



THE MEDIATING EFFECT OF SCHOOL CLIMATE ON THE RELATIONSHIP BETWEEN ACADEMIC SELF-CONCEPT AND STUDENT ENGAGEMENT

Raymunda L. Apostol¹,

Lovelle Shayne P. Delos Santos²ⁱ

¹Professor, Baganga Offsite,

Davao Oriental, Philippines

Public Schools Supervisor,

Baganga North District,

Sto Nino, Lambajon Baganga,

Davao Oriental, Philippines

²Master of Arts in Education,

Major in Educational Management,

University of Mindanao,

Davao City, Philippines

Teacher 2,

Sta. Filomena Elementary School,

Purok Nangka, Sta. Filomena, Cateel,

Davao Oriental, Philippines

Abstract:

This study aimed to determine the mediating effect of school climate on the relationship between academic self-concept and student engagement in public secondary schools in Cateel I District that offer the Senior High School Program. The researcher used a quantitative, non-experimental design of research using correlational techniques to gather data from 224 senior high school student respondents, who were stratified randomly. The data was collected through a survey method using validated questionnaires. Further, the results were collated and statistically analyzed using mean, Pearson r , and regression utilizing Medgraph to determine the mediation. The study revealed that academic self-concept, student engagement, and school climate exhibited high mean scores. This study also showed a significant relationship between the level of academic self-concept and student engagement, a significant relationship between academic self-concept and school climate, and a significant relationship between student engagement and school climate. Lastly, the results of this study showed that there was a partial mediation of school climate on the relationship between academic self-concept and student engagement. It implies that the school climate conveys good academic self-concept and student engagement.

ⁱ Correspondence: email shayne030208@gmail.com

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1. Introduction

The lack of student engagement is an issue that numerous teachers face. The lack of student engagement in the classroom may be due to teacher attitudes and classroom environment. Other classroom practices like textbook-based work, repetitive exercises, and memorization of facts also have a negative impact on student engagement (Urias, 2022). Schools, teachers, and students all face issues as a result of low student engagement. The evidence revealed a shortcoming trend in student engagement and academic achievement. Many teachers, parents, and specialists have highlighted their disappointment with student engagement and performance in school (Serembus & Riccio, 2019; Yang et al., 2018).

Moreover, one of the most important steps in achieving quality assurance, intended learning outcomes and academic success has been to examine the construct of student engagement. There is a direct link between greater student engagement, and higher grades, and better performance. Students who are engaged with the school are more likely to learn, find the experience rewarding, graduate, and pursue higher education (Abla & Fraumeni, 2019; Carmona-Halty et al., 2019). Engaged students are more likely to achieve academically, attend class regularly, and stay in school. Student engagement increases student satisfaction, enhances student motivation to learn, reduces the sense of isolation, and improves student performance (Frye, 2021; Martin & Bolliger, 2018).

Academic self-concept can be increased and enhanced along with student engagement in the high achiever's group within the classroom situation wherein they adopt the characteristics of others in the group (Ajmal & Rafique, 2018). Also, school climate has important implications for student's physical and mental well-being and academic achievement as well as impacts on students' academic self-concepts (Ramazan et al., 2023). Lastly, as the school climate increases, students adopt human values more, and there is an increase in students' academic achievement in school, student engagement, and student belonging (Kalkan & Dagli, 2021).

Furthermore, the researcher has not come across a study that dealt with the mediating influence of school climate on the relationship between academic self-concept and student engagement in the local setting. It is in this context that the researcher is interested in determining whether the school climate has a mediating influence on the relationship between the academic self-concept and student engagement in Cateel I District as this can raise concern for the intended beneficiaries of this study and possibly develop action plans to school climate, academic self-concept, and student engagement, thus, the need to conduct this study.

2. Literature Review

2.1 Academic Self-Concept

Academic self-concept is the perception of students while comparing themselves to others in terms of their ability in academics. It focuses on two aspects of students' academics including the confidence and the effort they manifest. One factor that affects students' self-concept is their characteristics. Since academic self-concept serves as the motivational characteristic of students, it plays a vital role in honing their active participation and cognitive and emotional involvement in various learning activities to achieve academic success (Galugu & Samsinar, 2019; Schnitzler et al., 2021).

Moreover, academic self-concept is also a set of attitudes, beliefs, and perceptions held by the students about their academic skills and performance. This refers to the personal beliefs someone develops about their academic abilities or skills. Further, academic self-concept is a student's view of his or her academic ability when compared with other students. It involves a description and an evaluation of one's perceived academic abilities. This refers also to the specific attitudes, feelings, and perceptions about one's intellectual or academic skills, representing a person's self-beliefs and self-feelings regarding the academic setting. It is also one's ability to self-perceive within a certain academic area as well as an individual's knowledge and perceptions about themselves in academic achievement situations (Febriana et al., 2019; Vikas, 2019).

The first indicator is academic confidence which is the belief of students in their ability to plan and carry out actions to succeed academically. Confidence plays an important role in students' success. Academic confidence contributes to self-perception which helps students to focus on competence, skills, and capabilities to effectively deal with various situations. Students who are confident in their academic abilities and have high self-esteem are more likely to be inspired and motivated to achieve goals (Dou et al., 2022; Marianty et al., 2021; Tasneem & Panwar, 2019).

Further, academic confidence is believed to affect performance through the influence on task perception. For example, research studies suggest that high academic confidence creates a feeling of calmness when approaching a difficult task. Conversely, low academic confidence may result in an individual perceiving a task as more difficult than it is, which leads to stress and narrowness of ideas when tackling the solution to the problem. Having high academic confidence in students can help them achieve good learning achievement. That way there will be a process of change in students not only on learning achievement but also on the attitudes of students (Abdullah et al., 2019; Cole & Kinzie, 2018).

The second indicator is academic effort. The way that students perceive the course will indicate how hard they would work on it turns out to be how well they would do on it. The situational interest of students and the teacher's guidance contributes to students' academic effort and performance. In the academic setting, academic effort is a crucial self-regulated study behavior. Study abilities that are frequently linked to success include managing effort, time, and the surroundings (Jones et al., 2021; Van Rooij et al., 2018).

Furthermore, academic efforts among students are crucial, especially in a distance learning environment. Self-regulated efforts and flexibility are the contributing factors affecting the satisfaction of students in a distance learning environment. Hence, it is emphasized that through perseverance efforts students may gain consistency in their interests. Thus, when it comes to regulating academic self-concept, perseverance of effort has a good relationship with self-assessment (Turan et al., 2022; Yang et al., 2023).

2.2 Student Engagement

Student engagement may involve educational, mental, academic, behavioral, emotional, psychological, and social. However, it has been a definite inquiry whether learners need to be functioning and performing in these different aspects of learning to achieve valuable development. Seemingly, this apparent concern had posted a big traditional question about what schools and the education system are supposed to do. Relatedly, student engagement is linked to improved achievement, persistence, and retention. It is the energy and effort that students employ within their learning community, observable via behavioral, cognitive, or affective indicators. The more students are engaged and empowered within their learning community, the more likely they are to channel that energy back into their learning, leading to a range of outcomes, that can further fuel engagement (Bond et al., 2020; Harris, 2018).

The first indicator of student engagement is behavioral engagement. Students with high effort and persistence exhibit high levels of behavioral engagement. Students' completion of a designated task is a sign of behavioral engagement. Under behavioral engagement is persistence which is conceptualized as a strategy and part of self-efficacy to continue attaining goal-oriented behavior despite academic obstacles and negative academic experiences. People with high persistence have little fear of the unknown, can stand up for what they believe in, and have the courage to face whatever may come along. Persistence strongly influences the choices people make, the effort they expend, the strength of their perseverance in the face of adversity, and the degree of anxiety they experience (Al Mamun & Lawrie, 2023; Dullas, 2018).

Behavioral engagement encompasses doing an assigned task or joining a student council. Motivation can have intrinsic and extrinsic motives, depending if it is influenced by internal constructs, such as a search for autonomy and competence through play, exploration, and curiosity, or external constructs such as incentives or pressure. It is affirmed that students who are behaviorally engaged would comply with behavioral norms, such as attendance and involvement, and would demonstrate the absence of disruptive or negative behavior (Fauziah, 2020; Gomes et al., 2023).

The second indicator is emotional engagement. Factors such as teacher support strongly influence emotional engagement. Factors from the family, peer, and community contexts make unique contributions to emotional engagement. There is a need to consider emotional engagement as a long-term process. Also, teachers are crucial agents in adolescents' school life, and teachers' roles involve both academic and socio-emotional functions. There are direct associations of teacher support with intentions to quit and

indirect associations via emotional engagement and boredom. Perceived emotional support is the most central aspect of teacher support, as revealed by both indirect and direct associations with intentions to quit (Quin et al., 2018; Tvedt et al., 2021).

Furthermore, emotional engagement through optimal learning experiences in school is important for adolescents as the age range from early teens to the early twenties is when children move from dependent childhood to self-sufficient adulthood, and must make new adjustments to their behavior to navigate such marginal stage of development. Relatedly, emotional engagement is characterized by positive or negative reactions to school, learning, and schoolwork and a personal sense of school belonging and valuing of education. There is a strong connection between emotional engagement and students' achievement and school-related behaviors (Gutman & Schoon, 2018; McCormick, 2019). The third indicator is cognitive engagement. It refers to the serious cognitive investment in learning, using higher-order thinking skills such as analysis and evaluation, to increase understanding, solve complex problems, or construct new knowledge. The concept of intellectual engagement allows exploration of what students are doing in classrooms, how they feel about their experiences of learning, and whether the work they do contributes to their learning. To increase cognitive engagement, students must move from shallow cognitive processing to meaningful cognitive processing. Deep cognitive processing allows for mental connection and knowledge elaboration that fosters higher-level cognitive learning outcomes (Barlow et al., 2020; Dunleavy et al., 2017).

Additionally, cognitive engagement is manifested by students when they make a mental effort to engage with learning resources. There is a need to evaluate students' cognitive engagement to enhance the quality of learning, as cognitive engagement is vital to ensure that students make a consistent mental effort. Relatedly, cognitive engagement is the extent to which students are willing and able to take on learning the task at hand. There is a significant relationship between cognitive engagement and classroom mastery goals, classroom performance-approach goals, and self-efficacy (Baber et al., 2019; Kew & Tasir, 2021).

2.3 School Climate

Students who experience a positive school climate report fewer experiences of physical, emotional, or cyberbullying with the establishment of standards of positive behavior. Students who attend schools that provide supportive peer relationships, clear rules, and a greater sense of safety are less likely to report being victims or victimizers of bullying. Likewise, knowledge of school rules and recognition by students that adults can intervene in school violence is associated with fewer reports of bullying (Acosta et al., 2019; Varela et al., 2021).

School climate plays a critical role in students' levels of academic achievement, regardless of their socioeconomic background. Schools with positive school climates could mitigate risk factors related to students coming from low-income backgrounds. This means that a positive school climate can impact the achievement levels of all students, regardless of their socioeconomic background. School climate also influences

the behavioral and academic outcomes of students. The school climate is a key factor in school life and can regulate behaviors in school that are accepted by society, promote interaction among school members, and help students better develop in various ways. A cooperative and competitive school climate is related to student development (Stuckey, 2019; Wang et al., 2022).

2.4 Correlation between Measures

A person's expectancies of success or academic self-concept in a given task in combination with that person's valuing of that task are key predictors of academic achievement, effort, student engagement, and career choices. Expectancy is also known as academic self-concept wherein when both expectancy and task value are used as predictors of academic achievement, expectancy results as the strongest predictor of achievement in various school areas. Also, academic self-concept is an important aspect of student engagement. Students with higher perceptions of their abilities are more likely to participate, show cognitive engagement, and experience enjoyment and interest (Perinelli et al., 2022; Schnitzler et al., 2021).

Besides having a positive effect on the student's academic achievement, school climate contributes positively to academic self-concept, self-belief, and aspiration. Self-concept development is influenced by other people who are close to the environment. Two factors influence self-concept namely: actor factors such as parents, peers, and society, and substance factors like learning, association, and motivation. Student relationships and academic self-concept are unique. Students' perceptions of the school climate, especially support from teachers, classmates, peers, and self-reliance in the classroom, are regarded as the core aspects of psychological development (Surayanah & Karma, 2018; Zhou et al., 2021).

Additionally, students' goal orientation and school climate have relationships with students' lives and school context. Students' dispositional orientation and school climate are related to intrinsic motivation, academic self-concept, adolescent adjustment, adolescent well-being, student engagement, and perceived autonomy support, among others. Students with more positive perceptions of school climate exhibit more positive trajectories in academic self-concept and self-esteem. Students from larger classes have more positive trajectories of academic self-concept compared to those from smaller classes (Coelho et al., 2020; Gutierrez et al., 2019).

There are positive associations between school climate and student engagement. The relationship between school climate including relational quality, fairness of rules, clarity of expectations, and safety, and student engagement is significant amidst cultural differences. A positive school climate provides students with appropriate support, structure, and opportunities for learning to help alleviate barriers to learning. Schools with a positive climate are safe, caring, and responsive, and a positive climate is linked with improving school connectedness, student engagement, attendance, classroom behavior, and academic performance, among others (Grazia, 2022; Wehrli, 2019).

This study is anchored on the Self-Determination Theory by Deci and Ryan (1980) in which the overall goal is to engage the student in educational activities. Engagement places a huge emphasis on the personal desire to learn. The student's motivation for going to school is related to intrinsic reasons, identified regulation reasons, and lack of self-determined motivation. Teachers who provide students with interesting activities and autonomy in the classroom help nurture motivation and a desire to complete school rather than drop out. Self-determined motivation has significant effects on dropping out of school.

This study is supported by the Self-Perception Theory by Bem (1972) wherein self-concept is one of the constructs in social science that is widely acknowledged to play a central role in all learning situations. Academic self-concept indicates one's ability to self-perceive within a certain academic area. It is also the individual's knowledge and perceptions about themselves in academic achievement situations. Further, it is one's self-evaluation regarding specific academic areas and how students feel about themselves as learners.

This study is also supported by the Social Cognitive Theory by Bandura (1986) which emphasizes that the reciprocal interaction of a behavior, person, and environment is where learning occurs in a social setting. Thus, there is a strong influence on social factors and the role of internal and external reinforcements that may affect those factors. School climate is the set of internal characteristics that distinguish one school from another and influence the behaviors of each school's members. It is comprised of common beliefs and shared experiences between school authorities and colleagues.

3. Material and Methods

The study employed a quantitative non-experimental research design using the descriptive correlation technique. It was used since the researcher was interested in determining the degree of connection between variables. Additionally, it tries to define and understand the state of the current study (Creswell, 2014). The correlational technique is a non-experimental approach in which it analyses the relationship between two or more variables without reserve. It also looks into the degree of association by relating it with other variables. Apparently, correlational studies have independent and dependent variables with the effects of the independent variable observed on the dependent value (Patidar, 2013). This design was used to align the variables based on the discussion of the aforementioned related literature. This technique was appropriate since the study aimed to determine whether there was a significant relationship between school climate, academic concept, and student engagement the findings of the study may become good inputs in the formulation of relevant programs and activities for the betterment of both the teachers and the students, as well.

Moreover, a mediation model was used in this study. The mediation model seeks to identify and explicate the mechanism or process that underlies an observed relationship between an independent variable (academic self-concept) and a dependent

variable (student engagement) via the inclusion of a third explanatory variable, known as a mediator variable (school climate). Rather than hypothesizing a direct causal relationship between the independent variable and the dependent variable, a mediational model hypothesizes that the independent variable influences the mediator variable, which in turn influences the dependent variable. Thus, the mediator variable serves to clarify the nature of the relationship between the independent and dependent variables. In other words, mediating relationships occur when a third variable plays an important role in governing the relationship between the other two variables (MacKinnon, 2008).

In this study, from the total of 508 senior high school students (Grade 12) in the selected 2 schools in Cateel 1, Davao Oriental, only 224 were considered as the sample size. The computation of the sample size was based on Slovin's formula, $n=N/(1+Ne^2)$, (Stephanie, 2003). With a desire to give everyone a chance to be included in the study, stratified random sampling was used. Stratified random sampling was employed in the study such that all senior high school students (Grade 12) from Cateel 1, Davao Oriental had the chance to be selected and considered for inclusion in the final sample. This was a sampling technique in which the population was divided into groups called strata. In this case, the senior high school students in School A (Cateel Vocational High School) were 203 (out of 460 total population) and the senior high school students of School B (San Antonio National High School) were 21 (out of the 48 total population of students) were the groups to become respondents. Moreover, the idea is that the groupings were made so that the population units within the groups were similar (Salkind, 2007).

Moreover, in the selection of the respondents of the study, inclusion criteria will be considered. To be included in the study are the students-respondents who are bonafide Grade 12 students, officially enrolled in SY 2021-2022 under the 2 identified schools: Schools A and B, Cateel 1 under the division of Davao Oriental. The teacher advisers' approval and recommendation as to who would be the preferred student respondents in Grade 12 senior high school were also considered in the inclusion. As such, they were the only ones fitted to the criteria to answer the questions in the survey questionnaire of the study. Those other Grade 12 students who do not belong to the identified 2 schools, School A and B of the study, were excluded from the study. Also excluded are those students under the elementary, junior high school, and Grade 11 as they do not belong to the criteria mentioned including those Grade 12 pupils who are currently enrolled in private schools.

The respondents were chosen accordingly to answer the questionnaire with confidentiality. The target respondents were free to decline from participating in the survey. They were not forced to answer the research questionnaire and were encouraged to return the same to the researcher for its automatic disposal. Moreover, they can withdraw any time their participation in the research process if they feel uncomfortable about the study since they were given the free will to participate without any form of consequence or penalty.

The following statistical tools were used in the computation of data and testing the hypotheses at 0.05 level of significance: Mean. This was used to determine the levels of academic self-concept, student engagement, and school climate. Pearson Product Moment Correlation (Pearson r). This statistical tool was used to determine the significance of the relationship between and among academic self-concept, student engagement, and school climate. Regression as input to the Medgraph. This was used to determine the significance of the mediation of school climate on the relationship between the academic self-concept and student engagement. In the conduct of this study, especially before the data were gathered, ethical issues and considerations were dealt with. The researcher underwent an evaluation conducted by the members of the ethics review committee.

4. Results and Discussion

Table 1: Level of Academic Self-concept

Items	SD	Mean	D.E.
Academic Confidence	0.54	3.92	High
Academic Effort	0.56	4.21	Very High
Overall	0.50	4.06	High

The level of academic self-concept is high, resulting from the very high and high levels of responses. The indicator of *academic effort* has a very high rating, while the indicator of *academic confidence* has a high rating. These indicators are arranged from highest to lowest level. The very high level rating of *academic effort* is suggestive of the very high crucial self-regulated study behavior. This claim is in line with various authors (Jones et al., 2021; Van Rooij et al., 2018) wherein the way that students perceive the course will indicate how hard they would work on it turns out to be how well they would do on it. The situational interest of students and the teacher's guidance contributes to students' academic effort and performance. Study abilities that are frequently linked to success include managing effort, time, and the surroundings.

The high level of *academic confidence* suggests the high belief of students in their ability to plan and carry out actions to succeed academically. This is also in line with various authors (Abdullah et al., 2019; Cole & Kinzie, 2018) stating that high academic confidence creates a feeling of calmness when approaching a difficult task. Having high academic confidence in students can help them achieve good learning achievement. That way there will be a process of change in students not only on learning achievement but also on the attitudes of students.

Table 2: Level of Student Engagement

Items	SD	Mean	D.E.
Behavioral Engagement	0.58	4.14	High
Emotional Engagement	0.58	4.08	High
Cognitive Engagement	0.59	4.00	High
Overall	0.51	4.08	High

The high level of student engagement resulted from the high levels of responses. The indicators of behavioral engagement, emotional engagement, and cognitive engagement were arranged from highest to lowest. The high level of behavioral engagement is indicative of the high effort and persistence of students. This claim is in line with various authors (Fauziah, 2020; Gomes et al., 2023) wherein behavioral engagement encompasses doing an assigned task or joining a student council. Motivation can have intrinsic and extrinsic motives, depending if it is influenced by internal constructs, such as a search for autonomy and competence through play, exploration, and curiosity, or external constructs such as incentives or pressure. Students who are behaviorally engaged would comply with behavioral norms, such as attendance and involvement, and would demonstrate the absence of disruptive or negative behavior.

Also, the high level of emotional engagement is suggestive of the high emotional connection learners make with instructors, peers, and content. This is in line with various authors (Gutman & Schoon, 2018; McCormick, 2019) stating that emotional engagement through optimal learning experiences in school is important for adolescents as the age range from early teens to the early twenties is when children move from dependent childhood to self-sufficient adulthood and must make new adjustments to their behavior to navigate such marginal stage of development. Relatedly, emotional engagement is characterized by positive or negative reactions to school, learning, and schoolwork and a personal sense of school belonging and valuing of education. There is a strong connection between emotional engagement and students' achievement and school-related behaviors.

Additionally, the high level of cognitive engagement suggests a high serious cognitive investment in learning, using higher-order thinking skills such as analysis and evaluation, to increase understanding, solve complex problems, or construct new knowledge. This claim is aligned with various authors (Baber et al., 2019; Kew & Tasir, 2021) who mentioned that cognitive engagement is manifested by students when they make a mental effort to engage with learning resources. There is a need to evaluate students' cognitive engagement to enhance the quality of learning, as cognitive engagement is vital to ensure that students make a consistent mental effort. There is a significant relationship between cognitive engagement and classroom mastery goals, classroom performance-approach goals, and self-efficacy.

Table 3: Level of School Climate

Items	SD	Mean	D.E.
A few vocal parents can change school policy.	0.85	3.62	High
The operation is vulnerable to outside pressure.	0.78	3.53	High
Selected citizen groups are influential with the board.	0.84	3.61	High
Teachers feel pressure from the community.	0.88	3.57	High
The principal responds to pressure from parents.	0.89	3.78	High
The school head explores all sides of the topic and admits that other opinions exist.	0.83	3.80	High
The school head treats all faculty members as his or her equals.	0.89	4.00	High
The school head puts suggestions made by faculty into operation.	0.81	3.92	High
The school head is friendly and approachable.	0.85	4.05	High
The school head is willing to make changes.	0.90	4.01	High
The school head lets faculty know what is expected of them.	0.84	3.97	High
The school head maintains definite standards of performance.	0.81	4.01	High
Teachers help and support each other.	0.86	4.24	Very High
The interactions between faculty members are cooperative.	0.86	4.04	High
Teachers provide strong social support for colleagues.	0.77	4.17	High
Teachers respect the professional competence of their colleagues.	0.90	4.14	High
Teachers go the extra mile" with their students.	0.86	3.96	High
Teachers in this school exercise professional judgment.	0.88	3.89	High
Teachers accomplish their jobs with enthusiasm.	0.85	4.01	High
Parents exert pressure to maintain high standards.	0.87	3.88	High
Students respect others who get good grades.	0.87	4.17	High
Students try hard to improve on previous work.	0.78	4.21	Very High
Students seek extra work so they can get good grades.	0.87	4.07	High
Parents press for school improvement.	0.87	3.92	High
High standards for academic performance are set.	0.89	3.91	High
Students can achieve the goals that have been set for them.	0.83	4.08	High
Academic achievement is recognized and acknowledged.	0.84	4.12	High
Overall	0.55	3.95	High

The high level of school climate reveals the high quality of school life, experiences, norms, goals, values, interpersonal relationships, teaching, learning, leadership practices, and organizational structure. This claim is in line with various authors (Acosta et al., 2019; Varela et al., 2021) wherein students who experience a positive school climate report fewer experiences of physical, emotional, or cyberbullying with the establishment of standards of positive behavior. Students who attend schools that provide supportive peer relationships, clear rules, and a greater sense of safety are less likely to report being victims or victimizers of bullying. Likewise, knowledge of school rules and recognition by students that adults can intervene in school violence is associated with fewer reports of bullying.

Moreover, the results of the study are also in line with various authors (Stuckey, 2019; Wang et al., 2022) who stated that school climate plays a critical role in students' levels of academic achievement, regardless of their socioeconomic background. Schools with positive school climates could mitigate risk factors related to students coming from

low-income backgrounds. This means that a positive school climate can impact the achievement levels of all students, regardless of their socioeconomic background. School climate also influences the behavioral and academic outcomes of students. A cooperative and competitive school climate is related to student development.

Table 4.1: Significance of the Relationship between Academic Self-Concept and Student Engagement

	Academic Confidence	Academic Effort	Overall Academic Self- Concept
Behavioral Engagement	0.465* (0.000)	0.751* (0.000)	0.672* (0.000)
Emotional Engagement	0.460* (0.000)	0.685* (0.000)	0.632* (0.000)
Cognitive Engagement	0.396* (0.000)	0.670* (0.000)	0.589* (0.000)
Overall Student Engagement	0.496* (0.000)	0.790* (0.000)	0.711* (0.000)

*Significant at 0.05 significance level.

The correlation between the measures of academic self-concept and student engagement revealed a significant relationship. This implies that academic self-concept is significantly correlated with student engagement. The findings of this study are in line with the studies of various authors (Perinelli et al., 2022; Schnitzler et al., 2021) stating that a person’s expectancy of success or academic self-concept in a given task in combination with that person’s valuing of that task are key predictors of academic achievement, effort, student engagement, and career choices. Expectancy is also known as academic self-concept wherein when both expectancy and task value are used as predictors of academic achievement, expectancy results as the strongest predictor of achievement in various school areas. Also, academic self-concept is an important aspect of student engagement. Students with higher perceptions of their abilities are more likely to participate, show cognitive engagement, and experience enjoyment and interest.

Table 4.2: Significance on the Relationship between Academic Self-concept and School Climate

	Academic Self-concept		
	Academic Confidence	Academic Effort	Overall Self-concept
School Climate	0.410* (0.000)	0.604* (0.000)	0.560* (0.000)

*Significant at 0.05 significance level.

The correlation between measures revealed that there is a significant relationship between academic self-concept and school climate. This implies that academic self-concept is positively correlated with school climate. The result of the study confirms various authors (Surayanah & Karma, 2018; Zhou et al., 2021) who mentioned that besides having a positive effect on the students’ academic achievement, school climate contributes positively to academic self-concept, self-belief, and aspiration. Self-concept

development is influenced by other people who are close to the environment. Two factors influence self-concept namely: actor factors such as parents, peers, and society, and substance factors like learning, association, and motivation. Student relationships and academic self-concept are unique. Students' perceptions of the school climate, especially support from teachers, classmates, peers, and self-reliance in the classroom, are regarded as the core aspects of psychological development.

Table 4.3: Significance on the Relationship between School Climate and Student Engagement

Student Engagement	School Climate
Behavioral Engagement	0.615* (0.000)
Emotional Engagement	0.590* (0.000)
Cognitive Engagement	0.617* (0.000)
Overall Student Engagement	0.684* (0.000)

*Significant at 0.05 significance level

The correlation between the measures of school climate and student engagement revealed a significant relationship. This implies that school climate is positively associated with student engagement. This claim is in line with various authors (Grazia, 2022; Wehrli, 2019) wherein there are positive associations between school climate and student engagement. The relationship between school climate including relational quality, fairness of rules, clarity of expectations, and safety, and student engagement is significant amidst cultural differences. A positive school climate provides students with appropriate support, structure, and opportunities for learning to help alleviate barriers to learning. Schools with a positive climate are safe, caring, and responsive, and a positive climate is linked with improving school connectedness, student engagement, attendance, classroom behavior, and academic performance, among others.

5. Mediation Analysis of the Three Variables

Table 5: Regression results of the variables in the criteria of the presence of mediating effect \ partial mediation (with sign unchanged)

			Estimate	S.E.	C.R.	P	Label
SC	<---	ASC	.611	.061	10.090	***	
SE	<---	ASC	.489	.051	9.627	***	
SE	<---	SC	.392	.047	8.428	***	

X = Academic Self-concept

Y = Student Engagement

M = School Climate

This study aims to contribute to the literature regarding the possible mediating variable for the relationship between academic self-concept and student engagement. Specifically,

school climate was investigated as a possible mediating variable that could explain the effect of academic self-concept on student engagement. Partial mediation is found in the study, and significant direct effects were presented that may help in the enhancement of the existing research on academic self-concept and student engagement. Significantly, the present study on the relationship between academic self-concept and student engagement is supported by the study of Deci and Ryan (1980) in which the overall goal is to engage the student in educational activities. Specifically, the current study has found that school climate is a partial mediator of academic self-concept and student engagement and met Baron and Kenny's (1986) mediation guidelines.

In this connection, the mediation analysis involved the path between academic self-concept and student engagement, and the path between school climate and student engagement. The findings confirm the relationship between academic self-concept and student engagement leading to support for various authors in this study (Coelho et al., 2020; Gutierrez et al., 2019) who declared that students' dispositional orientation and school climate are related to intrinsic motivation, academic self-concept, adolescent adjustment, adolescent well-being, student engagement, perceived autonomy support, among others. Students with more positive perceptions of school climate exhibit more positive trajectories in academic self-concept and self-esteem. Students from larger classes have more positive trajectories of academic self-concept compared to those from smaller classes.

5. Recommendations

The researcher came up with recommendations based on the results of the study. On the level of academic self-concept, the researcher recommends the school management through the initiatives of the teacher to introduce more techniques on how to overcome stresses and pressures being experienced by the students. Given the inventory of problematic students, the teacher may conduct one-on-one counseling for students who have some issues and concerns about their subjects and relationships with other students. The school management may allow the conduct of academic and cultural competitions before the end of the semester among the students per Grade level or if the situation warrants an inter-school competition to boost the morale of the students and feel proud of their achievements in their field of expertise or talents. This class or school activities may include competitions (sports, music, dance, quiz bee in English, Math, and Science subjects) which will showcase the talents, achievements and best performances of the students. The giving of recognition and commendations to students for their best achievements or performances may be done through the awarding of medals and certificates during recognition or graduation ceremonies.

Moreover, on academic self-concept, the establishment of legitimate clubs or organizations in class or school needs active support from the teachers (as club advisers). Various clubs may be organized like the debating club, Math or Science clubs, basketball or any sports clubs, and other clubs that may interest the students. In this case, the full

support of the school management may be required such as provision of some paraphernalia for the use of the club.

On the high level of student engagement, the teacher may also reach out to the respective parent of the student in crisis and discuss possible interventions, either in school with the assistance of the guidance counselor or at home with the parent's participation. There may be the conduct of a symposium or 1-day seminar/webinar on how to combat anxiety/depression may be facilitated in the classes among all students. This may include film-viewing or any platform using social media to help students in crises. The teacher will take note that all information during the counseling is strictly confidential. If all the interventions mentioned above are already in place, then positive efforts are requested to sustain said activities/interventions. The involvement of parents is necessary in matters where students (their children) are concerned to ensure that whatever the class or students in school are doing/engaged with, the parents are aware and may always show their support to all the activities in school which may include attendance to meetings, joining community outreaches and sponsoring relevant school projects. Further, it is also recommended that teachers may always show their passion for teaching by continually making innovations in their teaching strategies so all students are engaged in the class or school's activities.

For the high result on school climate, the researcher may recommend that the school may continue to establish the good rapport which is existing in the school. This may include a review or revisit of some school rules and policies affecting the school, teachers, and students, as well. If changes may occur in some policies, the conduct of orientation and re-orientation may be facilitated as part of information dissemination. There may be regular conduct of consultation periods to allow students to open up about whatever they have in mind. The conduct also of monthly or bi-monthly recognition of student-awardees for best achievement obtained either academically or in the extra-curricular activities. Moreover, the school environment is one aspect of the school climate. In this case, the researcher may recommend to the school management to maintain the school facilities by ensuring safe conditions of all the schools' facilities and maintaining the cleanliness, and orderliness in the classrooms and the school premises. Installation of important signages in conspicuous places to guide or inform all concerned of the school policies on a safe, clean, and secure environment.

On the result of the partial mediation effect of the school climate relationship between academic self-concept and student engagement, it is recommended that there should always be constant communication between school management and teachers and students and that everyone should always be reminded of the school's vision, mission and goals so that the best working relationship will be manifested at everyone gets out to the community and to the society bringing the good image of the school.

6. Conclusion

With consideration of the findings of the study, conclusions are drawn in this section. There is a high level of mean for school climate, a high level of mean for academic self-concept, and a high level of mean for student engagement. Moreover, there is a significant relationship between academic self-concept and student engagement. Also, there is a significant relationship between academic self-concept and school climate and a significant relationship between school climate and student engagement. Lastly, there is a significant partial mediation on the effect of school climate on the relationship between academic self-concept and student engagement.

The findings of the study support the notion about the mediating effect of school climate on the relationship between academic self-concept and student engagement. The findings support the anchor theory, the Self-Determination Theory by Deci and Ryan (1980) in which engagement places a huge emphasis on personal desire to learn. Further, the findings of the study support the Self-Perception Theory by Bem (1972), and the Social Cognitive Theory by Bandura (1986). The findings of the study support such theories as these explain why students are impacted by the school climate and that the school climate influences academic self-concept and student engagement. Since there is a partial mediation as a result of this study, the school climate of the students partially determines their academic self-concept and the engagement they experience daily.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Author(s)

Raymunda L. Apostol (EdD) is a university professor assigned at Baganga Offsite, Davao Oriental, Philippines, Public Schools Supervisor, Baganga North District, Sto Nino, Lambajon, Baganga, Davao Oriental, Philippines.

Lovelle Shayne P. Delos Santos is a Teacher 2 currently assigned at Sta. Filomena Elementary School, Purok Nangka, Sta. Filomena, Cateel, Davao Oriental, Philippines, and a candidate for Master of Arts in Education, Major in Educational Management, University of Mindanao, Davao City, Philippines.

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