



# CONSTRUCTIVIST LEARNING ENVIRONMENT MANAGEMENT SKILLS OF TEACHERS, PARENTAL INVOLVEMENT AND EMOTIONAL INTELLIGENCE: A CAUSAL MODEL ON ACADEMIC SELF-EFFICACY OF STUDENTS

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**Abstract:** This study determined the best-fit model of students' academic self-efficacy as influenced by teachers' constructivist learning environment management skills, parental involvement and their emotional intelligence. Using Structural Equation Model, the study focused on 400 grade 10 students from public secondary schools in Region XI, Philippines selected through stratified random sampling. Statistical analyses also included Mean and Pearson r. Results indicated high levels of constructivist learning environment, parental involvement, emotional intelligence, and academic self-efficacy. Significant correlations existed among constructivist learning environment, parental involvement, emotional intelligence, and academic self-efficacy. Model 3 emerged as the best fit model, demonstrating direct causal relationship between teachers' constructivist learning environment management skills, parental involvement, and students' emotional intelligence with academic self-efficacy. Notably, emotional intelligence exerted the strongest influence. In addition, structural modifications revealed that teachers' constructivist learning environment management skills were characterized by learning environment organization and relation establishment. Concurrently, parental involvement was assessed through collaborating with the community, communicating, and parenting. Emotional intelligence was described by motivation and self-awareness, while academic self-efficacy was determined by its two key indicators: perceived control and self-regulated learning. This implies that cultivating students' academic self-efficacy involves fostering positive teacher-student relationships, increasing parental engagement, and strengthening students' emotional well-being.

**Keywords:** *educational management, constructivist learning environment, parental involvement, emotional intelligence, academic self-efficacy, Structure Equation Model, teachers, Philippines*

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## INTRODUCTION

In education, persistent global challenges encompass a spectrum of issues ranging from subpar academic performance and soaring dropout rates to a pervasive sense of inadequate academic self-efficacy (Ahmad & Safaria, 2013; Lederer, Hoban, Lipson, Zhou & Eisenberg, 2021). The ramifications of low self-efficacy extend far beyond mere statistics, as it breeds a reluctance to invest effort and fosters perceptions of complex tasks as insurmountable hurdles, inevitably leading to lackluster outcomes (Hoy, 2021). This erosion of confidence precipitates a disheartening cycle where diminished aspirations become self-fulfilling prophecies, perpetuating a cycle of low expectations (Talsma, Schuz & Norris, 2019). Within educational environments, unmistakable signs of low self-efficacy manifest in students actively evading challenges, grappling with goal setting, and harboring doubts about their capacity to achieve objectives—a triad of characteristics emblematic of this debilitating condition (Talsma et al., 2019). Individuals grappling with low self-efficacy encounter hurdles in comprehending their capabilities, formulating effective plans, and executing tasks with conviction (Ahmad & Safaria, 2013; Talsma et al., 2019; Hoy, 2021). Confronting these formidable challenges head-on is imperative for cultivating a nurturing, empowering academic milieu where every learner can thrive.

Increasing self-efficacy among students can have a profound impact on their academic performance. As articulated by Albert Bandura's social cognitive theory, self-efficacy refers to an individual's belief in their ability to accomplish tasks and achieve desired outcomes. When students develop a strong sense of academic self-efficacy, they are more likely to approach learning tasks with confidence and enthusiasm (Gebauer, McElvany, Bos, Köller & Schöber, 2020). This positive mindset influences their motivation to engage in challenging academic activities, set ambitious goals, and persist in the face of obstacles. As a result, students with heightened self-efficacy are more likely to exert effort in their studies, leading to improved focus, increased perseverance and a greater likelihood of achieving positive academic outcomes (Ahmadi, 2020 & Cheng, 2020).

Numerous studies have revealed a significant association between various factors intricately linked to self-efficacy, with researchers emphasizing the pivotal role of the learning environment in shaping students' academic self-efficacy (Daemi, Tahriri & Zafarghandi, 2017; Dislen Daggol 2019). The correlation between a constructivist learning environment and students' academic self-efficacy is evident from various research findings. For instance, students' conceptions of science laboratory learning significantly contributed to their perceptions of the science laboratory environment, subsequently fostering their science learning self-efficacy (Lee, Liang, Wu, Chiou, Hsu, Wang & Tsai, 2020). This implies that when students conceptualize laboratory learning as a means to achieve in-depth understanding, guided by clear rules, they are more likely to express a stronger sense of academic self-efficacy (Lee et al., 2020). The connection between these factors suggests that a constructivist approach, emphasizing active engagement and clarity in learning activities, positively influences students' beliefs in their academic capabilities.

Moreover, the perception of a constructivist learning environment extends beyond science to impact mathematical performance, mathematical self-efficacy, and motivation to learn mathematics, resulting in a significant effect on overall mathematical performance (Abdi, 2023). Additionally, within the constructivist framework, student negotiation, promoting mutual respect, and teacher feedback positively predict self-efficacy (Sökmen, 2021). This indicates that not only does a constructivist learning environment enhance self-efficacy in specific subjects like science and mathematics but it also emphasizes the importance of student-teacher dynamics in fostering a positive and empowering academic atmosphere. In essence, the research findings collectively emphasize the positive correlation between a constructivist learning environment and students' academic self-efficacy across various disciplines.

Research findings consistently indicate a positive and moderate relationship between parental involvement and students' academic self-efficacy. Adimora, Onyishi and Helen (2019) revealed such a positive relationship, emphasizing the importance of parental involvement in enhancing academic self-efficacy. Their study unveiled a positive moderate relationship between parental involvement and academic self-efficacy among both male and female students, emphasizing the universality of this correlation. As a recommendation, the study suggests implementing educational programs in institutions to educate parents on the various forms of involvement that can positively impact their children's education.

Furthermore, Sumanti and Muljani's (2021) study emphasizes the correlation between parental involvement and children's self-efficacy in learning English. Their research underscores the significant impact of parents' commitment and encouragement on fostering children's confidence in language acquisition. By actively engaging in their children's learning process, parents contribute to creating a supportive environment that facilitates language development. This highlights the crucial role parents play in shaping their children's attitudes and beliefs towards language learning. Ultimately, the study underscores the importance of parental support in promoting successful language acquisition outcomes for children. Moreover, Grijalva-Quíñonez, Valdés-Cuervo, Parra-Pérez, and Vázquez (2020) provide additional insights into specific aspects of parental involvement. Their findings indicate that parental autonomy support directly and positively relates to academic self-efficacy and self-regulated learning. Additionally, parental autonomy has an indirect positive effect on academic achievement. In contrast, parental control is directly and indirectly negatively related to academic self-efficacy, self-regulated learning, and academic achievement (Grijalva-Quíñonez et al., 2020). These results highlight the nuanced nature of parental involvement, suggesting that supportive and autonomy-promoting behaviors positively influence students' academic self-efficacy, while controlling behaviors may have adverse effects. Collectively, these research findings emphasize the significance of parental involvement in fostering positive academic self-efficacy among students and provide valuable insights for educators and policymakers.

The correlation between emotional intelligence and academic self-efficacy is evident from the studies conducted by Randerson (2023), Jindal and Dutt (2023) and Fernández-Baños, Calleja-Núñez, Espinoza-Gutiérrez & Granero-Gallegos (2023). Randerson's study among faculty at US-based colleges and universities indicates that higher emotional intelligence corresponds to increased self-efficacy, while race does not impact self-efficacy among faculty members. Similarly, Jindal and Dutt's research on primary and secondary school teachers reveals a moderate positive correlation between emotional intelligence and self-efficacy. The absence of a significant difference in emotional intelligence and self-efficacy scores between primary and secondary school teachers underscores the universality of this correlation across educational levels. These findings collectively highlight the importance of emotional intelligence in shaping educators' beliefs in their academic capabilities, irrespective of racial differences or educational levels.

Additionally, Fernández-Baños et al. (2023) explore the mediating role of academic self-efficacy between emotional intelligence and academic engagement. Their research demonstrates that emotional clarity and repair positively and directly influence academic self-efficacy. Moreover, emotional repair predicts both behavioral and emotional engagement, emphasizing the multifaceted impact of emotional intelligence on various dimensions of academic engagement. The study underscores the significance of academic self-efficacy as a mediator, revealing its substantial role in improving behavioral and emotional engagement while reducing disaffection. This underscores the intricate relationship

between emotional intelligence and academic self-efficacy, indicating how emotional competencies directly contribute to students' engagement in academic endeavors.

Albert Bandura's Self-Efficacy Theory (1977) serves as the foundational framework for this study, highlighting the profound impact of individuals' beliefs in their ability to accomplish tasks on their behavior, motivation and overall success. Bandura posits that cognitive processes, such as observation and social modeling, are instrumental in the formation of self-efficacy. Through observing the experiences of others and reflecting on their own past performances, individuals gauge their capabilities. Positive experiences and successful outcomes contribute to bolstering self-efficacy, whereas failures or negative experiences may diminish it. Bandura's theory extends its influence across diverse domains, including education, psychology and personal development, emphasizing the pivotal role of perceived self-competence in guiding individuals' choices and efforts towards achieving their goals (Torres, 2023; Hopper, 2023; Filipowicz, 2023).

Moreover, the study delves into the intricate dynamics of cognitive processes and their implications for self-efficacy development. Bandura's emphasis on the importance of observation and social modeling sheds light on the mechanisms through which individuals acquire and refine their beliefs about their capabilities. By understanding how cognitive processes shape self-efficacy, educators, psychologists, and practitioners can devise strategies to enhance individuals' confidence and motivation in various contexts, fostering positive outcomes and personal growth (Torres, 2023; Filipowicz, 2023).

Furthermore, Bandura's Self-Efficacy Theory underscores the significance of fostering an environment conducive to positive experiences and successful outcomes. By creating supportive contexts that facilitate skill development and mastery experiences, educators and policymakers can empower individuals to cultivate higher levels of self-efficacy. This study not only contributes to theoretical understanding but also offers practical insights for interventions aimed at promoting self-efficacy across different settings, ultimately enhancing individuals' ability to navigate challenges and achieve their aspirations (Hopper, 2023; Filipowicz, 2023). Moreover, John Dewey's Experiential Learning Theory (1938) serves as another fundamental framework for this study, emphasizing the importance of meaningful experiences in the learning process. Dewey advocated for an educational approach that engages students directly with their environment, viewing education as a dynamic and interactive process. According to Dewey, learners are best equipped to acquire knowledge and skills when actively engaged in solving real-world problems and reflecting on their experiences. By integrating theory with practice, Dewey's educational philosophy aims to cultivate a deep understanding of subjects and foster critical thinking skills among students (Goldstein, 2023; Yngvesson & Garvis, 2023).

Dewey's emphasis on experiential learning has left a lasting impact on contemporary educational practices, influencing pedagogies that prioritize hands-on exploration and reflection. Educators have increasingly recognized the value of connecting classroom learning to authentic, lived experiences, thereby enhancing students' engagement and comprehension. By providing opportunities for students to actively participate in their learning process, educators can facilitate a more profound understanding of concepts and promote the development of practical skills necessary for success in various contexts (Varman, Cliff, Jones, Hammersley, Zhang, Charlton & Kelly, 2021).

Furthermore, Dewey's Experiential Learning theory underscores the need for educational systems to evolve beyond traditional, passive modes of instruction. By embracing a pedagogy centered on experiential learning, institutions can better prepare students for the complexities of the modern world. This study not only acknowledges Dewey's profound influence on educational philosophy but also explores practical implications for incorporating experiential learning into curricula to promote deeper engagement and learning outcomes (Goldstein, 2023; Yngvesson & Garvis, 2023).

Further, this study draws upon Epstein's Framework of Six Types of Involvement (1987) to shed light on the multifaceted nature of parental involvement in education. Epstein's framework categorizes parental engagement into six distinct types: parenting, communicating, volunteering, learning at home, decision-making and collaborating with the community. Unlike traditional perspectives, Epstein's model encourages a holistic approach that acknowledges the diverse ways parents can contribute to their children's educational journey. By delineating these various forms of engagement, Epstein's framework offers educators, policymakers, and parents a comprehensive understanding of the roles parents can play in supporting and enriching their children's learning experiences (Ballantine, Stuber & Everitt, 2021).

Epstein's model provides a structured framework for understanding parental involvement beyond conventional notions. It recognizes that parental engagement extends far beyond simple participation in school events or meetings. Instead, it encompasses a range of activities, including providing emotional support, facilitating learning at home, and collaborating with educators and the broader community. By categorizing these diverse forms of involvement, Epstein's framework highlights the myriad ways in which parents can contribute to their children's academic success and overall well-being (Brown, Graves & Burke, 2022).

Furthermore, Epstein's Framework of Six Types of Involvement offers practical guidance for educators and policymakers seeking to enhance parental involvement in education. By understanding the various dimensions of parental engagement outlined in Epstein's model, stakeholders can develop targeted strategies to foster effective partnerships between schools and families. This study not only recognizes the importance of parental involvement but also provides a structured framework to facilitate meaningful collaboration between parents and educational institutions, ultimately enriching the educational experiences of students (Ballantine et al., 2021; Brown, Graves & Burke, 2022).

This study is further supported by Goleman's Mixed Model of Emotional Intelligence (1995), which serves as a cornerstone in comprehending human emotional capabilities. Unlike traditional views that solely emphasize cognitive abilities, Goleman's model expands the concept of emotional intelligence to encompass personal and social competencies. The model delineates five key components: self-awareness, self-regulation, motivation, empathy and social skills. Goleman's groundbreaking research underscores the critical role of emotional intelligence in navigating intricate social interactions, fostering effective leadership, and attaining success across personal and professional domains.

Goleman's Mixed Model has had a profound impact on various fields, ranging from education and psychology to organizational development. By recognizing the significance of emotional intelligence, Goleman's model has revolutionized approaches to human development and performance enhancement. In education, educators leverage emotional intelligence principles to create supportive learning environments and foster students' social-emotional skills. Likewise, in organizational settings, leaders utilize emotional intelligence strategies to cultivate cohesive teams, enhance communication, and promote workplace well-being.

Moreover, Goleman's Mixed Model continues to guide individuals, educators, and leaders toward a more holistic understanding of emotional intelligence and its practical applications. By emphasizing the interconnectedness of personal and social competencies, the model encourages the development of well-rounded individuals capable of navigating diverse social contexts with empathy and resilience. As such, this study benefits from Goleman's insights, integrating emotional intelligence principles to enrich its understanding of human behavior and inform strategies for fostering positive outcomes in various spheres of life (Kanesan & Fauzan, 2019; Sfetcu, 2020; Krishnan & Awang, 2020).

This study examined the conceptual framework and hypothesized models to determine their fit in explaining the academic self-efficacy of students in Region XI. The first conceptual paradigm demonstrates the exogenous variables' direct influence: constructivist learning environment management skills of teachers, parental involvement, and students' emotional intelligence towards the endogenous variable, academic self-efficacy of students, as supported by theories and studies. Because latent variables cannot be seen immediately, these cannot be directly described either. Each latent construct is linked to numerous measures or observed variables in this way. As a result, one of the study's main concerns is the size of the regression paths between the unobserved and observed variables.

The first exogenous variable is teachers' constructivist learning environment management skills, measured through its key indicators communication and interaction, relation establishment, skills development, time usage and assessment, learning and teaching and learning environment organization. The significance of a constructivist learning environment is underscored by compelling research findings. For instance, a meta-analysis of 57 primary experimental studies, involving 6237 students, revealed that the application of the constructivist learning approach and active learning in environmental education yielded a positive and large overall effect size compared to traditional learning (Chuang, 2021).

Moreover, an examination into the application of John Dewey's constructivist learning theory within Physical Activity and Inquiry (PAI) learning found that constructivism holds the promise of actively engaging students in their educational journey. The study concluded that by embracing a constructivist approach, students become active participants in the learning process, fostering a deeper connection with the acquired knowledge. Through this engagement, students find the learning experiences more relevant and meaningful to their lives. The research highlights the potential of constructivism to not only enhance academic understanding but also to instill a sense of personal relevance and significance in the educational content (Madura & Madura, 2023).

Additionally, research by Zhu and Atompag (2023) emphasizes that constructivism is highly effective in enhancing students' discovery and inquiry abilities, providing them with real-world problem-solving opportunities, and fostering autonomous learning. These findings collectively highlight the significance of a constructivist learning environment in promoting active engagement, relevance, and foundational skills for students' future studies.

The second exogenous variable is parental involvement, evaluated through its key indicators parenting, communicating, volunteering, learning at home, decision-making, and collaborating with the community which contribute to a supportive and enriching educational environment. Based on various research findings, the significance of parental involvement is evident across diverse contexts and challenges. For instance, a meta-analysis examining parental involvement across socioeconomic statuses reveals that specific aspects such as parental academic expectations, support for child learning and parent-child discussions positively influence student achievement, emphasizing the universal impact of parental engagement (Tan, Lyu & Peng, 2020).

Additionally, during the COVID-19 pandemic, when education shifted to home-based learning, Portuguese parents played a crucial role in supporting their children's education. The study highlights that despite challenges, parents actively monitored attention in classes and facilitated task completion, underlining the essential contribution of parental involvement, particularly in times of crisis (Tan, et al., 2020).

Furthermore, a study conducted in Riau province during the pandemic emphasizes that parental engagement in children's online learning is high, with a significant percentage involved in supervising study time, accompanying learning, and addressing learning difficulties, highlighting the indispensable role parents play as learning companions at home (Novianti & Garzia, 2020). These findings collectively emphasize the enduring significance of parental involvement in influencing academic success and supporting children's learning, particularly in challenging circumstances.

The third exogenous variable is emotional intelligence, which is measured through its fundamental indicators self-awareness, self-regulation, motivation, social awareness and social skills. Research findings collectively highlight the profound significance of emotional intelligence (EI) in various domains, emphasizing its role in both academic and professional success. MacCann, Jiang, Brown, Double, Bucich & Minbashian (2020) reveal a robust association between students' EI and academic performance, with ability EI emerging as a particularly influential predictor, contributing to improved grades and overall academic achievement.

Moreover, Fteiha and Awwad (2020) delve into the realm of stress coping, showcasing a positive correlation between emotional intelligence and adaptive coping styles among students, underlining the importance of EI in effectively managing stressors. Gómez-Leal, Holzer, Bradley, Fernández-Berrocal & Patti (2022) extend the significance of EI to leadership, particularly in school settings, highlighting its crucial role in effective leadership, teacher satisfaction, and overall school performance.

Furthermore, El Khatib, Almtairi, and Al Qasemi (2021) explore the connection between emotional intelligence and project success, emphasizing that individuals with high EI scores exhibit key features associated with effective project management. The findings underscore that emotional intelligence is a vital attribute for project managers, contributing significantly to project success. Collectively, these studies underscore the multifaceted impact of emotional intelligence on academic performance, stress management, leadership effectiveness and project success, reinforcing the importance of nurturing and incorporating emotional intelligence in educational and professional settings.

The endogenous variable of the study is academic self-efficacy, which is measured through its key indicators perceived control, competence, persistence and self-regulated learning. The significance of self-efficacy is evident in the study, which employed Structural Equation Modelling (SEM) to investigate its influence on organizational commitment among 400 public school teachers in Region XI, Philippines (Guhao & Cabayag, 2024). The findings highlight a high level of self-efficacy and its strong, positive, and significant correlation with organizational commitment. The best-fit model emphasizes the direct causal relationship of self-efficacy on organizational commitment. The retained indicators, disciplinary self-efficacy and creative positive school climate, further characterize self-efficacy. This underscores the importance of recognizing and enhancing teachers' self-efficacy, suggesting that interventions such as professional development and support in workload allocation could be instrumental in improving organizational commitment among educators.

Similarly, studies exploring ASE among first-year nursing students in online learning environments and nursing students in South Korea further affirm the multifaceted role of academic self-efficacy. The research in Israel revealed positive correlations between ASE, resilience, and social support, indicating that strategies enhancing resilience and social support have the potential to significantly improve students' academic self-efficacy, even in online settings (Warshawski, 2022).

Additionally, the South Korean study investigated the association between self-directed learning, academic self-efficacy and problem-solving ability. The findings demonstrated the significant impact of academic self-efficacy on problem-solving ability, suggesting that fostering academic self-efficacy is crucial for developing essential skills in nursing students (Hwang & Oh, 2021). In summary, the research collectively emphasizes the vital role of academic self-efficacy in addressing challenges and enhancing educational outcomes across diverse contexts.

Moreover, Structural Equation Modeling (SEM) is essential to arrive at the best-fit model. The proposed model illustrates the following: the oval shapes represent the latent variables of the study; the rectangular figures connected to the ovals represent the measured variables of a latent construct; the single-headed arrow signifies a direct influence from one variable to another; while the double-headed arrow indicates a relationship.

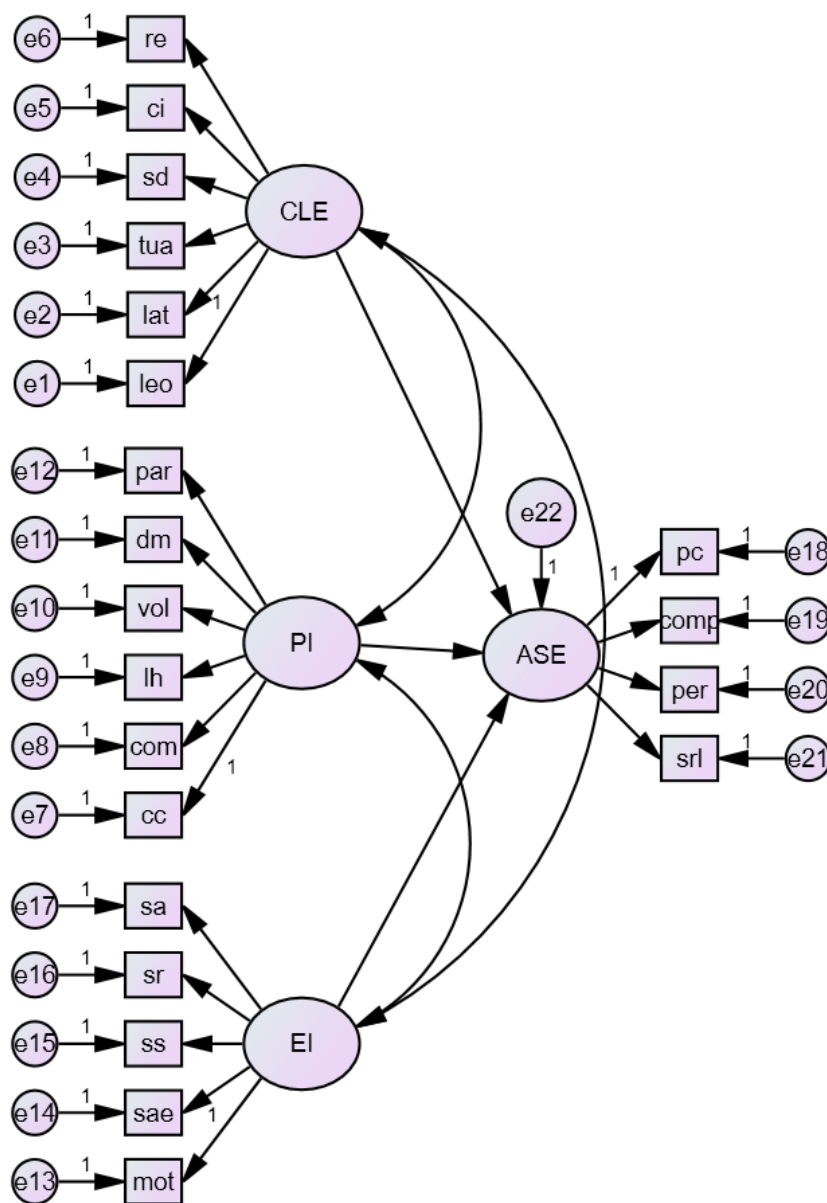


Figure 1. The Conceptual Framework of the study showing the direct relationships of the latent exogenous variables and the latent endogenous variable

Legend: ci – Communication and Interaction  
 re – Relation Establishment  
 sd – Skills Development  
 tua – Time Usage and Assessment  
 lat – Learning and Teaching  
 leo – Learning Environment Organization  
 CLE – Constructivist Learning Environment

sa – Self-Awareness  
 sr – Self-Regulation  
 mot – Motivation  
 sae – Self-Awareness/Empathy  
 ss – Social Skills  
 EI – Emotional Intelligence

par – Parenting  
 com – Communicating  
 vol – Volunteering  
 lh – Learning at Home  
 dm – Decision Making  
 cc – Collaborating with the Community  
 PI – Parenting Involvement

pc – Perceived Control  
 comp – Competence  
 per – Persistence  
 srl – Self-Regulated Learning  
 ASE – Academic Self-Efficacy

The Hypothesized Model 1 as illustrated in Figure 1 reflects the correlation of the three latent exogenous variables and their influence on the latent endogenous variable. The association is evident in the presence of a bidirectional arrow connecting three latent exogenous variables: constructivist learning environment management skills of teachers and parental involvement, parental involvement and emotional

intelligence of students, and constructivist learning environment management skills of teachers and emotional intelligence of students. The single-headed arrow directing from the three-latent exogenous relates directly to the academic self-efficacy of students corresponding to the latent exogenous and endogenous variables' measured indicators. This is shown over a single-headed indicator linked after the latent exogenous variables to the latent endogenous variable. Furthermore, the rectangular forms symbolize the measured domains of the associated latent exogenous and endogenous variables.

A research gap in the causal model on the academic self-efficacy of students lies in the limited exploration of longitudinal effects and dynamic interactions among the key variables. While the proposed model outlines the relationships between constructivist learning environment management skills of teachers, parental involvement, emotional intelligence, and academic self-efficacy, there is a need for studies that investigate how these relationships evolve (Adimora, et al., 2019 & Saeed & Ahmad, 2020). Additionally, understanding the dynamic interactions and reciprocal influences among these factors can contribute to a more nuanced and comprehensive understanding of the developmental trajectory of students' academic self-efficacy (Boz & Cetin-Dindar, 2023). Addressing this research gap is essential for refining the model, improving the precision of interventions and enhancing the model's applicability across different educational contexts and stages of academic development.

In consideration of the foregoing assumptions, the researcher has not come across a study that dealt with a structural equation model on the academic self-efficacy of students in the local setting. It is in this context that the researcher is interested in determining whether the factors such as constructivist learning environment management skills of teachers, parental involvement and emotional intelligence of students significantly influence the academic self-efficacy of students in public schools in Region XI, Philippines, as this can raise concern to the intended beneficiaries of this study and possibly develop action plans to augment the constructivist learning environment management skills of teachers, parental involvement and emotional intelligence of students and consequently develop academic self-efficacy among students; thus, the need to conduct this study.

Consequently, the main thrust of this study was to identify the best-fit model for students' academic self-efficacy, considering the influences of constructivist learning environment, parental involvement and students' emotional intelligence across public secondary schools in Region XI, Philippines. Additionally, the research aimed to provide a detailed analysis of various aspects. First, it sought to describe the level of teachers in managing a constructivist learning environment. This involved assessing communication and interactions, relation establishment, skills development, time usage and assessment, learning and teaching and learning environment organization. Secondly, the study aimed to ascertain the level of parental involvement, encompassing parenting, communicating, volunteering, learning at home, decision-making and collaboration within the community.

Furthermore, it aimed to determine the level of students' emotional intelligence in terms of self-awareness, self-regulation, motivation, social awareness, and social skills. Additionally, the study sought to determine the academic self-efficacy of students, specifically in the domains of perceived control, competence, persistence and self-regulation. It further aimed to determine the significance of the relationships between teachers' constructivist learning management skills and students' academic self-efficacy, parental involvement and students' academic self-efficacy and students' emotional intelligence and academic self-efficacy. Ultimately, the research aimed to determine the best-fit model contributing to the academic self-efficacy of students in the specified context.

In consonance with the above objectives, the null hypotheses were tested at a 0.05 level of significance. It was hypothesized that there is no significant relationship between constructivist learning management skills of teachers and students' academic self-efficacy, between parental involvement and students' academic self-efficacy and between students' emotional intelligence and academic self-efficacy. Also, it was hypothesized that there are no models best fit for the academic self-efficacy of students.

The findings of this study offer valuable insights for various educational stakeholders. For the Department of Education, the study provides a basis for informed policymaking, supporting the integration of teacher training programs that emphasize constructivist approaches, promoting parental engagement initiatives, and recognizing the importance of emotional intelligence in educational leadership training.

In school and classroom management, school leaders and educators can leverage these findings to enhance teaching practices, create inclusive and collaborative learning environments, and strengthen partnerships with parents to support students' academic self-efficacy. In the context of sustainable development goals, the study underscores the significance of holistic educational practices that not only focus on academic achievements but also on fostering socio-emotional skills. Furthermore, the findings contribute to social relevance by emphasizing the interconnectedness of various factors influencing academic success, promoting a more comprehensive and inclusive approach to education. Lastly, for future research, this study provides a foundation for exploring the intricate relationships between educational variables, suggesting avenues for further investigations into effective strategies for fostering student self-efficacy and overall well-rounded development.

Consequently, the findings of this study may also help the teachers in such a way that they may be aware of their contribution and role in promoting a more constructivist learning environment and a more engaged parent community in the school. Also, teachers may continually expose themselves to various professional development activities which will help them update their knowledge about constructivist teaching. Further, students who are the main beneficiaries of this study will be able to increase their self-efficacy beliefs and academic performance across disciplines. Likewise, this study would serve as a springboard for future researchers for further studies about the related variables and related studies.

## RESEARCH METHODOLOGY

Presented in this section are the discussions on the research respondents, materials and instrument, and design and procedure.

### Research Respondents

The respondents of the study were the 400 Grade 10 Junior High School students coming from large public secondary schools in Region XI (Davao Region) for the school year 2022-2023. The selection of 400 grade 10 students out of the 223,032 junior high school students in Davao Region was determined through a systematic and statistically sound sampling method. The rationale behind this sample size is to ensure a representative and manageable cohort that can provide meaningful insights into the research objectives. By selecting a subset of the population, the study aims to gather comprehensive data while maintaining feasibility in terms of resource allocation, data collection, and analysis. This sample size allows for a focused and in-depth examination of the relationships proposed in the research model, ensuring that findings are applicable and generalizable to the broader junior high school student population in Davao Region. Additionally, the chosen sample size

adheres to standard research practices, striking a balance between the need for robust results and practical considerations inherent in large-scale research studies.

Stratified random sampling was used in this study. Stratified random sampling is a method of sampling that involves the division of a population into smaller sub-groups known as strata. In stratified random sampling or stratification, the strata are formed based on members' shared attributes or characteristics such as income or educational attainment. Stratified random sampling is also called proportional random sampling or quota random sampling (Hayes, 2020).

Moreover, the researcher will consider the inclusion and exclusion criteria in the selection of the respondents of the study. The respondents are the bonafide Grade 10 students age 15-16 among selected public secondary schools in Region XI for the school year 2022-2023. These are students who are willing to submit themselves and are permitted by their parents to undergo the survey to be conducted. Those students who voluntarily agreed with the minor assent will be included in the survey, while those who clearly confessed their denial will be excluded from the study. Further, the researcher will consider students who will decide to withdraw or back out during the actual administration of the survey questionnaires.

## Research Instruments

The modified survey questionnaire used in this study was made up of four parts which were anchored from an adapted questionnaire, ie; constructivist learning environment, parental involvement, emotional intelligence and academic self-efficacy. These questionnaires were modified and subjected for validation by experts. The first draft of the research instrument was submitted to the research adviser for comments, suggestions and recommendations to improve its presentation with the corrections to be included and integrated. The final copies were submitted to the panel of experts for refinement. The final revision was made by incorporating the corrections, comments and suggestions given by the expert validators before the gathering of data.

The consolidated results from the experts obtained an average weighted mean of 4.34 which has a verbal description of very good. Further, before the administration of the research instrument, a pilot testing was done to selected students who were not the respondents of the study. The survey questionnaire for the pilot test was subjected to the reliability testing to establish using the Internal Consistency Method. This was the most appropriate method to use since the test contains dichotomously scored items which the examinee either passes or fails in an item. The computed reliability (Cronbach-Alpha score) of the instrument was 0.978 for constructivist learning environment questionnaire, 0.970 for parental involvement, 0.984 for emotional intelligence questionnaire, and 0.990 for academic self-efficacy questionnaire.

The questionnaire for constructivist learning environment was adapted from Yildirim (2014) which has the following indicators: communication and interaction, relation establishment, skills development, time usage and assessment, learning and teaching, and learning environment organization. The questionnaire for parental involvement was adapted from Erdener (2013) which has the following indicators: parenting, communicating, volunteering, learning at home, decision making and collaborating with the community.

Furthermore, the questionnaire for emotional intelligence was adapted from Singh (2004) which has the following indicators: self-awareness, self-regulation, motivation, social awareness/empathy and social skills. And lastly, the questionnaire for academic self-efficacy of students was adapted from Dullas (2018) with the following indicators: perceived control, competence, persistence, and self-regulated learning.

In evaluating the results, the five orderable gradations with their respective ranges of means and descriptions were used. The range of means of 4.20 – 5.00 with the descriptive equivalent of very high, means that the items related are always manifested. For 3.40 – 4.19 or high, this means that the items related are oftentimes manifested. For 2.60 – 3.39 or moderate, this means that the items related are sometimes manifested. For 1.80 – 2.59 or low, this means that the items related are seldom manifested. For 1.00 – 1.79 or very low, this means that the items related are not manifested at all.

## Research Design and Procedure

Furthermore, the quantitative, non-experimental design of research using correlational technique was used in this study. Correlational technique is a non-experimental design, where the researcher studies the correlation between variables in a normal setting without manipulation or control. In correlational studies, the researchers examine the strength of relationships among variables by looking unto how change in one variable is linked with change in the other variable. Generally, correlational method has independent and dependent variables, but the effect of the independent variable is seen on the dependent variable without manipulating the independent variable (Creswell, 2002).

Likewise, this study used Structural Equation Modeling. According to Lomax and Li (2013), this method combines factor analysis with path analysis to test theoretical relations among latent variables. Here models can range from simple to complex in nature in that any number of variables of any type can be involved (i.e., observed, latent, independent, and/or dependent variables). The incorporation of factor analysis in structural equation modeling allows the researcher to use multiple measures of each latent variable instead of a single measure, thereby enabling better measurement conditions (i.e., reliability and validity) than with a single measure.

Structural equation modeling (SEM) is a powerful, multivariate technique found increasingly in scientific investigations to test and evaluate multivariate causal relationships. Further, SEM includes the statistical method of path analysis. Path analysis, on the other hand, had its beginning in biometrics and aimed to find the causal relationship among variables by creating a path diagram (Wright, 1921). The path analysis in earlier econometrics was presented with simultaneous equations (Haavelmo, 1943). The structural model of Christensen, Johnson and Turner (2011) was used to test the hypothesized models and determine the best fit model for the organizational culture. In assessing the goodness of fit models, the following indices were computed as follows. The correlational method was used to measure the relationship between constructivist learning management skills of teachers and students' academic self-efficacy, between parental involvement and students' academic self-efficacy, and between students' emotional intelligence and academic self-efficacy. SEM was used to determine the best fit model of academic self-efficacy as estimated by constructivist learning management skills of teachers, parental involvement and emotional intelligence of students among public secondary schools in Region XI, Philippines. The data collection process began with obtaining approval to conduct the study from the University of Mindanao Ethics Review Committee on May 10, 2022. Following this, a request letter was sent to the Department of Education Regional Director on June 22, 2022. Subsequently, request letters, accompanied by the letter of approval from the regional director dated July 05, 2022, were dispatched to the superintendents of the 11 divisions of Region XI from August 10 to 19, 2022. After receiving approval from the regional and division authorities, request letters were then submitted to the principals of the identified participating schools on August 22, 2022, along with the requisite letters of approval.

The administration of the survey questionnaire across the diverse divisions of Davao Occidental, Davao del Sur, Digos City, Davao City, Davao del Norte, Tagum City, Panabo City, Davao de Oro, Mati City, and Davao Oriental, from September 12, 2022, to November 11, 2022, was a carefully orchestrated effort designed to prioritize the convenience of both students and schools. Recognizing the importance of minimizing disruptions to ongoing classes, the survey teams collaborated closely with educational institutions to establish a schedule that seamlessly integrated with the daily routines of students. By aligning with the existing class structures, this approach aimed to facilitate student participation in the survey without compromising the integrity of academic activities. The emphasis on convenience not only underscored a commitment to collecting comprehensive and meaningful data but also demonstrated a respectful consideration for the educational priorities of the regions involved. This thoughtful and collaborative strategy ensures that the insights garnered from the survey will contribute positively to the educational landscape of the Davao Region.

The following statistical tools were used in interpreting the data collated. Mean was used to describe the level of constructivist learning environment management skills of teachers, parental involvement, emotional intelligence and academic self-efficacy of students in answer to sub-problems 1 to 4. Pearson r was used to determine the significance of the relationship between students' academic self-efficacy and the independent variables (constructivist learning environment management skills of teachers, parental involvement and emotional intelligence of students) in answer to sub-problem 5. Structural Equation Modelling (SEM) was used to determine the best fit model for the academic self-efficacy of students among public secondary schools.

| INDEX   | SD            |
|---------|---------------|
| P-Close | > 0.05        |
| CMIN/DF | 0 < value < 2 |
| P-Value | > 0.05        |
| GFI     | > 0.95        |
| CFI     | > 0.95        |
| NFI     | > 0.95        |
| TLI     | > 0.95        |
| RMSEA   | < 0.05        |

During the execution of this study, particularly in the pre-data collection phase, meticulous attention was given to ethical concerns and considerations. The researcher underwent a comprehensive evaluation conducted by the members of the Ethics Review Committee. Following a series of rigorous review processes, the study received the official approval and endorsement from the University of Mindanao Ethics Review Committee (UMERC) with UMERC protocol number 2022-045.

#### IV. RESULTS AND DISCUSSION

Presented in this section are the data and analysis of findings based on the data collated from the research instruments used in the study to determine the model best fits the academic self-efficacy among public secondary schools in Region XI, Philippines. Interpretations of results were engaged in the following subheadings: the level of students' constructivist learning environment, the level of parental involvement, the level of students' emotional intelligence, the level of students' academic self-efficacy, the significance on the relationship between constructivist learning environment and academic self-efficacy; the significance on the relationship between parental involvement and academic self-efficacy, the significance on the relationship between emotional intelligence and academic self-efficacy; and goodness of fit measures of the three structural equation models.

##### Level of Constructivist Learning Environment of students

The first objective of this study was to determine the level of constructivist learning environment of students. The level of constructivist learning environment of students among public junior high schools is in terms of *Communication and Interactions, Relation Establishment, Skills Development, Time Usage and Assessment, Learning and Teaching and Learning Environment Organization*.

Shown in Table 1 are the data on the level of constructivist learning environment of students among public junior high schools. The level of constructivist learning environment of students obtained an overall mean of 3.83 or *high*, with a standard deviation of 0.930. This means that the constructivist learning environment of students, as perceived by the students, was oftentimes manifested.

**Table 1**  
*Level of Constructivist Learning Environment*

| Indicators                        | SD           | Mean        | D.E         |
|-----------------------------------|--------------|-------------|-------------|
| Communication and Interactions    | 0.972        | 3.89        | High        |
| Relation Establishment            | 1.013        | 3.78        | High        |
| Skills Development                | 1.054        | 3.91        | High        |
| Time Usage and Assessment         | 1.009        | 3.88        | High        |
| Learning and Teaching             | 1.047        | 3.83        | High        |
| Learning Environment Organization | 1.061        | 3.71        | High        |
| <b>Overall</b>                    | <b>0.930</b> | <b>3.83</b> | <b>High</b> |



From this result, among the six domains of constructivist learning environment of students, *skills development* has the highest mean score of 3.91 or *high*. The second highest indicator is *Communication and Interaction* with a mean score of 3.89 or *high*. This is followed by *Time Usage and Assessment, Learning and Teaching, Relation Establishment and Learning Environment Organization* which gained mean scores of 3.88, 3.83, 3.78 and 3.71 respectively, and can be described as *high*.

The high level of constructivist learning environment of students is due to the high ratings of students on all six domains. The data indicates that teachers demonstrated a profound ability to orchestrate dynamic and student-centered classrooms. Their expertise lies in creating an environment that promotes active engagement, collaboration, and independent thinking. Through skillful facilitation, these teachers empowered students to construct their own understanding, fostering the development of critical thinking, problem-solving, and interpersonal skills. The result is a learning atmosphere that not only enhances academic achievement but also nurtures a lifelong love for learning.

This is in line with the ideas of several authors (Yildirim, 2014; Neutzling, Pratt & Parker, 2019; Arik & Yilmaz, 2020; Pande & Bharathi 2020; Waruwu, Asbari, Purwanto, Nugroho Fikri, Fauji & Dewi, 2021; Chuang, 2021; Makri, Vlachopoulos & Martina, 2021; Yang, 2021; Zajda & Zajda, 2021) who revealed that a constructivist learning environment is characterized by a pedagogical approach that prioritizes providing students with ample time for inquiry and exploration, and encouraging intellectual apprenticeship through authentic tasks. Consequently, this educational framework incorporates diverse elements such as engaging projects, fostering critical thinking and promoting problem-solving skills. Additionally, it emphasizes the development of effective communication skills through both oral and written presentations, thereby creating a rich and immersive learning experience that empowers students to actively construct their knowledge and understanding.

Furthermore, among the six indicators in the constructivist learning environment, *skills development* dominated other five indicators which suggests that teachers exhibited exceptional proficiency in fostering skills development, particularly in supporting students' problem-solving abilities, purpose determination and realization skills. These educators adeptly guided students through engaging learning experiences that encourage critical thinking and problem-solving. They created an environment that empowered students to discover their purpose, encouraging self-reflection and goal-setting. By nurturing these skills, teachers with advanced constructivist management skills played a pivotal role in shaping students who were not only academically proficient but also equipped with the essential life skills needed for purposeful and successful futures.

This is in consonance with the statements of various researchers who stated that a constructivist learning environment is characterized by a teacher's adept ability to cultivate and enhance students' skills (Yildirim, 2014; Batdi, 2023; Seifert, 2023). This educational approach prioritizes the facilitation of active learning, critical thinking, and problem-solving, ensuring that students actively engage in the construction of their knowledge. Teachers in a constructivist learning environment skillfully guide students through tasks and projects that promote the development of essential skills, fostering a dynamic educational experience that empowers learners to excel in various aspects of their academic journey and beyond.

### Level of Parental Involvement

The second objective was to determine the level of *parental involvement*, which was measured through a survey questionnaire with the following indicators: *parenting, communicating, volunteering, learning at home, decision making and collaborating with the community*.

Shown in Table 2 are the data on the level of *parental involvement*. Computations yielded a grand mean of 3.63 or *high* with a standard deviation of 0.967, and this indicates that the parental involvement is oftentimes manifested.

**Table 2**  
*Level of Parental Involvement*

| Indicators                       | SD           | Mean        | D.E.        |
|----------------------------------|--------------|-------------|-------------|
| Parenting                        | 1.020        | 3.80        | High        |
| Communicating                    | 1.076        | 3.81        | High        |
| Volunteering                     | 1.101        | 3.50        | High        |
| Learning at Home                 | 1.065        | 3.65        | High        |
| Decision Making                  | 1.108        | 3.46        | High        |
| Collaborating with the Community | 1.148        | 3.55        | High        |
| <b>Overall</b>                   | <b>0.967</b> | <b>3.63</b> | <b>High</b> |

Data reveals that the domain of *parental involvement* that yielded the highest mean score is *communicating* with a mean rating of 3.81 or *high*, followed by *parenting* with a mean score of 3.80 or *high*. Third is *learning at home* with a mean score of 3.65 or *high* which is followed by *collaborating with the community* which gained a mean score of 3.55 or *high*. Fifth is the indicator *volunteering* with a mean score of 3.50. Lastly, the lowest indicator, albeit *high* is the *learning at home* which garnered a mean score of 3.46. The high level of parental involvement is due to the high rating given by the student respondents on all of the six domains which signifies that parents were actively engaged in fostering effective communication channels with educators and their children. This proactive engagement included regularly seeking updates on their child's academic progress, inquiring about homework and class activities, and maintaining open lines of communication with teachers. Through this commitment to ongoing dialogue, these parents created a collaborative environment that not only supported their child's academic journey but also enhanced the overall educational experience.

A high level of parental involvement in communication served as a cornerstone for building strong partnerships between parents, teachers and students, contributing significantly to a child's success and well-being. This is in consonance with the studies of various authors which stated that parental involvement encompasses a proactive engagement in various aspects of a child's education, including making inquiries about their homework, maintaining regular communication with teachers to stay informed about academic progress and fostering open lines of communication between parents and students (Erden, 2013; Aarthur, Oymar & Akerjordet, 2019; Oliveira, Chang-Bacon, Cho & Baez, 2020; Mahmudah, Putra & Wardana, 2021; Pascual 2021; Yulianti, Denessen, Droop & Veerman, 2022; Skinner, Rickert, Vollet &

Kindermann, 2022). This multifaceted involvement not only demonstrates a commitment to a child's academic success but also establishes a collaborative partnership between parents, teachers and students, creating a supportive foundation for effective learning and development.

Furthermore, among the six domains of parental involvement, *communicating* was the highest indicator which implies that parents actively participated in school orientations and meetings, demonstrating a commitment to staying informed about their child's educational journey. This involvement extended to the consistent exchange of up-to-date information regarding school events and the progress of the student. Through regular attendance at orientations and meetings, coupled with proactive communication, parents created a supportive partnership with educators, fostering an environment where collaborative efforts positively impact the academic success and well-being of the student. This commitment reflected a shared dedication to the child's educational experience and overall growth. This aligns with the insights of several authors, who define parental involvement as an active and effective exchange of information between school and home regarding school events and activities (Erdener, 2013; Waruwu et al., 2020; Appiah-Kubi & Amoako, 2020). It encompasses robust school-to-home and home-to-school communication, ensuring that parents are well-informed about their children's educational experiences. Additionally, parental involvement goes beyond communication to encompass the active participation of parents in their children's academic activities. This collaborative engagement not only strengthens the educational partnership between home and school but also contributes to the holistic development and success of students by fostering a supportive and engaged learning environment.

### Level of Emotional Intelligence of Students

The third objective was to determine the level of emotional intelligence of students, which was measured through a survey questionnaire with the indicators *self-awareness*, *self-regulation*, *motivation*, *social awareness*, and *social skills*. Shown in Table 2 are the data on the level of emotional intelligence of students. Computations yielded a grand mean of 3.77 or *high* with a standard deviation of 0.866, and this indicates that the emotional intelligence of teachers is oftentimes manifested. Data reveals that the domain of emotional intelligence of teachers that yielded the highest mean score is *self-awareness* with a mean rating of 3.91 or *high* followed by *motivation* as the second-highest indicator with a mean score of 3.87 or *high*. Thirdly, *self-regulation* got a mean score of 3.78 or *high* which is followed by *social awareness* which gained a mean score of 3.75 or *high*. Lastly, the lowest indicator, albeit *high* is the *social skills* which a got a mean score of 3.54.

**Table 3**  
*Level of Emotional Intelligence*

| Indicators               | SD           | Mean        | D.E.        |
|--------------------------|--------------|-------------|-------------|
| Self-Awareness           | 0.949        | 3.91        | High        |
| Self-Regulation          | 0.917        | 3.78        | High        |
| Motivation               | 0.973        | 3.87        | High        |
| Social Awareness/Empathy | 0.968        | 3.75        | High        |
| Social Skills            | 1.015        | 3.54        | High        |
| <b>Overall</b>           | <b>0.866</b> | <b>3.77</b> | <b>High</b> |

The high level of emotional intelligence of students is due to the high rating given by the student respondents on all of its five domains which signifies that students possessed a profound understanding and mastery of their emotions, as well as the ability to navigate and manage the emotions of others. This heightened emotional intelligence empowered students to develop strong interpersonal relationships, exhibit empathy, and effectively handle challenging situations. Beyond academic achievements, students with elevated emotional intelligence demonstrated resilience, adaptability, and a capacity for positive collaboration. Their advanced emotional awareness enhanced their overall well-being and equipped them with invaluable life skills, setting the foundation for success in both personal and professional pursuits.

This is in consonance with the studies of various authors (Singh, 2004; Karimpour, Sayad, Taheri & Sheibani, 2019; Nyamekye, 2019; Salavera, Usan & Teruel, 2019; Cherry, 2020; Trigueros, Sanchez-Sanchez, Mercader, Aguilar-Parra, Lopez-Liria, Morales-Gazquez & Rocamora, 2020; Adam, Kartowagiran, Yansa, Marlina & Amiruddin, 2022; Vila, Gilar-Corbi & Pozo-Rico, 2021; Chang & Tsai, 2022; Li, Pu & Phakdeephrot, 2022) who defined emotional intelligence as individuals' heightened awareness of their own emotions and their adept ability to express these emotions in a constructive and self-aware manner. This concept encompasses the capacity to recognize and understand one's feelings, facilitating effective communication and fostering emotional well-being. Individuals with a developed sense of emotional intelligence demonstrate a nuanced understanding of their own emotional states, enabling them to navigate interpersonal relationships with empathy and respond to situations with a balanced and thoughtful approach.

Furthermore, among the five domains of emotional intelligence, *self-awareness* was the highest indicator. The high level of students' self-awareness implies that students exhibited a heightened ability to empathize, actively listening and responding with understanding, fostering positive and meaningful interactions. Moreover, these students were adept at recognizing and respecting the expectations of others, navigating interpersonal relationships with a thoughtful and considerate demeanor. Their advanced self-awareness not only enhanced their own communication skills but also contributed to a harmonious and empathetic social environment, creating connections built on mutual understanding and respect. This resonates with a body of research from diverse authors (Singh, 2004; Li, Ma, Zhang, Wang, Liu & Ma, 2021; Simal, Mahulauw, Leasa & Batlolona, 2022), which stated that emotional intelligence is characterized by a profound understanding of one's emotions, strengths, weaknesses, needs and drives. Individuals with high emotional intelligence exhibit a heightened ability to behave decently and demonstrate sensitivity to others' opinions and feelings. This includes a keen awareness of their own actions, feelings, and thoughts, enabling them to approach situations with objectivity. This comprehensive self-awareness allows individuals with emotional intelligence to navigate interpersonal dynamics with empathy, respond thoughtfully to various stimuli, and contribute positively to both personal and social environments.

## Level of Academic Self-Efficacy of Students

The fourth objective was to determine the level of academic self-efficacy of students with the following indicators: *perceived control*, *competence*, *persistence* and *self-regulated*. Shown in Table 4 are the data on the level of academic self-efficacy of students. Computations yielded a grand mean of 3.79 or *high* with a standard deviation of 0.897, and this indicates that the self-efficacy is oftentimes manifested.

**Table 4**  
*Level of Academic Self-Efficacy*

| Indicators        | SD           | Mean        | D.E.        |
|-------------------|--------------|-------------|-------------|
| Perceived Control | 0.953        | 3.88        | High        |
| Competence        | 0.944        | 3.57        | High        |
| Persistence       | 0.995        | 3.86        | High        |
| Self-Regulated    | 0.937        | 3.87        | High        |
| <b>Overall</b>    | <b>0.897</b> | <b>3.79</b> | <b>High</b> |

From this result, the indicator of academic self-efficacy of students that yielded the highest mean score is *perceived control* with a mean score of 3.88 or *high*. Further, *self-regulated* ranked as the second-highest indicator with a mean score of 3.87 or *high*. This is followed by *persistence* and *competence* which gained the mean scores of 3.86 and 3.57 respectively.

The high level of academic self-efficacy of students is due to the high rating of students on all its four domains which signifies that students exhibited a strong belief in their ability to succeed academically. This confidence was grounded in a robust sense of personal competence and effectiveness in learning tasks. Such students approach challenged with optimism, persevered through difficulties, and viewed setbacks as opportunities for growth. Their elevated academic self-efficacy not only positively influenced their motivation and engagement but also contributed to improved learning outcomes. Students with this characteristic were more likely to set challenging goals, put forth sustained effort, and persisted in the face of obstacles, ultimately fostering a proactive and empowered approach to their educational journey. This is in line with the beliefs of various authors (Dullas, 2018; Mehmed & Purwandari, 2019; Usher, Li, Butz, & Rojas, 2019; Stephen, Rockinson-Szapkiw & Dubay, 2020; Dixon, Hawe & Hamilton, 2020; Lauermann & ten Hagen, 2021; Ulfatun, Septiyanti & Lesmana, 2021) who defined academic self-efficacy as students' beliefs and attitudes toward their abilities to achieve academic success in specific situations. These beliefs serve as catalysts for excellent performance, as they drive students to increase their commitment, endeavor, and perseverance in the pursuit of their educational goals. Essentially, academic self-efficacy represents the confidence students have in their capacity to meet the challenges of their academic endeavors, influencing their motivation and actions toward achieving positive learning outcomes.

Among the four domains of academic self-efficacy, *perceived control* had the highest mean rating which implies that students believed that the future depends on their actions and efforts. This mindset reflected a strong conviction that their academic success is within their influence, and their commitment and perseverance can shape their educational journey. This sense of perceived control fostered a proactive approach, motivating students to take responsibility for their learning outcomes, set ambitious goals, and navigate challenges with resilience. Ultimately, the belief that the future is contingent on their own actions empowered students to actively engage in their academic pursuits and strive for excellence.

These findings affirm several studies from various authors (Dullas, 2018; Thompson, 2020; Chen, Zhong, Luo & Lu, 2020) who defined perceived control as the conviction that an individual possesses the power to influence events or circumstances, allowing them to accrue benefits and avoid penalties. It encapsulates the perception of whether a situation is within one's control, reflecting the belief that one can determine their own internal states and behavior, exert influence on their environment, and actively contribute to bringing about desired outcomes. This comprehensive understanding of perceived control encompasses the confidence individuals have in their ability to navigate, shape, and impact various aspects of their lives.

## Significance on the relationship between Constructivist Learning Environment and Academic Self-Efficacy

One important purpose of this study was to determine whether teachers' constructivist learning environment management skills has a significant relationship with the academic self-efficacy of students. The results of the computations are shown in Table 5. The overall r-value on the correlation between the level of teachers' constructivist learning environment management skills and the level of academic self-efficacy of students is 0.679 with  $p < 0.05$ , which means that teachers' constructivist learning environment management skills is significantly associated with the academic self-efficacy of students. Hence, the null hypothesis is rejected.

Further, when the domains of *constructivist learning environment* such as *communication and interaction*, *relation establishment*, *skills development*, *time usage and assessment*, *learning and teaching* and *learning environment organization* were correlated to the overall academic self-efficacy of students, results of the computation yielded r-values ranging from 0.603 to 0.636 with all p-values less than 0.05, respectively, which can be all interpreted as *significant*. These factors are significantly related to the domains of academic self-efficacy such as *perceived control*, *competence*, *persistence* and *self-regulated*.

Data indicates that the overall teachers' constructivist learning environment management skills is associated with the academic self-efficacy of students. This confirms the proposition of several authors (Dislen Daggol, 2019; Lee et al., 2020; Sokmen, 2021; Abdi, 2023) which stated that constructivist learning environment holds profound significance in shaping and enhancing the academic self-efficacy of students. This educational approach fosters an atmosphere where students actively engage in the learning process, construct their own knowledge, and develop a deep understanding of concepts. In such an environment, students are encouraged to think critically, solve problems, and collaborate with peers. These experiences contribute to a sense of competence and mastery, leading to heightened academic self-efficacy. As students realize their capabilities to navigate challenges and succeed in their learning endeavors, the constructivist learning environment becomes a catalyst for building confidence, resilience, and a positive mindset, ultimately influencing their overall academic achievement.

**Table 5**  
Significance on the Relationship between Constructivist Learning Environment and Academic Self-Efficacy

| Constructivist Learning Environment | Academic Self-Efficacy         |                                |                                |                                |                                |
|-------------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                                     | Perceived Control              | Competence                     | Persistence                    | Self-Regulated Learning        | Overall                        |
| Communication and Interactions      | .638*<br>(0.000)               | .547*<br>(0.000)               | .606*<br>(0.000)               | .593*<br>(0.000)               | .636*<br>(0.000)               |
| Relation Establishment              | .612*<br>(0.000)               | .524*<br>(0.000)               | .598*<br>(0.000)               | .570*<br>(0.000)               | .615*<br>(0.000)               |
| Skills Development                  | .608*<br>(0.000)               | .479*<br>(0.000)               | .598*<br>(0.000)               | .574*<br>(0.000)               | .603*<br>(0.000)               |
| Time Usage and Assessment           | .607*<br>(0.000)               | .523*<br>(0.000)               | .592*<br>(0.000)               | .562*<br>(0.000)               | .610*<br>(0.000)               |
| Learning and Teaching               | .616*<br>(0.000)               | .529*<br>(0.000)               | .589*<br>(0.000)               | .561*<br>(0.000)               | .612*<br>(0.000)               |
| Learning Environment Organization   | .612*<br>(0.000)               | .568*<br>(0.000)               | .576*<br>(0.000)               | .561*<br>(0.000)               | .618*<br>(0.000)               |
| <b>Overall</b>                      | <b>.679*</b><br><b>(0.000)</b> | <b>.583*</b><br><b>(0.000)</b> | <b>.654*</b><br><b>(0.000)</b> | <b>.629*</b><br><b>(0.000)</b> | <b>.679*</b><br><b>(0.000)</b> |

\*Significant at 0.05 significance level.

### Significance on the Relationship between Parental Involvement and Academic Self-Efficacy of Students

Another purpose of this study was to determine whether Parental Involvement has a significant relationship with the Academic Self-Efficacy of Students. The results of the computations are shown in Table 6. As shown in the table, the overall r-value on the correlation between the level of parental involvement and the level of Academic Self-Efficacy of Students was 0.749 with  $p < 0.05$ , which means that the parental involvement is significantly associated with the Academic Self-Efficacy of Students. Hence, the null hypothesis is rejected.

Further, when the domains of parental involvement such as *parenting, communicating, volunteering, learning at home, decision-making* and *collaborating with the community* were correlated to the overall academic self-efficacy of students, results of the computation yielded r-values ranging from 0.633 to 0.719 respectively, all with  $p$ -values of less than 0.05. These can be all interpreted as *significant*. These factors are significantly related to the domains of organizational culture, such as the *perceived control, competence, persistence* and *self-regulated*.

**Table 6**  
Significance on the Relationship between Parental Involvement and Academic Self-Efficacy

| Parental Involvement             | Academic Self-Efficacy         |                                |                                |                                |                                |
|----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                                  | Perceived Control              | Competence                     | Persistence                    | Self-Regulated Learning        | Overall                        |
| Parenting                        | .698*<br>(0.000)               | .631*<br>(0.000)               | .679*<br>(0.000)               | .687*<br>(0.000)               | .719*<br>(0.000)               |
| Communicating                    | .626*<br>(0.000)               | .620*<br>(0.000)               | .636*<br>(0.000)               | .617*<br>(0.000)               | .666*<br>(0.000)               |
| Volunteering                     | .606*<br>(0.000)               | .655*<br>(0.000)               | .609*<br>(0.000)               | .600*<br>(0.000)               | .659*<br>(0.000)               |
| Learning at Home                 | .580*<br>(0.000)               | .591*<br>(0.000)               | .579*<br>(0.000)               | .624*<br>(0.000)               | .633*<br>(0.000)               |
| Decision Making                  | .604*<br>(0.000)               | .667*<br>(0.000)               | .608*<br>(0.000)               | .624*<br>(0.000)               | .668*<br>(0.000)               |
| Collaborating with the Community | .603*<br>(0.000)               | .626*<br>(0.000)               | .587*<br>(0.000)               | .631*<br>(0.000)               | .653*<br>(0.000)               |
| <b>Overall</b>                   | <b>.695*</b><br><b>(0.000)</b> | <b>.711*</b><br><b>(0.000)</b> | <b>.692*</b><br><b>(0.000)</b> | <b>.708*</b><br><b>(0.000)</b> | <b>.749*</b><br><b>(0.000)</b> |

\*Significant at 0.05 significance level.

Data indicates that the overall parental involvement is associated with the academic self-efficacy of students. This supports the findings of several authors (Adimora, et al., 2019; Grijalva-Quinonez et al., 2020; Sumanti & Muljani, 2021) who discovered that parental involvement plays a crucial role in shaping the academic self-efficacy of students. When parents actively participate in their children's education, supporting and encouraging their learning journey, it creates a positive and reinforcing environment.

Through consistent communication, engagement in educational activities and fostering a home atmosphere that values education, parents contribute to building their children's confidence in their academic abilities. This heightened academic self-efficacy translates into

increased motivation, perseverance and a positive attitude toward learning. The significance of parental involvement, therefore, lies in its power to empower students with the belief that they can succeed academically, setting the stage for long-term educational success.

### Significance on the Relationship Between Emotional Intelligence and Academic Self-Efficacy of Students

This present study also aimed to determine whether Emotional Intelligence has a significant relationship with the Academic Self-Efficacy of Students. The results of the computations are shown in Table 7. The overall r-value on the correlation between the level of emotional intelligence and the level Academic Self-Efficacy of Students was 0.905 with  $p < 0.05$ , which means that emotional intelligence is significantly associated with the Academic Self-Efficacy of Students. Hence, the null hypothesis is rejected.

In addition, when the domains of Emotional Intelligence such as *self-awareness*, *self-regulated*, *motivation*, *social awareness* and *social skills* were correlated to the overall Academic Self-Efficacy of Students, results of the computation yielded r-values ranging from 0.805 to 0.865 respectively, all with the  $p$ -values of less than 0.05 or *significant*.

These factors are significantly related to the domains of Academic Self-Efficacy of Students, such as *perceived control*, *competence*, *persistence* and *self-regulated*. Data indicates that the overall emotional intelligence is associated with the Academic Self-Efficacy of Students.

This supports the proposition of some researchers (Fernández Baños et al., 2023; Jindal & Dut; 2023; Randerson, 2023) that emotional intelligence holds profound significance in influencing the academic self-efficacy of students. Students with a high level of emotional intelligence exhibit a strong understanding of their emotions, interpersonal skills, and the ability to manage stress effectively. This emotional awareness contributes to the development of a positive self-image and a resilient mindset, fostering a sense of control over academic challenges. Students with heightened emotional intelligence can navigate social dynamics, collaborate with peers, and respond to setbacks with adaptability and perseverance. Ultimately, the cultivation of emotional intelligence significantly enhances academic self-efficacy by empowering students to regulate emotions, build meaningful relationships, and approach learning with confidence and resilience.

**Table 7**  
Significance on the Relationship between Emotional Intelligence and Academic Self-Efficacy

| Emotional Intelligence | Academic Self-Efficacy |                  |                  |                         |                  |
|------------------------|------------------------|------------------|------------------|-------------------------|------------------|
|                        | Perceived Control      | Competence       | Persistence      | Self-Regulated Learning | Overall          |
| Self-Awareness         | .795*<br>(0.000)       | .756*<br>(0.000) | .778*<br>(0.000) | .772*<br>(0.000)        | .828*<br>(0.000) |
| Self-Regulation        | .786*<br>(0.000)       | .781*<br>(0.000) | .777*<br>(0.000) | .772*<br>(0.000)        | .831*<br>(0.000) |
| Motivation             | .814*<br>(0.000)       | .796*<br>(0.000) | .844*<br>(0.000) | .785*<br>(0.000)        | .865*<br>(0.000) |
| Social Awareness       | .755*<br>(0.000)       | .752*<br>(0.000) | .757*<br>(0.000) | .752*<br>(0.000)        | .805*<br>(0.000) |
| Social Skills          | .748*<br>(0.000)       | .827*<br>(0.000) | .755*<br>(0.000) | .783*<br>(0.000)        | .830*<br>(0.000) |
| <b>Overall</b>         | .848*<br>(0.000)       | .852*<br>(0.000) | .851*<br>(0.000) | .841*<br>(0.000)        | .905*<br>(0.000) |

\*Significant at 0.05 significance level.

### Best Fit Model on Academic Self-Efficacy

The original proposed model outlined in Figure 1 requires some modification to fit the data. There were three generated models presented in the study. In identifying the best fit model, all indices included must consistently fall within the acceptable ranges. Chi-square/degrees of freedom value should be less than 2 but greater than 0 with its corresponding  $p$ -value greater than 0.05; the root mean square error approximation value must be less than 0.05 and its corresponding  $P$ -close value must be greater than 0.05 and other indices such as the normed fit index, Tucker-Lewis index, comparative fit index and the goodness of fit index must all be greater than 0.95.

**Generated Model 1.** In Figure 2 is shown the generated structural model 1. It displays the interrelationships of the exogenous variables *constructivist learning environment management skills of teachers* with its six indicators *communication and interaction*, *relation establishment*, *skills development*, *time usage and assessment*, *learning and teaching*, and *learning environment organization*; *parental involvement* with its six indicators *self-awareness*, *self-regulation*, *motivation*, *social awareness/empathy* and *social skills*; and *students' emotional intelligence* with its five indicators *self-awareness*, *self-regulation*, *motivation*, *social-awareness/empathy* and *social skills*: and their causal relationship on the endogenous variable *academic self-efficacy of students* with *perceived control*, *competence*, *persistence*, and *self-regulated learning* as its indicators. All indicators showing direct influences on the academic self-efficacy.

Furthermore, the survey results indicate a model that does not fit well with the provided data. The  $P$ -Close and  $P$ -Value of .00, both contradicting the required criterion of  $> 0.05$ , suggest a lack of statistical significance. The CMIN/DF ratio of 3.597, surpassing the acceptable range of 0 to 2, further supports the conclusion that the model does not adequately represent the data. The GFI, CFI, NFI, and TLI values, falling below the desired criterion of  $> 0.95$ , collectively indicate a suboptimal goodness-of-fit. Moreover, the RMSEA value of 0.081, exceeding the required criterion of  $< 0.05$ , further underscores that the model is not a good fit for the data. This calls for careful consideration and potential adjustments to improve the model's overall adequacy.

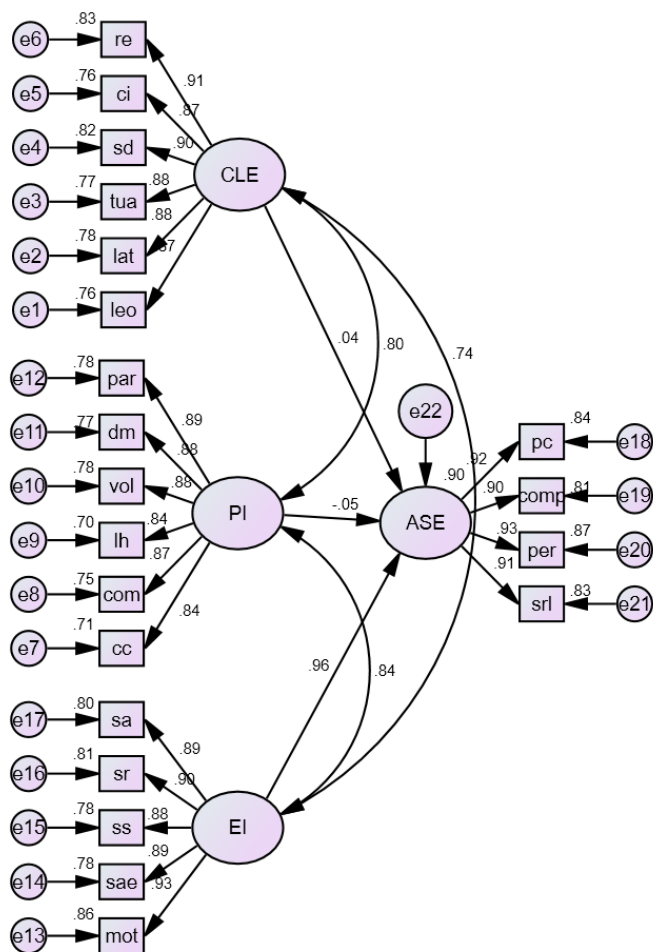


Figure 2. Structural Equation Model 1 in Standardized Solution

- Legend:
- ci – Communication and Interaction
  - sa – Self-Awareness
  - re – Relation Establishment
  - sr – Self-Regulation
  - sd – Skills Development
  - mot – Motivation
  - tua – Time Usage and Assessment
  - sae – Self-Awareness/Empathy
  - lat – Learning and Teaching
  - ss – Social Skills
  - leo – Learning Environment Organization
  - EI – Emotional Intelligence
  - CLE – Constructivist Learning Environment
  - par – Parenting
  - pc – Perceived Control
  - com – Communicating
  - comp – Competence
  - vol – Volunteering
  - per – Persistence
  - lh – Learning at Home
  - srl – Self-Regulated Learning
  - dm – Decision Making
  - ASE – Academic Self-Efficacy
  - cc – Collaborating with the Community
  - PI – Parenting Involvement

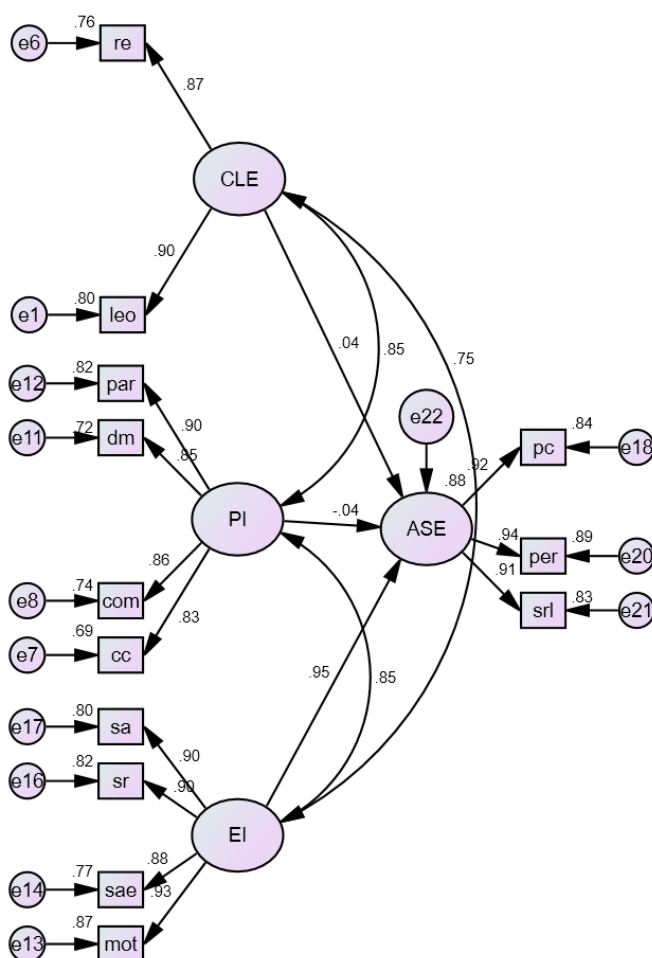
Table 8  
Goodness of Fit Measures of Structural Equation Model 1

| INDEX   | CRITERION     | MODEL FIT VALUE |
|---------|---------------|-----------------|
| P-Close | > 0.05        | .000            |
| CMIN/DF | 0 < value < 2 | 3.597           |
| P-Value | > 0.05        | .000            |
| GFI     | > 0.95        | .852            |
| CFI     | > 0.95        | .954            |
| NFI     | > 0.95        | .937            |

|       |        |      |
|-------|--------|------|
| TLI   | > 0.95 | .954 |
| RMSEA | < 0.05 | .081 |

- Legend:**
- CMIN/DF** - Chi-Square/Degrees of Freedom
  - NFI** - Normed Fit Index
  - TLI** - Tucker-Lewis Index
  - CFI** - Comparative Fit Index
  - GFI** - Goodness of Fit Index
  - RMSEA** - Root Means Square of Error Approximation
  - P-close** - P of Close Fit
  - P-value** - Probability Level

**Generated Model 2.** The generated model 2 is shown in Figure 3. It exhibits the interrelationships of the exogenous variables where some indicators with low values were removed. It can be seen that only two indicators— specifically, relation establishment and learning environment organization—have demonstrated a positive influence within the constructivist learning environment. Similarly, within the realm of parental involvement, positive influence is evident in its retained indicators namely, parenting, communicating, decision making, and collaborating with the community.



**Figure 3.** Structural Equation Model 2 in Standardized Solution

- |  |                               |
|--|-------------------------------|
| Legend: ci – Communication and Interaction | sa – Self-Awareness           |
| re – Relation Establishmen                 | sr – Self-Regulation          |
| sd – Skills Development                    | mot – Motivation              |
| tua – Time Usage and Assessment            | sae – Self-Awareness/Empathy  |
| lat – Learning and Teaching                | ss – Social Skills            |
| leo – Learning Environment Organization    | EI – Emotional Intelligence   |
| CLE – Constructivist Learning Environment  |                               |
| par – Parenting                            | pc – Perceived Control        |
| com – Communicating                        | comp – Competence             |
| vol – Volunteering                         | per – Persistence             |
| lh – Learning at Home                      | srl – Self-Regulated Learning |

dm – Decision Making  
 cc – Collaborating with the Community  
 PI – Parenting Involvement

ASE – Academic Self-Efficacy

Emotional intelligence, as indicated in the model, displays positive influence through its four retained indicators particularly, self-awareness, self-regulation, motivation, and social awareness/empathy. In contrast, academic self-efficacy is positively influenced by its three retained indicators specifically, perceived control, persistence, and self-regulated learning. It is noteworthy that all remaining indicators exert a direct influence on students' academic self-efficacy, emphasizing the comprehensive impact of the three exogenous variables on the endogenous variable.

Furthermore, in Model 2 are shown significant improvements in various indices compared to Model 1. Notably, the CMIN/DF ratio improved from 3.597 to 3.489, although it still falls short of acceptability, as it does not meet the required criterion of  $0 < \text{value} < 2$ . The GFI also demonstrated an increase from .852 to .927, yet it remains below the necessary threshold of 0.95 for a satisfactory fit.

Additionally, the RMSEA decreased from .081 to .079, but it remains unacceptable, failing to meet the required criterion of  $< 0.05$ . Both P-value and P-close maintained the same value of .000 in both models, indicating a poor fit as they do not satisfy the criterion of  $> 0.05$ . Although the CFI improved from .954 to .975, the NFI increased from .937 to .965, and the TLI rose from .947 to .966—meeting acceptable criteria individually—it is essential to emphasize that achieving a good fit requires meeting all criteria collectively. Thus, despite improvements in certain indices, comprehensive adherence to all criteria is imperative for deeming the model a good fit. Hence, a poor fit.

**Table 9**  
 Goodness of Fit Measures of Structural Equation Model 2

| INDEX   | CRITERION              | MODEL FIT VALUE |
|---------|------------------------|-----------------|
| P-Close | $> 0.05$               | .000            |
| CMIN/DF | $0 < \text{value} < 2$ | 3.489           |
| P-Value | $> 0.05$               | .000            |
| GFI     | $> 0.95$               | .927            |
| CFI     | $> 0.95$               | .975            |
| NFI     | $> 0.95$               | .965            |
| TLI     | $> 0.95$               | .966            |
| RMSEA   | $< 0.05$               | .079            |

**Legend:**

|         |   |  |
|---------|---|--|
| CMIN/DF | - | Chi-Square/Degrees of Freedom            |
| NFI     | - | Normed Fit Index                         |
| TLI     | - | Tucker-Lewis Index                       |
| CFI     | - | Comparative Fit Index                    |
| GFI     | - | Goodness of Fit Index                    |
| RMSEA   | - | Root Means Square of Error Approximation |
| P-close | - | P of Close Fit                           |
| P-value | - | Probability Level                        |

**Generated Model 3.** Lastly, in the generated Model 3 exhibited in Figure 4 the interrelationships of the exogenous variables are shown: *constructivist learning environment management skills of teachers, parental involvement and students' emotional intelligence* and their causal relationship on the endogenous variable *academic self-efficacy of students*. Model 3 is a modified version of Models 1 and 2, wherein some indicators with low values were removed. Furthermore, the substantial improvement among indices were manifested in Model 3 when compared to Model 2, such as: P-Close of .000 to .942; CMIN/DF of 3.489 to 1.224; P-value of .000 to .218; GFI of .927 to .986; CFI of .975 to .999; NFI, of .965 to .992; TLI, of .966 to .998 and RMSEA of .095 to .024; all fall within the acceptable ranges.

Moreover, the structural modifications revealed that students' academic self-efficacy was defined by its retained indicators *perceived control and self-regulated learning*. On the other hand, teachers' constructivist learning environment management skills was described by its domains *relation establishment and learning environment organization*; while parental involvement was determined by its retained indicators *parenting, communicating and collaborating with the community*. Finally, emotional intelligence was measured by its two retained domains *self-awareness and motivation*.

In Model 3 were found indices that consistently direct a very good fit to the data because all the indices presented fall within each criterion as shown in Table 10. Thus, there was no need to find another model for testing because it was already found to be the best fit among all the tested models. Therefore, the null hypothesis of no best fit model was rejected.

It could be stated that there is a best fit model that predicts the academic self-efficacy among junior high school students in Region XI. The model clearly illustrates the importance of teachers' constructivist learning environment management skills, parental involvement and students' emotional intelligence as predictors of students' academic self-efficacy. However, it could be gathered from the model that out of six indicators, only two remained as significant predictors of teachers' *constructivist learning environment management skills* to wit: *relation establishment and learning environment organization*. This result supported the studies of Pande and Bharathi (2020), Waruwu et al. (2020); Makri et al. (2021) and Yang (2021) emphasizing *relation establishment and learning environment organization* as significant predictors of academic self-efficacy of students.

This implies that the establishment of positive relations and effective organization of the learning environment play pivotal roles in fostering students' academic self-efficacy. When students experience supportive relationships with educators and peers, coupled with a well-structured learning environment, they are more likely to believe in their capabilities to succeed academically. These positive interactions and





**Table 10**  
*Goodness of Fit Measures of Structural Equation Model 3*

| INDEX   | CRITERION     | MODEL FIT VALUE |
|---------|---------------|-----------------|
| P-Close | > 0.05        | .942            |
| CMIN/DF | 0 < value < 2 | 1.224           |
| P-Value | > 0.05        | .218            |
| GFI     | > 0.95        | .986            |
| CFI     | > 0.95        | .999            |
| NFI     | > 0.95        | .992            |
| TLI     | > 0.95        | .998            |
| RMSEA   | < 0.05        | .024            |

**Legend:**

|         |   |  |
|---------|---|--|
| CMIN/DF | - | Chi-Square/Degrees of Freedom            |
| NFI     | - | Normed Fit Index                         |
| TLI     | - | Tucker-Lewis Index                       |
| CFI     | - | Comparative Fit Index                    |
| GFI     | - | Goodness of Fit Index                    |
| RMSEA   | - | Root Means Square of Error Approximation |
| P-close | - | P of Close Fit                           |
| P-value | - | Probability Level                        |

Furthermore, the result of this study reinforced the findings that the students' academic self-efficacy is predicted with parental involvement. In parental involvement only three out of six indicators were found to effect academic self-efficacy namely: parenting, communicating and collaborating with the community. This is in consonance with the statement of Appiah-Kubi and Amoako (2020) Waruwu et al. (2020) Lawrence and Fakaude (2021), Mahmudah et al. (2021) and Pascual (2021) that parenting, effective communication, and collaborative engagement with the community play a crucial role in shaping and bolstering students' academic self-efficacy. Parents, as primary influencers, contribute significantly to their children's belief in their academic capabilities. When parents actively participate in their child's education, provide encouragement, and demonstrate a genuine interest in their academic progress, students are more likely to develop a robust sense of self-efficacy.

Moreover, effective communication between educators, parents and the broader community further reinforces this positive impact. When there is a seamless flow of information about students' academic achievements, challenges and progress, it creates a supportive network that enhances the students' belief in their ability to succeed. Collaborative efforts between parents, educators, and the community create a holistic environment where students feel surrounded by encouragement and guidance, fostering a positive mindset and an increased sense of self-efficacy. In this collaborative ecosystem, students are more likely to navigate academic challenges with confidence, persistence, and a belief in their capacity to excel.

Subsequently, only two of the five indicators of emotional intelligence *social awareness* and *motivation* remain as predictors of students' academic self-efficacy. This substantiates the statements of Nyamekye (2019), Cherry (2020) Chang and Tsai (2022) and Li et al., (2022) which revealed that the positive interplay between social awareness and motivation significantly contributes to the enhancement of students' academic self-efficacy. Social awareness, involving a keen understanding of emotions and effective interpersonal relationships, creates a supportive environment where students feel valued and connected. This sense of belonging and positive social engagement serves as a foundation for academic self-efficacy, as students are more likely to believe in their abilities when surrounded by a network of encouragement and understanding.

Moreover, motivation, both intrinsic and extrinsic, acts as a catalyst in bolstering academic self-efficacy. Intrinsic motivation, driven by a genuine interest in learning and personal growth, inspires students to approach challenges with confidence and a belief in their competence. Extrinsic motivators, such as recognition and support from peers and educators, further reinforce this positive cycle, fueling students' determination to succeed academically.

Together, social awareness and motivation create a dynamic and empowering environment, fostering a mindset where students not only recognize their strengths and capabilities but also feel motivated to overcome obstacles. This combination of social support and motivation becomes a powerful force in shaping students' academic self-efficacy, ultimately influencing their academic achievements and overall well-being.

On the part of academic self-efficacy of students, only two out of four indicators remained to be measured, *perceived control* and *self-regulated learning*. This indicates that *perceived control* and *self-regulated learning* stand out as pivotal indicators of students' academic self-efficacy. The belief in one's ability to exert influence over academic outcomes, known as perceived control, is a fundamental factor shaping academic self-efficacy (Chen et al., 2020; Thompson, 2020). When students feel a sense of autonomy and control over their learning processes, they are more likely to approach challenges with confidence, viewing setbacks as opportunities for growth.

Similarly, self-regulated learning, encompassing strategies such as goal-setting, time management, and metacognitive skills, plays a crucial role in determining academic self-efficacy (Mehmed & Purwandari, 2019; Ulfatun et al., 2021). Students who actively engage in self-

regulated learning demonstrate a proactive approach to their studies, demonstrating the capacity to set and achieve goals, monitor their progress, and adapt strategies to meet evolving challenges. Together, perceived control and self-regulated learning form a symbiotic relationship, influencing the development of academic self-efficacy (Mehmed & Purwandari, 2019; Chen et al., 2020; Thompson, 2020; Ulfatun et al., 2021). As students perceive themselves capable of influencing their academic journey and actively employ effective learning strategies, they are more likely to cultivate a resilient and empowered mindset, positively impacting their academic performance and overall educational experience. In essence, these indicators serve as key determinants of students' confidence and belief in their ability to succeed academically.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, conclusions were drawn as follows:

The descriptive level of the exogenous variables constructivist learning environment, parental involvement and emotional intelligence of students and the endogenous variable – academic self-efficacy of students is high which signifies that these variables are evident and practiced oftentimes. The significant relationships between constructivist learning environment and academic self-efficacy of students, between parental involvement and academic self-efficacy of students as well as between emotional intelligence and academic self-efficacy of students imply that any increase in constructivist learning environment of students, parental involvement and emotional intelligence, results in a corresponding increase in the academic self-efficacy of students.

The structural model indicates the best fit model for the academic self-efficacy of students as proven by the summary of the goodness of fit satisfying all the indices for a structural equation model. The significant effect of constructivist learning environment, parental involvement and emotional intelligence on the academic self-efficacy of students implies that the academic self-efficacy of students is influenced by teachers' learning environment organizational management skills, parent's parenting style, and students' self-awareness accompanied with students' relation to learning in general.

Finally, findings showed that Model 3 came out as the best-fit model that predicted the academic self-efficacy of students. Further, results showed that the best-fit model was Model 3 showing the direct causal relationships of teachers' constructivist learning environment management skills, parental involvement and emotional intelligence of students on the academic self-efficacy of students. Furthermore, structure modifications revealed that teachers' constructivist learning environment management skills was defined by its retained indicators *learning environment organization and relation establishment*; while parental involvement was measured by its three retained indicators *collaborating with the community, communicating and parenting*.

Consequently, emotional intelligence was explained by its two remaining domains *motivation* and *self-awareness*; whereas the endogenous academic self-efficacy was determined by its two retained indicators *perceived control* and *self-regulated learning*. This implies that to build the academic self-efficacy of students, teachers may work on developing the retained indicators by way of establishing a good teacher-student relationship, increasing parental involvement and boosting positive moods of students.

The substantial impact of the constructivist learning environment, focusing on learning environment organization and relation establishment, along with parental involvement in collaborating with the community, effective communication, and positive parenting, as well as emotional intelligence in motivation and self-awareness, on students' academic self-efficacy, particularly in terms of perceived control and self-regulated learning, is congruent with several established educational theories and frameworks.

Bandura's Theory of Self-Efficacy (1977) posits that students' beliefs in their capabilities play a crucial role in shaping their academic performance. When applied in the constructivist learning environment, which encourages active engagement and collaboration, this theory finds synergy with John Dewey's Experiential Learning theory (1938). Dewey's framework emphasizes the importance of learning through meaningful experiences and interactions, aligning closely with the principles of self-efficacy. In this context, students not only develop their skills and knowledge but also cultivate confidence in their ability to succeed, thereby enhancing their overall academic achievement and personal growth. Similarly, Epstein's Framework of Six Types of Involvement (1987) underscores the importance of parental engagement and collaboration in enhancing students' academic experiences, reinforcing the significance of parental involvement. Moreover, Goleman's Mixed Model of Emotional Intelligence highlights the role of emotional intelligence in motivating students and promoting self-awareness, contributing to their academic self-efficacy by aligning with Bandura's notion of self-efficacy as a key determinant of academic success.

This convergence of theories and frameworks underscores the interconnectedness of the constructivist learning environment, parental involvement, emotional intelligence, and academic self-efficacy. By integrating principles from Bandura, Dewey, Epstein, and Goleman, educators and stakeholders can cultivate environments that empower students to take control of their learning, regulate their behaviors, and achieve academic success. Through collaborative efforts between educators, parents and students, supported by emotionally intelligent practices, students are better equipped to navigate the complexities of the educational journey, develop confidence in their abilities, and achieve their full potential.

Based on the foregoing findings and conclusion, the following recommendations are suggested:

Since *learning environment organization* has the lowest mean for *constructivist learning environment management skills of teachers*, the Department of Education may consider providing ongoing professional development opportunities for teachers to enhance their understanding and application of constructivist learning principles. This may also equip them with the skills needed to create an engaging and student-centered learning environment.

Moreover, *decision making* turned out to be the lowest in rank among all the domains of parental involvement, indicating that school administrators should consider fostering a welcoming and inclusive school environment that encourages parents to feel comfortable engaging with educators. Open lines of communication and create spaces where parents can voice concerns, seek advice, and actively participate in decision-making processes may be created.

Similarly, results show that *social skill* has the lowest mean for *emotional intelligence* which goes to show that schools should implement social and emotional learning programs that specifically target emotional intelligence skills. These programs can include activities, discussions, and exercises that promote empathy, effective communication, and relationship-building.

And lastly, as shown in the results *competence* is the lowest among the four domains of *academic self-efficacy* which signifies that there is a need to structure learning experiences that allow students to progressively master skills and content. Success in mastering tasks reinforces their belief in their own competence and contributes to heightened self-efficacy. Moreover, teachers may also consider providing students timely and constructive feedback that focuses on both strengths and areas for improvement. Specific feedback helps students understand their competence in particular tasks and offers guidance for improvement.

Further, it was found that constructivist learning environment management skills of teachers, parental involvement and emotional intelligence of students have significant relationship with the Academic Self-Efficacy of Students. Therefore, school administrators who are actively engaged in school planning and teacher development initiatives, may consider these results in encouraging teachers to actively employ constructivist learning strategies that promote student engagement, critical thinking and collaborative learning. Professional development programs can further enhance teachers' skills in creating and managing a constructivist learning environment.

Further, they may also consider establishing an effective communication channel between teachers and parents to ensure a shared understanding of students' academic progress, challenges and achievements. Regular parent-teacher conferences, newsletters, and online platforms can facilitate ongoing collaboration. Lastly, they may also consider advocating for teachers to model emotional intelligence in their interactions with students. Demonstrating empathy, active listening, and effective communication sets a positive example for students, reinforcing the importance of these skills in academic and personal success.

Since the best fitting model for the Academic Self-Efficacy of Students was anchored on constructivist learning environment management skills of teachers, parental involvement and emotional intelligence of students it is recommended that Department of Education may continue to integrate effective organizational strategies into the learning environment, emphasizing clear structures and routines. Timely distribution of resources, well-organized classrooms, and accessible materials contribute to an environment where students feel in control, positively impacting their academic self-efficacy.

Further, they may also consider designing learning activities that simulate real-world decision-making scenarios. Whether through case studies, simulations, or problem-solving exercises, these experiences allow students to apply their decision-making skills in practical contexts, boosting their confidence in academic tasks. In the same sense, they may start implementing social skills training programs that explicitly teach and practice effective communication, teamwork, and conflict resolution. These programs provide students with the tools they need to navigate social interactions successfully, enhancing their overall academic self-efficacy.

By implementing these recommendations, educators can create a learning environment that not only enhances organizational skills, decision making, and social skills but also significantly contributes to students' academic self-efficacy. This holistic approach fosters a positive and empowering atmosphere where students feel confident and capable in their academic pursuits.

Similar studies may be conducted using a mixed-methods approach involving qualitative data collection to explore further the variables constructivist learning environment managing skills of teachers, parental involvement, emotional intelligence and Academic Self-Efficacy of Students.

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