.24	0.73	Often
6. I use points as an incentive to my students for completing assignments on time.	3.39	0.63	Very Often
7. I observe that my students are more engaged to remain on group tasks when they know they can earn points.	3.49	0.55	Very Often
8. I observe that my students are excited when they earn rewards for their achievements.	3.41	0.55	Very Often
9. I observe that my students who receive rewards tend to develop a more positive attitude toward learning.	3.34	0.69	Very Often
10. I observe that my students become more responsible and organized when they know they can earn rewards	3.37	0.70	Very Often
Overall	3.25	0.77	Often

Legend: 1.0-1.75-(Not at All/Poor Level); 1.76-2.50-(Not Often/Low Level); 2.51-3.25-(Often/High Level);3.26-4.00-(Very Often/Very High Level)

Gamification strategies were observed to be effective, with an overall mean score of 3.25 (SD = 0.77). Teachers noted that digital badges and points encouraged students to strive for achievements, stay focused, and collaborate with peers. Rewards boosted motivation, responsibility, and positive attitudes toward learning, with students showing excitement when earning recognition. The highest ratings were given to indicators related to group engagement and responsibility, suggesting that gamification is particularly effective in fostering teamwork and accountability. However, while gamification increased enthusiasm and participation, its impact on critical evaluation and e-safety was limited. This aligns with Li, Ma, & Shi (2023) and Boudadi & Gutiérrez-Colón (2020), who emphasize gamification's motivational benefits but caution that it requires teacher guidance to ensure deeper learning outcomes. Overall, gamification fosters enthusiasm and responsibility, but must be strategically integrated to balance motivation with critical literacy skills.

Part II. Level of Students' Digital Literacy

2.What is the level of digital literacy of the students as assessed by the teachers in terms of:

3.1 Critical Thinking and Evaluation;

3.2 Effective Communication

3.3 The ability to find and select information

3.4 E-safety

Table 5: presents the levels of Digital Literacy in terms of Effective Communication

Indicators	Mean	SD	Interpretation
As a teacher...			
1. I provide clear and concise instructions for assignments or activities.	3.63	0.58	Very Often
2. I observe my students actively participating in class discussions.	3.61	0.63	Very Often
3. I use real-world examples to connect lessons to students' lives and increase engagement.	3.68	0.52	Very Often
4. I observe my students helping each other understand concepts during class.	3.71	0.46	Very Often
5. I provide opportunities for students to share their thoughts and ideas during lessons	3.85	0.36	Very Often
6. I facilitate group activities that promote collaboration and communication to my students.	3.59	0.50	Very Often
7. I encourage my students to ask questions to clarify their understanding of the material	3.68	0.57	Very Often
8. I consider the students' needs and interests in class discussions to enhance engagement.	3.66	0.53	Very Often
9. I use a variety of communication methods to engage students	3.66	0.67	Very Often
10. I provide feedback on my student work and performance.	3.63	0.58	Very Often
Overall	3.67	0.53	Very Often

Legend: 1.0-1.75-(Not at All/Poor Level); 1.76-2.50-(Not Often/Low Level); 2.51-3.25-(Often/High Level);3.26-4.00-(Very Often/Very High Level)

The survey results reveal that teachers are highly confident in their communication practices, with an overall mean score of 3.67 (Very Often). They consistently provide clear instructions, encourage active student participation, and use real-world examples to make lessons more engaging. Teachers also foster collaboration, create opportunities for students to share ideas, and give regular feedback, showing a strong commitment to clarity and student understanding.

Supporting studies (Karasova & Nehyba, 2023; Okoli et al., 2014) confirm that effective communication is a critical driver of teaching success, directly influencing student behavior, engagement, and overall classroom achievement.

Table 6: presents the levels of Digital Literacy in terms of The Ability to Find and Select Information

Indicators	Mean	SD	Interpretation
As a teacher...			
1. I observe my students summarizing the information they find during discussion.	3.49	0.71	Very Often
2. I notice my students effectively use technology to find and select information during lessons.	3.37	0.58	Very Often

3. My students are able to evaluate the credibility and reliability of the information they find.	3.37	0.66	Very Often
4. I observe the ability of my students to be wise in choosing definitions on the internet of their assignments in lessons.	3.44	0.63	Very Often
5. My students select information relevant to their tasks or assignments.	3.49	0.60	Very Often
6. I observed that my students recognize and avoid misinformation or biased sources.	3.46	0.60	Very Often
7. I observe my students logically organize the information they find for their task.	3.41	0.63	Very Often
8. I notice my students are working collaboratively with peers to find and select reliable information.	3.39	0.70	Very Often
9. I read my student search information like assignments to make sure they are picking right information	3.44	0.55	Very Often
10. My students can locate information that is aligned to our topic.	3.41	0.59	Very Often
Overall	3.43	0.63	Very Often

Legend: 1.0-1.75-(Not at All/Poor Level); 1.76-2.50-(Not Often/Low Level); 2.51-3.25-(Often/High Level);3.26-4.00-(Very Often/Very High Level)

The survey results show that teachers are highly confident in their communication practices, with an overall mean score of 3.67 (Very Often). They consistently provide clear instructions, observe active student participation, and use real-world examples to connect lessons to students' lives. Teachers also encourage collaboration, create opportunities for students to share ideas, and provide regular feedback on student work, demonstrating a strong commitment to clarity, engagement, and student understanding.

This finding is further supported by Hattie (2009), who emphasized that teacher clarity and feedback are among the most powerful influences on student achievement, reinforcing the importance of communication as a central driver of effective teaching and learning.

Table 7: presents the levels of Digital Literacy in terms of E-SAFETY

Indicators	Mean	SD	Interpretation
As a teacher...			
1. I notice that my students can distinguish between trustworthy and potentially harmful online content.	3.39	0.59	Very Often
2. I observe that my students are aware of how to protect their personal information online.	3.32	0.69	Very Often
3. I guide my students on the importance of logging out of accounts when using shared device	3.39	0.70	Very Often
4. I notice that my students are aware of how to identify and report cyber bullying incidents.	3.41	0.67	Very Often
5. I teach my students how to evaluate the credibility of online information sources	3.51	0.55	Very Often
6. I observe that my students are respectful and polite in their online interactions.	3.32	0.57	Very Often
7. I notice my student's identifying misinformation toward fake news when searching online.	3.32	0.69	Very Often
8. I remind my students not to indicate their full name and address in some links sent to them.	3.32	0.65	Very Often

9. I assess my student's practice of safe online behavior during school-related activities.	3.20	0.65	Very Often
10. I remind my students of safe internet practices.	3.44	0.63	Very Often
Overall	3.36	0.64	Very Often

Legend: 1.0-1.75-(Not at All/Poor Level); 1.76-2.50-(Not Often/Low Level); 2.51-3.25-(Often/High Level);3.26-4.00- (Very Often/Very High Level)

The survey results show that teachers perceive their students to have strong e-safety skills, with an overall mean score of 3.36 (Very Often). Students are frequently observed distinguishing between trustworthy and harmful online content, protecting personal information, and logging out of accounts when using shared devices. They also identify and report cyberbullying, evaluate the credibility of online sources, and maintain respectful online interactions. Teachers consistently guide learners in recognizing misinformation, avoiding the disclosure of personal details, and practicing safe online behavior during school activities.

These findings are reinforced by prior studies: Livingstone et al. (2015) found that students are increasingly aware of online safety, Mishna et al. (2018) emphasized the crucial role of educators in managing online risks, and Chovet et al. (2023) highlighted the importance of teaching privacy and security to strengthen digital literacy.

Is there a significant relationship between the profile of the respondents and their level of digital literacy?

Technological Tools		Digital Literacy Skills of the Students			
		Critical Thinking and Evaluation	Effective Communication	The Ability to Find and Select Information	E-Safety
Educational Apps	r-value	0.433**	0.152	0.522**	0.422**
	p-value	0.005	0.343	<0.001	0.005
Learning Management System	r-value	0.284	0.266	0.617**	0.512**
	p-value	0.072	0.092	<0.001	<0.001
Gamification	r-value	0.655**	0.435**	0.610**	0.464**
	p-value	<0.001	0.005	<0.001	0.002

Legend: ** Correlation is significant at 0.05 level (two-tailed)

The correlation analysis presented in Table 8 demonstrates that the use of technological tools has a significant positive relationship with students' digital literacy skills. This means that when teachers integrate tools such as educational apps, learning management systems (LMS), and gamification strategies into their classroom practices, students show measurable improvements in critical thinking, effective communication, information selection, and e-safety. The data highlights that technology integration is not incidental but directly linked to the enhancement of essential digital competencies.

Educational apps emerged as particularly effective in strengthening evaluative skills and critical thinking. By providing interactive and personalized learning experiences, these apps encourage students to explore content independently, assess credibility, and apply knowledge in meaningful ways. Teachers observed that students using apps were more engaged in problem-solving and demonstrated stronger abilities to filter reliable information from unreliable sources, which is a cornerstone of digital literacy.

Learning Management Systems (LMS) also played a crucial role in organizing resources and promoting safe online practices. LMS platforms provided structured access to materials, facilitated communication between teachers and students, and reinforced responsible digital behavior. The correlation analysis suggests that LMS use is strongly associated with students' ability to collaborate effectively and maintain ethical standards in digital environments, making it a vital tool for both academic and civic development.

Gamification strategies, while primarily motivational, were also found to contribute positively to digital literacy. By incorporating points, badges, and rewards, teachers observed increased student engagement, responsibility, and persistence in completing tasks. Although gamification's impact on evaluative skills and e-safety was less pronounced compared to apps and LMS, its role in fostering enthusiasm and accountability cannot be overlooked. It complements other tools by sustaining student interest and participation.

These findings are consistent with prior research. Chiu (2022) reported that integrating digital technologies significantly boosts literacy outcomes, while Voogt & Roblin (2019) emphasized the role of educational technology in building digital competencies. Similarly, Castaño-Muñoz et al. (2018) confirmed that students who regularly engage with digital tools exhibit higher levels of literacy. The alignment of this study with earlier work reinforces the reliability of the observed correlations and underscores the global relevance of technology integration in education.

Overall, the study underscores that the strategic use of technology is a key determinant of digital literacy. While demographic factors such as age or years of service showed no significant influence, the choice and application of technological tools directly shaped student outcomes. This highlights the importance of equipping teachers with the skills and resources to integrate technology thoughtfully. Further analysis is needed to explore underlying factors, such as teacher preparedness and institutional support, which may influence the strength of these relationships.

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter provides a summary of the findings, conclusions, and relevant recommendations based on the study's results.

Summary

This research investigated the impact of technological tools on digital literacy in Social Studies education among junior high school teachers in Tanauan. A quantitative correlational design was employed, using a structured survey instrument to examine how teachers' use of apps and platforms relates to digital literacy outcomes. The questionnaire included items on both technological tools and literacy skills, with reliability testing confirming strong consistency. Data were analyzed through descriptive statistics and the Pearson Product Moment Correlation Coefficient to determine the relationship between teachers' integration of technology and their digital literacy practices. Overall, the study emphasized that technological tools significantly shape pedagogy and student learning, highlighting their role in fostering critical thinking, effective communication, and responsible digital engagement.

SUMMARY OF FINDING

The salient findings of the study are summarized as follows:

1. Most respondents were female teachers in their mid-thirties, with several years of teaching experience and most holding a master's degree, reflecting a well-qualified and academically prepared teaching group.
2. The study established a strong correlation between the use of technological tools and the improvement of digital literacy skills in Social Studies education. This underscores the importance of integrating apps, learning management systems, and gamification strategies to enhance students' digital competencies.
3. The research emphasized the transformative potential of digital tools such as Google Classroom, Canva, and gamification, which significantly improve student engagement, motivation, and performance. At the same time, challenges such as digital inequality, teacher preparedness, and the need for professional development were noted, highlighting the importance of equitable access initiatives like the Digital Rise Program in the Philippines.

CONCLUSION

1. The results obtained in the study led to the conclusion that the hypothesis being tested indicates a significant relationship between collaborative learning strategies and leadership skills among junior high school teachers. As a result, the null hypothesis proposed in the study is not supported.
2. Research confirms that students participating in collaborative learning environments tend to show enhanced leadership abilities, including stronger problem-solving and interpersonal communication skills.
4. There is a clear connection between the collaborative strategies used by teachers and the leadership skills of students, as such approaches promote active engagement and effective decision-making in group contexts.
5. The use of collaborative learning methods proves to be an impactful approach in nurturing leadership traits among students, highlighting the importance of teamwork and collective accountability in attaining group objectives.

Recommendations:

Based on the study's findings and conclusions, the following recommendations are provided

1. **Enhancing Student Digital Literacy:** Students should be encouraged to actively engage with technological tools in the classroom. Developing the ability to navigate and utilize these tools will strengthen their digital literacy skills, enrich their learning experiences, and prepare them for future technological demands.
2. **Integrating Technology in Teaching:** Teachers are advised to incorporate a variety of digital platforms and applications into their instructional strategies. This integration will enhance their own digital literacy while creating more engaging and effective learning environments. Continuous professional development in technology use is essential to sustain this growth.
3. **Supporting Infrastructure and Resources:** School administrators should prioritize investment in updated technological resources and infrastructure. Providing training opportunities and access to modern tools will foster an environment that promotes digital literacy across the curriculum.
4. **Expanding Research Horizons:** Future researchers are encouraged to explore the long-term impacts of technological tools on digital literacy. Comparative studies across different educational contexts and regions will broaden understanding of how technology integration influences Social Studies education.
5. **Policy Development and Implementation:** Policy makers should establish and implement policies that promote technology use in education. This includes funding for infrastructure, supporting teacher training, and setting clear standards for digital literacy integration within the curriculum.

Recommendation

This research is entitled The Impact of Technological Tools In Digital Literacy in Social Studies Education which was prepared and submitted by the researchers who are Chanra Nicole D. Aranas, Jan Marinie C. Cerda, and Joshua C. Malijan as part of the requirements for the Bachelor of Secondary Education Major in Social Studies, is recommended to be accepted for approval by the board

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APPROVAL SHEET

This research paper entitled **The Impact of Technological Tools in Digital Literacy in Social Studies Education**, prepared and submitted by Chanra Nicole D. Aranas, Jan Marinie C. Cerda in partial fulfillment of the requirements for the degree

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Aranas, C.N. Cerda, J.M.

Dedication

The researchers dedicate this hard work to our Almighty God, in awe of Your endless blessings, unwavering strength, and guiding light, we humbly offer their gratitude.

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APPENDIX

Respondent's Profile

Directions: This part of the instrument aims to survey personal information which will be needed to answer a specific problem posed in the study. Please respond to each item as completely as possible and select the option that corresponds to your response.

Name (Optional)

Variable	Categories
Age	24–32 years old
	33–40 years old
	41–49 years old
	50 and above
Years of Service	0–5 years
	6–10 years
	11–15 years
	16–20 years
	21–25 years
	26–30 years
Sex	Male
	Female
Educational Attainment	Bachelor's Degree
	Master's Degree
	Master's Units
	Doctoral Degree
	Doctoral Units

The Use of Technological Tools

Direction: This portion is designed to determine your assessment on the use of technological tools in improving the students' digital literacy. Check the option that corresponds to your answer on each item based on the following scales.

Numerical Value

4	Often
3	Sometimes
2	Seldom
1	Never

No.	Statements	4	3	2	1
1	I can easily share files with students, including documents, PPT, and videos using Google Classroom.				
2	I stay updated on Google Classroom that I can incorporate into my teaching.				
3	I use Canva to design presentations and visual aids for my lessons.				
4	I find Canva easy to use for designing educational materials.				
5	I use Google Classroom to provide feedback on student work.				
6	I consistently monitor students' engagement with the resources and activities I post on Google Classroom.				
7	I encourage my students to use Canva to design their own materials.				
8	I use Quizlet to help my students improve their performance on quizzes and tests.				
9	I use Quizlet to create study sets or flashcards for my lessons.				
10	I use Quizlet to assess my students' understanding of the material.				

Here is your **clean, publication-ready table**:

Table: Use of Learning Management System (Google Classroom) in Teaching and Learning

No.	Statements	4	3	2	1
1	I use Google Classroom to provide feedback on my students' activities.				
2	I use Google Classroom to post assignments and resources for my students.				
3	I track my students' submissions and completion of tasks in Google Classroom.				
4	I use Google Classroom to share multimedia resources, such as videos and slides.				
5	I use Google Classroom to manage announcements and assignments for my students.				
6	I use Google Classroom's grading tools to assess and record my students' work.				
7	I observe that my students complete assignments on time with the help of Google Classroom reminders.				
8	I notice my students seeking help or asking questions through Google Classroom's comment section.				
9	I observe that my students become more self-directed, using Google Classroom as a resource hub for their learning.				
10	I observe that my students revisit posted materials on Google Classroom to support their learning.				

No.	Statements	4	3	2	1
1	I observe that digital badges encourage my students to strive for specific learning achievements.				
2	I notice that my students enjoy collecting points, which enhances their motivation to participate in learning activities.				
3	I notice that earning digital badges helps my students stay focused and committed to their learning tasks.				
4	I observe that providing digital badges for completing assignments reinforces my students' learning.				
5	I use digital badges to encourage collaboration among my students to complete tasks.				
6	I use points as an incentive for my students to complete assignments on time.				
7	I observe that my students are more engaged in group tasks when they know they can earn points.				
8	I observe that my students are excited when they earn rewards for their achievements.				
9	I observe that students who receive rewards tend to develop a more positive attitude toward learning.				
10	I observe that my students become more responsible and organized when they know they can earn rewards.				

Critical thinking and evaluation- is the process of analyzing and evaluating information to make reasoned judgments, questioning assumptions and considering alternative perspectives. Evaluation involves assessing the value or effectiveness of something based on evidence, determining its validity and relevance.	(4)	(3)	(2)	(1)
1. I encourage my students to analyze complex information during discussion				
2. I use open-ended question to encourage my students think critically				
3. I provide opportunities for my students to assess the relevance of evidence presented in class				
4. I prompt my students to draw conclusions from the information discussed in class				
5. I create activities that challenge my students to use problem-solving skills				
6. I use rubrics that include criteria for evaluating critical thinking in assignment				
7. I present real-world problems for students to solve collaboratively				

8. I encourage peer questioning to foster collaborative learning experience				
9. I guide my students in reflecting on their questions to deepen their understanding of the subject				
10. I provide criteria for students to evaluate the quality of their own activities				

Effective communication- is the clear exchange of information, ensuring mutual understanding through active listening and appropriate feedback	(4)	(3)	(2)	(1)
1. I provide clear and concise instructions assignments or activities				
2. I observe my students actively participating in class discussions				
3. I use real-world examples to connect lessons to students lives and increase engagement				
4. I observe my students helping each other understand concepts during class				
5. I provide opportunities for students to share their thoughts and ideas during lessons				
6. I facilitate group activities that promote collaboration and communication to my students				
7. I encourage my students to ask questions to clarify their understanding of the material				
8. I consider the student's needs and interests into class discussions to enhance engagement.				
9. I use a variety of communication methods to engage students				
10. I provide feedback on my student work and performance.				

No.	Statements	4	3	2	1
1	I observe my students summarizing the information they find during discussions.				
2	I notice my students effectively use technology to find and select information during lessons.				
3	My students can evaluate the credibility and reliability of the information they find.				
4	I observe that my students are wise in choosing definitions from internet sources for their assignments.				
5	My students select information relevant to their tasks or assignments.				
6	I observe that my students recognize and avoid misinformation or biased sources.				
7	I observe my students logically organize the information they find for their tasks.				
8	I notice my students working collaboratively with peers to find and select reliable information.				
9	I review my students' searches in assignments to ensure they are selecting the correct information.				
10	My students can locate information that is aligned with our topic.				

No.	Statements	4	3	2	1
1	I notice that my students can distinguish between trustworthy and potentially harmful online content.				
2	I observe that my students are aware of how to protect their personal information online.				
3	I guide my students on the importance of logging out of accounts when using shared devices.				
4	I notice that my students are aware of how to identify and report cyberbullying incidents.				
5	I teach my students how to evaluate the credibility of online information sources.				
6	I observe that my students are respectful and polite in their online interactions.				
7	I notice that my students identify misinformation and fake news when searching online.				
8	I remind my students not to share their full name and address in online forms or links.				
9	I assess my students' practice of safe online behavior during school-related activities.				
10	I remind my students of safe internet practices.				



Republic of the Philippines
Department of Education
REGION IV - A CALABARZON
CITY SCHOOLS DIVISION OF TANAUAN

December 3, 2024

CHANRA NICOLE D. ARANAS et. al

Researchers

Tanauan Institute Inc.

J. Gonzales St., Brgy. 4

Tanauan City, Batangas

Dear Ms. Aranas:

Greetings of health and safety!

This is in connection with your letter dated November 29, 2024, regarding your request to administer a survey questionnaire among the junior high school teachers.

Relative to this, permission is granted provided that **DepEd Order No. 9 s. 2005, Instituting Measures on Time - On - Task and Data Privacy Act of 2012** will be strictly observed. It is also suggested that you directly coordinate with the school heads of the schools where your study will be undertaken.

Lastly, to fulfill our vision of continuous improvement for better service delivery, we request that you provide this office an e-copy of your findings and recommendations.

Yours truly,

NICOLAS M. BURGOS

Asst. Schools Division Superintendent

Officer-In-Charge

Office of the Schools Division Superintendent

3177 / SGOD-P & R LMF



Address: Pres. J.P. Laurel Highway, Poblacion 1, Tanauan City, Batangas 4232
Telephone No.: (043) 723-9015 / 723-9277 / 784-4788 / 403-9363
Email Address: tanauan.city@deped.gov.ph
Website: <https://depedtanauancity.com>

Mapusapang pagtingklat,
Inuuri ng pag-ano ng kabataan:
Angat Tanauan!

**Chanra Nicole D. Aramas***Banga, Talisay Batangas**Telepono: 09817515443**aranaschanranicole11@gmail.com***LEVEL OF EDUCATION****PRIMARY LEVEL OF EDUCATION**

Moises Salvador Elementary School

2010-2016

Gen. Geronimo St.

Sampaloc, Manila

SENIOR HIGH SCHOOL

Our Lady Assumption College

2020 – 2022

Tanauan, Batangas

SECONDARY LEVEL OF EDUCATION

Balas Buco St. Maria National High School

2016-2020

Balas, Talisay Batangas

PERSONAL INFORMATION**Age:** 21**Date of Birth:** May 11, 2003**Place of Birth:** Quezon City**Nationality:** Filipino**Weight:** 48**Sex:** Female**Religion:** INC**Height:** 5'5**Civil Status:** Single**CHARACTER REFERENCE**

Mr. Romeo M. Aranas

09567124580

Banga, Talisay Batangas

"I hereby certify that all the information stated above is true and correct to the best of my knowledge and belief. Any false statement or misrepresentation may result in the rejection of this application."

**CHANRA NICOLE D. ARANAS***Signature Above Printed Name*

**Jan Marinie C. Cerda***Brgy. Pagaspas, Tanauan City, Batangas**Telephone: 09667941088**janmarinieccerda@gmail.com*

LEVEL OF EDUCATION

PRIMARY EDUCATION

San Antonio Elementary School

2010-2016

San Antonio, Sto. tomas Batangas

SECONDARY EDUCATION

San Pedro National High School

2016-2020

San Pedro, Sto. tomas Batangas

SENIOR HIGH SCHOOL

Tanauan Institute, Inc.

2020 – 2022

Tanauan City, Batangas

PERSONAL INFORMATION**Age:** 22**Sex:** Female**Date of Birth:** March 20, 2003**Religion:** Roman Catholic**Place of Birth:** Binangonan Rizal**Height:** 5'5**Nationality:** Filipino**Civil Status:** Single**Weight:** 70

CHARACTER REFERENCE

Marites C. Cerda

09959105598

San Vicente, Sto. Tomas Batangas

"I hereby certify that all the information stated above is true and correct to the best of my knowledge and belief. Any false statement or misrepresentation may result in the rejection of this application."

**JAN MARINIE C. CERDA**

Signature Above Printed Name



TANAUAN INSTITUTE, INC.
J. Gonzales St. Brgy. 4, Tanauan City
Tanauan City Batangas
COLLEGE DEPARTMENT

November 12, 2024

Ms. Madelle Masongsong
Teacher, SHS Department
Tanauan Institute Inc.

Dear Ma'am:

Greetings of Peace!

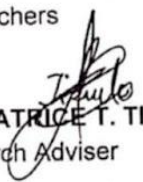
We are students in Tanauan Institute taking up Bachelor of Secondary Education Major In Social Studies conducting a study entitled " **THE IMPACT OF TECHNOLOGICAL TOOLS IN DIGITAL LITERACY IN SOCIAL STUDIES EDUCATION**" as part of our requirements in Research in Social Studies.

As our validator, we would like to ask your approval for the research instrument to be used in measuring the variables needed in the study. attached herewith is the copy of the questionnaire to be administered for the said research. Your comments and suggestions will be highly appreciated and will be of great help to this undertaking.

I am hoping for your favourable response and wholehearted consideration on this matter.

Thank you very much and God Bless!

Sincerely yours,
Aranas, Chanra Nicole D.
Cerde, Jan Marinie C.
Malijan, Joshua C.
Researchers

Noted:

BEL PATRICE T. TISUELA
Research Adviser

Approved:

Ms. Madelle Masongsong
Teacher, SHS Department



TANAUAN INSTITUTE, INC.
J. Gonzales St. Brgy. 4, Tanauan City
Tanauan City Batangas
SENIOR HIGH DEPARTMENT

November 12, 2024

Ms. Nicca Angela Piamonte
 Teacher, SHS Department
 Tanauan Institute Inc.

Dear Ma'am:

Greetings of Peace!

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Malijan, Joshua C.
 Researchers

Noted:
BEL PATRICE T. TISUELA
 Research Adviser

Approved:
Ms. Nicca Angela Piamonte
 Teacher, SHS Department



TANAUAN INSTITUTE, INC.
J. Gonzales St. Brgy. 4, Tanauan City
Tanauan City Batangas
COLLEGE DEPARTMENT

November 12, 2024

Ms. Jolina Ramos
 Teacher, SHS Department
 Tanauan Institute Inc.

Dear Ma'am:

Greetings of Peace!

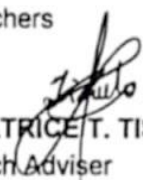
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 Researchers

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BEL PATRICE T. TISUELA
 Research Adviser

Approved:
Ms. Jolina Ramos
 Teacher, SHS Department

