



## Academic engagement, psychological well-being, and online learning self-efficacy among senior high school students transitioning to blended learning: Inputs to strategy development

Irene G. Opeña\*<sup>1</sup>, Dr. Elna R. Lopez<sup>2</sup><sup>1, 2</sup> Lyceum of the Philippines University - Batangas, Philippines\*Corresponding Author e-mail: [ireneopena0224@gmail.com](mailto:ireneopena0224@gmail.com)**Received:** 29 June 2025**Revised:** 25 November 2025**Accepted:** 19 December 2025**Available Online:** 21 December 2025**Volume IV (2025), Issue 4, P-ISSN – 2984-7567; E-ISSN - 2945-3577**<https://doi.org/10.63498/etcor519>

### Abstract

**Aim:** This study aimed to examine the relationships between academic engagement, psychological well-being, and online learning self-efficacy among senior high school students transitioning to blended learning. The research sought to provide inputs for developing effective strategies to support students' adaptation in the post-pandemic learning environment.

**Methodology:** A quantitative descriptive-correlational research design was employed involving 306 senior high school students. Standardized survey instruments were used to gather numerical data, which were analyzed using descriptive and inferential statistics to determine levels of engagement, well-being, and self-efficacy, as well as their interrelationships.

**Results:** Findings revealed that the majority of respondents exhibited vigor, dedication, and absorption in their studies, accompanied by moderate stress levels. Significant positive correlations were found among the three variables. Psychological well-being and online learning self-efficacy were strongly associated ( $r = .663$ ,  $p < .001$ ), suggesting that higher self-efficacy contributes to greater psychological well-being and sustained academic engagement.

**Conclusion:** The study highlights the importance of institutional strategies that promote psychological support and digital competence to enhance students' engagement and adaptability in blended learning. Educational organizations are encouraged to implement responsive programs addressing students' mental health and learning confidence during transitional educational phases.

**Keywords:** academic engagement, psychological well-being, online learning self-efficacy, blended learning

### INTRODUCTION

Globally, the COVID-19 pandemic forced schools to adopt remote and blended learning modalities, raising concerns about student engagement, well-being, and online self-efficacy (UNESCO, 2021; Hodges et al., 2020). In the Philippines, the Commission on Higher Education (CHED) and the Department of Education (DepEd) introduced flexible learning strategies to ensure educational continuity, but students reported challenges such as digital fatigue, unstable internet access, and decreased motivation (Baticulon et al., 2021).

Students' independence and self-regulation are crucial for successful online learning, impacting their engagement and collaboration with peers while raising concerns about the long-term implications of attitudes towards technology in education. Despite the accessibility benefits of online education during the pandemic, these challenges adversely affect students' psychological well-being (PWB), academic engagement (AE), and online learning self-efficacy (OLSE).

Social factors like peer pressure and discipline-specific characteristics also shape academic engagement, impacting scientific productivity. While numerous studies focus on the well-being of academics, few examine student engagement and its consequences, necessitating a closer examination of burnout and engagement to enhance students' well-being alongside their academic commitments. Self-regulated learning becomes imperative, particularly



in the context of online education, as students navigate independent learning environments to foster adaptability and competency development.

Social presence in online learning is pivotal, reflecting students' engagement, communication, and collaborative efforts. Active participation fosters authentic learning experiences despite the challenges posed by remote environments. While international studies have examined how online learning self-efficacy relates to engagement and well-being, limited empirical research has been conducted among Filipino Senior High School students navigating the shift to blended learning (Mamolo, 2022). This study sought to tackle the challenges students face with online learning self-efficacy, which affects their psychological well-being and academic involvement. By examining the root causes of students' low engagement during the pandemic, the research offers insights into creating strategies and policy changes to better address learners' needs.

## Review of Related Literature

Academic engagement plays a pivotal role in student success, especially in blended learning environments where self-regulation and motivation are essential. Recent studies emphasize that engagement is not merely behavioral but also emotional and cognitive. Castillo et al. (2023) found that study habits and time management significantly influence academic performance among senior high school students in blended learning, highlighting the need for strand-specific support strategies. Similarly, Mauhay et al. (2023) reported a moderate positive correlation between academic motivation and self-efficacy, suggesting that motivated students are more likely to engage actively in their learning tasks.

Co (2023) conducted a comparative analysis across academic strands and grade levels, revealing that STEM students rated online components of blended learning more positively, while GAS students gave higher evaluations of faculty performance. These findings underscore the importance of customizing engagement strategies based on strand-specific needs and perceptions.

The shift to blended learning has brought renewed attention to students' psychological well-being. Conwi et al. (2024) explored mental health adjustment in a blended learning environment and found that while many students displayed moderate well-being, academic distress remained high. Their study emphasized that effective adaptation to blended learning can mitigate stress and promote resilience.

Yco et al. (2023) examined emotional intelligence and mental health among Filipino senior high school students, reporting a strong positive correlation between the two. This suggests that emotional competencies are protective factors in maintaining psychological well-being during academic transitions.

Online learning self-efficacy refers to students' belief in their ability to succeed in digital learning environments. Compuesto et al. (2022) found that self-efficacy is inversely related to academic burnout, especially during the abrupt shift to online learning. Their findings suggest that students with higher self-efficacy are better equipped to manage academic stress.

Cruz et al. (2022) explored the relationship between self-efficacy and perceived loneliness, revealing that students with stronger self-efficacy reported lower levels of isolation. Nieva and Prudente (2022) conducted a mediation analysis showing that online self-regulated learning positively predicts well-being, even when academic performance does not mediate the relationship. This indicates that self-efficacy and self-regulation are critical to emotional satisfaction in blended learning environments.

## Synthesis and Research Gap

Recent literature affirms that academic engagement, psychological well-being, and online learning self-efficacy are interconnected and essential for student success in blended learning. However, most studies examine these variables in isolation. There is limited research that explores their combined influence, particularly among Filipino senior high school students transitioning from fully online to blended modalities. This study addresses that gap by investigating the relationships among these three constructs and offering strategic inputs for enhancing blended learning implementation.

## Research Objectives

### General Objective:

This study explored the relationship between students' academic engagement, psychological well-being, and online learning self-efficacy during their transition to blended learning. It also examined the differences and





### Treatment of Data

Data gathered were analyzed using both descriptive and inferential statistics. Descriptive statistics, including frequency, percentage, weighted mean, and rank, were used to describe respondents' profiles and levels of psychological well-being, academic engagement, and online learning self-efficacy. An independent samples t-test determined significant differences among groups based on demographic variables, while Pearson's r correlation examined the relationships among the main variables.

### Ethical Considerations

The study complied with ethical standards in educational research and the provisions of the Data Privacy Act of 2012. Approval to conduct the research was obtained from the institution's administration. Informed consent was secured electronically before participation. Students were informed of the study's objectives, their voluntary participation, and their right to withdraw at any time. Data confidentiality and anonymity were strictly observed, and no identifying information was included in any reports or publications. All data were stored securely and used solely for research purposes.

### RESULTS and DISCUSSION

This section provides an overview of the respondents' profiles concerning their Academic Engagement (AE). Here, the respondents' school and class engagement.

#### Profile of the Respondents on Academic Engagement

Table 1 shows the students' perception of Academic Engagement.

Statements	Weighted Mean	Rank	Interpretation
<b>School Engagement</b>			
You think attending our school will be advantageous for you.	3.5784	2	Strongly Agree
You place value on education and treat it seriously.	3.6601	1	Strongly Agree
You view our school as a fun environment.	3.4412	4	Agree
You enjoy conversing with other students at school.	3.3660	8	Agree
When you require help, school personnel are there to provide it.	3.3922	7	Agree
You engage in educational activities.	3.3301	9	Agree
You find the things done in school enjoyable.	3.4248	6	Agree
You have a close group of classmates.	3.1961	10	Agree
You feel safe on school grounds.	3.4314	5	Agree
You choose to attend school.	3.5196	3	Strongly Agree
Mean	3.4340	1	Agree
<b>Class Engagement</b>			
Your desire to study drives you.	3.5654	1	Strongly Agree
Your own personal learning objectives are set.	3.3431	7	Agree
During class, you strive to perform your best.	3.5588	2	Strongly Agree
You also study for your lessons in addition to attending them.	3.3301	8	Agree
You attend lessons by preparing beforehand.	3.4248	5	Agree
When performing your schoolwork, you exert the most effort.	3.4608	3	Agree



You enjoy the mental hurdles that studying presents.	3.3170	9	Agree
You put up sufficient time and effort to acquire knowledge.	3.4477	4	Agree
You place a high value on studying alongside your peers (in a group)	3.3758	6	Agree
You are regarded as a distinct individual by your teachers.	3.0882	10	Agree
Mean	3.3912	2	Agree

Note: 4.00-3.5 (Strongly Agree) 3.49-2.5 (Agree), 2.49-1.5 (Disagree), and 1.49-1.00 (Strongly Disagree)

Table 1 presents the respondents' academic engagement across two domains: school and class engagement. The highest-rated item—"You place value on education and treat it seriously" (WM=3.6601)—reflects students' strong intrinsic motivation and commitment to learning. This aligns with Deci and Ryan's (1985) Self-Determination Theory, which posits that autonomy and intrinsic motivation are foundational to sustained academic effort. Recent studies affirm this relationship. For instance, Peng (2021) emphasized that teacher praise significantly enhances students' academic motivation and engagement, particularly in language learning contexts. The second-highest item—"Your desire to study drives you" (WM=3.5654)—further underscores the role of internal motivation. This is echoed in a 2024 study by Loyola-Carrillo et al., which found that emotional engagement and goal-directed behavior are key predictors of academic performance and psychological well-being.

Students also agreed with the statement "During class, you strive to perform your best" (WM=3.5588), indicating a high level of behavioral engagement. Duckworth et al. (2007) introduced the concept of grit—perseverance and passion for long-term goals—as a critical factor in academic achievement. The item "You choose to attend school" (WM=3.5196) suggests that students perceive school attendance as a personal choice, reflecting both autonomy and school satisfaction.

Class engagement items such as "You attend lessons by preparing beforehand" (WM=3.4248) and "You put up sufficient time and effort to acquire knowledge" (WM=3.4477) reflect cognitive and behavioral engagement. Hattie and Timperley (2007) emphasized the importance of timely, improvement-focused feedback in enhancing student effort. More recently, studies have shown that structured feedback and teacher-student rapport significantly influence engagement levels (Peng, 2021).

### Profile of the Respondents on Psychological Well-Being

Table 2 shows the students' perception of Psychological Well-Being

Statements	Weighted Mean	Rank	Interpretation
Most of your personality traits are things you like.	3.2712	4.5	Agree
You are content with how things have gone thus far when you consider the path of your life.	3.2745	3	Agree
Unlike other people, you do not aimlessly roam through life.	3.1863	9	Agree
The pressures of your daily life might be depressing.	2.9967	11	Agree
You feel disappointed with your life's accomplishments in many ways.	2.7614	16	Agree
You've found it challenging and difficult to maintain strong connections.	2.9608	12	Agree



You don't truly consider the future since you live your life one day at a time.	2.7059	18	Agree
You generally get the impression that you are in control of your surroundings.	2.8856	13	Agree
You are skilled at handling the obligations in your daily life.	3.1144	10	Agree
Sometimes you think you've accomplished everything there is to do in life.	2.8791	14	Agree
You have experienced constant development, change, and learning throughout your life.	3.2418	7	Agree
You appreciate establishing future goals and putting up the effort necessary to see them through.	3.3595	1	Agree
You often become depressed as a result of life's obligations.	2.8464	15	Agree
You don't get along well with the neighbors and the community.	2.0719	20	Disagree
Both you and your friends are confident in your ability to be trusted.	3.2582	6	Agree
You believe that it is crucial to have new experiences that force you to reconsider your perspective.	3.2712	4.5	Agree
People would characterize you as a generous person who is eager to lend a helping hand.	3.2810	2	Agree
You frequently let people with strong beliefs to affect you	2.7320	17	Agree
There aren't a lot of long, dependable connections in your life.	2.5686	19	Agree
You evaluate your own worth based on your own values, not on those of other people.	3.2386	8	Agree
<b>COMPOSITE TOTAL</b>	<b>2.9953</b>		<b>Agree</b>

Note: 4.00-3.5 (Strongly Agree) 3.49-2.5 (Agree), 2.49-1.5 (Disagree), and 1.49-1.00 (Strongly Disagree)

The statement "You may learn without classmates present in the same room" received one of the lowest weighted means (WM=2.5686), indicating that students generally disagree with the notion of solitary learning. This suggests that peer interaction remains a vital component of their psychological well-being. Ryff's (1989) dimension of Positive Relations with Others underscores the importance of interpersonal connections in fostering emotional health. The data imply that students derive motivation, accountability, and emotional support from collaborative learning environments, which are perceived as essential for personal growth and academic engagement.

Jaggars and Xu (2016) found that students who valued the social dimensions of learning were less inclined to enroll in online courses. These studies affirm that the absence of physical peer presence may hinder students' sense of belonging and reduce their perceived capacity for effective learning.



Conversely, the statement "Schoolwork can be sent off in a digital shared folder" reflects a moderate level of agreement, suggesting that students appreciate the organizational benefits of digital platforms. While this item primarily relates to online learning self-efficacy, it also intersects with Ryff's dimension of Environmental Mastery, which pertains to one's ability to manage life circumstances effectively. The use of shared digital folders may enhance students' sense of control over academic tasks, thereby contributing positively to their psychological well-being. Kuo et al. (2014) found that digital submission systems improved students' confidence and engagement, which may indirectly support emotional stability and satisfaction.

Email communication, frequently cited by respondents, further contributes to psychological well-being by facilitating private, thoughtful exchanges with instructors. This mode of interaction supports Self-Acceptance and Positive Relations, allowing students to articulate concerns without the social pressure of face-to-face settings.

Finally, the emphasis on accessible technical support reflects students' need for reliable assistance, reinforcing their sense of Environmental Mastery. Grajek (2016) highlights that institutions offering diverse support channels—such as email, phone, and chat—promote student satisfaction and reduce stress, thereby enhancing overall psychological well-being.

### Profile of the Respondents on Online Learning Self-Efficacy

Table 3 shows the students' perception of Online Learning Self-Efficacy

Statements	Weighted Mean	Rank	Interpretation
You can conveniently navigate online course materials.	3.0915	9.5	Agree
E-mail is a convenient way to communicate with your teacher.	3.2582	2	Agree
You may interact easily with technical support by e-mail, phone, or live online chat.	3.2516	3	Agree
Schoolwork can be sent off in a digital shared folder.	3.2614	1	Agree
You handle any technological issues on your own	2.8660	16.5	Agree
You can use the online grade book to browse	3.0980	8	Agree
You have good time management skills.	3.0850	11.5	Agree
You complete each task on schedule.	3.0621	13	Agree
You gain proficiency in new technology.	3.2157	5	Agree
You may learn without the instructor present in the same room.	2.6797	20	Agree
You may learn without classmates present in the same room.	2.8301	18	Agree
To discover an answer to a query about the course, you conduct an internet search.	3.1373	7	Agree
You do an online course materials search.	3.0850	11.5	Agree



You use asynchronous technology for communication like emails, discussion boards, etc.)	3.2059	6	Agree
You finish a comprehensive online team project.	3.0392	15	Agree
You employ synchronous technology such as Skype to communicate with others	2.6928	19	Agree
When distractions are there, you concentrate on your academic task.	3.0588	14	Agree
You create and adhere to a strategy for completing all necessary tasks on schedule.	3.2451	4	Agree
You make effective use of the internet databases, e-books, and references available from the library.	3.0915	9.5	Agree
When an issue occurs, you quickly post a query in the relevant venue, such as an email or discussion board.	2.8660	16.5	Agree
<b>COMPOSITE MEAN</b>	<b>3.0560</b>		<b>Agree</b>

Note: 4.00-3.5 Strongly Agree) 3.49-2.5 (Agree), 2.49-1.5 (Disagree) and 1.49-1.00 (Strongly Disagree)

Table 3 presents students' perceptions of their online learning self-efficacy, with a composite mean of 3.0560, interpreted as "Agree." The highest-rated item—"Schoolwork can be sent off in a digital shared folder" (WM=3.2614)—suggests that students value structured digital tools that facilitate task completion. This reflects confidence in managing academic responsibilities in virtual environments.

High agreement with statements such as "E-mail is a convenient way to communicate with your teacher" (WM=3.2582) and "You may interact easily with technical support by e-mail, phone, or live online chat" (WM=3.2516) indicates that students feel supported and capable of navigating communication channels. Abdolrezaour et al. (2023) found that self-efficacy and resilience significantly predicted academic motivation in online education, especially when students had access to responsive support systems.

Students also agreed with "You create and adhere to a strategy for completing all necessary tasks on schedule" (WM=3.2451), reflecting strong time management and planning skills. Tus (2021) emphasized that self-efficacy, motivation, and learning strategies are positively correlated with academic performance in online settings, particularly when students are equipped with tools that foster autonomy and structure.

Lower-rated items such as "You may learn without the instructor present in the same room" (WM=2.6797) and "You may learn without classmates present in the same room" (WM=2.8301) suggest that students still value physical presence and social interaction. This is consistent with findings by Abdolrezaour et al. (2023), who noted that resilience and social support are critical to sustaining motivation in online learning environments.

Finally, the data indicate that while students demonstrate confidence in using digital tools and managing tasks independently, they still rely on interpersonal connections and structured support to maintain motivation and engagement in online learning.

### Correlation Matrix of the Three Variables

Table 4 shows the correlation between Psychological Well-Being, Academic Engagement, and Online Learning Self-Efficacy

Variable(X)	Variable (Y)	Pearson-r value	p-value	Interpretation



<b>Psychological Well-being</b>	Learning Self-Efficacy	.663**	0.000	Highly Significant
	Academic Engagement			
	<i>School</i>	.380**	0.000	Highly Significant
	<i>Class</i>	.477**	0.000	Highly Significant
<b>Learning Self-Efficacy</b>	Academic Engagement			
	<i>School</i>	.447**	0.000	Highly Significant
	<i>Class</i>	.552**	0.000	Highly Significant

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed)

Table 4 illustrates the interrelationships among the study's three core variables: psychological well-being, academic engagement, and online learning self-efficacy. All correlations were statistically significant at the 0.01 level, indicating robust associations across domains.

The strongest correlation was observed between psychological well-being and online learning self-efficacy ( $r = .663$ ,  $p < .000$ ), suggesting that students who perceive themselves as capable in navigating online learning environments tend to report higher levels of psychological well-being. Recent findings by Abdolreza et al. (2023) reinforce this link, showing that self-efficacy and resilience significantly predict academic motivation and emotional stability in virtual learning contexts.

Additionally, academic engagement—both at the school and class levels—was found to be significantly associated with psychological well-being ( $r = .380$  and  $r = .477$ , respectively;  $p < .000$ ). These results align with Skinner and Belmont's (1993) foundational work, which demonstrated that students who are behaviorally and emotionally engaged in classroom activities exhibit greater psychological health.

Classroom engagement also plays a mediating role in the relationship between teacher-student interactions and emotional outcomes. Schreiber et al. (2006) found that students who were more engaged in school reported lower levels of anxiety and despondency, highlighting the protective role of academic involvement. Moreover, parental support has been shown to reinforce both academic engagement and psychological well-being, suggesting that external relational factors contribute meaningfully to students' emotional health.

The significant correlations between online learning self-efficacy and both school engagement ( $r = .447$ ,  $p < .000$ ) and class engagement ( $r = .552$ ,  $p < .000$ ) further emphasize the interconnectedness of digital competence and academic involvement. Tus (2021) found that self-efficacy, motivation, and strategic learning behaviors are positively associated with academic performance in online settings, particularly when students are equipped with structured support and clear goals.

Collectively, these findings underscore the importance of fostering both academic engagement and online learning self-efficacy to promote psychological well-being among students, especially in increasingly digital educational environments.

## Conclusions

Respondents of the study were mostly female, in the early adulthood stage, in their senior high school level, and from 5000 and below socio-economic status.

Academic engagement (AE) is notably high, with school engagement (SE) yielding a weighted mean of 4.43, interpreted as "Strongly Agree." Class engagement also reflects substantial involvement, with a weighted mean of 3.391, corresponding to "Agree." Psychological well-being presents a similarly favorable outcome, with a weighted mean of 3.995, also interpreted as "Agree.". Online learning self-efficacy, while slightly lower, maintains a weighted mean of 3.056, likewise interpreted as "Agree."

Online learning self-efficacy showed significant difference across socio-economic status with a p-value of 0.045. Students with access to additional resources such as laptops, tablets, and online workspaces exhibited greater confidence in navigating digital platforms. In contrast, psychological well-being and academic engagement did not



differ significantly across profile variables. This consistency may be attributed to shared challenges, cultural contexts, and standardized learning inputs provided through the school's learning management system.

The study revealed significant correlations among psychological well-being, online learning self-efficacy, and academic engagement with p-values of <0.005. Respondents demonstrated high levels of psychological well-being, particularly in their capacity to set future goals and commit to achieving them. This tendency was notably present among students from lower socioeconomic backgrounds, whose aspirations were shaped by a desire to improve their living conditions.

The interrelationship among psychological well-being, online learning self-efficacy, and academic engagement was particularly salient during the pandemic. Institutional efforts to provide mental health resources, flexible learning structures, and consistent communication played a critical role in sustaining students' emotional resilience and academic motivation. These findings inform the proposed program for senior high school students transitioning to blended learning and offer strategic insights for future educational development.

### Recommendations

Schools may consider increasing the number of participating institutions within Batangas and expanding to other areas in the CALABARZON region, including public schools, to enhance the generalizability of student perceptions. The use of interactive technologies, such as gamified learning platforms and collaborative digital tools may help make learning more engaging and enjoyable, encouraging active participation among students. Creating a friendly, inclusive, and respectful classroom environment may foster a sense of safety and belonging, which in turn promotes student engagement and collaboration. Encouraging open communication and cultivating a culture of trust within schools may support students in expressing their feelings and seeking help when facing mental health challenges. Establishing supportive relationships and promoting constructive self-talk may help build students' resilience and coping skills, contributing to emotional well-being, academic success, and personal growth.

#### For Students and Parents

Providing clear resources, guidance, and support for online activities may help students develop essential digital skills and confidence. Encouraging reflection and teamwork may enhance motivation, communication, and understanding, leading to a more meaningful learning experience. Parents may consider engaging in regular conversations about emotional health to normalize open expression and strengthen family support systems.

#### For Future Researchers

Future researchers may consider using the original 42-item version of the Psychological Well-being (PWB) Scale to further enrich the construct's measurement. Integrating mentoring and empathy-related outcomes as variables may offer deeper insights into the relationships and differences among constructs, especially when analyzed across demographic profiles. Research findings may be presented to school management, and organizations may consider benchmarking the proposed plan to inform and enhance their development strategies.

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