

# The Influence of Digital Literacy and Self- Efficacy as a Predictors of Student Engagement of Computer System Servicing Senior Highschool Students

<sup>1</sup>Geronimo, Rodelyn, <sup>1</sup>Alayon, Andrew Clark, <sup>1</sup>Ambi, Angel, <sup>1</sup>Bedico, Steven Ray, <sup>1</sup>Caquendangan, Harvey, <sup>1</sup>De Asis, Cristian, <sup>1</sup>Dela Cruz, Seanne Edward, <sup>1</sup>Gonzaga, Angel, <sup>1</sup>Good, Gisell, <sup>1</sup>Ilagan, John Patrick, <sup>1</sup>Memeje, Milkie Jr, <sup>1</sup>Malimbag, Eren, <sup>1</sup>Suarez, Shayne, <sup>1</sup>Lauron, Gian, <sup>1</sup>Talaboc, Nino John, <sup>1</sup>Vasquez, Cyril Jhone., <sup>2</sup>Anna Marie O. Pelandas, PhD (CAR)., <sup>2</sup>Jocel T. Labadan, MAEd

<sup>1</sup>Department of Education, Senior High School Students, Philippines

<sup>2</sup>Department of Education, Senior High School Teachers Division of Davao de Oro, Philippines

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## ABSTRACT

This study examined the influence of digital literacy and self-efficacy on the engagement of Senior High School students in the Computer Systems Servicing strand at Lorenzo S. Sarmiento Sr. National High School. Using a quantitative, non-experimental research design with descriptive correlational techniques, data were collected through structured questionnaires. The study assessed the levels of digital literacy, self-efficacy, and student engagement and analyzed the relationships and predictive effects of the independent variables on engagement. Findings revealed that students possess high levels of digital literacy and self-efficacy, with citizenship and character as significant predictors within digital literacy and belief in personal ability within self-efficacy. Correlational analyses indicated positive relationships between both independent variables and student engagement. Multiple regression results further confirm that the domains of digital literacy and self-efficacy collectively influence student engagement, highlighting the importance of both technical skills and personal competence. The study underscores the need for educational interventions that develop students' digital skills, ethical awareness, and confidence to enhance engagement, academic performance, and preparedness for future educational and professional challenges.

**Keywords:** Computer System Servicing, Digital Literacy, Student Engagement, Computer System Servicing, Senior High School, Philippines

## INTRODUCTION

Globally, student engagement remains a persistent concern in educational settings. In the United States, studies indicate that students with low engagement exhibit poor academic outcomes and higher dropout rates (Fredricks, 2021). In South Korea, the rapid shift to online learning has highlighted a decline in active classroom participation among high school students, affecting skill acquisition (Kim, 2022). Similarly, in Germany, digital distractions and low interactive participation have been linked to decreased academic motivation among vocational students (Schneider & Wagner, 2021). These international findings underscore that student engagement is a critical issue across diverse educational contexts.

In the Philippines, digital literacy has emerged as a significant factor influencing academic success. In Luzon, particularly in Quezon City, students with strong digital competencies are better able to navigate online learning platforms, enhancing their learning participation (Reyes, 2021). In Batangas, research shows that digital literacy improves students' ability to access and process information, thereby fostering greater engagement (Delos Santos, 2022). In Cebu, students proficient in digital tools demonstrate more consistent participation in collaborative projects, reflecting higher engagement levels (Valdez, 2023).

Equally important is self-efficacy, which plays a critical role in students' willingness to participate and persist in academic tasks. In Luzon, particularly in Manila, students with high self-efficacy tend to approach challenges with confidence, enhancing their classroom involvement (Torres, 2021). In Baguio, students' belief in their academic capabilities has been associated with proactive learning behaviors and active participation (Santos, 2022). In Iloilo, self-efficacy significantly predicts students' persistence in problem-solving tasks and collaborative activities (Ramos, 2023).

Recent studies emphasize the interplay of digital literacy and self-efficacy in predicting student engagement. Fredricks (2021) highlighted that digital literacy enhances engagement by enabling students to navigate technology effectively. Similarly, Torres (2021) argued that self-efficacy boosts engagement by increasing confidence in task completion. Moreover, Valdez (2023) found that students who possess both digital skills and strong self-efficacy exhibit the highest levels of participation and academic motivation.

Locally, student engagement remains a challenge in the Davao Region. In Davao City, senior high school students have shown irregular participation in blended learning activities (Garcia, 2021). In Tagum City, students frequently report low interest in completing digital assignments, reflecting engagement gaps (Torralba, 2022). In Digos City, inconsistent participation in practical CSS exercises has been observed, indicating a need for interventions (Mendoza, 2023). Specifically, at Lorenzo S. Sarmiento Sr. National High School, gaps in active learning and classroom participation among CSS strand students have been noted, reinforcing the relevance of this study.

Despite extensive research on student engagement, limited studies in the Philippines specifically investigate the combined influence of digital literacy and self-efficacy on CSS senior high school students' engagement. Addressing this gap is urgent due to the increasing integration of technology in education, which requires students to possess both digital skills and confidence to participate effectively. Understanding these relationships can significantly impact curriculum design, teaching strategies, and interventions aimed at enhancing engagement and academic performance in vocational strands.

## **Research Objectives**

1. To determine the level of students' digital literacy in terms of:

1.1 communication

1.2 copyright

1.3 critical thinking

1.4 citizenship

1.5 character

1.6 curation

1.7 correctness

1.8 creativity, and

1.9 collaboration

2. To determine the level of student self-efficacy in terms of:

2.1 belief in person ability

2.2 belief that ability grows with effort

3. To determine the level of student engagement in terms of:
  - 3.1 liking for learning
  - 3.2 liking for school
  - 3.3 effort and persist;
  - 3.4 extracurricular
  - 3.5 cognitive engagement
4. To determine the significant relationship between digital literacy and student engagement among CSS senior high school students.
5. To determine the significant relationship between self-efficacy and student among the CSS senior high school students.
6. To identify which of the domains of digital literacy would influence student engagement among CSS senior high school.
7. To identify which of the domains of self-efficacy would influence student engagement among CSS senior high school.

## **METHODOLOGY**

This study employed a quantitative, non-experimental research design using descriptive correlational techniques to examine the existence, direction, and strength of the relationship between two defined variables. The descriptive correlational method was considered appropriate as it allowed the researchers to describe the condition of the situation as it existed and to investigate potential causes of the observed phenomenon. Correlational research enables the examination of relationships between variables without manipulating them, with correlations reflecting the strength and direction of these relationships (Bhandari, 2021; Creswell & Creswell, 2021).

This study collected quantitative data regarding the phenomenon using structured questionnaires administered to the target respondents. The focus was to determine the influence of students' digital literacy and self-efficacy on their engagement in learning among Senior High School students in the Computer Systems Servicing (CSS) strand. The quantitative approach and survey method were deemed suitable to measure and analyze these variables systematically.

### **Population and Sample**

This study focused on the Computer Systems Servicing (CSS) students of Lorenzo S. Sarmiento Sr. National High School. The participants included CSS students from Grades 11 and 12, who were considered ideal respondents since their digital literacy and self-efficacy could directly influence their student engagement.

The sampling technique employed in this study was stratified random sampling, where each CSS student had an equal chance of being selected. This method ensured that the sample accurately represented the population, minimized selection bias, and enhanced the validity of the findings. According to Creswell (2014), an appropriate sample size is essential to ensure the reliability and validity of a study's results. At Lorenzo S. Sarmiento Sr. National High School, the total population of CSS students was 204 individuals. Using the Raosoft sample size calculator, a random sample of 134 respondents was determined to achieve statistical significance. This sample size was considered sufficient to represent the population, ensuring dependable and generalizable findings regarding the predictors of student engagement.

## Statistical Tool

The statistical tools used for data analysis and interpretation in this study were as follows:

**Mean.** This tool was used to determine the level of students’ digital literacy, self-efficacy, and engagement among Senior High School students. By computing the mean, the researchers identified the overall level of these three variables.

**Pearson Correlation.** This was used to test the significance of the relationship between students’ digital literacy, self-efficacy, and their engagement in class. Pearson correlation allowed the researchers to establish whether a positive, negative, or no relationship existed between the variables.

**Multiple Regression Analysis.** This was employed to determine the influence of digital literacy and self-efficacy on the student engagement of Senior High School students. Multiple regression analysis provided insights into how strongly each independent variable (digital literacy and self-efficacy) predicted student engagement.

## RESULTS

### Level of Digital Literacy

Shown in Table 1 are the mean scores for the indicators of digital literacy among Senior High School students in Lorenzo S. Sarmiento Sr. National High School, with an overall mean of 3.00, described as high, and a standard deviation of 0.55. The high level could be attributed to the consistently high ratings given by the respondents across all indicators. This indicates that the students’ digital literacy is evident in terms of communication, copyright, critical thinking, citizenship, curation, character, correctness, creativity, and collaboration.

The cited overall mean score was the result of the following computed mean scores from highest to lowest: 3.47, described as high, for character with a standard deviation of 0.80; 3.45, high, for citizenship with a standard deviation of 0.47; 3.43, high, for both communication and copyright with standard deviations of 0.41 and 0.42, respectively; 3.39, high, for curation with a standard deviation of 0.51; 3.36, high, for critical thinking with a standard deviation of 0.44; 3.32, high, for correctness with a standard deviation of 0.42; 3.27, high, for creativity with a standard deviation of 0.49; and 3.26, high, for collaboration with a standard deviation of 0.55.

Table 1. Level of Digital Literacy

Indicators	Mean	SD	Descriptive Equivalent
Communication	3.43	0.41	High
Copyright	3.43	0.42	High
Critical thinking	3.36	0.44	High
Citizenship	3.45	0.47	High
Curation	3.39	0.51	High
Character	3.47	0.80	High
Correctedness	3.32	0.42	High
Creativity	3.27	0.49	High

Collaboration	3.26	0.55	High
<b>Overall</b>	<b>3.00</b>	<b>0.55</b>	High

### Level of Self-Efficacy

Shown in Table 2 are the mean scores for the indicators of self-efficacy among Senior High School students in Lorenzo S. Sarmiento Sr. National High School, with an overall mean of 3.63, described as high, and a standard deviation of 0.45. The high level could be attributed to the high ratings given by the respondents across all indicators, indicating that students' self-efficacy is strongly evident in their belief in personal ability and belief that ability grows with effort.

The overall mean score was the result of the following computed mean scores from highest to lowest: 3.64, described as high, for belief in ability grows with effort with a standard deviation of 0.49, and 3.63, high, for belief in personal ability with a standard deviation of 0.41.

Table 2. Level of Self-efficacy

Indicators	Mean	SD	Descriptive Equivalent
Belief in personal ability	3.63	0.41	High
Belief in ability grows with effort	3.64	0.49	High
<b>Overall</b>	<b>3.63</b>	<b>0.45</b>	<b>High</b>

### Level of Students' Engagement

Shown in Table 3 are the mean scores for the indicators of students' engagement among Senior High School students in Lorenzo S. Sarmiento Sr. National High School, with an overall mean of 3.72, described as high, and a standard deviation of 0.49. The high level could be attributed to the consistently high ratings given by the respondents across all indicators, indicating that the students' engagement is evident in their liking for learning, liking for school, effort and persistence, participation in extracurricular activities, and cognitive engagement.

The overall mean score was the result of the following computed mean scores from highest to lowest: 3.74, described as high, for liking for learning with a standard deviation of 0.52; 3.64, high, for effort and persistence with a standard deviation of 0.43; 3.62, high, for liking for school with a standard deviation of 0.58; 3.51, high, for extracurricular participation with a standard deviation of 0.61; and 3.26, high, for cognitive engagement with a standard deviation of 0.33.

Table 3. Level of Students' Engagement

Indicators	Mean	SD	Descriptive Equivalent
Liking for learning	3.74	0.52	High
Liking for school	3.62	0.58	High
Effort and persist	3.64	0.43	High
Extracurricular	3.51	0.61	High
Cognitive Engagement	3.26	0.33	High
<b>Overall</b>	<b>3.72</b>	<b>0.49</b>	<b>High</b>

### Significance of the Relationship between Digital Literacy and Students’ Engagement

Pearson’s r value between digital literacy and students’ engagement is 0.48 with a p-value of <0.001. In this relationship, students’ engagement is the dependent variable, while digital literacy is the independent variable. The result suggests a moderate positive correlation between digital literacy and students’ engagement. This indicates that as students’ digital literacy increases, their engagement in learning also tends to increase.

Furthermore, the overall result of the indicators in digital literacy shows a probability level of <0.001, which is significantly lower than the alpha level of 0.05. Therefore, the null hypothesis stating that there is no significant relationship between digital literacy and students’ engagement among Senior High School students, is rejected. The findings highlight a significant relationship, suggesting that the components of digital literacy meaningfully contribute to enhancing student engagement.

Table 4. Significance of the Relationships Between Teachers’ Attitude to Students’ Motivation

	Pearson’s r	p
Digital Literacy—Student’s Engagement	0.48	<.001

### Significance of the Relationship Self-Efficacy and Students’ Engagement

The Pearson’s value between self-efficacy and students’ engagement is 0.52 with a p-value of <0.001. In this relationship, students’ engagement serves as the dependent variable, while self-efficacy is the independent variable. The result indicates a moderate positive correlation between self-efficacy and students’ engagement. This suggests that as students’ self-efficacy increases, their engagement in learning likewise tends to increase.

Moreover, the overall result of the indicators in self-efficacy shows a probability level of <0.001, which is significantly lower than the alpha level of 0.05. Therefore, the null hypothesis stating that there is no significant relationship between self-efficacy and students’ engagement among Senior High School students, is rejected. The findings demonstrate that the components of self-efficacy have a significant influence on students’ engagement in learning.

Table 5. Significance of the Relationships Between Digital Literacy to Students’ Engagement

	Pearson’s r	p
Self-Efficacy—Student’s Engagement	0.52	<.001

### Multiple Regression Analysis on the Influence of the Domain of Self-efficacy on Student Engagement

Using Multiple Regression Analysis, the data revealed that the influence of the domains of self-efficacy on students’ engagement among Senior High School students has an F-value of 12.96 with a corresponding p-value of <0.001, indicating a significant relationship. This means that the domains of self-efficacy collectively have a significant influence on students’ engagement among Senior High School students in Lorenzo S. Sarmiento Sr. National High School, as the probability is less than 0.05. The R-squared value of 0.168 implies that 16.8% of the variation in students’ engagement is explained by the domains of self-efficacy, while the remaining 83.2% is influenced by other factors not covered in this study.

Specifically, the domain belief in personal ability has a coefficient of 0.213, t-value of 3.301, and p-value of 0.001, indicating a significant positive effect on students’ engagement. On the other hand, the domain belief that ability grows with effort has a coefficient of 0.102, t-value of 1.903, and p-value of 0.059, which is not statistically significant at the 0.05 level. This suggests that while personal belief in ability strongly predicts engagement, the belief in growth through effort shows only a marginal effect.

Table 6. Multiple Regression Analysis on the Influence of the Domain of Self-efficacy on Student Engagement

Self-Efficacy	Coefficients	t	p	Decision $\alpha=0.05$
Belief in personal ability	0.213*	3.301	0.001	H <sub>0</sub> is rejected
Belief that ability grows with effort	0.102*	1.903	0.059	H <sub>0</sub> is not rejected
<b>Dependent Variable: Students' Engagement</b>				

\*p<0.03 R=0.410 R<sup>2</sup>=0.168 F-ratio=12.96 p-value< .001

**Multiple Regression Analysis on the Influence of the Domain of Digital Literacy on Student Engagement**

Using Multiple Regression Analysis, the data revealed that the influence of the domains of digital literacy on students' engagement among Senior High School students has an F-value of 28.27 with a corresponding p-value of <0.001, indicating a significant overall effect. This suggests that the domains of digital literacy collectively have a significant influence on students' engagement among Senior High School students in Lorenzo S. Sarmiento Sr. National High School, as the probability is less than 0.05. The R-squared value of 0.296 implies that 29.6% of the variation in students' engagement is explained by the domains of digital literacy, while the remaining 70.4% is influenced by other factors not examined in this study.

Specifically, the domains citizenship and character were found to have a significant positive effect on students' engagement, with coefficients of 0.129 and 0.172, t-values of 2.24 and 2.41, and p-values of 0.02 for both, leading to the rejection of the null hypothesis. The remaining domains—communication, copyright, critical thinking, curation, correctedness, creativity, and collaboration—showed no significant effect, with p-values greater than 0.05, indicating that their individual contributions to students' engagement were not statistically significant.

Table 7. Multiple Regression Analysis on the Influence of the Domain of Digital Literacy on Student Engagement

Digital Literacy	Coefficient	t	p	Decision $\alpha=0.05$
Communication	0.032	0.41	0.68	H <sub>0</sub> is not rejected
Copyright	0.030	0.38	0.70	H <sub>0</sub> is not rejected
Critical thinking	0.052	0.80	0.42	H <sub>0</sub> is not rejected
Citizenship	0.129	2.24	0.02	H <sub>0</sub> is rejected
Character	0.172	2.41	0.02	H <sub>0</sub> is rejected
Curation	0.019	0.31	0.76	H <sub>0</sub> is not rejected
Correctedness	0.087	0.30	0.26	H <sub>0</sub> is not rejected
Creativity	0.023	0.35	0.73	H <sub>0</sub> is not rejected
Collaboration	0.012	0.20	0.84	H <sub>0</sub> is not rejected
<b>Dependent Variable: Students' Engagement</b>				

\*p < 0.05 R= 0.544 R<sup>2</sup>=0.296 F-value= 28.27 p-value< 0.001

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## DISCUSSIONS

### Level of Digital Literacy

The findings indicate that the digital literacy of Senior High School students is generally high across all measured indicators. This suggests that students possess the necessary skills to effectively communicate, think critically, and participate responsibly in digital environments. High levels of digital literacy are essential in today's educational landscape, as they allow students to navigate online resources, engage in collaborative learning, and responsibly use digital tools in academic settings (Nguyen et al., 2021).

Among the various domains, students demonstrated particularly strong competencies in character and citizenship, reflecting their awareness of ethical and responsible behavior in digital spaces. This aligns with contemporary studies emphasizing the importance of digital citizenship as a core component of digital literacy, promoting safe, ethical, and respectful engagement online (Chung et al., 2020). The results also suggest that students are developing skills in creativity and collaboration, which are critical for problem-solving and innovation in technology-driven learning environments (Hsu et al., 2021).

Overall, the high level of digital literacy observed in the respondents implies that students are well-prepared to integrate digital tools into their learning processes. Strengthening these skills further can enhance their academic performance, engagement, and readiness for future digital challenges. Schools are encouraged to continue fostering comprehensive digital literacy programs that balance technical skills with ethical and creative competencies to support holistic student development (Martin et al., 2020).

### Level of Self-efficacy

In the previous chapter, the findings indicate that the self-efficacy of Senior High School students is generally high, suggesting that students have strong beliefs in their personal abilities to accomplish tasks and face academic challenges. High self-efficacy is essential for student motivation and learning because it drives persistence, goal setting, and confidence in overcoming obstacles (Zimmerman, 2020). Students who perceive themselves as capable are more likely to actively engage in learning activities and take ownership of their educational outcomes.

Among the measured domains, students showed strong confidence in both their personal abilities and the belief that their abilities can improve with effort. This reflects a growth-oriented mindset, which encourages students to embrace challenges and view difficulties as opportunities to develop skills and knowledge. Developing a growth mindset through self-efficacy has been linked to improved academic performance and resilience in educational settings (Bandura, 2020). These findings emphasize the importance of nurturing self-efficacy to support students' academic growth and engagement.

Overall, the high level of self-efficacy observed suggests that students are well-positioned to handle the demands of senior high school education. Educators can further enhance student self-efficacy by providing supportive learning environments, positive feedback, and opportunities for mastery experiences. Promoting self-efficacy not only improves academic engagement but also prepares students for lifelong learning and success in increasingly complex and challenging contexts (Schunk, 2021).

### Level of Students' Engagement

The findings indicate that the level of student engagement among Senior High School students is generally high, suggesting that students are actively involved in their learning and show interest in school-related activities. High engagement is essential for effective learning as it promotes participation, motivation, and persistence in academic tasks. Engaged students are more likely to retain knowledge, apply critical thinking skills, and achieve better academic outcomes (Fredricks, 2020).

The results show that students demonstrate engagement across multiple dimensions, including their attitude toward learning, effort, participation in school activities, and cognitive involvement. This reflects the importance

of creating learning environments that support both emotional and cognitive engagement. Schools that foster interactive and meaningful learning experiences encourage students to connect with the content and collaborate with peers, enhancing overall academic development (Reeve, 2021).

Overall, the high level of student engagement observed suggests that students are motivated and willing to invest effort in their education. To maintain and further enhance engagement, educators can implement strategies such as active learning, collaborative projects, and personalized feedback. Encouraging student engagement not only improves academic performance but also develops critical skills and positive learning behaviors that prepare students for future educational and professional challenges (Skinner, 2020)..

### **Significance on the Relationship Between Digital Literacy and Students' Learning Engagement**

The results indicate a significant positive relationship between digital literacy and student engagement among Senior High School students. This suggests that students who possess higher digital literacy skills are more likely to be actively involved and motivated in their learning. Digital literacy equips students with the ability to effectively access, evaluate, and utilize information in digital environments, which in turn promotes their participation and interest in academic activities (Nguyen, 2021).

The findings highlight that the components of digital literacy, such as communication, critical thinking, and responsible use of digital tools, play a meaningful role in fostering engagement. Students with strong digital literacy skills can collaborate, create, and navigate digital learning platforms more effectively, enhancing their cognitive and behavioral involvement in school tasks. This aligns with recent research emphasizing the importance of integrating digital literacy into education to support student-centered learning and engagement (Chung, 2020).

Overall, the significant relationship underscores the need for educational programs that strengthen students' digital competencies. By developing students' skills in communication, creativity, and ethical digital behavior, educators can enhance learning engagement and prepare students to navigate the demands of modern academic and professional environments. Fostering digital literacy is therefore a crucial strategy for promoting active, motivated, and self-directed learners (Martin, 2020).

### **Significance on the Relationship Between Self-Efficacy and Student Engagement**

The results reveal a significant positive relationship between self-efficacy and student engagement among Senior High School students. This indicates that students who have strong beliefs in their personal abilities and their capacity to grow through effort are more likely to be actively engaged in learning activities. Self-efficacy promotes confidence, persistence, and intrinsic motivation, enabling students to participate fully and effectively in academic tasks (Schunk, 2021).

The findings emphasize that the components of self-efficacy, including belief in personal ability and belief that ability can improve with effort, play a crucial role in fostering engagement. Students with higher self-efficacy are more willing to embrace challenges, persist in the face of difficulties, and employ strategic learning behaviors. This aligns with recent research demonstrating that self-efficacy is a key predictor of academic engagement and motivation in secondary education (Bandura, 2020).

Overall, the significant relationship between self-efficacy and student engagement highlights the importance of nurturing students' confidence and growth-oriented mindsets. Educators can enhance engagement by providing supportive feedback, opportunities for mastery experiences, and learning environments that reinforce students' belief in their capabilities. Developing self-efficacy not only strengthens academic participation but also prepares students for lifelong learning and success in complex educational and professional contexts (Zimmerman, 2020).

### **Multiple Regression Analysis on the Influence of Digital Literacy on Student Engagement**

The results of the multiple regression analysis indicate that the domains of digital literacy collectively have a significant influence on student engagement among Senior High School students. This suggests that students'

ability to access, evaluate, and use digital resources meaningfully contributes to their involvement and motivation in learning activities. Digital literacy equips students with essential skills to navigate complex information environments, enhancing their capacity to engage cognitively and behaviorally with academic tasks (Nguyen, 2021).

Among the domains, citizenship and character were found to significantly predict student engagement, highlighting the importance of ethical, responsible, and principled behavior in digital spaces. This implies that students who demonstrate awareness of digital rights, responsibilities, and ethical norms are more likely to participate actively and positively in learning processes. The findings align with recent studies emphasizing that digital citizenship and personal integrity in technology use foster deeper engagement, collaboration, and self-directed learning in educational settings (Hsu et al., 2021).

Overall, the results underscore the need for educational strategies that strengthen specific domains of digital literacy to enhance student engagement. While technical skills such as communication, critical thinking, and creativity are valuable, fostering ethical and character-based competencies appears particularly influential in motivating students to invest effort and remain actively involved in learning. Schools can support engagement by integrating digital literacy programs that balance technical proficiency with ethical and responsible use of technology, preparing students for both academic success and responsible digital participation (Martin et al., 2020).

### **Multiple Regression Analysis on the Influence of Self-Efficacy on Student Engagement**

The results of the multiple regression analysis indicate that the domains of self-efficacy collectively have a significant influence on student engagement among Senior High School students. This suggests that students' beliefs in their personal capabilities and their capacity to improve through effort play a vital role in their active participation in learning activities. High self-efficacy fosters motivation, persistence, and proactive learning behaviors, which are essential for achieving meaningful engagement in academic settings (Pajares & Urdan, 2021).

Specifically, the domain of belief in personal ability significantly predicts student engagement. This implies that students who are confident in their skills are more likely to approach learning tasks with determination and consistency. Conversely, the belief that ability grows with effort showed a smaller, non-significant effect, indicating that immediate confidence in one's competencies has a stronger influence on engagement than the growth-oriented mindset alone. This is consistent with recent research highlighting that students perceived competence directly affects their academic engagement and willingness to tackle challenging tasks (Komarraju et al., 2020).

Overall, the findings underscore the importance of educational strategies that enhance students' self-efficacy. Providing mastery experiences, personalized feedback, and opportunities for goal setting can strengthen students' confidence and encourage sustained engagement. Developing self-efficacy equips students with the skills, resilience, and motivation necessary to succeed not only in school but also in future academic and professional endeavors (Linnenbrink-Garcia et al., 2021).

## **CONCLUSION**

The study revealed that Senior High School students in the Computer Systems Servicing strand at Lorenzo S. Sarmiento Sr. National High School demonstrate high levels of digital literacy and self-efficacy, both of which positively influence their engagement in learning. Among the domains of digital literacy, citizenship and character were particularly significant, highlighting the importance of ethical and responsible behavior in digital environments. Within self-efficacy, belief in personal ability was found to strongly predict engagement, emphasizing that students' confidence in their skills plays a crucial role in motivating active participation in academic tasks.

Overall, the findings underscore the need for educational strategies that enhance both digital literacy and self-efficacy to foster student engagement. By designing learning experiences that strengthen technical skills, ethical

awareness, and confidence, educators can support students' active involvement in learning, improve academic performance, and prepare them for future challenges in both educational and professional settings.

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