



THE MEDIATING EFFECT OF SCHOOL CLIMATE ON THE RELATIONSHIP BETWEEN TEACHER COMMUNICATION BEHAVIOR AND STUDENT ENGAGEMENT

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Abstract:

The purpose of this study was to determine the mediating effect of school climate on the relationship between teacher communication behavior and student engagement. Utilizing quantitative, non-experimental design via correlational technique, data were obtained from 300 respondents of the study who are students who belong to the senior high school department, particularly Grade levels 11 and 12 of the three national high schools under the division of Davao Del Sur in the province of Davao Del Sur. The researcher utilized a stratified random sampling technique and an online survey mode of data collection. The researcher also utilized the statistical tools mean, Pearson r, and Medgraph using Sobel z-test. From the results of the study, it was found that there is a high level of mean score for teacher communication behaviour and very high levels of mean scores for school climate and student engagement. Also, results revealed that there is a significant relationship between teacher communication behaviour and student engagement, a significant relationship between teacher communication behaviour and school climate and a significant relationship between school climate and student engagement. Further, it was revealed that there was full mediation on the effect of school climate on the relationship between teacher communication behaviour and student engagement. This implies that the teacher's communication behaviour conveys the school climate.

Keywords: education, school climate, teacher communication behaviour, student engagement, mediating effect, students, Philippines

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1. Introduction

Poor levels of student engagement pose challenges to institutions, teachers and students (Serembus, & Riccio, 2019; Stott, 2016; Yang, Lavonen, & Niemi, 2018). Evidences showed the shortcoming trend in student engagement and academic performance of the students. Many teachers, parents and experts expressed their concern about the poor engagement and performance in school (Abubakar, Abubakar, & Itse, 2017). Besides, the attention of scholars had also drifted from disengaged students to engage students by realigning the course contents to the needed knowledge in society. Hence, over the years, there have been significant efforts to untangle the complex relationship between factors that might enhance students' engagement and the actual engagement that translates to desired results (Kezar & Rhoads, 2001; Khun-Inkeeree, Pimjan, & Adelaja, 2021; Parsons & Taylor, 2011).

Examining the construct of students' engagement has been one of the fundamental works in achieving quality assurance, desired learning outcomes and academic performance (Abubakar et al., 2017; Capri, Gunduz & Akbay, 2017; Carmona-Halty, Schaufeli, & Salanova, 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).

Given the importance of student engagement, the researcher reviewed literatures which presented the factors which influence student engagement which include teacher communication behavior and school climate. As teachers learn these communication behaviors, they can be able to maximize student engagement in learning (Waldeck, 2021). Moreover, a substantial body of research has found that students are more engaged in school and attain higher academic achievement in schools with a positive school climate (Konold, Cornell, Jia, & Malone, 2018; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Several studies have suggested that a positive school climate fosters greater student engagement in school, while other studies have found that engagement leads to greater learning and academic success (Archambault, Janosz, Fallu, & Pagani, 2009; Lawson & Masyn, 2015; Murray, 2009; Wang & Eccles, 2013).

Furthermore, the researcher has not come across a study that dealt with the mediating effect of school climate on the relationship between teacher communication behavior and student engagement in the local setting. Although there are already existing literatures on the association between and among school climate, teacher communication behavior and student engagement, those studies dealt only with bivariate relationships and did not cover the interrelationships between and among the three variables in a single study. This study dealt with the three variables with one variable as the mediating construct, making this study a contribution to new knowledge. Further, this study can raise concern for the intended beneficiaries of this study and possibly develop action plans to augment the school climate, teacher communication behavior and student engagement, thus, the need to conduct this study.

2. Literature Review

2.1 Teacher Communication Behavior

Good communication behaviors of teachers are the basic need for the academic success of students, and professional success in life. Teacher communicates more instructions orally in the classroom to students. Teachers with poor communication skills may cause the failure of students to learn and promote their academics. Students need to understand what is right, and what is wrong and it totally depends upon the communication skills of the teachers they adopt in the classroom. Communication between teachers can be described by the way teachers deliver lessons to the students through the media, and gestures that cause certain effects. The learning process is a form of communication between teachers and students. There is a formation in the communication, knowledge, skills or attitudes and assessment of teachers to students in accordance with the objectives that have been expected. In teaching-learning process besides using verbal communication, the teacher sometimes uses nonverbal communication to teach in order to communicate with the students (Arima, Irwandi, & Ali, 2021; Sutiyatno, 2018).

The first indicator of teacher communication behaviors is challenging. Challenging refers to the extent to which the teacher uses higher-order questions to challenge students in their learning. Teacher questioning plays an important role in instruction. Teachers pose questions frequently, often for reasons such as to stimulate interest or curiosity, to generate students' knowledge claims, and to check students' knowledge comprehension. It is also widely established that instructional questions promote students' cognitive processes at different levels and complexity (Calik & Aksu, 2018; Dillon, 1984; Ong et al., 2016; Ramadhan et al., 2019; She & Fisher, 2000). Further, throughout history, questioning is at the centre of the teaching and learning process for teachers. Effective questioning, in fact, contributes to the development of curiosity, creativity and reflective thinking skills of students. Students' engagement toward the task might also be kept high with the help of teachers' questioning (Calik & Aksu, 2018).

The second indicator is encouragement and praise which refers to the extent to which the teacher praises and encourages students (She & Fisher, 2000). Praise has several effects. The first effect is a cognitive response to praise. A praising comment refers to something about the praisee and therefore, will direct attention to the praisee. The second effect is an emotional outcome resulting from praise. The obvious outcome is likely to be a feeling of positive affect, such as pleasure, pride, or joy. Praise conveys that one has surpassed some noteworthy evaluative standards. Positive affect may also result from enjoying pleasant interpersonal contact. The third effect is motivational. As previously mentioned, if praise brings about a positive effect for the praisee, people will pursue things for which they are praised. All forms of teacher praise, however, are not necessarily reinforcing the behaviors of all students and in all situations (Markelz & Taylor, 2016). Also, the teacher's role in encouraging support of students' autonomy, relevance, and relatedness of the material increases motivation to learn. Additionally, the teacher's ability to develop students' competence, interest in the subject taught and

perception of self-efficacy are all important factors that influence students' motivation to learn (Johnson, 2017; Singh & Singh, 2021).

The third indicator is non-verbal support which refers to the extent to which the teacher uses non-verbal communication to interact positively with students (She & Fisher, 2000). For example, a teacher looks confident while delivering the lecture in class enhances the quality of teaching. Non-verbal message regulates the conversational flow as well. For example, gestures, head movements and many other behaviors indicate how the interaction should progress (Sutiyatno, 2018). The teachers' attention to the students' non-verbal reactions and arranging the syllabus considering the students' mood and readiness have been emphasized in the studies reviewed (Bambaeroo & Shokrpour, 2017).

The fourth indicator is understanding and friendly which refers to the extent to which the teacher is understanding and friendly towards the students (She & Fisher, 2000). Positive teacher-student relationships lead to increased cooperation and engagement in the classroom. They also contribute to a welcoming, inclusive school climate that promotes equity, social and emotional learning and improved student outcomes (Nishioka, 2019). Additionally, several aspects have an essential role in optimizing learning in special circumstances namely: managing and developing infrastructure in order to avoid interruptions; being understanding and using friendly tools and methods that help students understand information; providing reliable, interactive and diverse resources; providing services that help students and teachers learn about the latest policies adopted by universities and the government, and encouraging collaboration between institutions (Coman et al., 2020). The last indicator is controlling which refers to the extent to which the teacher controls and manages student behavior in the classroom (She & Fisher, 2000). In general, classroom management can be defined as a teacher supervising student activities in the classroom, such as the learning process, social interactions, and student behaviour. The teacher's classroom management approach can be classified into three categories: interventionist, non-interventionist, or interactionalist. This approach shows the role level of the role of high teacher control to low teacher control. Meanwhile, poor teacher control represents a non-interventionist classroom management model (Handrianto et al., 2021; Musta'in & Handrianto, 2020). Also, good classroom management means that teachers provide an opportunity for students the implementation of project-based assignments. Students work to find the project's assignment's meaning, making the project work meaningful to their own experience and real life. They will integrate the assignment's components or aspects into a complete one and relate findings with past knowledge (Handrianto & Rahman, 2018).

2.2 Student Engagement

Student engagement has been defined as students' willingness, need, desire, and compulsion to participate in and be successful in the learning process. Looking beyond cognitive skills learned or mastered, engagement focuses on individuals' dispositions or attitudes about classroom experiences and life-long learning.

The first indicator of student engagement is affective-liking for learning. This type of engagement connotes emotional reactions linked to learning-task investment. The greater the student's learning interest level, positive affect, positive attitude, the positive value held, curiosity, and task absorption (and the less the anxiety, sadness, stress, and boredom), the greater the affective learning engagement (Boykin & Pedro Noguera, 2021; Ladd & Dinella, 2009; Ladd, Ettekal, & Kochenderfer-Ladd, 2017).

The second indicator is affective - liking for school. Research indicated that affective aspects of development provide a basis for autonomous learning. Some researchers argued that previous definitions of emotional engagement may actually be referring to relational engagement. Specifically, students' reports of perceived teacher support, perceived press for understanding such as students' perception that the teacher wants them to learn and understand, and their sense of school belonging as proxies for understanding the extent to which students were relationally engaged in school (Davis, Chang, Andrzejewski, & Poirier 2010; Sciarra & Seirup, 2008; Skinner & Belmont, 2013; Talbert, 2017). Also, emotional engagement of students refers to when they suggest engaging students in learning requires positive emotional experiences, which contribute to a classroom climate that forms the foundation for teacher-student relationships and interactions necessary for motivation to learn (Dunleavy, 2008; Friesen, Milton, & Willms, 2009; Jones & Thomas, 2017).

The third indicator is behavioral - effort and persistence. Persistence or perseverance is conceptualized as a strategy and part of self-efficacy to continue in attaining goal-oriented behavior despite academic obstacles and negative academic experiences. In relation to self-efficacy, 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. And those students with high self-efficacy increase the monitoring of their performances which leads to greater persistence of their positive academic behaviors (Bouffard, Bouchard, Goulet, Denoncourt, & Couture, 2005; Dullas, 2018; Schunk & Pajares, 2002). The effort is the amount of energy expended in a learning process. Persistence refers to continuous effort in learning especially when the student is faced with some barriers or obstacles. Persistence and efforts not only reflect motivation but serve as important indices for adaptive behavior (Mih et al., 2015).

The fourth indicator is the behavioral - extracurricular activities. The students who actively participate in extracurricular activities get a lot of benefits including higher grades, and test scores, higher educational achievements, more regularity in class attendance and higher self-confidence. While out-of-school activities increase leadership and teamwork abilities in students. These activities also decrease the use of drugs, and alcohol and behavioral and disciplinary problems related to their use (Saqib et al., 2018). Students who participate in structured activities are more likely to respect diversity, play by the rules and contribute as a member of a team whether it is sports, scouting or clubs (Ahmad et al., 2015).

The last indicator is cognitive. Cognitive engagement is a matter of students' will—that is, how students feel about themselves and their work, their skills, and the strategies

they employ to master their work. In this sense, cognitive engagement refers to the quality of students' engagement whereas sheer effort refers to the quantity of their engagement in the class (Bircan & Sungur, 2016; Davis et al., 2010; Metallidou & Viachou, 2007).

2.3 School Climate

Schools are the prime element in our education system. For personnel working in a school, adapting to the schools' purpose, accepting the values, beliefs, and norms and behaving appropriately are within the scope of organizational climate. There are many factors that affect organizational climate. But the prime factor in organizational climate is people and interaction between groups. The interaction of school with its environment, the balance between the purpose of the school and the individual's purpose the degree of the success of the realization of the school's purpose, the manager at school and other professional people's personal traits, are the primary effects on the organizational climate (Aydin, 2013; Bursahoglu, 2013; Topcu, 2008).

A positive climate is an important concept that will facilitate the success and welfare level we desire to see in schools. There are important responsibilities for school members in building an environment that they want to be a part of, and where mutual sincerity, trust and respect exist (Ozden, 2014; Taymaz, 2013). On the other hand, a negative climate can affect the perception of safety within the school and reinforce problematic behaviors such as bullying. In contrast, students that experience a positive school climate report fewer experiences of physical, emotional or cyberbullying (Varela et al., 2019) 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, it has been found that knowledge of school rules and recognition by students that adults can intervene in school violence is associated with fewer reports of bullying.

Several studies have found an association between school climate and student mental health (Aldridge & McChesney, 2018; Reaves et al., 2018). A systematic literature review found that positive relationships with teachers and peers that involved respect, connection, support, positive attitudes towards diversity, and the absence of intimidation or victimization are associated with increased adolescent psycho-social well-being and preventive behaviors, as well as lower prevalence of mental health problems and risk behaviors (Aldridge & McChesney, 2018). Along the same lines, a meta-analysis by Reaves et al. (2018) focused on longitudinal studies exploring the relationship between school climate and behavior, and found that follow-ups of between 6 months and 2 years revealed relationships between school climate and problematic behaviors, especially between characteristics of the institutional environment, interpersonal relationships within the school and the presence of behavioral problem.

Research suggested that the answer lies in a single set of communication behaviors of teachers known as immediacy skills. These verbal and nonverbal messages, when practiced authentically by teachers, encourage students to engage in learning. As teachers

learn these communication behaviors, they can be able to maximize student engagement in learning (Waldeck, 2021).

Also, positive teacher communication can be explained in light of positive psychology which has attracted much attention during the two last decades, encompassing three main pillars: (1) positive experiences, (2) positive individual traits, and (3) positive institutions. It is assumed that when productive interactions exist between students and instructors, and a friendly and desirable classroom climate is present, students are more likely to experience positive emotions which are at the heart of successful teaching and learning (Seligman et.al, 2009). Positive psychologists have endeavored to uncover how individuals can prosper in more positive and favorable conditions. Consequently, it can be stated that positive psychology has brought about a major shift in the focus of psychology, from the obsession with only negative and undesirable events and behaviors in life toward more positive qualities (Seligman, 2009).

Moreover, a substantial body of research has found that students are more engaged in school and attain higher academic achievement in schools with a positive school climate (Konold, Cornell, Jia, & Malone, 2018; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Several studies have suggested that a positive school climate fosters greater student engagement in school, while other studies have found that engagement leads to greater learning and academic success (Archambault, Janosz, Fallu, & Pagani, 2009; Lawson & Masyn, 2015; Murray, 2009; Wang & Eccles, 2013). Additionally, the school atmosphere is a strong predictor of student involvement. According to the findings of Konold et al. (2018), a pleasant school atmosphere can promote student involvement in school and, as a result, have a direct impact on student academic attainment.

This study is anchored on the Social cognitive theory has been a particularly popular theoretical explanation for the climate-achievement link as it relates to students and staff (Bandura, 1993, 1997). Authors have suggested that students need collective efficacy to activate the influence of the school climate, in particular for the aspect of the academic press, on their achievement. This approach has also been applied in explaining the impact of staff perspectives on student achievement (Goddard et al., 2000a). For example, Caprara et al. (2006) found that teachers' self-efficacy beliefs were significantly related to students' academic achievement. Goddard et al. (2000a) additionally found that collective teacher efficacy significantly predicted students' reading and mathematics performance.

3. Material and Methods

The quantitative, non-experimental design of research using the correlational technique was used in this study. The correlational technique is a non-experimental design, where the researcher examines the relationship between two or more variables in a natural setting without manipulation or control. In correlational studies, the researchers

examined the strength of associations between variables by looking how the change in one variable was correlated with the change in the other variable (Cresswell, 2007).

Moreover, a mediation model was used in this study. The mediation model is one that seeks to identify and explicate the mechanism or process that underlies an observed relationship between an independent variable (teacher communication behavior) and a dependent variable (student engagement) via the inclusion of a third explanatory variable, known as a mediator variable (school climate). 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).

The respondents of the study were the 300 senior high school students, specifically belonging to the Grade Levels 11 and 12, in 3 different districts of public secondary schools in Magsaysay, Bansalan and Matan-ao (MABAMA), Davao del Sur. A stratified random sampling method will be used in determining the respondents of the study. Stratified random sampling is a method for sampling from a population whereby the population is divided into subgroups and units are randomly selected from the subgroups. Stratification of target populations is extremely common in survey sampling. Following stratification, a sample is selected from each stratum, often through simple random sampling (Frey, 2018).

Moreover, in the selection of the respondents of the study, inclusion criteria were considered. The student-respondents must be bonafide senior high school students (Grade levels 11 and Grade 12) of the 3 different districts of public secondary schools in Matanao, Bansalan and Magsaysay (MABAMA), Davao del Sur, who are officially enrolled in SY 2021-2022 were included as samples as they were the only one who fit the criteria that can answer the questions in the survey questionnaire of the study. Other students who are not enrolled in grade levels 11 and 12 and who do not belong to the identified areas or are enrolled in private schools were deemed excluded from the study. Lastly, elementary students from grade levels 7, 8, 9, and 10 were also excluded from the study.

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 anytime their participation in the research process if they felt uncomfortable about the study since they were given the free will to participate without any form of consequence or penalty.

The data was gathered through the procedures mentioned as follows. First, before the conduct of the study, the researcher sent a letter asking for permission from the Schools Division Superintendent of the Department of Education Division of Davao del Sur. Then, the researcher sent letters asking for permission from the School Heads of the participants. Once approved, the survey questionnaires were administered to the

respondents of the 3 public secondary under MABAMA, Province of Davao del Sur. As soon as the request was approved and strictly observing the safety protocols in this pandemic time as per mandate by the Inter-Agency Task Force for the Emerging Infectious Disease (COVID-19) such as physical/social distancing and wearing of facemasks, the researcher immediately visited the concerned school heads of the 3 schools, as part of the courtesy call and discussed the plan on the conduct of online survey thru google docs to all concerned respondents.

During the courtesy call, a list and contact numbers/email addresses of all respondents/students were requested from the offices of the concerned school heads/principals. The list served as the basis for the researcher for the data gathering which activity took around 3 weeks from the sending of the survey questionnaire to all the respondents in google forms up to the retrieval of the accomplished survey questionnaires. Also, before the actual data collection, the researcher secured the Certificate of Compliance from UMERC to ensure compliance with some ethical considerations in research.

All retrieved questionnaires were encoded in the excel template after verification and checking as to the completeness of the answers. After all the tallying and validating of results, the data was analysed and interpreted in line with the objectives of the study. Based on the findings of the study, conclusions and recommendations were formulated.

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 teacher communication behavior, 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 teacher communication behavior, student engagement and school climate. Path Analysis. This was used to determine the significance of the mediation of school climate on the relationship between teacher communication behavior and student engagement.

4. Results and Discussion

Table 1: Level of Teacher Communication Behavior

Indicators	Mean	SD	Descriptive Level
Challenging	4.12	0.588	High
Encouragement and praise	4.01	0.621	High
Non-verbal support	3.92	0.695	High
Understanding and friendly	4.23	0.640	Very High
Controlling	3.95	0.638	High
Overall	4.05	0.519	High

The level of teacher communication behavior is high, resulting from the high levels responses. The indicator understanding and friendly has a very high rating. Further, the indicators challenging, encouragement and praise, controlling, and non-verbal support have high ratings. These indicators are arranged from highest to the lowest level. The

very high-level rating of understanding and friendly is suggestive of the very high extent to which the teacher is understanding and friendly towards the students. This claim is in line with various authors (Coman et al., 2020; Nishioka, 2019) wherein positive teacher-student relationships lead to increased cooperation and engagement in the classroom. Also, an aspect that has an essential role in optimizing learning in special circumstances is understanding and using friendly tools and methods that help students understand information.

The high level of challenging suggests that the teacher greatly uses higher-order questions to challenge students in their learning. This is also in line with various authors (Calik & Aksu, 2018; Ong et al., 2016; Ramadhan et al., 2019) stating that teachers pose questions frequently, often for reasons such as to stimulate interest or curiosity, to generate students' knowledge claims, and to check students' knowledge comprehension. Effective questioning also contributes to the development of curiosity, creativity and reflective thinking skills of students. Moreover, the high level of encouragement and praise is indicative of the high extent to which the teacher praises and encourages students. This claim concurs with various authors (Johnson, 2017; Markelz & Taylor, 2016; Singh & Singh, 2021) who mentioned that if praise brings about positive affect for the praisee, people will pursue things for which they are praised. The teacher's role in encouraging support of students' autonomy, relevance, and relatedness of the material increases motivation to learn.

In addition, the high level of controlling is suggestive of the high extent to which the teacher controls and manages student behavior in the classroom. This claim is in line with various authors (Handrianto & Rahman, 2018; Musta'in & Handrianto, 2020) wherein good classroom management means that teachers provide an opportunity for students the implementation of project-based assignments. This also includes the teacher supervising student activities in the classroom, such as the learning process, social interactions, and student behavior. Further, the high level of non-verbal support suggests the high extent to which the teacher uses non-verbal communication to interact positively with students. This is in line with various authors (Bambaeeroo & Shokrpour, 2017; Sutiayatno, 2018) who stated that non-verbal communication gives a significant positive effect on students' achievements. The more the teachers used verbal and non-verbal communication, the more efficacious their education and the students' academic progress were.

Table 2: Level of Student Engagement

Indicators	Mean	SD	Descriptive Level
Affective - liking for learning	4.28	0.601	Very High
Affective - liking for school	4.38	0.609	Very High
Behavioral - effort and persistence	4.25	0.584	Very High
Behavioral - extracurricular activities	4.05	0.657	High
Cognitive	4.17	0.580	High
Overall	4.22	0.509	Very High

The very high level of student engagement resulted from the very high and high levels responses. The indicators affective - liking for school, affective - liking for learning, behavioral - effort and persistence, cognitive, and behavioral - extracurricular activities were arranged from highest to lowest. The very high level of affective - liking for school is indicative of the high extent to which students feel a sense of belonging and the degree to which they care about their school. This claim is in line with various authors (Jones & Thomas, 2017; Skinner & Belmont, 2013; Talbert, 2017) wherein the interactions between students and their peers and between staff and students have very important contributions to the student experience, and thereby to retention and success. Students' reports of perceived teacher support, perceived press for understanding such as students' perception that the teacher wants them to learn and understand, and their sense of school belonging are proxies for understanding the extent to which students are relationally engaged in school.

The very high level of affective-liking for learning is suggestive of the very high emotional reactions linked to learning-task investment. This claim is in line with various authors (Boykin & Pedro Noguera, 2021; Ladd et al., 2017) stating that the greater the student's learning interest level, positive affect, positive attitude, the positive value held, curiosity, and task absorption (and the less the anxiety, sadness, stress, and boredom), the greater the affective learning engagement. Furthermore, the very high level of behavioral - effort and persistence is indicative of the very high self-efficacy to continue attaining goal-oriented behavior despite academic obstacles and negative academic experiences. This is in line with various authors (Dullas, 2018; Mih et al., 2015) stating that students with high self-efficacy increase the monitoring of their performances which leads to greater persistence of their positive academic behaviors. Persistence and efforts not only reflect motivation but serve as important indices for adaptive behavior.

Additionally, the high level of cognitive signifies that students highly feel positive about themselves and their work, their skills, and the strategies they employ to master their work. This claim concurs with various authors (Bircan & Sungur, 2016; Dunleavy et al., 2017) who mentioned that students would seek to go beyond the requirements and would relish challenges. In this sense, cognitive engagement refers to the quality of students' engagement whereas sheer effort refers to the quantity of their engagement in the class. Lastly, the high level of behavioral - extracurricular activities is indicative of the high participation of students in extracurricular activities. This is aligned with the statements by various authors (Ahmad et al., 2015; Saqib et al., 2018) wherein out-of-school activities increase leadership and teamwork abilities in students, and decrease the use of drugs, alcohol and behavioral and disciplinary problems related to their use. Students who participate in structured activities are more likely to respect diversity, play by the rules and contribute as a member of a team whether it is sports, scouting or clubs.

Table 3: Level of School Climate

Indicators	Mean	SD	Descriptive Level
The teachers care about their students	4.46	0.673	Very High
I like my teachers	4.44	0.632	Very High
Adults who work care about the students	4.33	0.695	Very High
Teachers listen to the students when they have a problem	4.39	0.688	Very High
Teachers let the students know when they are doing a good job	4.35	0.704	Very High
Adults treat students fairly	4.21	0.756	Very High
Students get along with one another	4.27	0.690	Very High
Students are friendly toward other students	4.32	0.688	Very High
Students really care about each other	4.28	0.739	Very High
Students treat each other with respect	4.30	0.728	Very High
I decide to stay rather than go to another school	4.31	0.763	Very High
I feel good	4.41	0.677	Very High
I am proud that it is my school	4.47	0.654	Very High
I feel like I am at home	4.32	0.728	Very High
The rules are fair	4.29	0.734	Very High
The consequences for breaking school rules are fair	4.32	0.664	Very High
Teachers are fair when correcting the misbehavior of students	4.30	0.736	Very High
Overall	4.34	0.557	Very High

The very high level of school climate reveals the very high adaptation to the schools' purpose, acceptance of values, beliefs, and norms and practice of appropriate behavior. This claim is in line with various authors (Varela et al., 2019) stating that students that 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.

Moreover, the results of the study are also in line with various authors (Aldridge & McChesney, 2018; Reaves et al., 2018) who mentioned that positive relationships with teachers and peers that involved respect, connection, support, positive attitudes towards diversity, and the absence of intimidation or victimization are associated with increased adolescent psychosocial well-being and preventive behaviors, as well as a lower prevalence of mental health problems and risk behaviors. Follow-ups of between 6 months and 2 years revealed relationships between school climate and problematic behaviors, especially between characteristics of the institutional environment, interpersonal relationships within the school, and the presence of behavioral problems.

Table 4.1: Significance on the Relationship between
 Teacher Communication Behavior and Student Engagement

Teacher Communication Behavior	Student Engagement					
	AFLL	AFLS	BEP	BEA	COG	Overall
CHAL	.684** <.001	.559** <.001	.605** <.001	.541** <.001	.651** <.001	.722** <.001
ENPR	.605** <.001	.489** <.001	.532** <.001	.577** <.001	.565** <.001	.660** <.001
NVS	.507** <.001	.423* <.001	.494** <.001	.575** <.001	.531** <.001	.604** <.001
UF	.636** <.001	.624** <.001	.585** <.001	.476** <.001	.597** <.001	.693** <.001
CONT	.516** <.001	.447** <.001	.469** <.001	.531** <.001	.543** <.001	.597** <.001
Overall	.719** <.001	.621** <.001	.656** <.001	.662** <.001	.705** <.001	.800** <.001

The correlation between the measures of teacher communication behavior and student engagement revealed a significant relationship. This implies that teacher communication behavior is significantly correlated with student engagement. The findings of this study are in line with the studies of various authors (Waldeck, 2021) stating that teacher communication behavior is a relevant variable as verbal and nonverbal messages, when practiced authentically by teachers, encourage students to be engaged in learning. As teachers learn these communication behaviors, they can maximize student engagement in learning. Also, teacher care, stroke, immediacy, credibility, immediacy, clarity, confirmation, relational closeness to students, humor, and praise are all instances of teacher-positive communication behaviors. These behaviors fulfill students' relational, rhetorical, and emotional needs and wants.

Table 4.2: Significance on the Relationship between
 Teacher Communication Behavior and School Climate

Teacher Communication Behavior	School Climate
Challenging	.587** <.001
Encouragement and Praise	.524** <.001
Non-Verbal Support	.488** <.001
Understanding and Friendly	.664** <.001
Controlling	.434** <.001
Overall	.659** <.001

The correlation between measures revealed that there is a significant relationship between teacher communication behavior and school climate. This implies that teacher communication behavior is positively correlated with school climate. The result of the study confirms various authors (Goldman et al., 2017; Seligman, 2009) who mentioned that when productive interactions exist between students and instructors, and a friendly and desirable classroom climate is present, students are more likely to experience positive emotions which are at the heart of successful teaching and learning. All these promote effective teacher–student communication, result in classroom vitality, and satisfy learners’ needs for emotional and interpersonal support.

4.1 Student Engagement

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

	AFL	AFLS	BEP	BEA	COG	Overall
School Climate	.729** <.001	.754** <.001	.678** <.001	.510** <.001	.597** <.001	.776** <.001

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 (Konold et al., 2018; Lawson & Masyn, 2015; Thapa et al., 2013; Wang & Eccles, 2013) wherein students are more engaged in school and attain higher academic achievement in schools with a positive school climate. The school atmosphere is a strong predictor of student involvement and a pleasant school atmosphere can promote student involvement in school and thus, as a result, have a direct impact on student academic attainment. Lastly, a positive school climate fosters greater student engagement in school, and engagement leads to greater learning and academic success.

Table 5: Regression Results of the Variables in the Criteria of the Presence of Mediating Effect

95% Confidence Interval								
Effect	Label	Estimate	SE	Lower	Upper	Z	p	% Mediation
Indirect	a × b	0.283	0.0303	0.224	0.343	9.37	<.001	36.1
Direct	c	0.501	0.0367	0.429	0.573	13.65	<.001	63.9
Total	c + a × b	0.784	0.0331	0.720	0.849	23.73	<.001	100.0

The aim of this study is to contribute to the literature regarding the possible mediating variable for the relationship between teacher communication behavior and student engagement. Specifically, school climate was investigated as a possible mediating variable that could explain the effect of teacher communication behavior on student engagement. Full mediation is found in the study, and important and significant direct effects were presented that may help in the enhancement of the existing research on teacher communication behavior and student engagement. Significantly, the present study on the relationship between teacher communication behavior and student

engagement has found relevance to the study of Bandura (1993) wherein students need collective efficacy to activate the influence of the school climate, in particular for the aspect of academic press, on their achievement. Teachers' self-efficacy beliefs were significantly related to students' academic achievement. Specifically, the current study has found that school climate is a positive and significant full mediator of teacher communication behavior and student engagement.

The mediation analysis involved the path between teacher communication behavior and school climate, and the path between school climate and student engagement. The findings confirmed the significant relationship between teacher communication behavior and student engagement leading to support for one of the authors of this study Waldeck (2021) who declared that teacher communication behavior is the first variable considered to be relevant. The single set of communication behaviors of teachers known as immediacy skills, when practiced authentically by teachers, encourage students to be engaged in learning. As teachers learn these communication behaviors, they can be able to maximize student engagement in learning. Thus, teacher communication behavior conveys a good school climate and student engagement.

5. Recommendations

The researcher came up with recommendations based on the results of the study. On the high level of teacher communication behavior, the researcher recommends that the teachers may conduct a monthly classroom meeting, as a brainstorming session, where students are given the opportunity to open up their suggestions for the things that need to be addressed or improved may it be about the class activities, teacher concerned or students' interest. There is an open discussion about everybody's concerned in the class. This does not include the personal problems of students which can be addressed by the teachers in a dialogue or one on one meeting. For the school management, the researcher may recommend for a conduct of regular meetings among the teachers to thresh out some difficulties which the teacher may encounter in the classroom with their students or even about their class activities. There may be opportunities for teachers to attend seminars about stress management, anger management and some counseling fora or symposia to address some issues of teachers whose teaching behavior and attitudes in the conduct of classes and activities may affect the students negatively. This is in addition to the attendance and participation in some psychosocial activities like first aid skills development, mental health wellness awareness and other important life skills.

On the very high level of student engagement, the researcher may recommend maintaining whatever class or school activities that are already installed. 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 competition may start from inter-classes and can move on to inter-school competition by way of a cultural presentation or quiz bee competition. The most important thing is that students can identify themselves with the school that

they are enrolled in and that they will manifest their best interest to support whatever endeavors the teachers or the school are planning and implementing. Further, it is also recommended that teachers may always show their passion for teaching by continually making innovations in their teaching strategies in order for all students to be engaged in the class or schools' activities. The establishment of legitimate clubs or organizations in class or in school which need 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 such other clubs which may interest the students. In this case, the full support of the school management may be required such as the provision of some paraphernalia's for the use of the club.

For the very 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 the 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, it is hereby recommended that the involvement of parents is necessary for 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.

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, orderliness in the classrooms and the school premises. Installation of important signage's in conspicuous places to guide or inform all concerned of the school policies on the safe, clean and secure environment.

On the result of the full mediation effect of teacher communication on the relationship between school climate 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 on the findings of the study, conclusions are drawn in this section. There is a high level of teacher communication behavior and very high levels of school climate and student engagement. Also, there is a significant relationship between teacher communication behavior and student engagement, a significant relationship between teacher communication behavior and school climate and a significant relationship between school climate and student engagement. There is a full mediation on the effect of school climate on the relationship between teacher communication behavior and student engagement. The findings of the study clearly confirm the notion about the mediating effect of school climate on the relationship between teacher communication behavior and student engagement. The findings are supported by the anchor theory, the Social Cognitive Theory by Bandura (1993) which explains the climate-achievement link as it relates to students and staff.

Acknowledgements

The researcher would like to extend her deepest sincerest gratitude to all the people who helped there in any manner, who have shared the effort and knowledge in order to make this research a reality.

To her thesis adviser, Lyndon A. Quines, EdD and the panel of examiners: Jocelyn B. Bacasmot, EdD, Mary Ann E. Tarusan, PhD, Rinante L. Genuba, EdD and Elleine Rose A. Oliva, EdD for their kind assistance, willingness and passion in helping the researcher in the completion of her study- The Mediating Effect School Climate on the relationship between Teacher Communication Behavior and Student Engagement, their efforts are much appreciated.

To the officers of the Department of Education, Division of Davao del Sur, to all the respondents, the senior high school students (Grade levels 11 and 12) or the districts of Magsaysay, Bansalan and Matan-ao, division of Davao del Sur who have given their wholehearted support in this study;

To her loved ones: husband Dario, unico hiyo Clint Briainne and my family as a whole, for their continuous support, understanding, untiring support and never-ending love and care.

Finally, to our GOD ALMIGHTY, for everything that HE has done for us. To Him be the Glory and honor forever.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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