

# Digital Competence and Students' Readiness for E-Learning in the Local College of Santo Tomas, Davao Del Norte

Renie Jane R. Cubijano<sup>1</sup>, Christian M. Deadio<sup>2</sup>, Catherine F. Madjos<sup>3</sup>, John Mark B. Lazaro<sup>4</sup>

<sup>1,2,3</sup>Student, Santo Tomas College of Agriculture Sciences and Technology, Philippines

<sup>4</sup>Instructor, Santo Tomas College of Agriculture Sciences and Technology, Philippines

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## ABSTRACT

Students' readiness for e-learning is essential for achieving outcomes in online education, as it directly influences how effectively learners engage in a virtual environment. This study aimed to determine the significant relationship between digital competence and students' readiness for e-learning in the Local College of Santo Tomas, Davao del Norte. The respondents of the study were 300 fourth-year students selected through simple random sampling. Two adapted survey questionnaires were used to measure digital competence in terms of command, privileging, appropriation, and reintegration, and students' readiness for e-learning in terms of technology access, technology skills, study skills, time management, and motivation. This study utilized quantitative non-experimental research through a descriptive correlational design. Mean and Pearson  $r$  were employed as statistical tools in analyzing the data. The findings revealed that the level of both digital competence and students' readiness for e-learning was high, indicating that both variables are oftentimes observed. Moreover, the results showed a very strong and significant relationship between digital competence and students' readiness for e-learning. This implies that higher levels of digital competence are associated with higher levels of readiness for e-learning. Therefore, students with higher levels of digital competence tend to demonstrate greater readiness for e-learning, reflected in the ability to effectively use digital tools in online learning environments. This suggests that enhancing students' digital skills can positively influence engagement, motivation, and success in e-learning.

**Keywords:** Digital Competence, Students' Readiness for E-Learning, Correlational Research Design, Philippines

## INTRODUCTION

Students' readiness for e-learning involves the ability to effectively use digital technologies, take responsibility for their own learning, and adapt to technology-based educational settings (Reyes et al., 2021). However, Barrot et al. (2021), stated that many college students experienced a considerable level of difficulty that involved home environment, mental health, as well as the inability to remain focused or engaged; although technological skills were not a problem among the participants, a range of problems related to the living conditions and overall well-being were causing students to give little motivation to engage in online learning. In addition, low motivation and dissatisfaction with online teaching reduce the urge among the students to engage in e-learning activities. Consequently, Wagiran et al. (2022), argue that negative technology experiences have a mediating connection with e-learning preparedness that falls on lower motivation, which eventually reduces the sense of preparation and the efficiency of learning in students.

Consequently, Siregar (2022), found that university students' technological competence and motivation had a strong effect on their willingness to engage in e-learning, which mediated between student satisfaction with the online learning.

This also indicates that self-management of learning, lecturer quality, and access to technology were prominent dimensions to influence student readiness in the online learning context of higher education, which

makes it multi-dimensional, as Fadhilah and Husin (2023) discovered. Importantly, Ramos et al. (2024), demonstrated that e-learning preparedness is directly connected with learning engagement and mediates the relationship between engagement and learning achievement, which means that even when students are prepared, they can still engage in learning and still underperform.

In addition, Kallas and Pedaste (2022), state that digital competence largely determines the preparedness of students to e-learning since it involves the skill, knowledge, and attitude to be used. The research has brought out the importance of behavioral intention to utilize digital devices in the development of such competencies, influencing the overall effectiveness of e-learning. Similarly, Scheel et al. (2022) explained that students with stronger digital skills and better self-organization tend to be more prepared and self-assured when taking part in online learning. They also observed that digital competence is one of the factors that determines the success of students in virtual learning classes. Furthermore, Ibrahim et al. (2023), affirmed that students exhibiting developed digital skills have a greater self-efficacy and academic success, which indicates that digital skills are not merely a precondition for preparation but also for positive learning results.

Despite the studies on digital competence and e-learning readiness, researches on the interaction of these factors in local college setting especially in Santo Tomas, Davao del Norte are limited. The available literature is also more inclined towards large universities or national samples, which creates a gap in understanding the specific experience and readiness level of the students in smaller institutions, which are based on communities. Addressing this gap is urgent considering the increased use of digital learning platforms in higher education institutions. In addition, the study is significant because it provides local data that help educators and policymakers create targeted strategies to improve students' digital competence and readiness for e-learning. Furthermore, this study supports Sustainable Development Goal (SDG) 4: Quality Education. This goal focuses on inclusive and equitable education and lifelong learning. The goal highlights the importance of digital skills for meaningful participation in education, particularly in rural or developing communities like Santo Tomas.

### **Statement Of The Problem**

This study determines the significant relation between Digital Competence and Students' Readiness for E-Learning in the Local College of Santo Tomas, Davao del Norte. Specifically, this sought to answer the following questions:

1. What is the level of Digital Competence in terms of:
  - 1.1 command;
  - 1.2 privileging;
  - 1.3 appropriation; and
  - 1.4 reintegration?
2. What is the level of Students' Readiness for E-Learning in terms of:
  - 2.1 technology access;
  - 2.2 technology skills;
  - 2.3 study skills;
  - 2.4 time management; and
  - 2.5 motivation?
3. Is there a significant relationship between Digital Competence and Students' Readiness for E-Learning?

## Hypothesis

The null hypothesis was tested at a 0.05 level of significance, stating no significant relationship between digital competence and students' e-learning readiness.

## Theoretical Framework

This study draws on Adaptive Structuration Theory (AST) by Desanctis and Poole (1994), which states that Adaptive Structuration Theory describes the way, in which features and structures that are incorporated in information technologies are and adopted by users in context; the digital competence in students influences how they appropriate e-learning tools (which structures they use, modify, or ignore) and, thus, their willingness to engage in online learning. Since AST prefigures the interaction between affordances of technology and user activity, it can be used to understand the difference in readiness: two students who have the same LMS could exhibit various levels of readiness due to digital skills and appropriation habits. Also, this is supported by the study of Shaya (2020), that it aims at student preparedness, intention, and acceptance of online learning, the competence towards self-competence, motivation, and obstacles influencing the e-learning transition in tertiary education.

In addition, Self-Efficacy Theory by Bandura (1977), assumes that the belief in the abilities of people is a predictor of their motivation and intention to perform tasks, which can be applied to digital situations as well, because a higher level of digital (or computer) self-efficacy implies the willingness and perseverance of students to use e-learning tools. To put it in other words, digital competence enhances task-specific self-efficacy, which, in turn, contributes directly to students' willingness to participate effectively in online learning. Furthermore, the study by Hu et al. (2024), explains that increased self-confidence is associated with enhanced digital skills, allowing students to utilize e-learning platforms efficiently

## Conceptual Framework

The conceptual structure of the study's variables is shown in Figure 1. The independent variable is digital competence with four indicators: Command, Privileging, Appropriation, and Reintegration (Conde-Jimenez, 2018). The dependent variable is students' readiness for e-learning with five indicators: Technology Access, Technology Skills, Study Skills, Time Management, and Motivation (Tuntirojanawong, 2013).

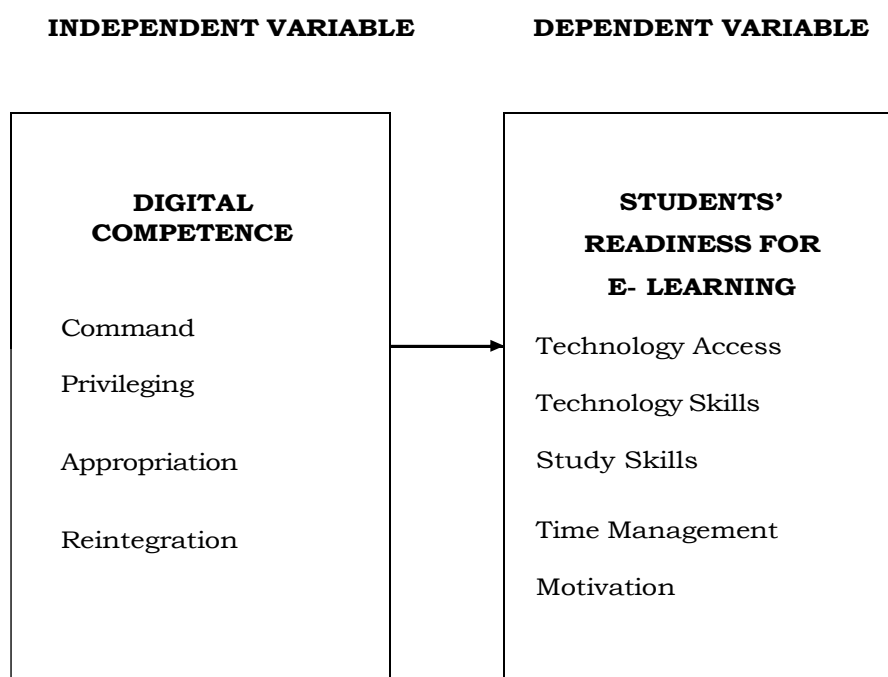


Figure 1. The Conceptual Paradigm of the Study

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## Significance of the Study

The result of the study is beneficial to the following entities and authorities:

**Commission on Higher Education (CHED).** This study is relevant to the Commission on Higher Education (CHED), as it may help inform policy development and support the implementation of digital learning programs in higher education institutions. By examining data on students' digital competence and e-learning preparedness at a local college in Santo Tomas, Davao del Norte, the study presents evidence to CHED on the effectiveness of the current policies and support strategies in place for digital learning. The results could be used to identify gaps in students' digital skills, access to technology, and readiness to study online, enabling CHED to develop specific interventions, capacity-building activities, and the equal distribution of resources. Finally, the findings may inform CHED in facilitating inclusive, accessible, and high-quality e-learning settings, especially in colleges in developing regions.

**School Administrator.** The study can serve as a valuable resource for school administrators since it provides them with the helpful data regarding the digital competence and e-learning readiness of the students at the local college in Santo Tomas, Davao del Norte. The awareness of true digital capability of the students, accessibility of technology, and willingness of the students to study online assist the administrators in making sensible decisions on the policy regarding the utilization of technology at the institutional level, online digital training courses, and required changes in infrastructure. The findings assist school leaders to know which areas require further support and resources, such as improvement of technological facilities, training of faculty, or digital literacy programs. In the end, this study can inform administrators to create a more accommodating, effective, and student- focused online learning that would enhance student achievement and smooth adaptation to online learning.

**Teachers.** The study would be helpful to teachers since it would provide knowledge regarding the measures of digital fluency and readiness of the students to e-learning in a local university in Santo Tomas, Davao del Norte. The findings can be used to help the teacher change instructional practices, learning materials and examinations, adopt more interactive and inclusive online learning, and enhance learners' digital literacy. Altogether, the study provides useful data to facilitate the success of students in distance education and enhance the standards of the teaching process in the technological world.

**Parents.** The study is useful to the parents of the students as it helps them know the degree of digital competence and preparedness of their children to e-learning at the local college of Santo Tomas, Davao del Norte. Knowing the technological strengths and weaknesses of their children, parents can play a more active role in advising and helping them acquire digital and study skills to successfully engage in online learning. The findings indicate that a positive home environment featuring digital devices, reliable internet connections, and encouraging responsible and productive use of technology is necessary.

**Students.** The study is relevant to the students, as they are in a position to assess their digital competence and readiness to engage in e-learning at the local college of Santo Tomas, Davao del Norte. Aware of the pros and cons of online learning, students are encouraged to be more active participants in acquiring required digital skills, navigating online academic procedures, and attending online classes. Following the results, the students are also able to be sensitized to the need to seek additional support, training, and learning resources to become digitally literate, flexible, and more confident in online education. Finally, the present study empowers students to improve their e-learning preparedness, thereby enhancing their future academic performance and preparing them to meet future academic and professional demands in a digitalized world.

**Future Researchers.** The current study is an excellent resource to other researchers in the future, as it gives a good background to other studies on digital competence and e-learning preparedness in higher institutions. Introducing facts and experiences of the local college of Santo Tomas, Davao del Norte, the study provides a clear picture of what is happening, what is a challenge, and what is an opportunity in a technology-based learning setting. The findings can help future scholars to compare the results across institutions, revise the research instruments, or investigate other factors that influence the effectiveness of digital learning. Finally, the research adds to the existing research on the subject of digital education and contributes to future studies

focused on increasing the level of student readiness and facilitating fair and efficient e-learning activities in the education setting.

## Definition Of Terms

The study used specific terms and definitions. The following terminologies were defined both conceptually and operationally to help readers understand:

**Digital competence.** This refers to the attitude, knowledge, awareness, and skills that have been described, which constitute a set of values that are very important when using disruptive digital technologies and tools within an organization (Sandhu, 2021). The operational concept of digital competence implies that students are capable of using digital technologies, tools, and online platforms to facilitate learning activities with the confidence and efficacy needed to promote preparedness for e-learning.

**Command.** This is a minimum of instrumental and operational knowledge and skills necessary to effectively access and utilize digital technologies, for example, the knowledge of how to operate devices and common computer software, perform routine digital activities, and implement basic technical processes that are necessary to engage in digital activities (Nikolova, 2024). In this research, it is operationally defined as the degree of proficiency and control of the students in using digital tools and online learning platforms, which represent their digital competence and add to their preparedness for e-learning.

**Privileging.** This is the attitude of the learner to prioritizing and critically choosing the digital resources and tools (valuing ICTs as meaningful problem-solving and learning resources (giving them precedence over other resources at times), such as critical appraisal of online material, sensitivity to the reliability of sources, and the selection of the most relevant digital tools to personal learning (Tarigan, 2024). In this study, privileging is operationally defined as the students' preferential access to and advantage in using digital resources and technologies, which enhances digital competence and readiness to engage effectively in e-learning.

**Appropriation.** Appropriation refers to the use of digital technologies as tools and is the process through which these technologies are utilized (Tchounikine, 2025). In this research, the operational concept of appropriation is the students' capacity to internalize and effectively integrate digital technology into learning processes, as a manifestation of digital competence that can be used to facilitate preparedness for e-learning.

**Reintegration.** Reintegration (as a digital-competence construct): the capacity of the learner or the teacher to re-incorporate into daily professional, educational, or social practices digital tools, practices, and resources that they have learned or adopted (Basantes-Andrade et al., 2022). Operationally, the concept of reintegration can be described as the ability of the students to be adaptive and reuse digital competencies and online experiences in diverse online situations, which is a demonstration of sophisticated digital competence and reinforces preparedness for e-learning.

**Students' Readiness for E-learning.** This is the state in which students can participate in online learning, defined as preparedness, gauged by the dimensions of self-management of learning, the quality of lecturers, and access to technology (Fadhilah, 2023). In this study, the operational definition of students' preparedness to engage in e-learning is how well students operate with digital tools, as reflected in their level of digital competency, which includes their knowledge, skills, and confidence in using digital tools to complete online learning tasks.

**Technology access.** This refers to access to various technological resources that can be utilized to improve instruction and support student learning. This includes access to both instructional tools and web-based technologies (Krishnan, 2022). In this research, technology access is defined operationally as the availability and sufficiency of digital devices, internet access, and technological resources that facilitate the effective acquisition of digital competence and engagement in e-learning activities by students.

**Technology skills.** Technology skills are the knowledge of student in higher education to explore, identify, handle, and employ digital technologies and devices (e.g., software applications, digital devices, online

platforms) in a personal, social, academic, and professional work effectively (Rodrigues, 2021). In this study, the operational definition of technology skills is the skills of the students to effectively utilize digital devices, software applications, and online platforms to become technologically competent and be able to perform e-learning activities.

*Study skills.* Strategies and practices of processing and understanding new information in an effective and efficient way (e.g., organizing, highlighting, reviewing, note taking, using study aids), i.e., the intellectual/strategic ways in which students process and learn new information (Abid et al., 2023). In this research, study skills are operationalized in terms of how the students manage time, organize learning activities, and use effective study skills to be digitally competent and willing to engage in the e-learning environments successfully.

*Time management.* Time management is how the student can plan, schedule and control the time he/she uses on academic activities; especially in digital or technology-mediated learning situations because digital competence will allow the student to employ more tools and methods, address problems in learning, and streamline academic activities (Galindo-Domínguez, 2021). The operationally determined definition of time management is the capacity of the students to organize, prioritize, and devote time to the online learning activities, which will be one of the characteristics of their digital competence and general preparedness to e-learning.

*Motivation.* Motivation refers to the psychological influence that clarifies a person's reasons for their actions. It serves as the driving force behind human behaviors (Cherry, 2023). In this study, the operational definition of motivation is the inner drive and desire of the students to deal with digital tools and online learning activities, which increases digital competence and preparedness to be a successful part of e-learning.

## METHODOLOGY

This chapter presents the research methodology used in examining the relationship between digital competence and students' readiness for e-learning in the local college of Santo Tomas, Davao del Norte. The chapter covers the study location, participants, research instruments, data collection procedures, statistical methods, and ethical considerations used to analyze the gathered data.

### Research Design

The research design employed in this study was a quantitative, non-experimental study encompassing descriptive and correlational research designs. Moreover, according to Nwabuko (2024), the quantitative non-experimental research design is used when observational studies are conducted, and variables are not manipulated. Furthermore, Mweshi and Muhyila (2024), stated that research design involves a study in which the variables are not manipulated but rather observed and measured in their natural state.

Moreover, Bag-ao and Dioso (2024), state that a descriptive- correlational design is appropriate when the researcher does not intend to manipulate the variables but instead describes the phenomena and determines relationships between identified variables, and look for another meaning of descriptive-correlational design that would support this statement. This statement is supported by the study by Picazo-Sánchez et al. (2022), which states that a descriptive-correlational study assesses naturally occurring variables to identify relationships and does not entail variable manipulation.

In addition, the researchers employed the design described above to address the study's main objectives and focus. The researcher used a descriptive approach to determine and assess the level of digital competence and e-learning readiness among students at the local college. It also involved the use of mean tests to measure students' competency and readiness levels. Furthermore, the correlational method was used to examine the relationship between digital competence and students' e-learning readiness, aiming to gain deeper insight into the extent and nature of this relationship.

## Research Locale

Figure 2 shows a map of the Davao Region, emphasizing Santo Tomas, Davao del Norte, the location where the study was conducted. Santo Tomas is recognized as a first-class municipality in the province and comprises 19 barangays. Based on the 2024 census, the municipality recorded a population of 131,100 residents.

Santo Tomas is situated on the island of Mindanao within the second political district of Davao del Norte. It is bordered to the north by the municipalities of Kapalong and Talaingod, to the east by Asuncion, to the west by Davao City, and to the south by Braulio E. Dujali.

The municipality was named after Saint Thomas, the patron saint of Danao, the hometown of the late Vicente Duterte, former governor of the once-undivided Davao Province and father of the 16th Philippine President, Rodrigo R. Duterte. Originally called Tibal-og, the area was previously under the jurisdiction of the nearby municipality of Kapalong. Before the 1950s, it was a vast forest inhabited by the indigenous Ata-Manobo people and enriched by the intermingling cultures of the Mandaya and Ata-Manobo tribes.

The study took place in the Municipality of Santo Tomas, Davao del Norte, with students in a local college serving as respondents. The location was chosen because it has a large student population who are actively engaged in digital learning environments, making them well-positioned to provide meaningful insights into digital competence and readiness for e-learning.



Figure 2. Map of the Philippines Highlighting the Municipality of Santo Tomas

## Research Subject

The respondents of this study were 300 fourth year students studying at a local college in Santo Tomas, Davao del Norte. They were chosen using a simple random sampling method. According to Singh (2023), simple random sampling (SRS) is a method of selecting a sample where each unit from a population has an equal probability of being chosen. This allowed all possible combinations of units to be formed with the same chance of selection.

## Research Instrument

The researchers used two (2) adapted survey questionnaire for independent variable and dependent variable. The questionnaires were validated by the panelists and an external validator to ensure validity.

## Digital Competence Questionnaire

The questionnaire used to get the level of Digital Competence, was from the research study titled “Digital Competence as an Indicator of the Impact of ICT Educational Policies: Validation Of A Theoretical Model Using PLS” (Conde-Jiménez, 2018). The questionnaire consists of 22 items covering the following aspects: Command (6 items), Privileging (7 items), Appropriation (5 items), Reintegration (4 items). Respondents rated each item using a 5-point Likert scale, from 5 for “Always”, 4 for “Oftentimes”, 3 for “Sometimes”, 2 for “Seldom”, and 1 for “Least”.

The parameter used for the interpretation of Digital Competence and Students’ Readiness for E-Learning of college students studying in a local higher education institution in Santo Tomas, Davao del Norte, were the following:

Range of Mean	Descriptive Level	Interpretation
4.20 – 5.00	Very High	Digital Competence was always observed
3.40 – 4.19	High	Digital Competence was oftentimes observed
2.60 – 3.39	Moderate	Digital Competence was sometimes observed
1.80 – 2.59	Low	Digital Competence was seldom observed
1.00 – 1.79	Very Low	Digital Competence was least observed

## Students’ Readiness for E-learning Questionnaire

The questionnaire used to get the level of Students’ Readiness for E-learning, is from the research study titled “Students’ Readiness for E-learning: A Case Study of Sukhothai Thammathirat Open University, Thailand” (Tuntirojanawong, 2013). The questionnaire consists of 25 items covering the following aspects: Technology access (5 items), Technology skills (5 items), Study skills (5 items), Time management (5 items), Motivation (5 items). Respondents rated each item using a 5- point Likert scale, from 5 for “Always”, 4 for “Oftentimes”, 3 for “Sometimes”, 2 for “Seldom”, and 1 for “Least”.

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3.40 – 4.19	High	Students’ Readiness for E-learning was oftentimes observed
2.60 – 3.39	Moderate	Students’ Readiness for E-learning was sometimes observed
1.80 – 2.59	Low	Students’ Readiness for E-learning was seldom observed
1.00 – 1.79	Very Low	Students’ Readiness for E-learning was least observed

## Data Collection

The researchers used the following procedures to gather data:

**Seeking authorization to undertake research.** The researcher sought approval to obtain the consent of the Research Director to collect the data. The research questionnaire was reviewed and validated by the validators. To conduct the research formally, the researchers requested an Ethics Certificate prior to conducting the study.

**Asking permission from the respondents.** The respondents were informed by giving them informed permission forms prior to the collection of any data. The research was carried out with a high value of protection of data privacy and security. It similarly adhered to ethical standards, where well-being, equity, and the dignity of all participants were being taken care of. The study would explain to the respondents the aim of the study, their anticipated roles, and the use of their data to the respondents before any data were collected.

**Questionnaire Distribution and Retrieval.** Upon approval, the researchers provided the research equipment to the subjects. To support the validity and reliability of the study, researchers are keen on the distribution and collection of questionnaires to persuade respondents to respond fully.

**Collecting and analyzing data.** Analysis of the research data, its summary, and tabulation followed the collection of research instruments. In order to make the right interpretation, the researchers consulted an assigned statistician.

### Statistical Tools

The following statistical tools were used to compute data and test the hypothesis at an alpha 0.05 level of significance.

**Mean.** The mean is a statistical instrument that is used to indicate the average in a set of data. It is calculated by summing all the data values and dividing the result by the number of observations (Luís et al, 2023). In the present research, the average was used to evaluate the values of Digital Competence and Students' Readiness towards E-learning at the local college of Santo Tomas, Davao del Norte.

**Pearson r.** Pearson r is a correlation coefficient that lies between the negative and positive values of one and is used to show whether there is a linear relationship between two continuous variables and its strength (David et al., 2020). Pearson r was used in this study to test the correlation between Digital Competence and Students Readiness to E-learning in the local college of Santo Tomas, Davao del Norte.

### Ethical Consideration

**Social Value.** The research provides social value by studying the digital competence and e-learning preparedness of students at the local College of Santo Tomas in Davao del Norte. The results can guide teachers and schools to enhance the strategies of online learning, provide superior instruction support, minimize digital barriers, and make the process of online learning more inclusive and effective.

**Informed consent.** In this study, informed consent was obtained from all the participants in a clear and direct form by distributing it physically to secure a signed copy of the research study. The form described the purpose of the study, procedures, risks involved in the study, expected benefits, and the use of the data obtained from the study. The rights of the participants were also explained to them, such as the right to participate willingly, the right not to answer or ask any question, and the right to leave the study at any stage without any penalties. The words used were simple and non-technical to ensure complete understanding.

**Vulnerability of Research Participants.** The participants of this study were college students who could provide voluntary and informed answers, and they, therefore, were not regarded as very vulnerable. Nevertheless, their safety was an area of concern. Data were collected in a neutral and non-directive environment that prevented the pressure or influence of any kind, and ensured that no instructors or school officials were present at the time of conducting the survey. Strict anonymity was ensured to ensure that the students feel free and comfortable in giving truthful answers regarding their digital competency and e-learning preparedness.

**Risk, Benefits, and Safety.** The research posed a low risk to the subjects. The questions in the survey were not invasive and referred only to the overall digital skills and experience of e-learning. There was a likelihood that some participants would have some slight discomfort in thinking about the limitation of their digital competence, but this was reduced through the development of neutral and non-judgmental questions. These

small risks were not as significant as the anticipated benefits may be since the study may bring rich information on how to enhance online learning systems, training programs, and student support services in the institution. There were no anticipated physical, psychological, or social damages.

**Data Privacy and Confidentiality.** In this study, data privacy and confidentiality were strictly protected throughout the study. The main information was gathered only to the necessary points, and none of the identifying details were shown in the analysis, reports, or presentations. Participation was on a voluntary basis, and the students had the option of skipping questions or dropping out without penalty. Any electronic files were saved on password-protected devices, while the paperwork was stored in locked cabinets accessible only to the researchers. Data were used only in the academic context and safely disposed of when the study was completed.

**Justice.** The study ensured fair selection of respondents by using clear inclusion criteria and choosing participants who accurately represent the student population of the local college of Santo Tomas. Bias was avoided by treating all respondents equally, maintaining neutrality during data collection, and ensuring that no participant was favored or disadvantaged at any point in the process. Participants received just compensation for the time they dedicated to the study, and reimbursements were provided if they incurred any expenses while taking part in the research. All respondents were informed of both the minimal risks and potential benefits, ensuring that everyone had a fair understanding of their participation. The study underwent a series of research defenses, and all data-gathering tools were reviewed and validated by field experts to guarantee scientific validity.

**Transparency.** The research ensured that the entire process, as well as the nature and extent of participation, was clearly explained to all respondents so they could make an informed decision about whether to participate in the study. The results of the study were made known to the respondents, should the respondents wish to. The researcher made sure that all findings were correct according to the statistical outcomes, and there was no manipulation or transformation of the data. The rights and well-being of all respondents were highly guarded through confidentiality and voluntary participation in the study.

**Adequacy of Facilities.** The researcher guaranteed the availability of all requisite facilities and resources to execute the study on digital competence and readiness to e-learning among students in the local college of Santo Tomas adequately. The college library provided access to material needed for references, and therefore, the study has the support of credible and relevant literature. The researcher also possesses a functional laptop and sound internet connectivity that allowed effective data collection, analysis, and communication during the research process.

**Community Involvement.** The research participants were members of the academic community, such as panel members, school heads, teachers and students, who were involved in the provision of guidance, feedback, and participation during the research process. It also engaged the wider community of scholars by allowing opportunities for the study to be presented at research conferences, where findings can be shared, evaluated, and enriched through academic discussions.

## RESULTS

This chapter presents the analysis and interpretation of data gathered from the students of the Local College of Santo Tomas, Davao del Norte, on the level of digital competence and students' readiness for e-learning. The organization and presentation of data were based on the statement of the problem outlined in Chapter 1.

### Level of Digital Competence of Students

The descriptive statistics findings on determining the level of digital competence were shown in Table 1, which had an overall mean of 4.16 and a standard deviation of 0.85, described as high. This means that the digital competence of students studying in the local college of Santo Tomas, Davao del Norte, is often observed. The result also shows that Appropriation has the highest mean of 4.26 and standard deviation of 0.89, with a descriptive level of very high, which implies that appropriation is always observed. This means that students

consistently demonstrate strong appropriation of digital competence, as they always practice responsible online behavior, protect personal information, and effectively use computers for independent learning and creative tasks. On the other hand, Command has the lowest mean of 4.07 and standard deviation of 0.84, with a descriptive level of high, which means that Command is often observed. This means that students oftentimes demonstrate command of digital competence, reflecting their ability to use basic digital equipment, manage various applications and platforms, create and organize digital content, and apply legal and ethical awareness in digital media use.

Table 1 Summary of the Level of Digital Competence

Indicators	Mean	SD	Descriptive Equivalent
1. Command	4.07	0.84	High
2. Privileging	4.22	0.80	Very High
3. Appropriation	4.26	0.89	Very High
4. Reintegration	4.10	0.88	High
<b>Overall</b>	<b>4.16</b>	<b>0.85</b>	<b>High</b>

**Level of Students’ Readiness for E-Learning**

The descriptive statistics on the level of students’ readiness for e- learning were presented in Table 2, which had an overall mean of 4.15 with a standard deviation of 0.85, described as high. This implies that students’ readiness for e-learning in the Local College of Santo Tomas, Davao del Norte, is oftentimes observed. The results reveal that Time Management and Motivation obtained the highest mean of 4.21 with a standard deviation of 0.81, both described as very high, implying that both time management and motivation are always observed. This indicates that students always demonstrate strong time management, consistently scheduling tasks, completing assignments ahead of time, exercising self-discipline, and actively participating in online courses. Likewise, students exhibit strong motivation, setting clear learning goals, staying focused despite online distractions, appreciating the flexibility of online learning, and remaining motivated even with the limited presence of the instructor. In contrast, Technology Access has the lowest mean of 4.01 and standard deviation of 0.98, with a descriptive level of high, which means that technology access is oftentimes observed. This implies that students oftentimes demonstrate technology access, as they generally have daily access to computers both at home and on campus, possess necessary software and virus protection, and can reliably connect to the internet for e-learning activities.

Table 2 Summary of the Level of Students’ Readiness for E-Learning

Indicators	Mean	SD	Descriptive Equivalent
1. Technology Access	4.01	0.98	High
2. Technology Skills	4.12	0.85	High
3. Study Skills	4.19	0.81	High
4. Time Management	4.21	0.81	Very High
5. Motivation	4.21	0.81	Very High
<b>Overall</b>	<b>4.15</b>	<b>0.85</b>	<b>High</b>

## Correlation Between Digital Competence and Students' Readiness for E-Learning

Displayed in Table 3 is the relationship between digital competence and students' readiness for e-learning. The table shows an overall  $r$ -value of 0.822 with a  $p$ -value of 0.001, which is less than 0.05, thus indicating that the null hypothesis is therefore rejected. This means that there is a very strong positive relationship between digital competence and students' readiness for e-learning. This further demonstrates that students' digital competence is correlated to the readiness for e-learning in the Local College of Santo Tomas, Davao del Norte.

Table 3 Significance of the relationship between digital competence and students' readiness for e-learning

Variables Correlated	Mean	r	p- value	Decision on Ho	Decision on Relationship
Digital Competence	4.16				
Students' Readiness for E- learning	4.15	0.822	<0.001	Rejected	Significant

## DISCUSSION

This chapter presents the summary, conclusions, and recommendations of the research findings. The results focus on the relationship between digital competence and students' readiness for e- learning in the local college of Santo Tomas, Davao del Norte.

### Level of Digital Competence of Students

The results revealed that students at the local college of Santo Tomas, Davao del Norte, have a high level of digital competence, which is often observed. This indicates that students often demonstrate their skills in using digital tools and technology. However, some aspects of digital competence may still need improvement for students to reach the highest level. The findings confirm the statement of Mejias-Acosta et al. (2024), that digital competencies, such as communication, information management, content creation, and digital empathy, represent essential capabilities for university students to use technology interactively and enhance their learning experiences, highlighting the importance of high digital competence in contemporary education. Similar to the statement of Cabero-Almenara et al. (2023), which states that higher education students' digital competence is a key predictor of their academic performance, indicating that students' ability to use digital technology is critically linked to success in digital learning environments.

### Level of Students' Readiness for E-Learning

The findings indicate that students' readiness for e-learning in the local college of Santo Tomas, Davao del Norte, has a high descriptive level, suggesting that readiness is often observed. This means that students are often able to effectively engage in online learning, demonstrating the ability to access technology, manage their study time, apply digital skills, and stay motivated in e-learning environments. The results aligned with the study of Kusel et al. (2020), which states that students' readiness for using digital media and online learning relies on their competencies with digital tools and confidence in engaging with online environments, supporting the idea that students often demonstrate readiness to engage effectively in e- learning. The findings are similar to the study of Lakshmi and Majid (2024), that students' readiness for e-learning is strongly associated with their confidence and competence in using digital tools and online learning platforms, as the study revealed that students demonstrated proficiency and comfort in managing digital learning activities such as LMS platforms, handling online files, and participating in virtual courses which supports the idea that students with stronger digital competencies are more prepared to engage effectively in e-learning environment.

## Correlation Between Digital Competence and Students' Readiness for E-Learning

The study examined the relationship between digital competence and students' readiness for e-learning. The correlation analysis revealed a very strong positive correlation between the two variables. This indicates that

digital competence and students' readiness for e-learning have a significant relationship since the probability value is  $p < 0.001$ , lower than the 0.05 level of significance, which therefore rejects the null hypothesis. The findings of the study support the statement of Kallas and Pedaste (2022), which emphasizes that students' preparedness for e-learning is strongly influenced by their level of digital competence, which encompasses the skills, knowledge, and attitudes required for effective use.

## CONCLUSION

First, the findings of the study revealed that digital competence has a descriptive level of high, which means that digital competence is often observed. This indicates that students from the Local College of Santo Tomas, Davao del Norte exhibit a high level of digital competence which implies that they consistently show proficiency in using digital tools and technological resources. It was also revealed that students' readiness for e-learning has a high descriptive level, which indicates that students' readiness is often observed. This means that students are often able to effectively engage in online learning.

Second, the study's findings concluded that digital competence and students' readiness for e-learning has significant relationship.

Third, the relationship between digital competence and students' readiness for e-learning conforms to the Theory of Adaptive Structuration Theory (AST) by Desanctis and Poole (1994), which states that the way students interpret and use features of digital technology shapes their engagement and readiness in e-learning. Effective use and interpretation of digital tools reinforce students' competence, thus influencing their readiness for e-learning.

## RECOMMENDATION

First, based on the findings and conclusions of the study, the following recommendations are presented. Since command was identified as the lowest indicator of digital competence, the college administration, in collaboration with faculty members, is encouraged to strengthen initiatives that focus on developing students' foundational digital skills. This may be implemented through regular face-to-face, hands-on activities that allow students to practice using basic digital tools, applications, and platforms commonly required in academic tasks. For instance, guided exercises on document creation, file management, online communication platforms, and basic troubleshooting may be integrated into existing classes. In addition, faculty members are encouraged to incorporate simple but consistent digital tasks, such as preparing digital reports or using learning management systems, to help students apply these skills in practical classroom settings.

Second, to improve students' readiness for e-learning, they may have access to reliable digital devices and internet connectivity in both school and home settings. At the institutional level, schools are encouraged to expand access to ICT resources by offering device-loan programs, extending computer laboratory hours, and providing scheduled access to campus internet facilities for students with limited connectivity. Schools may also consider increasing the number of available computers and establishing additional computer laboratories to accommodate the growing demand for digital use. Technical assistance and basic troubleshooting support may also be made available to help students use digital tools more effectively during academic activities. At the household level, students are encouraged to use available digital resources to support their participation in e-learning activities. This may include setting a regular study schedule, identifying a quiet learning space, and monitoring internet connectivity. Students may also use alternative access options, such as coin-operated public Wi-Fi services or other community-based internet facilities, when home connections are unstable. Planning online tasks during periods of stronger connectivity and downloading materials for offline use may further support consistent readiness for e-learning.

Third, future researchers may further investigate the relationship between digital competence and students' readiness for e-learning. Specifically, they may examine how factors such as access to technology, digital skills, online learning attitudes, and responsible use of digital media influence academic performance in a virtual learning environment. Using this study as a reference, researchers can explore ways to strengthen digital competence and support students' successful readiness in e-learning.

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