
RESEARCH ARTICLE

The Interplay of Academic Mastery, Learning Strategies, and Social Efficacy among Northeastern College Students

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ABSTRACT

The objective of this study is to determine whether there is a correlation among the self-efficacy beliefs of Northeastern College students across four areas: academic mastery, learning strategies, social efficacy, and attendance/motivation. A random sample of 244 students was selected from each area of study using stratified sampling, and participants completed a structured Likert-style questionnaire. The study analyzed the relationship between demographics (age, level of education, type of course, number of classes taken per term) and understanding how each of the four self-efficacy domains relates to one another. The findings indicate that Northeastern College students demonstrate a high level of self-efficacy in academic discipline, specifically regarding attendance ($M=4.13$) and success on traditional assessments ($M=3.70$). Students also show moderate to high levels of self-efficacy in their use of learning strategies ($M=3.84$), but lower levels of self-efficacy in the higher-level competency areas of interdisciplinary synthesis and mastery of mathematics. In the area of social efficacy, there was a pattern of conflicting responses: students feel confident interacting with peers but less confident interacting with instructors, and they fear or experience anxiety about assuming any leadership role among peers, which may be attributed to the hierarchical structure of their culture. No statistically significant differences in self-efficacy were found by sex. While students possess a solid academic discipline, additional institutional support may be needed to increase their self-efficacy in quantitative subjects, facilitate communication with faculty, and develop high-stakes social leaders to improve students' overall success.

KEYWORDS

self-efficacy, academic mastery, learning strategies, social efficacy, student success

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Introduction

Self-efficacy, a psychological construct, is a crucial factor in determining how successful students are overall, how well they persist academically, and how satisfied they are with their well-being when attending school. According to Bandura's Social Cognitive Theory, self-efficacy represents individual beliefs about the ability to perform behaviors needed for particular and expected outcomes; hence, self-efficacy consists of multiple beliefs that can affect individuals in multiple ways (Montero, 2025; Tsang et al., 2012). Self-efficacy beliefs arise from the same sources that lead to the development of self-identity, including mastery experience, vicarious experience, social persuasion, and physiological state, as well as cognitive, motivational, affective, and selection processes, thus leading to behavioral outcomes (Tsang et al., 2012).

Academic self-efficacy has been researched across many cultures and institutions. The research shows that students with greater academic self-efficacy generally believe they can overcome challenges in school, are more likely to be motivated to use effective learning strategies, invest time and effort in their academic work, and achieve higher levels of academic success (Cheng, 2023). In addition, academic self-efficacy has been found to influence students' major and career choices, predict the academic areas and levels in which students will become engaged, and serve as a strong predictor of achievement across multiple cultures and settings

(Xu et al., 2025; Tsang et al., 2012). Therefore, research increasingly demonstrates that self-efficacy is not merely a psychological trait but a dynamic, developmentally sensitive construct that universities and colleges must actively foster to facilitate student success.

College students who believe they can use effective metacognitive strategies to monitor their academic performance and manage time effectively are more likely to be academically successful (Mills et al., 2007). Additionally, attaining mastery-oriented goals promotes the use of deep cognitive strategies for learning and, consequently, creates opportunities for deeper knowledge development and integration than does performance avoidance, which focuses on achieving immediate success (Shaojie et al., 2025). Thus, the interaction among self-efficacy, mastery experiences, and the use of learning strategies is a key influence on how students approach the challenges posed by taking college-level courses (Montero, 2025; Cheng, 2023; Chen et al., 2023).

Motivational components of social relationships are important and should be supported through social skills development, such as developing supportive communication with peers and professors and engaging in campus life. As peer relationships play a critical role in the development of motivation and academic success among college students (Daumiller & Hemi, 2022), research demonstrates that peer support, social norms, and social networks affect motivation and academic achievement, and that peer interactions also impact students' motivation. The significance of peer relationships increases during the transition from high school to college; additionally, these relationships positively correlate with academic competence, intrinsic motivation, and self-efficacy (Marley & Wilcox, 2021). Even when controlling for mastery and performance goals, they explain additional variance in student adaptive outcomes, particularly for students from collectivist cultures (King et al., 2013).

Additionally, the study by Berdida et al. (2023) found that social support was a key mediating variable for psychological well-being among Filipino college students, whereas stress level was not; self-efficacy served as a mediating variable for resilience and mindfulness. Therefore, encouraging help-seeking behavior—driven by self-regulated learning strategies and social-interactive processes with peers and teachers—should be supported across all academic communities. Consequently, the social aspects of one's self-efficacy can serve as an integral component within the broader context of both establishing student confidence and their capacity to participate in academic activities.

Several factors affect student self-efficacy in higher education in the Philippines. These include structural, socio-economic, and cultural influences. Specifically, research in the Philippines has consistently shown that culture and economics affect a student's readiness for college and overall academic performance. The data show that students with greater economic and cultural capital are better prepared for college than those with less capital and are more likely to achieve greater levels of success in life (Pagulayan et al., 2021). In addition, collectivist cultures affect how students perceive and evaluate their self-efficacy (Ahn et al., 2015). For example, Filipino students tend to exhibit modesty bias when estimating their self-efficacy compared to individualistic cultures. Research on mathematics self-efficacy and academic performance has demonstrated a significant positive correlation between the two, as well as a significant negative correlation between self-efficacy and mathematics anxiety among Filipino students, confirming trends observed in other groups (Ahn et al., 2015).

The educational consequences of the COVID-19 pandemic have caused serious disruption to the educational landscape in the Philippines, with Filipino faculty reporting many difficulties such as student negative attitudes towards learning, lack of access and poor internet connectivity, and few flexible learning pedagogies (Potoy et al., 2023) that have adversely impacted on students' perceptions of their ability to succeed and become engaged in school. The transition from remote to on-campus learning after the pandemic has also been correlated with mental health issues for Filipino college students, with socio-ecological variables identified as key predictive factors of psychological well-being (Cleofas, 2023). These contextual factors point to the importance of viewing self-efficacy as a contextual rather than an acontextual psychological construct, and as an embedded construct within the socio-economic, cultural, and institutional context of higher education in the Philippines.

Theoretical and empirical literature suggest that examining the interconnections among academic mastery, learning strategies, and social efficacy is necessary to understand the confidence systems students develop. Research shows that academic self-efficacy impacts motivation and learning strategies; students with higher academic self-efficacy exhibit greater motivation and perform better than those with lower self-efficacy (Xu et al., 2025). Studies documenting the relationship between self-efficacy and social engagement also indicate that students who attribute their academic success to an internal locus of control exhibit greater in-class communication with their instructors and a positive correlation between students' beliefs about their own abilities and instrumental help-seeking behavior (Ryan & Fong, 2024).

Although self-efficacy in higher education is an emerging area of research, there remains a substantial gap in the literature examining the interrelated domains of academic mastery, learning strategies, and social efficacy as components of college students' confidence in the Philippines. While previous research has examined the relationship between self-efficacy and various academic outcomes (Montero, 2025; Cheng, 2023), social support (Berdida et al., 2023), and peer relationships (Daumiller & Hemi, 2025; Marley & Wilcox, 2021), there is one major limitation: none of this research has conducted a comprehensive analysis to elucidate how these three interrelated domains—academic mastery (i.e., performance, grades, and technical skills), learning

strategies (i.e., study skills, understanding, and time management), and social efficacy (i.e., communicating with peers and professors and being involved on campus)—interact with one another within a single institution in the Philippines. Another limiting factor is that little is known about the relationship between self-efficacy and demographic factors when compared across these three domains within regionally based higher education institutions in the Philippines; therefore, this area of research must be explored further due to the unique socio-economic and cultural circumstances faced by college students living in the Philippines (Pagulayan et al., 2021; Ahn et al., 2015).

Statement of the Problem

Identifying specific strengths and weaknesses in student confidence across these domains is equally critical for developing targeted, evidence-based enhancement programs and student support initiatives. Addressing these gaps, the present study investigates the interplay of academic mastery, learning strategies, and social efficacy among students of Northeastern College. Specifically, it seeks to answer the following research questions:

1. What is the demographic profile of the respondents in terms of:
 - 1.1 Sex; and
 - 1.2 Year Level?
2. What is the level of self-efficacy of Northeastern College students in the following domains:
 - 2.1 Academic Mastery
 - 2.2 Learning Strategies;
 - 2.3 Social Efficacy;
 - 2.4 Attendance and Motivation?
3. Is there a significant difference in the students' self-efficacy levels when grouped according to their demographic profile?
4. Is there a significant relationship among academic mastery, social efficacy, learning strategies, and attendance and motivation?

Research Methodology

This quantitative, descriptive-correlational study has both a descriptive element, describing the demographic profile of the sample, and a correlational element, examining the current levels of Achievement in Academics, Learning Strategies, and Social Skills. In addition to the descriptive element, a correlational analysis will be utilized to examine the "interconnection" or significant relationship between Achievement in Academics, Learning Strategies, and Social Skills. By observing these attributes without the impact of changes, the study design will allow for objective analysis of the relationships among confidence in Academics, Learning Strategies, and Social Skills.

The research will be conducted at Northeastern College. This setting was selected due to its diverse demographic population. It will provide a unique opportunity to study the wide range of social and academic integration. The unique academic environment and cultural climate of this institution provide the context for students lived experiences of balancing their technical skills with their ability to communicate with peers.

Stratified random sampling will be used to obtain an adequate representation of the different student body segments. The students will be grouped by year of study (first-year, second-year, third-year, fourth-year students) so that the unique challenges related to efficacy during the transition stages (initial adjustment to the pre-professional transition) can be captured and covered across all aspects of the population. The size of each group will be determined using either Slovin's formula or another appropriate power analysis tool to achieve an adequate level of precision, ensuring the sample data are representative of the larger Northeastern Community.

To collect the data used in this study, a structured Likert-scale questionnaire was adopted from the research of Ildil et al., (2019), titled " The College Academic Self-Efficacy Scale (CASES); An Indonesian Validation to Measure the Self-Efficacy of Students." The questionnaire was divided into four sections: Section one will gather demographic information (sex, student year, age); Section two will focus on academic mastery (technical skills, grades); Section three will examine different learning strategies (time management, studying); Section four will explore social efficacy (communication with peers and faculty). Content experts reviewed the final instrument and conducted reliability testing using Cronbach's Alpha prior to administering the final survey, confirming that all items on the questionnaire are appropriate and accurately measure the content.

The data collected were analyzed using both descriptive and inferential statistics. Demographics were documented using frequency and percentage distributions, while weighted means established the level of self-efficacy for participants by domain. To compare groups based on demographic profiles, T-tests for gender and a One-Way ANOVA for age and year level were used. To examine the "interrelationship" among the identified variables, Pearson's r Correlation Coefficient was used. The final analysis included an

item-by-item review of the survey to determine which items demonstrate specific strengths and weaknesses, which served as the basis for developing the proposed enhancement program.

The research study was conducted in accordance with all ethical research guidelines. All participants were provided with Informed Consent to participate in the study. Participants were informed of the study's purpose and advised that they could withdraw at any time without penalty. All published data will be anonymized and de-identified to protect participants' anonymity and confidentiality. The data was stored securely, maintaining the confidentiality of all respondents while allowing access for academic use. The research study respects the dignity and privacy of the students at Northeastern College.

Result and Discussion

Table 1. Respondents' Profile

Frequencies of Sex

Sex	Counts	% of Total
MALE	111	45.5%
FEMALE	133	54.5%

Frequencies of Year Level

Year Level	Counts	% of Total
FIRST YEAR	81	33.2%
FOURTH YEAR	52	21.3%
SECOND YEAR	51	20.9%
THIRD YEAR	60	24.6%

The demographic profile of the respondents at Northeastern College, shown in Table 1, illustrates the diversity of the sample across both sex and year, which is important to consider in examining how academic mastery impacts learning strategies and social efficacy. The total number of respondents in the study was 244, including 54.5% females (n = 133) and 45.5% males (n = 111), resulting in an almost equal number of males and females. The largest group of participants (33.2%, n = 81) was First Year students, followed by Third Year (24.6%, n = 60), Fourth Year (21.3%, n = 52), and Second Year (20.9%, n = 51). This distribution provides a wide range of perspectives from various stages of the undergraduate experience to provide a well-rounded foundation for evaluating the potential impact of demographic variables on the social and academic growth of the respondents during their time at the institution.

The sample primarily contains individuals in their younger years. This suggests that these findings primarily reflect the self-efficacy beliefs underlying the construction of an academic self-identity at this stage of their lives. By focusing on this specific population and using institutional interventions targeted to this age group, the greatest potential for developing beliefs about their ability to cope with future challenges can be realized (Wibrowski et al., 2016). In addition, evaluating whether sex affects self-efficacy across all three domains would allow for a more thorough examination of the differences observed in self-efficacy between males and females in both the Philippines and internationally (Muega-Geronimo & Carlos, 2023).

Young participants in the sample indicate that the findings primarily reflect students' self-efficacy beliefs as they develop their academic identity. A younger population may experience the most benefits from targeted interventions at their institution (Wibrowski et al., 2016). In addition, the sample's gender composition provides an opportunity to evaluate whether sex is a significant distinguishing factor in self-efficacy across the three domains examined. Data on this relationship from both Filipino (Muega-Geronimo & Carlos, 2023) and international academic literature vary wildly.

Table 2. Academic Mastery

	Mean	SD
5. Taking “objective” tests (multiple-choice, T-F, matching)	3.70	0.864
6. Taking essay tests	3.57	0.916
12. Earning good marks in most courses	3.39	0.920
22. Performing simple math computations	3.22	1.058
23. Using a computer	3.58	0.984
24. Mastering most content in a math course	2.97	1.024
30. Getting good grades	3.64	0.903
Overall Mean	3.44	0.653

Table 2 presents the participants' academic mastery. These results support the relationship reported by many prior studies, linking students' academic self-efficacy to positive behaviors and academic success (Cheng, 2023; Dowd et al., 2019). Northeastern College students have the highest levels of confidence, specifically in performance on objective tests (Mean=3.7) and in receiving good grades (Mean=3.64). The highest levels of confidence in academic performance are most likely due to strong mastery experiences in structured and evaluative environments (Torres et al., 2023). In addition, this is consistent with the theoretical framework that mastery experiences provide the best source of self-efficacy information, particularly when they occur through the completion of problem-solving tasks in a structured academic environment (Tsang et al., 2012; Torres et al., 2023). Additionally, the standard deviations of approximately 0.90 to 1.00 of the Academic Mastery items indicate the relative consistency of how students at Northeastern College feel confident; therefore, there exists a relatively cohesive institutional culture that supports academic engagement among students (Montero, 2025).

Although the relatively low average rating (M=2.97) for math content mastery raises some concern, how it is interpreted in the context of Filipino education will influence its practical and theoretical significance. There are also studies indicating that other groups of potential teachers in the Philippines similarly reported low levels of mastery experience when solving math problems, where social persuasion was identified as the only factor that significantly predicted achievement (Dagdag et al., 2021); leading to the conclusion that whatever deficit of mathematical self-efficacy experienced at Northeastern College is not unique to the institution, but rather a widespread pattern seen throughout post-secondary institutions in the Philippines as a whole. Additionally, the research supports a statistically meaningful positive correlation between mathematics self-efficacy and academic performance as well as a statistically meaningful negative correlation between mathematics self-efficacy and mathematics anxiety among Filipino students (Ahn et al., 2015); thereby suggesting that this study identified that a relatively low level of mathematics self-efficacy could result in lower academic performance for any quantitative discipline.

Further support for this conclusion comes from studies showing that high levels of self-efficacy lead students to apply more complex cognitive strategies, resulting in greater academic success (Xu et al., 2025; Hong et al., 2020), while students with lower domain-specific self-efficacy are likely to avoid or stop working on difficult tasks in those domains (Hong et al., 2020). Therefore, a gap in math self-efficacy represents an important point of institutional intervention, especially given the compounding impact of deficits in domain-specific self-efficacy on overall academic motivation and the use of strategies (Montero, 2025; Hariri et al., 2021).

Table 3. LEARNING STRATEGIES

	Mean	SD
1. Taking well-organized notes during a lecture	3.45	0.952
8. Listening carefully during a lecture on a difficult topic	3.73	0.903
13. Studying enough to understand the content thoroughly	3.67	0.880
20. Understanding most ideas you read in your texts	3.70	0.855

Table 3. LEARNING STRATEGIES

	Mean	SD
21. Understanding most ideas presented in class	3.68	0.868
26. Relating course content to material in other courses	3.25	0.837
28. Applying lecture content to a laboratory session	3.23	1.003
29. Making good use of the library	3.37	0.987
31. Spreading out studying instead of cramming	3.24	0.918
32. Understanding difficult passages in textbooks	3.28	0.854
Overall Mean	3.84	0.691

Table 3 shows that students tend to exhibit moderate-to-high self-efficacy in Learning Strategies (mean = 3.84, SD = 0.691). This suggests that they have a generally positive outlook on the behavioral and cognitive aspects of academic engagement, with some important nuances indicating a significant difference between their receptive and generative self-regulatory competencies. They are most confident in their ability to listen carefully during difficult lectures (M = 3.73) and to understand textual ideas (M = 3.70), suggesting that their self-regulatory competencies related to input—representing foundational skills—are much stronger than their higher-order self-regulatory competencies (Mills et al., 2007). This finding is in agreement with previous studies, which have demonstrated that self-efficacy is a much stronger and significant predictor of self-regulated learning for undergraduate students than just goal-setting alone, and that the majority of students’ deficits in self-regulatory learning behaviors were associated with reading comprehension and text-processing capabilities across the various modules (Russell & Warner, 2017). In addition, the college learning environment has an overall positive effect on motivation for learning, types of learning strategies, and levels of engagement in the classroom (Cayubit, 2021); therefore, the moderate-to-high levels of self-efficacy for Learning Strategies observed at Northeastern College are likely a function of the institutional learning environment and not solely based on personal characteristics of the students.

The finding that respondents had relatively low self-efficacy for mastering material covered in uninteresting courses (M=3.08) and applying what they learned in lecture to laboratory experiences (M=3.23) is particularly important, since these two areas assess both control strategies and interdisciplinary transfer - two of the most critical dimensions of self-regulated learning related to increased academic engagement and long-term academic success (Wolters, 2003; Conley & French, 2013). Research regarding academic procrastination also shows that college students’ self-efficacy and work-avoidant goal orientations, as well as their use of metacognitive strategies (Wolters, 2003), contribute to their procrastination; therefore, lower levels of self-efficacy in mastering uninteresting material may place respondents at risk for motivational disengagement in academic settings that provide fewer incentives for engaging with the coursework. Lower levels of self-efficacy (M=3.24) regarding spaced practice and (M=3.25) regarding interdisciplinary synthesis indicate that although respondents feel they can comprehend materials presented in a traditional classroom setting, their self-efficacy in using more sophisticated self-directed learning techniques needs further development.

Similar to what has been found regarding cognitive and metacognitive skills in the literature with Filipino education students, this study found no significant differences between students when analyzing their planning/management of information practices and recommended an action plan around their being data-driven about their use of research and experiential learning, which will promote development of higher-level learning competencies (Discipulo & Bautista, 2022). Additionally, there is also evidence in the literature supporting that motivation affects student’s ability to implement learning strategies, and that value components of student’s motivation can best predict their learning strategy use (Hariri et al., (2021); Hence, the study suggests that improving motivation to use learning strategies in less enjoyable subject areas can be beneficial for increasing students’ self-efficacy around the use of learning strategies at Northeastern College.

Table 4. Social Efficacy

	Mean	SD
2. Participating in a class discussion	3.75	0.969
3. Answering a question in a large class	3.24	0.939
7. Writing a high-quality term paper	3.16	0.815

Table 4. Social Efficacy

	Mean	SD
9. Tutoring another student	3.15	1.008
10. Explaining a concept to another student	3.41	0.940
11. Asking a professor in class to review a concept you don't understand	3.25	0.958
25. Talking to a professor privately to get to know him or her	2.58	1.084
27. Challenging a professor's opinion in class	2.65	0.941
Overall Mean	3.24	0.616

The moderate level of Social Efficacy (mean = 3.24, SD = .616) reported by students at Northeastern College represents a complex and theoretically consistent pattern: students report the greatest level of confidence when participating in class discussions (3.75) and when clarifying things to their peers (3.41). This aligns with previous research showing the importance of peer relationships for academic motivation and social self-efficacy in college (Daumiller & Hemi, 2025; Marley & Wilcox, 2021). These results support previous studies indicating that the importance of peers increases during the transition to college and that peer relationships are related to academic competence, motivation, and self-efficacy (Marley & Wilcox, 2021). The social goals of students from collectivistic cultures, such as Filipino students, also increase the importance of social self-efficacy, because social goals have been shown to explain additional variation in positive educational outcomes within collectivistic populations even after controlling for mastery/learning and performance goals (King et al., 2013). Thus, peer-oriented social self-efficacy is particularly salient for post-secondary institutions in the Philippines.

The examples of especially low self-efficacy in faculty interaction mean = 2.58 in terms of talking privately with a professor and mean = 2.65 when challenging a professor's opinion during class, illustrate a well-established theme in Philippine higher education culture, whereby there are significant barriers to direct interpersonal interaction between students and faculty due to the existing hierarchical relationships between the two groups of individuals that are rooted in the cultural understanding of hierarchy. Research on help seeking confirms that, as a general rule, students' perceived self-efficacy has been found to positively correlate with the likelihood of the student engaging in "instrumental" help-seeking behaviors and that a positive relationship exists between attribution of academic outcomes to an internal locus of control and students' in-class communications with their instructors (Ryan & Fong, 2024). While the low faculty interaction self-efficacy evidenced, via the research of this current study, suggests to researchers that students at Northeastern College do not seek out faculty as resources for academic support solely because they wish to avoid confrontation, there may also be a strong structural barrier to the students seeking academic support through direct face-to-face communication with faculty and therefore have an indirect negative effect on their academic performance and their learning strategy development (Ryan & Fong, 2024; Nabizadeh et al., 2019).

Table 5. Attendance and Motivation

	Mean	SD
14. Running for student government office	2.38	1.161
15. Participating in extracurricular events (sports, clubs)	2.98	1.146
16. Making professors respect you	3.56	0.912
17. Attending class regularly	4.13	0.934
18. Attending class consistently in a dull course	3.73	0.964
19. Making a professor think you're paying attention in class	3.65	0.988
33. Mastering content in a course you're not interested in	3.08	0.866
Overall Mean	3.36	0.613

As shown in Table 5: Attendance and Motivation, Northeastern College Students have a Reasonable Likelihood (Self-Efficacy) in this area, with an overall average rating of 3.36 (SD = 0.613). An example of their highest likelihood of self-efficacy would be

"attending class regularly", which rated 4.13, while "maintaining regular class attendance even if the class would be perceived as boring" rated 3.73, suggesting students believe they are academically disciplined and will have control over their learning environment. This correlates with the research title component of "Academic Mastery," as students demonstrate high levels of self-efficacy in executing specific fundamental behaviors of a scholar. Conversely, students had the lowest average rating of self-efficacy in the area of social self-efficacy in the academic setting with respect to "running for student government position" as it generated the lowest mean of all the behaviors measured with an average of 2.38, which leaves us to speculate whether students feel confident in managing their own learning strategies and physical presence in class but less confident regarding their ability to serve in a social leadership position. However, given that students had the highest average self-efficacy rating of 3.56 regarding "making professors respect you," we support the idea that social self-efficacy when engaging in vertical professional relationships may be greater than social self-efficacy in horizontal political relationships with peers.

Regarding attendance and motivation (overall mean = 3.36; SD = 0.613), high confidence in regular class attendance (mean = 4.13) is observed, whereas low self-efficacy to participate in student government (mean = 2.38) is observed. This results in students having strong overall academic discipline (as documented in previous research on Filipino students' strong sense of social responsibility and academic development; Pagulayan et al., 2021). However, their confidence in, and self-efficacy to perform as a leader in high-stakes social situations, is much more limited than the strong confidence reflected in their level of participation in academic activities. This indicates that students' lack of confidence (low self-efficacy) regarding being active on campus has implications for their overall social efficacy development (Cayubit, 2021).

Table 6. Independent Samples T-Test (Sex)

		Statistic	df	p
ACADEMIC PERFORMANCE	Student's t	1.315	242	0.190
LEARNING STRATEGIES	Student's t	1.106 ^a	242	0.270
SOCIAL EFFICACY	Student's t	0.806 ^a	242	0.421
ATTENDANCE AND MOTIVATION	Student's t	1.326	242	0.186

Note. $H_a \mu_{MALE} \neq \mu_{FEMALE}$

^a Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances

Table 6 shows that no significant differences between male and female students were found in self-efficacy levels across the four categories; therefore, these results should be interpreted within the context of previous research on this topic. While some researchers have reported gender-based differences within specific categories of self-efficacy, there is also evidence of no significant differences between male and female students in perceptions of academic mastery and social skills when aggregated across all four self-efficacy categories.

This finding aligns with broader research examining motivational orientations and gender differences in STEM disciplines. Jannini et al. (2024) found inconclusive evidence for differences in motivational orientation as a function of biological sex; Nabizadeh et al. (2019) also found no significant difference between men and women in mean scores for learning and motivational strategies used by medical students. The lack of an effect of sex on these outcomes may be attributed to the specific contextual influences of Northeastern College; specifically, due to the similarities shared by the socioeconomic backgrounds of students attending the institution and the common academic experience, gender-based differences in self-efficacy that might exist in other contexts appear to be lessened (Pagulayan et al., 2021; Muega-Geronimo & Carlos, 2023).

Table 7. One-Way ANOVA (Welch's) – Year Level

	F	df1	df2	p
ACADEMIC PERFORMANCE	3.53	3	125	0.017
LEARNING STRATEGIES	1.25	3	127	0.293
SOCIAL EFFICACY	3.15	3	127	0.027
ATTENDANCE AND MOTIVATION	1.52	3	126	0.212

A. Post Hoc Tests

Games-Howell Post-Hoc Test – ACADEMIC PERFORMANCE

		FIRST YEAR	FOURTH YEAR	SECOND YEAR	THIRD YEAR
FIRST YEAR	Mean difference	—	-0.314	-0.125	0.00282
	p-value	—	0.018	0.700	1.000
FOURTH YEAR	Mean difference		—	0.189	0.31648
	p-value		—	0.405	0.051
SECOND YEAR	Mean difference			—	0.12773
	p-value			—	0.763
THIRD YEAR	Mean difference				—
	p-value				—

Games-Howell Post-Hoc Test – LEARNING STRATEGIES

		FIRST YEAR	FOURTH YEAR	SECOND YEAR	THIRD YEAR
FIRST YEAR	Mean difference	—	-0.139	-0.1619	0.0420
	p-value	—	0.625	0.588	0.986
FOURTH YEAR	Mean difference		—	-0.0226	0.1813
	p-value		—	0.998	0.452
SECOND YEAR	Mean difference			—	0.2039
	p-value			—	0.429
THIRD YEAR	Mean difference				—
	p-value				—

Games-Howell Post-Hoc Test – SOCIAL EFFICACY

		FIRST YEAR	FOURTH YEAR	SECOND YEAR	THIRD YEAR
FIRST YEAR	Mean difference	—	-0.203	-0.2213	0.0485
	p-value	—	0.199	0.238	0.966
FOURTH YEAR	Mean difference		—	-0.0180	0.2519
	p-value		—	0.999	0.075
SECOND YEAR	Mean difference			—	0.2698
	p-value			—	0.107
THIRD YEAR	Mean difference				—
	p-value				—

Games-Howell Post-Hoc Test – ACADEMIC PERFORMANCE

		FIRST YEAR	FOURTH YEAR	SECOND YEAR	THIRD YEAR
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Games-Howell Post-Hoc Test – ATTENDANCE AND MOTIVATION

		FIRST YEAR	FOURTH YEAR	SECOND YEAR	THIRD YEAR
FIRST YEAR	Mean difference	—	-0.198	-0.0843	-0.0376
	p-value	—	0.174	0.884	0.986
FOURTH YEAR	Mean difference		—	0.1137	0.1604
	p-value		—	0.758	0.457
SECOND YEAR	Mean difference			—	0.0468
	p-value			—	0.982
THIRD YEAR	Mean difference				—
	p-value				—

According to the table 7, academic performance ($F(3,125) = 3.53, p = 0.017$) and social efficacy ($F(3,127) = 3.15, p = 0.027$) are significantly impacted by year level. The Games-Howell post hoc test shows a significant difference in academic performance between first-year and fourth-year students ($p = 0.018$). The theoretical and empirical literature support this developmental trajectory; students acquire mastery experience as they progress through college, resulting in increased academic self-efficacy (Tsang et al., 2012; Torres et al., 2023). Additionally, first-generation college students are more likely to experience an increase in self-regulatory skills, motivational beliefs, and academic achievement indicators after participating in structured learning support programs during their first year (Wibrowski et al., 2016), resulting in a portion of the academic self-efficacy gap between first- and fourth-year students at Northeastern College stemming from a cumulative effect of their academic experiences and the support received from the institution.

The relationship between Learning Strategies ($p = 0.293$) and Attendance and Motivation ($p = 0.212$) appears stable across year levels; thus, it is possible that these aspects of self-efficacy are more like stable traits or that they were developed early in college and have remained fairly consistent since then. This aligns with evidence from the literature indicating that student motivations related to their use of learning strategies and the relationship between the two are fundamentally intertwined and driven more by a student's motivational orientation than by their academic experiences (Hariri et al., 2021; Hong et al., 2020). Also, regarding Social Efficacy, a statistically non-significant (but close to significant) pattern emerges from post hoc comparisons (Fourth-Year vs Third-Year: $p = 0.075$), suggesting that social self-efficacy develops through a more slowly progressive, nonlinear pattern during most of the undergraduate years. This is consistent with the notion that social confidence and peer relationships evolve dynamically throughout the undergraduate experience (Daumiller & Hemi, 2025; Marley & Wilcox, 2021).

Table 8. Correlation Matrix

		ACADEMIC PERFORMANCE	LEARNING STRATEGIES	SOCIAL EFFICACY	ATTENDANCE AND MOTIVATION
ACADEMIC PERFORMANCE	Pearson's r	—			
	df	—			
	p-value	—			
LEARNING STRATEGIES	Pearson's r	0.788***	—		
	df	242	—		

Table 8. Correlation Matrix

		ACADEMIC PERFORMANCE	LEARNING STRATEGIES	SOCIAL EFFICACY	ATTENDANCE AND MOTIVATION
	p-value	<.001	—		
SOCIAL EFFICACY	Pearson's r	0.721***	0.760***	—	
	df	242	242	—	
	p-value	<.001	<.001	—	
ATTENDANCE AND MOTIVATION	Pearson's r	0.658***	0.718***	0.674***	—
	df	242	242	242	—
	p-value	<.001	<.001	<.001	—

Note. * p < .05, ** p < .01, *** p < .001

As a result of very strong positive relationships between each of the three main self-efficacy categories, Academic Mastery/Social Efficacy ($r = 0.721$; $p < .001$), Learning Strategies/Social Efficacy ($r = 0.760$; $p < .001$), Academic Mastery/Learning Strategies ($r = 0.788$; $p < .001$), these three empirical correlations provide the strongest basis for concluding that scholars should conceptualize College Self-Efficacy as a multidimensional entity comprised of interconnected domains rather than as separate and unrelated belief systems. Specifically, the results reveal that Academic Mastery and Learning Strategies are most closely related ($r = 0.788$), and support previous findings from Structural Equation Modelling conducted on Philippines data to the effect that study habits directly account for 39% of variance in GPA, and that the degree to which individuals have self-efficacy can have a strong effect on their motivation and study habits (Montero, 2025)

This finding reinforces the theoretical proposition that adopting robust learning strategies is a powerful correlate of academic success and that self-efficacy beliefs in one domain cascade through motivational and behavioral pathways to shape outcomes in related domains (Montero, 2025; Hariri et al., 2021). Research further confirms that there is a direct and significant relationship between learning strategies and cumulative GPA (Nabizadeh et al., 2019); and that self-efficacy has a cyclical relationship with self-regulatory processes including goal setting, strategy use, self-monitoring, and self-judgment (Hong et al., 2020), all of which are reflected in the strong Academic Mastery–Learning Strategies correlation observed at Northeastern College.

As a result of very strong positive relationships between each of the three main self-efficacy categories, Academic Mastery/Social Efficacy ($r = 0.721$; $p < .001$), Learning Strategies/Social Efficacy ($r = 0.760$; $p < .001$), Academic Mastery/Learning Strategies ($r = 0.788$; $p < .001$), these three empirical correlations provide the strongest basis for concluding that scholars should conceptualize College Self-Efficacy as a multidimensional entity comprised of interconnected domains rather than as separate and unrelated belief systems. Specifically, the results reveal that Academic Mastery and Learning Strategies are most closely related ($r = 0.788$), and support previous findings from Structural Equation Modelling conducted on Philippines data to the effect that study habits directly account for 39% of variance in GPA, and that the degree to which individuals have self-efficacy can have a strong effect on their motivation and study habits (Montero, 2025)

Academic Mastery and Social Efficacy were found to have a large relationship ($r = .721$), suggesting that there is evidence of the importance of social persuasion in predicting mathematics achievement among Filipino prospective teachers as reported by Dagdag et al. (2021), as well as family and peer-related academic social supports that are also predictors for academic motivation and first-semester according to Marley & Wilcox (2021). In summary, these findings suggest that academic success at Northeastern College cannot occur in isolation and is therefore dependent upon both effective study habits and social confidence. These results support the design of holistic support systems to enable students to achieve academic success and provide a consistent basis for understanding the relationships among self-efficacy and student learning outcomes, self-regulation, metacognition, intrinsic motivation, and learning strategies in the literature (Dowd et al., 2019).

Conclusions

In conclusion, students enrolled at Northeastern College have a very high level of academic self-efficacy; they feel confident with tasks that require passive learning, such as listening or basic comprehension. However, there are many areas in which these students feel they lack confidence, such as using knowledge in unfamiliar situations, learning material that is not interesting, and using self-regulation techniques to enhance future volunteering (e.g., spaced practice). Thus, although students show the same degree of self-efficacy in performing their basic academic responsibilities (e.g., having a high level of confidence in attending class) as they experience higher-order volitional (e.g., self-regulation) and metacognitive (e.g., using spaced practice) processes, students actually lack the volitional and metacognitive skills necessary to achieve deeper levels of independent learning.

In addition, another striking finding in this study concerns social self-efficacy, specifically its impact on the traditional Filipino academic hierarchy. In general, students reported high social self-efficacy when interacting with peers, participating in class discussions, and so on; however, their self-efficacy in direct interaction with faculty members and in leadership roles in class was very low. Interestingly, while gender was not a contributing factor in the study's findings, students' year in college strongly influenced their beliefs about self-efficacy; as students progressed from their first to their fourth year, their academic self-efficacy increased dramatically. Finally, because the study found a significant relationship among academic, social, and strategic self-efficacy, student success can be viewed as an integrated phenomenon at Northeastern College, in which social self-efficacy supports study habits and vice versa, resulting in students achieving the same level of mastery in academics.

Therefore, the college should consider shifting from traditional lecture-based formats to developing Learning to Learn modules that teach students how to address the identified generative self-regulation gaps. Faculty should use specific instructional methods (spaced repetition, interdisciplinary synthesis, and volitional control) to help students remain focused during "boring" subjects; and to facilitate the bridge from low-order comprehension to high-order academic mastery by moving the primary focus in the classroom from passive reception (listening) to active generation (application and synthesis) of material.

To address the very low social efficacy scores in faculty interactions, the college should offer structured "Low-Stakes Interaction" programs, such as informal mixers or peer-led group activities, to help students interact with faculty. Faculty Professional Development should support faculty "approachability" and include inclusive feedback mechanisms to help reduce the perceived hierarchical nature of the college. Additionally, due to the very low score for students' confidence in participation in Student Government, the Office of Student Affairs should implement "tiered" leadership opportunities for students (e.g., start with a small-scale project management position) to assist in developing the social efficacy needed for students to hold high-stakes leadership positions in the college's governance system.

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