Motivation and Self-Efficacy as Predictors of Student Engagement among University Students in One Philippines State University

Regina Fidirico Aba; Ma. Alith Frisha Baybay; Glaiza May Bernardez; Yasy Mae Cabrera; Riella Mar Agapito; Joseph Callanta

Cavite State University, Philippines

regina.aba@cvsu.edu.ph

Abstract

Student engagement plays a vital role in the learning process. Identifying the factors that contribute to student engagement in their studies may include examining their level of motivation and self-efficacy. Hence, this study explored the predictive relationship between motivations and self-efficacy on student engagement. Using correlation predictive design, 509 students of Cavite State University-Silang Campus participated in the study. To measure different variables, the study utilized different scales that included Academic Motivation Scale (AMS), General Self-efficacy Scales (GSES), and University Student Engagement Inventory (USEI). Pearson r and multiple regressions analysis were utilized to identify the predictive relationship between motivation and self-efficacy on student engagement. The results reported a high-level of motivation which indicates that the students were highly motivated to engage in activities. Students also reported a high-level of Self-Efficacy, which indicates that they tend to trust and believe their capabilities to do a task. In terms of Student engagement, students showed a high-level and indicated the students were actively involved, motivated, and invested in their learning and educational experiences. In addition, there was a significant relationship between motivation and student engagement. The results indicated that the self-efficacy and student engagement of the students had a weak positive significant relationship. Students' motivation and self-efficacy could significantly predict student engagement. It is recommended for future researchers to look beyond motivation and self-efficacy as predictors of student engagement due to lack of predicting results or to increase the values of the predictors.

Keywords: *Intrinsic Motivation; Extrinsic Motivation; Self-Efficacy; Amotivation; Student Engagement*

1. Introduction

Motivation provides the desire and energy to pursue goals, while self-efficacy empowers individuals with the belief in their abilities to succeed. These two constructs may be attributed to student engagement as they could cause either failure or success. Hence, both factors' presence was fundamental

to identify students' engagement. Student engagement, as defined by Brallier (2020), it refers to the "students' participation and commitment to academics and school-related activities." Furthermore, engaged students were found to be more certain of their career choice, while disengaged students lacked interest or had uncertainty about their career path (Ketonen et al., 2016 as cited in Brallier, 2020). In addition, an article explained that engagement and motivation were separate, related, but often confused as motivation was the driving force that causes a student to take action, thus engagement was the observable behavior or evidence of that motivation. Researchers explain that motivation was necessary for engagement, but successful engagement could also help students to feel motivated in the future (Parrish, 2022). However, in the study by Fuertes et al. (2023), they found that there was no significant relationship between motivation and student engagement.

On the contrary, there were contradicting results about motivation and student engagement. A study found that intrinsically motivated students perform better than extrinsically motivated ones (Liu et al., 2022). It was explained that intrinsically motivated students engage in activities for the pleasure and satisfaction they experience, which resulted in students to perform better that led to an increased effort, persistence, and enjoyment (Main, 2023). Moreover, the study of Kum (2022) found that extrinsic motivation had a positive impact on students' learning effectiveness, which meant that students' accomplishments increased when they frequently used deep learning strategies. However, in a study of Fang & Lu (2023) found that extrinsic motivation and student engagement did not show a significant effect. With regard to amotivation, a study revealed that lack of motivation showed a negative correlation with academic success, indicating that increased academic amotivation was linked to decreased academic engagement (Itler, 2021). Contrarily, the study of Ulivia (2022) indicated that it could be linked to students' academic engagement, as the amotivation factor showed a significant relationship.

In addition, research indicated that student motivation to learn and self-efficacy were positively associated with student engagement (Bedi, 2023). This finding aligns with the broader exploration of the study of Singh and Abdullah (2020) as cited in Azila-Gbettor et al. (2021), which reported that there was a positive and significant association between self-efficacy and student engagement among 400 students selected from Jammu and Kashmir. Singh et al. (2022) also found that there was a significant strong effect of self-efficacy on student engagement in online learning. Contrarily, there was no significant correlation between self-efficacy and student's motivation and engagement (Lumbantoruan, 2023).

Further study was recommended in order to develop a better knowledge and significant findings with regards to predicting academic achievement, future researchers must explore and examine all motivational domains, such as intrinsic and extrinsic motivation, as well as self-efficacy. Moreover, it was also recommended to increase the number of participants for better results, since the said study's sample size was limited only to 51 first year students (Reyes et al., 2021). To measure the students' academic achievement, the researchers used student engagement in class as the predictor of all motivational domains and self-efficacy. This was supported by Assunção, et al. (2020), as engagement describes students' involvement in academic learning and achievement.

As a result, the researchers examined these variables such as motivation, self-efficacy, and student engagement as previous studies yielded contradicting results and were limited by small sample size, which restricted the generalizability of their findings. Thus, this study was designed to investigate the predictive relationship of motivation and self-efficacy on student engagement and to provide more generalizable results.

2. *Literature Review*

2.1. Motivation

It was found that each individual differs in what motivates them to strive hard. Harney (2020), stated that intrinsic motivation comes from inside, meaning, it was when you were motivated to do something because it was internally rewarding, it gives a positive emotional return and satisfaction. Extrinsic motivation, however, was influenced by external factors, including tangible rewards such as money or grades, and intangible rewards such as praise or fame (Cherry, 2022). This was supported by Prishtina (2022), which stated that intrinsically motivated students were more energetic to learn new materials and use deep learning strategies, going deep into the material to fully understand it, which would offer a feeling of satisfaction. It was explained that intrinsically motivated students engage in an activity for the pleasure and satisfaction they experience, which resulted in students to perform better which led to an increased effort, persistence, and enjoyment (Main, 2023).

In a study conducted by Parrish (2022), it stated that motivation was the driving force that causes a student to take action. Meanwhile, engagement was the observable behavior or evidence of that motivation. It was explained that motivation was necessary for engagement, but successful engagement could also help students to feel motivated in the future (Parrish, 2022). But, contradicting results found that there was no significant relationship between motivation and student engagement. In addition, the study of Kum (2022) found that extrinsic motivation had a positive impact on students' learning effectiveness, meaning, students' accomplishments increased when they frequently used deep learning strategies. With regard to amotivation, a study revealed that lack of motivation showed a negative correlation with academic success, indicating that increased academic amotivation was linked to decreased academic engagement (Itler, 2021). Contrarily, the study of Ulivia (2022) indicated that It could be linked to students' academic engagement, as the amotivation factor showed a significant relationship.

Further, the notion of disengagement from learning, most students did not align with this perspective. Less amotivated students showed higher levels of academic engagement, which had a positive impact on their grades. Therefore, the more actively engaged students were in learning, the more improved academic outcomes would be.

However, Briones (2021) found in his study that the highest intrinsic incentive for students was their skills, while their most motivator for extrinsic motivation was material reward and their strongest motivator was the intrinsic factor.

2.2. Self-Efficacy

According to Bandura et al. (1996), self-efficacy was the most crucial to functioning, even though various mechanisms were described about personal agency. He also stressed the significance of self-efficacy to the perception capacity of the people to exert control over their level of functioning and environmental demands. The way an individual thinks, feels, acts, and responds to stimuli from the outside world was influenced by their efficacy beliefs. Additionally, according to the majority of studies, self-efficacy was a reliable indicator of one's actual performance as it was defined as the ability to respond to a situation expectedly with the necessary information, abilities, and attitudes (Aziz et al., 2020).

Moreover, earlier study found that students with a high self-efficacy level had traits like persistence and willingness to try (Ahmad & Safaria as cited in Al-Abyadh et al. 2022). Due to their

Motivation and Self-Efficacy as Predictors of Student Engagement among University Students in One Philippines State University

141

mental capacities, students with strong self-efficacy would be able to focus, organize, and elaborate content successfully.

Thus, there were high chances that these students might complete the task regardless of the difficulties and continuously put effort if they find it hard to keep up with the material or come up with effective methods (Heslin & Klehe 2006, as cited in Al-Abyadh et al. 2022). Contrarily, Yongmei & Chei (2023), claimed that internality and learning adaptation were connected to academic self-efficacy. Aside from that, based on Neroni et al. (2022), no measure of academic success was significantly predicted by academic self-efficacy alone. According to Bedi (2023), involving 605 students in the city of Handan, Hebei province in China, the results revealed that academic self-efficacy was positively associated with learning engagement.

In a local study, Sechico et al. (2023), found that students who had healthy levels of self-efficacy could perform well in the classroom, willing to open themselves up to criticism, make sound decisions, and had healthy interpersonal relationships with the people around them. Based on a study of Callao (2021), as cited in Cebu (2023), stating that according to Bandura (1995), students with high self-efficacy levels were typically in charge of their own lives; their choices and actions had an impact on them. However, individuals who possess low levels of self-efficacy tend to hold the belief that their lives were influenced by external factors such as destiny and a certain degree of chance. As a result, they often had a tendency to overestimate the level of difficulty associated with a particular task or goal they need to accomplish.

2.3. Student Engagement

Scholars who study college learning define student engagement as, "the mental state students were in while learning, representing the intersection of feeling and thinking." (Barkley & Major, 2020, p. 6; Foster 2023). Engaged students were not just absorbing content, they tried to make meaning of what they were studying by putting in intellectual effort and working through challenging ideas. Engaged learners care about the subject, feel motivated or excited to learn, and take ownership of their own learning (Foster, 2023). Student engagement, in a broad sense, refers to the level of involvement they had in their learning. It's not only something that we need to encourage or reward, but it's a skill that everyone needs to develop. Engaged students were able to take in new ideas and learn concepts that might be difficult for them (Adam, 2022).

Furthermore, student engagement in the classroom was essential since it could indicate their success academically. It was supported by a study which claimed that students who reported higher levels of engagement were more likely to attend class regularly and get higher grades than those who reported lower levels of engagement; they found that engaged students were 75% more likely to get higher grades and attend class regularly than disengaged students (Klem & Connell, (2004), as cited in Fuertes et al., (2023). On the other hand, disengaged students could display disruptive behavior to get attention or vent their annoyance with the classroom setting and were less likely to aim for higher educational goals (Rimm-Kaufman & Hulleman, 2015 as cited in Fuertes et al,. 2023).

According to the study by Sternberg (2005), motivation was essential for academic success since, with it, a student would put out the effort to learn (Fuertes et al., 2023). Motivation was the driving force that caused a student to take action. Engagement was the observable behavior or evidence of that motivation. Motivation was necessary for engagement, but successful engagement could also help students to feel motivated in the future (Parrish, 2022).

There was an international study in regards to self-efficacy and student engagement. According to the study of Yunita (2023), the self-efficacy variable with student engagement had a positive correlation with a very strong correlation coefficient. In addition, there were studies that academic self-efficacy and academic motivation had a positive and significant relationship with student long-term engagement.

The academic motivation was also found to be positively correlated with student long-term engagement. Furthermore, learning agility was found to mediate the relationship between academic self-efficacy and student sustainable engagement. Furthermore, learning agility mediated the relationship between academic motivation and long-term student engagement.

2.4. Theoretical Framework

The focus of this study was based on various theories, that is, Self-Determination Theory (SDT) and Self-efficacy Theory (SET) and Student Involvement Theory (SIT) as an extended explanation of motivation, self-efficacy, and student engagement. Edmund Deci and Richard Ryan created the Self - determination Theory in 1985. It determines the key aspects of the motivated behavior of humans. According to the theory, motivation cannot be taken as a unidimensional view. Rather, three dimensions of motivation have to be looked into: intrinsic, extrinsic and amotivation.

Intrinsic motivation (IM) referred to a case where a student performed an activity because he/she thought it was enjoyable and rewarding. Therefore, intrinsically motivated students engage in an activity with no anticipation of reward although neither an external nor an internal stimulus forces them into doing so (Deci and Ryan, 1985; Deci et al. 1991; Vallerand and Bissonnette 1992; Vallerand et al. 1992; Frederick and Ryan 1995). Vallerand et al. (1992) agreed to indicate that IM was an international construct which could be characterized into three more specific motives, which include intrinsic motivation towards knowledge, accomplishments, and stimulation.

Extrinsic motivation on the other hand was a participation in an activity to earn some reward. Deci and Ryan (1985) perceive extrinsic motivation as a multidimensional construct, too. There were three categories of extrinsic motivation used in the self-determination theory which included external regulation, introjection and identification. Finally, the third component of motivation as found in SDT was amotivation. It means failure of a contingency between the actions of individual and results. There are no specific purposes of amotivated people and their goals fail to show willingness to perform an action (Vallerand et all, 1992 as cited in Barkoukis et al., 2008).

Schwarzer and Fuchs (1995) conceptualized the Generalized Self-efficacy. Generalized self-efficacy was a construct and involved beliefs that individuals held in relation to the competency of themselves to manage effectively a number of situations. In that regard, the concept of generalized self-efficacy was at that defined as strong efficacy of oneself, as rather permanent efficacy in dealing with stressful situations efficiently also in the meaning of judgments about own capability to influence the social environment (Baessler & Schwarzer, 1996; Jerusalem & Schwarzer, 1992 as cited in Juarez & Contreras, 2008). The theory was thus utilized in this study since it enabled the researchers to establish and better assert the efficacy of the students as well as having an insight of how efficacy can contribute and predict an engagement amongst the students.

Student Involvement Theory was developed by Astin (1984). According to this theory, student involvement is a concept with respect to the proportion of effort that a student may contribute to his/ her college life. The most remarkable thing about his theory was that he did not simply look at the subjects and techniques, like others usually did; he pondered concerning the reasons behind what students do. Astin claims that the efficacy of an educational practice or policy is determined by the extent to which

they engage the students. Notably, engagement and involvement are similar concepts adopted by Astin in his theory. In his view, he believes that the student should be involved as much as possible on his/her campus so as to achieve maximum growth and learning. The quality and the number of the activity of the student on campus directly affected the degree of learning and a personal growth a student could attain (Kanellopoulou, 2020)

3. Methodology

3.1. Research Design

A correlation predictive research design was utilized to determine the predictive relationship between variables. A correlational design was employed to determine if motivation and student engagement as well as self-efficacy and student engagement has significant relationship. Correspondingly, aside from the determining if there is a connection between the variables the study also utilized a predictive design to determine the extent to which motivation and self-efficacy can predict student engagement by employing a multiple regression analysis.

3.2. Participants of the Study

The participants of the study are the college student from one state university in Cavite. The population consists of 3,815 students who were enrolled during the first semester of the academic year 2023-2024. The lists were obtained from the office of the registrar. Using the G*Power analysis to determine the sample size, a total of 509 samples were computed. The researchers choose all students from one state university in Cavite as previous researcher limits their participants to 51 first year students which lacked generalizability. By utilizing stratified random sampling technique which involved the division of a population into smaller subgroups known as strata, where it is formed based on members' shared attributes or characteristics (Hayes, 2023). In this study, students from one state university were divided into year levels and programs to ensure that all students have an equal chance of being selected.

3.3. Instrumentation and Data Gathering Process

A standardized instrument was utilized to gather data that included Academic Motivation Scale (AMS), a 28-point scale to measure motivation. It was designed to assess the degree to which individuals were motivated to engage in academic activities and other underlying reasons for their motivation. Also, it aimed to further enhance the sub-constructs of the intrinsic motivational dimensions, to provide a complete and comprehensive measure for assessing various specifics of students' motives relevant to various academic contexts and was also evaluated in this research. The Academic Motivation Scale was consisted of seven constructs, namely: intrinsic motivation towards knowledge, accomplishments, and stimulation, external regulation, introjected and identified motivation, and amotivation. The scores for each subscale were calculated by adding up the responses to the relevant items and dividing by the number of items on that subscale. The score for each subscale ranges from 1 to 7, indicating higher scores for higher levels of motivation. As for self-efficacy, the standardized test was also used namely, General Self-efficacy Scale (GSES), created by Schwarzer & Jerusalem (1995), it is a 10-point scale to measure self-efficacy which aimed to assess the strength of an individual's belief in his or her own ability to respond to difficult situations and to deal with any associated obstacles or setbacks. It also aimed to predict coping with daily problems and adaptation after experiencing stressful life events. This scale consisted of 10 items, wherein the responses were made on a 4-point scale and took on average of approximately 4 minutes to complete. After participants had responded to all the statements, the total score was calculated by finding the sum of all items. For the GSE, the total score ranges between 10 and

Motivation and Self-Efficacy as Predictors of Student Engagement among University Students in One Philippines State University

144

40, wherein a higher score specifies more self-efficacy. A higher total score indicated a higher level of self-efficacy, reflecting stronger beliefs in one's ability to handle various situations. Lastly, University Student Engagement Inventory (Assunção, H., et al. 2020) was used. It consisted of 15-point items to measure student engagement. To which the internal consistency of the questionnaire was shown according Cronbach (1951), for group-level comparisons coefficients in the vicinity of 0.70 are adequately acceptable, 0.80 are good, and 0.90 or greater are excellent and highly desirable. USEI consists of 15 self-report items, each associated with likert-type response with options ranging from "1-never" to "5-always." Each of the three first-order factors was composed of five items. According to the author of the scale, to score the dimension, researchers must calculate the items' mean in each dimension. Mean scores below 2 indicate low-engagement while mean scores
above 3.5 indicate high-engagement.

After identifying the instrument that will be used, the researchers ask first for the permission of the rightful owners of the standardized instruments. Then, the researchers obtained the approval of the school to conduct the study and obtained the list of students from the office of the registrar for sampling purposes, as well as informed the students about the nature of the study and the confidentiality clauses before collecting the data. After gathering of data, the responses were encoded in the Microsoft excel and Jamovi Software for data analysis.

3.4. Data Analysis

The researchers utilized data analysis which was conducted using Jamovi version 2.4. This provides complete and precise data results. The participants' level of motivation, self-efficacy, and student engagement were assessed using mean, this gives a more accurate average that reflects the importance of each observation and standard deviation, as it showed how much variation there is from the average or mean. While relationships between variables were tested using Pearson's r, it is the most common way to gauge linear correlation. It is the value in between –1 and 1 that gauge the direction and strength of the relationship between two variables (Turney, 2022). For predictions of variables, it was analyzed using Multiple Linear Regression, and is used to identify and analyze the connections between several independent variables and a dependent variable.

3.5. Data Source

The researchers used primary and secondary sources in modifying the necessary information in this study. Consequently, the primary source came from the students from the Cavite State University-Silang Campus. While the secondary sources of data, the researchers administered a collection of information from various journals, articles, and other stored information in cyberspace.

3.6 Research Ethics

The researchers followed the ethical guidelines in conducting the study, wherein a letter to conduct was given to the campus dean, chairperson, research personnel, and coordinators of different programs. The researchers ensured that the letter was signed and approved before conducting the study. An informed consent was also provided for the participants to ensure that students know and understand the nature of the study. Consent was secured for voluntary participation before respondents answered the research questions in a face-to-face. Responses were not associated with their identity and data obtained were handled confidentially. Participants were also given the right to withdraw from the study.

4. *Findings and Discussion*

This part presented the results and discussion gathered by the researchers regarding motivation, self-efficacy, and student engagement among students of Cavite State University-Silang Campus.

Table 1
Level of Motivation

ASPECTS	$(\bar{X})$	*SD*	*Verbal interpretation*
Intrinsic motivation towards knowledge	5.50	1.12	High
Intrinsic motivation towards accomplishments	5.08	1.18	High
Intrinsic motivation towards stimulation	4.79	1.21	High
External regulation	5.80	1.08	High
Introjected motivation	5.42	1.20	High
Identified motivation	5.65	1.16	High
Amotovation	2.71	1.42	Low
TOTAL	*4.99*	*1.06*	*High*

Legend:*Very high = 6.16 - 7.00; High = 4.44 - 6.15; Moderately high = 3.58 - 4.43; Low = 1.86 - 3.57; Very low = 1.00 - 1.85*

The overall level of motivation of the students was high (M= 4.99± 1.06). Specifically, motivation is divided into three domains, the intrinsic motivation, extrinsic motivation, and amotivation. For intrinsic motivation, it was classified into three subscales, namely: intrinsic motivation towards knowledge, intrinsic motivation towards accomplishments, and intrinsic motivation towards stimulation. It was presented that intrinsic motivation towards knowledge had a high-level of motivation (M= 5.50± 1.12); intrinsic motivation towards accomplishments also had a high-level of motivation (M= 5.08± 1.18); and intrinsic motivation towards stimulation had a high-level of motivation as well, (M= 4.79± 1.21). These findings indicated that these students were intrinsically motivated because of the satisfaction they feel, the growth, and they find the tasks enjoyable, and according to Hawthorne (2024), those who are intrinsically motivated was a "self-summoned willingness to learn", they do not require rewards or incentives because they were driven more internally.

On the other hand, the subscale for extrinsic motivation was also classified into three, namely: external regulation, introjected motivation, and identified motivation. It was presented that students also had a high level of external regulation (M= 5.80± 1.08); students were also high in introjected motivation (M= 5.42± 1.20); and had a high level in identified motivation as well, (M= 5.65± 1.16). These findings indicated also that students are not just intrinsically motivated but also extrinsically which is much higher, meaning they are more motivated because of the external rewards or incentives they may receive after completion of tasks or those who are extrinsically motivated are more driven only to seeks knowledge to obtain benefits or to avoid difficulty (Khaliq et al., 2023).

Lastly, for the domain of amotivation, it showed a low-level of amotivation (M= 2.71± 1.42), which meant that students are not amotivated at all, as these students seek knowledge; they complete tasks because of the internal and external rewards, and they do not lack the drives to pursue goals. These

students were eager to engage in activities because they found them both personally fulfilling and externally satisfying. According to Floris et al. (2023), students put in more work, positively view their future and their chances of reaching their goals, and were able to successfully overcome obstacles and setbacks by using efficient ways to cope.

Table 2
Level of Self-efficacy

ASPECTS	$\overline{(X)}$	SD	Verbal interpretation
Self-efficacy	29.57	4.98	High

Legend:*Very high = 30 - 40; High = 20 - 30; Low = 10 - 20; Very low = 1.00 - 10*

The results indicated a high-level of Self-Efficacy with a mean value of 29.57 (SD=4.98), which meant that they tend to trust and believe their capabilities to perform a task. They were confident they could deal efficiently with unexpected events, they were responsible for their own life, driven by their personal values, and they believed that there was a good opportunity that awaits them. Sechico et al. (2023), added that students who had healthy levels of self-efficacy could perform well in the classroom, willing to open themselves up to criticism, make sound decisions, and had healthy interpersonal relationships with the people in their immediate environment. This is supported by an article that stated that people with high level of self-efficacy or strong belief in their ability tend to perceive difficult tasks as challenges and opportunities for them to learn and grow, as they believed that these tasks were not given without its purpose. Likewise, student with high level of self-efficacy tend also to attribute failure and insufficient effort so they may see these failures as something that will taught them what to improve or changed (Lopez-Garrido, 2025).

Table 3
Level of Student Engagement

ASPECTS	$\overline{(X)}$	SD	Verbal interpretation
Student Engagement	3.60	0.57	High

Legend:*High = 3.41 - 5 - 30; Low = 1 - 3.40*

The results indicated a high-level of Student Engagement with a mean value of 3.60 (SD=0.57), which meant that the students were actively involved, motivated, and invested in their learning and educational experiences. It also implied that students were deeply connected and committed to their academic pursuits, actively participating in various aspects of their education. Specifically, students scored high in the following statement: *"I follow the school rules; I pay attention in class; and I usually participate actively in group assessments"*. These statements explained that students were highly engaged in class as students were highly committed to the established norms and values of the university, and students actively participated in the shared expectations, fostering a sense of responsibility and dedication to its academic pursuits. This was supported by an article that states that students had a tendency to be behaviorally involved in academic activities (Thijs & Verkuyten, 2009 as cited in IPL, 2021). Furthermore, there are factors that may contribute to a high level of student engagement according to the study of Li and Xue (2023), which are learning ability and thinking ability of the students, teacher and student relationships, the learning resource, the study background, and the individual positive emotions. The most influential factors that they found was the individuals' positive emotion which included the extent where students are satisfied with the curriculum, they were recognized by their teachers, the sense of belongingness was established and other positive emotions contributed to the students' engagement in their studies.

Table 4
Relationship between Motivation and Student Engagement

ASPECTS	R-value	Description	P-value	Interpretation
Intrinsic motivation towards knowledge and Student Engagement	0.430	Moderately Strong Positive Relationship	<.001	High
Intrinsic motivation towards accomplishments and Student Engagement	0.404	Moderately Strong Positive Relationship	<.001	High
Intrinsic motivation towards stimulation and Student Engagement	.423	Moderately Strong Positive Relationship	<.001	High
External regulation and Student Engagement	.329	Weak Positive Relationship	<.001	High
Introjected motivation and Student Engagement	.305	Weak Positive Relationship	<.001	High
Identified motivation and Student Engagement	.228	Weak Positive Relationship	<.001	High
Amotivation and Student Engagement	-0.039	Very Weak Negative Relationship	<.001	Low

Note: *Accept Ho if P-value is ≥ 0.05*
Reject Ho if P-value is ≤ 0.05

Relationship between Motivation and Student Engagement. It showed that there was a moderately strong positive relationship between intrinsic motivation and student engagement, with a correlation coefficient of: (r = 0.430 p= 0.001) for the subscale of intrinsic motivation towards knowledge, (r =0.404 p= 0.001) for intrinsic motivation towards accomplishments, and (r= 0.423 p= 0.001) for intrinsic motivation towards stimulation. It also showed that there was a weak positive relationship between extrinsic motivation and student engagement, with a correlation coefficient of: (r=0.329 p= 0.001) for the subscale of external regulation; (r= 0.305 p= 0.001) for introjected motivation; and (r = 0.228 p= 0.001) for identified motivation, with a computed p-value of .001 for each subscale. Lastly, it showed that there was a very weak negative relationship between amotivation and student engagement (r =-0.039 p=0.001).

The results indicated that there was a significant relationship between motivation and student engagement. Specifically, in the subscale of intrinsic motivation, it showed that intrinsic motivation towards knowledge had a moderate positive relationship with student engagement, which meant that students find joy and fulfillment in the process of acquiring new knowledge, they derived joy from uncovering new and previously unseen things, and they enjoyed expanding the understanding of subjects that captivate his interest. The study of Rubio et al. (2023) indicated that the students achieved their goals by taking part in learning and exploring activities that were intrinsically enjoyable or satisfying. Also, it showed that intrinsic motivation towards accomplishments had a moderate positive relationship with student engagement, which meant that students find pleasure in outdoing themselves in their academic efforts, satisfied from pushing their own limits in the pursuit of personal achievements, contentment, and fulfillment in experiencing excellence in challenging academic tasks. This was also supported by the study of Rubio et al. (2023), which stated that students achieve success by a sense of accomplishment through producing or perfecting a task. Moreover, it also showed that there was a moderate positive

relationship between intrinsic motivation towards stimulation and student engagement, which meant that students had confidence in their capacity to manage unexpected events, they were interested and captivated in reading interesting authors. This was supported by the study of Rubio et al. (2023) stating that students achieve their goals by engaging in stimulating activities, especially those related to art, aesthetics, entertainment, or pleasure. Moreover, the results indicated that there was a significant relationship between extrinsic motivation and student engagement. As it showed that there was a weak positive correlation between external regulation and student engagement, which meant that the students excel in studies for getting a better and high-paying job in the future and had a better life later on. It was supported by Abun (2021), which stated that student engagement could be attributed to external incentives such as avoidance of punishment, praise, and rewards that regulate their behavior. Also, the result showed that there was a weak positive correlation between introjected motivation and student engagement, which meant that students could keep calm in tough situations because they were confident in their ability to cope, and showed that they were excellent students and to show that they could succeed in their studies. It also implies that individuals complied with tasks because they feel obligated, and experience guilt if they do not (Abun, 2021). It showed also in the results that there was a weak positive correlation between identified motivation and student engagement, which meant that students believed that entering college would better prepare them for their chosen career and to have a better job in the future. According to the study of Nishimura & Joshi (2021), as cited in Floris et al. (2023), it was said that students with identified motivation put in more work, positively view their future and their chances of reaching their goals, and were able to successfully overcome obstacles and setbacks by using efficient ways to cope. Also, students put time and effort in studying because they know the possible benefits and could relate to the task's value (Liu et al., 2019). Lastly, it showed that amotivation had a very weak negative correlation on student engagement. Since the participants had a high level of motivation in other subscales, it showed that students do not lack motivation as they were highly driven and they put in greater effort (Liu et al., 2022).

Table 5
Relationship between Self-efficacy and Student Engagement

ASPECTS	R-value	Description	P-value	Interpretation
Self-Efficacy and Student Engagement	0.387	Weak Positive Relationship	<.001	Reject Ho

Note: *Accept Ho if P-value is ≥ 0.05*
         Reject Ho if P-value is ≤ 0.05

The relationship between self-efficacy and student engagement revealed a significant weak positive correlation (r = 0.387 p= 0.001) between variables. Since the p-value is less than 0.05, the null hypothesis was rejected. This study suggests that as self-efficacy or the belief of the students in their ability increases, student engagement also increases, and vice versa. Student who believed that they are capable of completing the tasks are more likely to participate or engaged (Lopez-Garrido, 2025). In addition, he also stated that self-efficacy can be developed and improve through enactive mastery or when the students successfully complete the tasks in the past performance, it increases their confidence and self-efficacy to perform future tasks which made them engaged more, as well as the vicarious experiences or when the students saw other students successfully performed the tasks made them think and believed in their selves that if others can do it, they can do it also. Though self-efficacy and student engagement only had a weak correlation, it could still be associated with student engagement. Self-efficacy was a reliable indicator of one's actual performance as it was defined as the ability to respond to a situation expectedly with the necessary information, abilities, and attitudes (Aziz et al., 2020).

Table 6
Prediction of Motivation and Self-Efficacy on Student Engagement

				OVERALL MODEL TEST		
MODEL	**R**	**R²**	**ADJUSTED R²**	**F**	**df1**	**df2**
1	0.47	0.22	0.22	75.60	2	525

3.

PREDICTORS	ESTIMATE	SE	T	P	STAND. ESTIMATE
Intercept	1.70	0.16	10.84	<.001	—
MOTIVATION	0.20	0.03	7.06	<.001	0.30
SELF-EFFICACY	0.03	0.00	6.45	<.001	0.27

Note: *Accept Ho if P-value is ≥ 0.05*
Reject Ho if P-value is ≤ 0.05

Prediction of Motivation and Self-Efficacy on Student Engagement. This resulted in a significant model, R2=0.22, F(75.60), p .001, which revealed that motivation and self-efficacy significantly predicted student engagement.

Specifically, in motivation, it explained that as students' motivation increases, student engagement would also increase, and vice versa. It was proven that students who were intrinsically motivated engage in an activity for the pleasure and satisfaction they experience, and extrinsically motivated because of the external rewards that the students would receive if they engaged in an activity (Main, 2023; Kum, 2022). Therefore, regardless if students are intrinsically or extrinsically motivated, student engagement will increase if they were motivated. Likewise, self-efficacy also significantly predicted student engagement. It explained that as students' self-efficacy is high, students are likely to engage in class, as they were motivated and committed to their academic endeavour. If the students had a high self-efficacy, they were more likely to engage in tasks regardless of how difficult it was (Al-abyadh, et al., 2022).

Conclusion

The finding indicates that students from one state university in Cavite, Philippines demonstrated a high level of motivation which was a powerful driver for students as they were more likely to work hard and overcome challenges when they are focused on achieving a specific goal, and a high self-efficacy would help students to engage more in their academic pursuits. The findings of this study establish a predictive relationship between motivation and self-efficacy on student engagement. It was revealed that students' engagement is significantly higher when students are driven by external rewards while intrinsic motivations play a lesser role. Likewise, a weak positive relationship between self-efficacy and student engagement suggests that building students' self-efficacy or their belief in their ability is a crucial factor in promoting students' engagement in their education. Taking this into account, the researchers recognized the critical role of institutional support in academic success. Instead of relying on what motivates student to engaged or participate in their academics, the institutions as well as the teachers or instructors must find a way how to improve engagement lessening the dependence on external motivations or rewards, and ways to improve their self-efficacy. The study also suggests that the guidance and counselling services should implements initiatives – such as webinars, seminars or programs focused on educational productivity that will help students cope with academic demands and support their adjustment to their college life. Parental support is also essential in fostering students' motivation and self-efficacy through showing love and support, giving encouragement, and affirmation. Further study

was recommended as this study only determines factors such as motivation and self-efficacy that can predict student engagement, so future researchers may explore other variables such as parental or teacher support or other variables to further understand and enhance student engagement.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was not supported by any funding.

References

Abun, D. (2021). *Academic self-regulation of STEM of senior high school students of Divine Word Colleges in Region I, Philippines and Their Academic Performance.* Retrieved from https://ssrn.com/abstract=3807851

Adam, R. (2022, January 13). What is the meaning of student engagement? - AES Impact. AES Impact. Retrieved from https://aesimpact.org/what-is-the-meaning-of-student-engagement/amp/

Al-Abyadh, M. H. A., & Azeem, H. A. H. A. (2022). Academic achievement: Influences of university students' self-management and perceived self-efficacy. Journal of Intelligence, 10(3), 55. https://doi.org/10.3390/jintelligence10030055

Assunção, H., Lin, S., Sit, P., Cheung, K., Harju-Luukkainen, H., Smith, T. J., Maloa, B. F. S., Campos, J. A. D. B., Stepanović-Ilić, I., Esposito, G., Francesca, F. M., & Maroco, J. (2020). University student engagement inventory (USEI): Transcultural validity evidence across four continents. Frontiers in Psychology, 10. https://doi.org/10.3389/fpsyg.2019.02796

Aziz, A., Sulaiman, S., & Razak, N. A. A. (2020). Students' emotional intelligence and self-efficacy towards their academic performance: A survey study on public higher learning institutions. Universal Journal of Educational Research, 8(11C), 129–135. https://doi.org/10.13189/ujer.2020.082315

Bedi, A. (2023). Keep learning: Student engagement in an online environment. Online Learning, 27(2). https://doi.org/10.24059/olj.v27i2.3287

Brallier, C. B. (2020). The effects of student engagement on academic achievement among college students (Master's thesis). Middle Tennessee State University. https://jewlscholar.mtsu.edu/bitstreams/4a1228df-60f6-4cec-acbd-cfadff8756d0/download

Briones, M. A. (2021). Licensure examination: students intrinsic and extrinsic factors as success predictor. Journal of English Education and Linguistics, 2(2), 93–110. Retrieved from https://doi.org/10.56874/jeel.v2i2.424

Cebu, J. (2023). Self-efficacy of Filipino college students as correlates to demographics. ResearchGate. https://www.researchgate.net/publication/368789042_Self-Efficacy_of_Filipino_College_Students_as_Correlates_to_Demographics

Cherry, K. (2022). What is extrinsic motivation? Verywell Mind. https://www.verywellmind.com/what-is-extrinsic-motivation-2795164

Fang, S., & Lu, D. (2023). The impact of learning motivation on student engagement in experiential learning. In Advances in Social Science, Education and Humanities Research (pp. 1147–1153). https://doi.org/10.2991/978-2-38476-126-5_127

Motivation and Self-Efficacy as Predictors of Student Engagement among University Students in One Philippines State University

151

Floris, M., Paganin, G., Guglielmi, D., & Mazzetti, G. (2023). Motivation is not enough: How career planning and effort regulation predict academic achievement. Current Psychology. https://doi.org/10.1007/s12144-023-05070-6

Foster, S., (2023) Facilitating and assessing student engagement in the classroom. (2023, November 8). Center for Teaching & Learning. Retrieved from https://www.colorado.edu/center/teaching-learning/2023/01/23/facilitating-and-assessing-student-engagement-classroom?fbclid=IwAR0fmkpxg3jocSGeNVFdEnqbjCMXmwcBgiwgklA-tAWIPKh2K84YFy2L9QA

Fuertes, H. G., Evangelista, I. A., Marcellones, I. J. Y., & Bacatan, J. R. (2023). Student engagement, academic motivation, and academic performance of intermediate level students. Zenodo (CERN European Organization for Nuclear Research). https://doi.org/10.5281/zenodo.8037103

Harney, J. (2020, February 27). Five studies highlighting the power of intrinsic motivation Workstars. Employee recognition and engagement. Retrieved June 7, 2023, from https://www.workstars.com/recognition-and-engagement-blog/2020/02/24/5-studies-highlighting-the-power-of-intrinsic-motivation

Hawthorne, H. (2024, May 2). Understanding the importance of motivation in education. *The Hub | High Speed Training*. https://www.highspeedtraining.co.uk/hub/motivation-in-education/

Hayes, A. (2023). Multiple linear regression (MLR) definition, formula, and example. Investopedia. https://www.investopedia.com/terms/m/mlr.asp

Heilporn, G., Lakhal, S., & Bélisle, M. (2021). An examination of teachers' strategies to foster student engagement in blended learning in higher education. International Journal of Educational Technology in Higher Education, 18(1). https://doi.org/10.1186/s41239-021-00260-3

IPL. (2021, February 18). Student engagement theory. Internet Public Library. Retrieved January 23, 2024, from https://www.ipl.org/essay/Motivation-Research-Student-Engagement-PCVCNQ2EPG

Itler, I. (n.d.). The relationship between academic amotivation and academic achievement: A study on middle school students. ERIC Database. https://eric.ed.gov/?id=EJ1307357

Khaliq, S. (2023). Extrinsic Motivation and Students' Academic Achievement: A correlational study. *Journal of Development and Social Sciences*, *4*(II). https://doi.org/10.47205/jdss.2023(4-ii)34

Kum, B. K. (2022). The effects of intrinsic and extrinsic motivation on student learning effectiveness (Case study: International students of Estonian Entrepreneurship University of Applied Sciences). Creativity and Business Innovation. https://eek.ee/download.php?t=kb&dok=p1g22soegbedd1ke2hna10c71v3b3.pdf

Liu, C., Shi, Y., & Wang, Y. (2022). Self-determination theory in education: The relationship between motivation and academic performance of primary school, high school, and college students. Advances in Social Science, Education and Humanities Research. https://doi.org/10.2991/assehr.k.220704.167

Lopez-Garrido, Gabriel. (2025, May 1). *Bandura's Self-Efficacy Theory of Motivation in Psychology*. Simply Psychology. https://www.simplypsychology.org/self-efficacy.html

Lumbantoruan, J. (2023). The impact of student engagement and motivation in the statistics learning process. ResearchGate. https://www.researchgate.net/publication/375136559_The_Impact_of_Student_Engagement_and_Motivation_in_the_Statistics_Learning_Process

Main, P. (2023). Intrinsic motivation. Structural Learning. https://www.structural-learning.com/post/intrinsic-motivation

Moore, R., Lopes, J. (1999). Paper templates. In TEMPLATE'06, 1st International Conference on Template Production. ABCpress.

Parrish, N. (2022, November 17). To increase student engagement, focus on motivation. Edutopia. https://www.edutopia.org/article/to-increase-student-engagement-focus-on-motivation

Rubio, I. M., Ángel, N. G., De Lurdes Rosas Da Silva, S., Furtado, G. E., & Brito-Costa, S. (2023). *Intrinsic motivation: Knowledge, achievement, and experimentation in sports science students—relations with emotional intelligence. Behavioral Sciences, 13(7),* 589. https://doi.org/10.3390/bs13070589

Sechico, K. R., Ledesma, K. M., Mata, S., & Handang, J. (2023). A quantitative investigation of self-efficacy among filipino young adult learners. ResearchGate. Retrieved from https://www.researchgate.net/publication/370100872_A_Quantitative_Investigation_of_self-efficacy_among_Filipino_young_adult_learners.

Smith, J. (1998). The book, The publishing company. London, 2nd edition.