School Culture Elements and Intellectual Stimulaton as Predictors of Student Engagement in School

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ABSTRACT

The main purpose of this study was to determine the significant influence of school culture elements and intellectual stimulation on student engagement among senior high school students. The study employed the quantitative design using correlational technique. The respondents were the 300 public senior high school students selected through stratified random sampling. Mean, Pearson-r, and Regression Analysis were used in determining the findings of the study. Moreover, adapted survey questionnaires were used for school culture, intellectual stimulation and student engagement. Results revealed that the level of school culture is very high; the level of intellectual stimulation is high, the level of student engagement is very high; there is a significant relationship between school culture and student engagement; there is a significant relationship between intellectual stimulation and student engagement. Further, regression analysis revealed that school culture significantly influences student engagement, intellectual stimulation significantly influence student engagement, and in the combined domains of school culture and intellectual stimulation, interactive teaching style, challenging students, and encouraging independent thought significantly influence student engagement. In singular capacity, both the independent variables, school vulture and intellectual stimulation significantly influence student engagement as shown in its beta coefficient.

Key words: school culture, intellectual stimulation, student engagement, quantitative design, regression analysis, public senior high school in the Philippines.

SDG Indicator: # (Quality Education)

INTRODUCTION

Problems on student engagement is one of the primary concerns in education nowadays. Students who resist engagement were found to be academically unstable and more likely to drop-out of school (Bond, et. al, 2020). Also, students who are less engaged in both academic and non-academic activities in school developed a feeling of neglect. They do not feel accepted by their classmates or teachers. Gradually these students withdraw from school life and become disaffected from school. Some disaffected students are disruptive in class and exert a negative influence on other students (Wilms, 2020).

Meanwhile, students' engagement is very significant for it is considered as one of the most important determinants of successful learning (Ginting, 2021). Student who are engaged in learning were found to be more successful academically. They were found to be intrinsically motivated to invest in learning, attend classes, and participate in study activities (Wekullo, 2019). Also, students who are engaged in learning are more likely to devote time and effort to achieve their goals. As a result, engagement is viewed as a motivator in obtaining academic success or achievement (Tinto, 2019).

Relatively, the concept of student engagement is seen to incorporate the concepts of school culture and intellectual stimulation which provide a more holistic perspective and meaning about learning. As student

engagement is widely presumed to be malleable, it is relevant to both explore the predictors of student engagement and outline factors that can be stimulated to positively influence it (DeVito, 2019).

Meanwhile, the concept of school culture, which deals on the learning place and environment, has an impact on student engagement. In this context, the matter of how culture embodied in students' involvement in learning activities are given focus. The positive impact of active-learning pedagogies was clear enough in the authors' proposal rather than comparing the results of traditional lecturing and active learning, research should focus more on how and for whom active learning is most effective (Gray & DeLoreto, 2019).

Relatively, school personnel need to focus on the interactive system among school members, and the interactive system develops and cultivates the culture in order to improve instruction and learning. The role of instructional leaders is vital for the development and promotes effective school culture. It is the duty of school leaders to build effective school culture which encourage not only teachers' engagement to work but also students' engagement to learning. If this fails, leaders will lose their commitment to the school's community and power that is regarded as basis of headship. In the same way, schools will be losing the learning engagement of students (Perry, 2022).

Moreover, intellectual stimulation is also considered as significant factor of student engagement. The structural regression model of Shin and Bolkan (2021) revealed that intellectual stimulation had a direct effect on students' intrinsic motivation as well as an indirect effect through the mechanisms of volitional student engagement, self-efficacy for learning, and supportive peer relations. Results from the study indicate that intellectually stimulating behaviors are associated with educational outcomes such as engagement, peer relations, and self-efficacy, and thus promote students' optimal development by fostering intrinsic value and a sense of fulfilment associated with learning.

In addition, it was found out that intellectual stimulation improved intellectual growth. In the process of making growth, learners need to get engaged and be socially responsible. Intellectual stimulation means that challenging learners reconsider some of their ideas and take different viewpoints on issues facing their studies. It is also a teachers' behavior that encourages creativity and stimulate innovative ideas. Teachers exercising intellectual stimulation continue to encourage learners to think and act in new ways by challenging their beliefs and supporting new and innovative behavioral practices (Hahm,& Chen, 2020).

The conceptual framework of this study is composed of two independent variables and one dependent variable. The independent variables of this study are school culture and intellectual stimulation. On the other hand, the dependent variable is student engagement. Since the variables are not directly correlated, it follows that this cannot be measured directly. To this, each variable constructs will be associated with multiple measures or observed variables. Thus, the extent of regression paths from the independent variable to the observed variables (dependent) will be one of the primary concerns of this study.

The variable school culture has three (3) indicators namely: leadership, collegial teaching, and professional commitment (DeVaney, 2012). *Leadership* refers to how the school program is being handled by the school head and teachers. *Collegial Teaching* means how teachers share their experiences to others as basis for improvement and development. *Professional Commitment* refers to how teachers employ initiatives that will give merit to the development of the school as well as learners.

The latent intellectual stimulation has the following three (3) indicators Interactive Teaching Style, Challenging Students, and Encouraging Independent Thought (Bolkan & Goddboy, 2010). *Interactive Teaching Style* refers to how teachers imposed challenging, enjoyable and exciting learning activities. *Challenging Students* refers to the demanding but worthwhile activities that encourages learners to learn in new ways. *Encouraging Independent Thought,* refers to initiative that help learners think in an analytical way about the lesson.

The latent student engagement has five (5) indicators namely: Affective: Liking for Learning, Affective: Liking for School, Behavior: Effort &Resistance, Behavior: Extra-Curricular, and Cognitive (Hart, Stewart, Jimwerson, 2011). *Affective: Liking for Learning* means a student's feelings toward the acquisition of knowledge. Affective: Liking for School is the feeling of teachers toward school and teachers. *Behavior: Effort & Resistance* refers to the observable student actions, can it be positive or negative which give them the opportunity to engage.

Behavior: Extra-Curricular refers to participation of learners while at school and is investigated through a student's positive conduct, effort, and participation. *Cognitive* includes a student's perceptions and beliefs associated to school and learning.

Various research have shown the existence of correlations among school culture, intellectual stimulation, and student engagement. Some research demonstrates strong and consistent associations between school culture and student engagement and intellectual stimulation and student engagement. Such relationships are particularly strong for student engagement for it gave contribution in determining factors that will strengthen learning engagement that can improve learning achievement.

The study is being anchored on Tintos' (1993) Integration Theory which claimed that students were more likely to remain in school and persist if they are connected socially and academically within school. Students who integrated into the school by making friends, joining student clubs and/or organizations, or engaging in academic activities were more likely to persist than those students who did not have these types of meaningful connections. Students who did not feel at home in school believed that there was no place for them in school. As applied in this study, senior high school students are perceived to be more engaged in school when they are intellectually motivated by the teachers and by the school as whole. They find the complete atmosphere which is derived from the school culture a great factor in their engagement in school.

Meanwhile, this is being supported by Kearsley and Schneiderman (1999) Engagement Theory which posits three primary means to accomplish engagement: an emphasis on collaborative efforts, project-based assignments, and non-academic focus. It is suggested that these three methods result in learning that is creative, meaningful, and authentic. The study identified that in order for the learners to become engaged in any learning activities, effort within the school must be done to develop every learner's potential holistically, thus, the need to give focus both on academic and no-academic aspects of students growing.

Though there are existing studies correlating student engagement with other variables, those studies were done in the foreign settings. The researcher has not come across of similar studies in the Philippines, specifically in Tagum City. Importantly, these studies directly cover the main variables while this research covers the variables including its specific domains, making this study different from those studies in the foreign setting and other parts of the country. It is for this reason that the researcher is interested to determine whether school culture and intellectual stimulation has significant correlation with student engagement. The result of this study may help in determining which specific domain of school culture and intellectual stimulation may significantly influence student engagement and identify the best fit model for student engagement and use this data to help school heads and teachers maintain learners' interest in learning and for successful implementation of any educational endeavors.

Meanwhile, findings of the study are beneficial because it would strengthen the relationship between the school heads and teachers who are the prime movers in education, where the school administrators support the needs of teachers in performing their duties to maintain rapport and collaboration. This would motivate everyone to participate actively in the efforts of maintaining a positive school culture. Finally, the outcome of this study may serve as reference for deeper and wider research to explore variables not included in this study.

The purpose of this study is to find out which domain of student engagement significantly influence school culture and intellectual stimulation among senior high schools in the Division of Tagum City. Specifically, it seeks to answer the following objectives. Firstly, to assess the level of school culture in terms of leadership, collegial teaching, and professional commitment. Secondly, to determine the level of intellectual stimulation in terms of Interactive Teaching Style, Challenging Students, and Encouraging Independent Thought. Thirdly, to find out the level of Affective: Liking for Learning, Affective: Liking for School, Behavior: Effort & Resistance, Behavior: Extra-Curricular, and Cognitive. Furthermore, it tries to identify the significant relationships between school culture and student engagement and intellectual stimulation and student engagement. This will also determine the best fit model for student engagement.

METHOD

Research Respondents

This study was conducted in public secondary schools in Tagum City Division. This was considered as the venue of the study since the researcher would like to discover in a wider scope whether school culture elements and intellectual stimulation significantly influence student engagement among public senior high school students. The study included 300 public senior high school students who were selected using stratified random sampling. Department of Education-Tagum City currently is having 2,890 senior high school learners. The area covered in this study was the whole School Division of Tagum City. Particularly, the number of senior high school learners selected were as follows: Tagum National Trade School, 90 students; Tagum City National High School, 105 students; and Tagum City National Comprehensive High School, 105 students. Meanwhile, this study gave focus on the school culture elements, intellectual stimulation and student engagement which would be based on students' direct experience they encounter in school. Thus, excluded in this study were teachers, parents, school heads and DepEd Officials perceptions for they could not give the data needed in this study.

The respondents might withdraw from the research study if he/she committed falsification, plagiarism and other moral offenses or the respondents had health conditions and special needs. Participants could withdraw from the research study at time if they felt troubled or discomforted. If so, the participants should let the researcher know that he/she wished to withdraw. A participant might provide the researcher with the reason(s) for leaving the study but was not required to provide their reasons.

Several research and studies used 300 respondents as the minimum number of samples of the study (Turner, 2020). On the contrary, some scholars argued that sample size does not much depend on the population size, which is counter-intuitive to many researchers (Sergiovane, 2019). Hence, 300 number of respondents were considered to answer the survey questionnaire.

The study aimed to assess the student engagement among public senior high school students, thus in determining respondents of the study, the researcher utilized stratified random sampling which determined the number of schools. To determine the 300 respondents who were appropriate for Structural Equation Model, the rule of the thumb was followed (Bujang, 2021) in which the researcher liked to work using the correct sample per strata in quota sampling.

The respondents of the study were public senior high schools within Tagum City. They were the ones fit for the study to provide useful information to test the hypothesis of this study. Excluded were the teachers, parents, school heads and DepEd Officials, hence, this study focused on students' engagement. The study included 300 public senior high school students who were selected using stratified sampling from Division of Tagum City. Public senior high school students evaluated the school culture elements, intellectual stimulation and student engagement. Respondents' inclusion was as follows: public senior high school students in Tagum City Division and were willing to become part of the study. They were the ones fit respondents for the study for they could provide useful information to test the hypothesis of this study.

Materials and Instruments

This study adapted downloaded questionnaires from web sources. The questionnaire was modified to include only the items relevant to the study. The draft was first shown to the researcher's adviser for comments and suggestions, after which experts were requested to validate the said questionnaire. After validation of the experts, the reliability of the questionnaire was tested through pilot testing. It was articulated by Taber (2020) Cronbach's alpha reliability coefficient normally ranges between 0 and 1. However, there was actually no lower limit to the coefficient. The closer Cronbach alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. On the other hand, Daidi and Siew (2019) provided the following rules of thumb: Cronbach's Alpha > .9 – Excellent; Cronbach's Alpha > .8 – Good; Cronbach's Alpha > .7 – Acceptable; Cronbach's Alpha > .6 – Questionable; Cronbach's Alpha > .5 – Poor; and Cronbach's Alpha < .5 – Unacceptable. While increasing the value of alpha is partially dependent upon the number of items in the scale, it should be noted that this has diminishing returns. It should also be noted that an alpha of .8 is probably a reasonable goal. When using Likert-

type scales it is imperative to calculate and report Cronbach's alpha coefficient for internal consistency reliability for any scales or subscales one may be using. The analysis of the data then must use these summated scales or subscales and not individual items. Cronbach's alpha does not provide reliability estimates for single items.

There were three sets of questionnaires adapted from different authors, which were validated by experts on questionnaire construction. The comments of the experts were properly taken and incorporated in the finalization of the said instrument. The adopted standardized questionnaire was valid in contents for they were already tested and proven by the authors as it underwent modification to classify the questions. The questionnaire was designed in a very comprehensive form with the help of the expert validators to provide the respondents with ease and comfort in answering each question and in understanding the objective of the study.

The first part of the questionnaire dealt with school culture with indicators such as leadership, collegial teaching, and professional commitment (DeVaney, 2012). Another set of instruments employed was to measure the intellectual stimulation of teachers. The instrument was adopted and modified from the study of Bolkan and Goddboy (2010). There were indicators on this variable namely: Interactive Teaching Style, Challenging Students, and Encouraging Independent Thought and each indicator is composed of five items. Moreover, the third set of the questionnaire were adapted and modified from the study of Hart, Stewart, and Jimwerson (2011) which considers Affective: Liking for Learning, Affective: Liking for School, Behavior: Effort & Resistance, Behavior: Extra-Curricular, and Cognitive.

The five-point Likert scale was used for the research variables. According to Darnton (2023), the Likert Scale requires individuals to tick on a box/blank in response to a large number of items concerning an attitude, object and stimulus. It is common to treat the number obtained from a rating scale directly as measurements by calculating averages or more generally any arithmetic operations.

There were five orderable gradations for school culture with their respective range of means and descriptions. Range of means, descriptive level and description were as included: 1.00-1.79 is very low and denotes that the item in school culture is never manifested; 1.80-2.59 is low and describes that the item in school culture is seldom manifested; 2.60-3.39 is moderate and specifies that the item in school culture is sometimes manifested; 3.40-4.19 is high which means that the item in school culture is oftentimes manifested; and 4.20-5.00 is very high which implies that the item in school culture is always manifested.

Meanwhile in evaluating the level of intellectual stimulation, the following scale was used: 1.00-1.79 is very low which means that intellectual stimulation is always evident; 1.80-2.59 is low and describes that intellectual stimulation is oftentimes evident; 2.60-3.39 is moderate and specifies that intellectual stimulation is sometimes evident; 3.40-4.19 is high which means that intellectual stimulation is seldom evident; and 4.20-5.00 is very high which implies that intellectual stimulation is never evident.

In determining the level of student engagement, the means were interpreted using the following scale: 1.00-1.79 is very low which means that the student engagement item-statement is always manifested; 1.80-2.59 is low and describes that the student engagement item-statement is oftentimes manifested; 2.60-3.39 is moderate and specifies that the student engagement item-statement is sometimes manifested; 3.40-4.19 is high which means that the student engagement item-statement is seldom manifested; and 4.20-5.00 is very high the student engagement item-statement is never manifested.

Design and Procedure

This research utilized a quantitative research design specifically in order to determine correlations between variables. This is a structured way of collecting and analyzing data obtained from different sources. Quantitative research design involves the use of computational, statistical, and mathematical tools to derive results. It is conclusive in its purpose as it tries to quantify the problem and understand how prevalent it is by looking for projectable results to a larger population (Lu, 2021). This research design is suitable for this study since its objective is to determine the significant impact of school culture and intellectual stimulation as predictor of student engagement among senior high school students. The correlational design was used to describe, explore, and explain the degree and strength of relationship between school culture and student engagement and

intellectual stimulation and student engagement. This was used to investigate relationships between variables without controlling or manipulating any of them (Bhandari, 2021). In general, this study has two independent variables and one dependent variable. Correlational technique was utilized in such a way that the effect of the student engagement will be observed on both school culture and intellectual stimulation without manipulating the independent variables.

Causal model which involves regression or correlation analysis was used in this study. This served as a strong theoretical logic linking the variables of the study. Regression is changes between a dependent and one or more independent variables; the changes will be observed in one variable due to some unit changes other variable(s) (Raj, 2019). In this case, student engagement to school culture and intellectual stimulation.

Furthermore, to determine the significance of the relationships between the exogenous and endogenous variable, pearson-r was used. Moreover, linear regression determined the predictors of the dependent variable given the list of independent variables. Mean was used in determining the levels of school culture, intellectual stimulation and student engagement. The study determined which exogenous variables best fit on student engagement.

Additionally, the researcher adhered to the ethical standards throughout the study by following procedural assessments and standard criteria established by the University of Mindanao Ethics and Review Committee (UMERC). During this study, the respondents were given the free will to voluntarily contribute without any form of cost. Also, in accordance with Data Privacy Act of 2012, the researcher ensured that the respondents' private information being kept in private. All sources of knowledge in this study were properly acknowledged. Overall, the researcher followed all UMERC ethical guidelines in the course of the study.

This adhered voluntary participation in which there was assurance that participants signified their willingness to participate in the study. They were fully informed about the purpose of the study and were given time to read information first and ask anything they did not know and were given explanations, enough time to think about their participation before they were asked to sign the informed consent form. The researcher will safeguard and guarantee the privacy and confidentially of participants information. So, the researcher kept the records of the study confidential to protect the rights and welfare of all the participants involved.

It also underwent to a process for applying the principle of respect for person, who may solicit consent, how and when it was be done. In this research, consent and approval from the different school officials were asked by the researcher before the conduct. The researcher made sure that the participants had the willingness to become a part of the study. In identifying the respondents of the study, this was properly stipulated in the data collection procedure which also indicated the process in acquiring approval of the study as well as how the questionnaire were administered and retrieved. The study concerned on school culture elements and intellectual stimulation as predictors of student engagement among senior high school students thus, there were no involvement in high risk of situations that the respondents may experience in physical, psychological or socio-economic concerns. Thus, minimal risk were seen in the participation in the study for this involved soliciting ideas and perceptions based on the experiences that teachers have in performance of their duties only. The researcher ensured to maximize the benefits as stated in the significance of the study while minimizing risk of harm of the research for the individual participants involved. In this study, one of its significances was to provide teachers with mechanisms and trainings that would improve their performance of duties through engagement.

The researcher made sure that the study will find no evidence of misrepresentation of someone else's word as her own. To this, the study underwent preliminary online plagiarism check and further submitted for Turnitin Software plagiarism check. There will be no trace of evidence of misrepresentation of someone else's work as his own. In this study, there will be no making up of data and results or purposefully putting conclusions that was not accurate and no inconsistency with the existing literature among the information included in study.

This research has no trace of purposefully misrepresenting the work or fit model or theoretical expectation and have no evidence of over claiming or exaggerations on this research will appear. All data were gathered from the survey that the researcher conducted. In addition, no trace of conflict of interest will be done in the study just like for example the disclosure of Conflict of Interest which is a set of conditions in which professional judgment concerning primary interest such as participants' welfare or the validity of the research tends to be influenced

by a secondary interest such as financial or academic gain or recognitions. The research as well has no trace of misleading the respondents to any potential harm. Falsehood about the author's identity and the nature and true purpose of the study should be avoided, this research does not use deception hence to deceive is to deliberately mislead others. This study remained true to its purpose.

RESULTS AND DISCUSSION

In this section, the presentation of the data gathered and the comprehensive discussion, interpretation and implication of the findings of the study were included. This describes the level of school culture, the level of intellectual stimulation, and the level of student engagement. This also displays the correlation between school culture intellectual stimulation and student engagement. This also discusses the significant influence of school culture elements on student engagement, intellectual stimulation and student engagement, and the combined influence of the domains of school culture elements on student engagement. The third part presents the extent of influence of predictor variables on alternative work arrangements.

Level of School Culture Elements

Presented in Table 1 is the level of school culture elements which was measured by three indicators namely: leadership, collegial teaching, and professional commitment. Each of these indicators describes how teachers give importance on the shared values, beliefs and norms that influence the way every teachers, pupils and school heads think, express, feel and behave in and out of school compounds. The three indicators of school culture elements had an overall mean rating of 4.20 or *very high.* This means that school culture elements in terms of leadership, collegial teaching, and professional commitment were always manifested by the teachers. Divulged in the table, professional commitment had the highest mean rating of 4.23 or *very high*, leadership and collegial teaching had the mean ratings of 4.19 or *high.*

Table 1 Level of School Culture Elements

Indicator	SD	Mean	Descriptive Level
Leadership	0.69	4.19	High
Collegial teaching	0.75	4.19	High
Professional commitment.	0.70	4.23	Very High
Overall	**0.72**	**4.20**	**Very High**

To understand the facets which gave meaning on the overall very high result of school culture, it implies that teachers maintain good values and beliefs in teaching for them to get engaged in learning. Findings also emphasized that teachers as observed by the learners are having positive attitudes and behaviors in terms of leading the class, motivating students to engage in learning and in doing their teaching task.

The result conforms the ideas of Karaduman (2021) that school culture has effects on the achievement of student in terms of motivation to study, boost the sense of competition and their development in all respects. It can be noted as well as mentioned by Dogan (2020) that students have good learning foundation as they describe their teachers as having good attitudes and behaviors in school management and leadership. Teachers make the most to raise the learning level of students who consider schooling as necessary.

Further, findings have also borne on the ideas of Jessiman et. al, (2023) who pointed out that school culture is aligned into four dimensions, structure and context, organizational and academic, community, and safety and support. There was strong evidence of the interdependence of the four dimensions in shaping the culture of a school. Also, Van Houtte & Van Maele, 2021 stressed that a positive school culture has been associated with positive child and youth development, effective risk prevention and health promotion efforts, with extensive evidence for the impact on student mental health.

Level of Intellectual Stimulation

Presented in Table 2 is the level of intellectual stimulation. This is composed of three indicators namely: interactive teaching style, challenging students, and encouraging independent thought. The three domains of intellectual stimulation had an overall mean of 4.18 or *high* which implies that the domains are oftentimes manifested. Among the three construct, challenging students had the highest mean with a rating of 4.20 or *high*, followed by encouraging independent thought with a mean score of 4.18 or *high*, and the lowest is interactive teaching style had a mean of 4.16 or *high*.

Contributory to the high level of intellectual stimulation are the item-statements found in the appended tables. It was specified that teachers encourage students to look into the lesson concepts in a meaningful way, challenges students to do the best they can, and teachers openly share problems related to teaching with each other to improve teaching- learning.

Meanwhile, finding has bearing on Thuan, (2020) study findings that there was positive direct relationship between leader intellectual stimulation and follower creative performance. The follower proactive personality

Table 2 Level of Intellectual Stimulation

Indicators	**SD**	**Mean**	**Descriptive Level**
Interactive Teaching Style	0.75	4.16	High
Challenging Students	0.73	4.20	Very High
Encouraging Independent Thought	0.70	4.18	High
Overall	**0.73**	**4.18**	**High**

moderated the direct relationship which illustrated that follower creative ability and job autonomy partially mediated the positive effect of leader intellectual stimulation on follower creativity. In addition, the study findings are in conformance with the findings of Cardona et al., (2018) that intellectual stimulation has a positive influence on team learning, it can affect team members' emotional responses through perception, and leaders value their contributions and are closely linked to team development as manifested by the students. Therefore, as specified by Sutanto, et. al (2021), intellectual stimulation which teachers employ encourages team learning by instilling positive influences and helping learners participate in collective learning to improve performance.

Moreover, the findings has something to do with what Towler (2021) has emphasized that teachers are highly having intellectual stimulation of which they take risks and solicit followers' ideas. They recognize followers through stimulation, creativity and innovation. The teachers' support and collaboration with the learners as they try new approaches and develop innovative ways of dealing with teaching-learning issues. Teachers encourage learners to think independently so they will become autonomous.

Level of Student Engagement

The level of students' engagement in relation to its five indicators namely: affective: liking for learning, affective: liking for school, behavior: effort and resistance, behavior and extra-curricular, and cognitive is shown in Table 3 and it has an overall mean rating of 4.20 or qualitatively described as *very high* with a standard deviation of 0.73. The very high rating result were derived from five indicators' rating. The construct affective: liking for school and cognitive had mean ratings of 4.25 or *very high*, affective: liking for learning had a mean rating of 4.22 or *very high*, behavior: effort and resistance had a mean rating of 4.18 or high, and behavior: extra-curricular had a mean rating of 3.93 or *high*.

It was found out that the very high level of students' engagement is due to the very high level of the items *try to think through topics and decide what one supposed to learn from them rather than studying topics by just reading*

them over and *try to combine different pieces of information from course material in new ways.* This implies that students are enjoying their learning and able to connect their experiences to the lessons in school. Furthermore, the statement *one like the school* contributes to the finding as well.

Meanwhile, findings showed that students are eager to find ways to learn. They want to stay in school and be with other students to collaboratively enjoy learning time. This is in conformance with the ideas of Ginting (2021) that children are happily engaging and learning as he pointed out that the most important determinant of successful learning is student engagement. It can be noted as well that teachers in this school use documented strategies to learn about their students and create bridges between home and classroom cultures that might not be visible to other teachers (Perry, 2022).

Table 3 Level of Student Engagement

Indicators	SD	Mean	Descriptive Level
Affective: Liking for Learning	0.67	4.22	Very High
Affective: Liking for School	0.74	4.25	Very High
Behavior: Effort & Resistance	0.78	4.18	High
Behavior: Extra-Curricular	0.87	3.93	High
Cognitive	0.66	4.25	Very High
Overall	**0.73**	**4.20**	**Very High**

Meanwhile, the findings of Mahmoud (2024) has something to do with the study as he postulated that student engagement has been focused upon improving achievement, positive behaviors, and a sense of belonging in students so that they remain in school. Progressively, student engagement strategies are further developed and broadly applied to manage classroom behaviors. Engagement is more important than involvement or participation as it requires feelings and sense-making as well as activity.

Significance on the Relationship between of School Culture Elements and Student Engagement

Table 4. Significant Relationship between School Culture Elements and Student Engagement

School culture	**Student engagement**					**Overall**
	Affective: Liking for Learning	Affective: Liking for School	Behavior: Effort & Resistance	Behavior: Extra-Curricular	Cognitive	
Leadership	.319**	.267**	.389**	.243**	.331**	**.433****
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	**(0.000)**
Collegial teaching	.349**	.208**	.274**	.207**	.446**	**.426****
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	**(0.000)**
Professional commitment.	.333**	.257**	.307**	.346**	.452**	**.473****

	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	**(0.000)**
Overall	**.423****	**.307****	**.412****	**.326****	**.514****	**.559****
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**

The data in Table 4 showed the correlation between school culture elements and student engagement. It can be perceived from the overall results that there was a significant relationship between school culture elements and student engagement as reflected in the table, the P-value that was 0.000 which was lower than 0.05 and its correlation coefficient r –value is .599. The null hypothesis that there was no significant relationship between school culture elements and student engagement is therefore rejected. It could be observed that school culture elements does affect student engagement. The findings emphasized that there was a significant relationship between school culture elements and student engagement.

Among the three indicators of school culture elements when correlated with student engagement, the three indicators namely leadership, collegial teaching and professional commitment showed significance with the P-values of 0.000 and coefficient r- values of .433, .426, and .473 respectively. On the other hand, when the five student engagement indicators were correlated with school culture, all constructs showed significance. This implies that all domains of student engagement affect the overall school culture elements.

The findings of Khan (2022) that there is a fully mediation by school culture, on the relationship between instructional leadership and student engagement is in conformance with the study. He have pointed out that school culture engages not only the teachers to share knowledge and workload, obtain and provide feedback, and assess their progress, but school culture play a vital role on improving student learning outcomes which can be achieved through learning engagement. It was also implied in the study the importance of engagement as a potentially important and useful construct in developing school culture (Christenson & Furiong, 2021).

Significance on the Relationship between Intellectual Stimulation and Student Engagement

Similarly, the data in Table 5 shows the relationship between intellectual stimulation and student engagement with an overall P-value 0.000 which is lower than 0.05, the standard sets in this study and with an r value of .382. It could be observed that intellectual stimulation significantly affect student engagement. Thus, the null hypothesis that there was no significant relationship between intellectual stimulation and student engagement was rejected. The findings emphasized that there was a significant relationship between intellectual stimulation and student engagement.

Table 5 Significance on the Relationship between Intellectual Stimulation and Student Engagement

Intellectual stimulation	Student engagement					**Overall**
	Affective: Liking for Learning	Affective: Liking for School	Behavior: Effort & Resistance	Behavior: Extra-Curricular	Cognitive	
Interactive Teaching Style	.451**	.334**	.387**	.295**	.488**	**.543****
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	**(0.000)**
Challenging Students	.446**	.356**	.456**	.317**	.488**	**.576****
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	**(0.000)**

Encouraging Independent Thought	.512**	.380**	.436**	.344**	.559**	.619**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	**(0.000)**
Overall	**.564****	**.428****	**.513****	**.382****	**.614****	**.696****
	(0.000)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**

*Significant at 0.05 significance level

All the domains of intellectual stimulation have correlations with the overall student engagement namely: interactive teaching style with P-value of 0.000 and coefficient r-value of .295, challenging students with P-value of 0.000 and coefficient r-value of .317, and encouraging independent thought with P-value of 0.000 and coefficient r-value of .344. It indicates that the associations of interactive teaching style, challenging students, and encouraging independent thought to the overall student engagement were observed among senior high school students.

Meanwhile, when domains of students engagement were correlated with intellectual stimulation, all domains also showed significant relationship, to name: affective: liking for learning has P-value of 0.000 and coefficient r-value of .564, affective: liking for school has P-value of 0.000 and coefficient r-value of .428, behavior: effort and resistance has P-value of 0.000 and coefficient r-value of .513, and behavior: extra-curricular has P-value of 0.000 and coefficient r-value of 382.

The findings has bearing on the contention of Shin & Bolkan (2021) that intellectual stimulation had a direct effect on students' intrinsic motivation as well as student engagement, self-efficacy for learning, and supportive peer relations. Their study indicate that intellectually stimulating instructional behaviors of students are associated with educational outcomes such as student engagement, peer relations, and self-efficacy, and thus promote students' optimal development by fostering intrinsic value and a sense of fulfillment associated with learning. Further, findings has also bearing on Dago-oc & Tagadiad (2023) have mentioned that student engagement is one of the elements that intellectual stimulation can be developed among students in the classroom.

Significance on the Influence of School Culture Elements on Student Engagement

Shown in Table 6 are the regression coefficients to test the significant influence of the overall school culture elements on students' engagement. Using the regression analysis, the data revealed that generally, np indicators of school culture significantly influence student engagement since F value 46.001 and $P < 0.05$. The R^2 value of 0.319 implies that 31.9 percent of the *school culture*

Table 6 Significance on the Influence of School Culture Elements on Student Engagement

School culture elements	Student engagement				
	B	B	Std. error	*t*	*Sig*
Constant		1.567	.205	4.262	.000
Leadership	0.088	.199	.044	1.779	.076
Collegial teaching	0.063	.182	.043	1.258	.209
Professional commitment.	0.057	.244	.047	1.061	.290
		R	0.565		

		R^2	0.319		
		ΔR	0.312		
		F	46.001		
		P	0.000		

was due to student engagement variation. The 68.1 percent is influenced by other factors not covered in this study. The *P<0.05* signifies the rejection of the null hypothesis set in the early part of this study. Specifically, the data revealed that *school culture* does not significantly influence student engagement, which has values of 0.000 which are less than the alpha value, which is 0.05. Meanwhile, in its singular capacity, *professional commitment* best influences *student engagement* with the highest beta coefficient of 0.244. However, other elements can also influence *student engagement* but with the support of other indicators.

Further, findings validates Thorton's (2015) Classical Theory which focuses on the derivation of individual-level cognition from abstract cultural patterns external to the mind, conceiving of culture as external and organized as an emergent order of symbolic systems. Variants of the classical approach differ in their attention to cultural content, the functionalists focusing more on norms and values and the phenomenologists on cognition.

In addition, results is in conformance with Bolkan and Goodboy (2021) stated that student engagement and school culture have a continuing transactional relationship. This association has significant outcomes for academic motivation and school success. This chapter begins by describing and understanding the use of the terms school culture and student engagement and the importance of these to school practices and students' academic achievement motivation. It then proceeds to discuss two aspects of school culture that relates to student engagement: perceived teacher support and cultural compatibility.

Significance on the Influence of Intellectual Stimulation on Student Engagement

Shown in Table 7 are the regression coefficients to test the significant influence of the overall intellectual stimulation and student engagement. Using the regression analysis, the data revealed that generally, interactive teaching style, challenging students, and encouraging independent thought significantly influence student engagement since F value 93.718 and $P < 0.05$. The R^2 value of 0.487 implies that 48.7 percent of the *intellectual stimulation* was due to student engagement variation. The 51.3 percent is influenced by other factors not covered in this study. The *P<0.05* signifies the rejection of the null hypothesis set in the early part of this study. Specifically, the data revealed that intellectual stimulation significantly influence student engagement, which has values of 0.000 which are less than the alpha value, which is 0.05. Meanwhile, in its singular capacity, *encouraging independent thought* best influences *student engagement* with the highest beta coefficient of 0.352. However, other elements can also influence *student engagement* but with the support of other indicators.

Table 7 Significance on the Influence of Intellectual Stimulation on Student Engagement

Intellectual stimulation	Student engagement				
	B	B	Std. error	*t*	*Sig*
Constant	0.000	1.161	.183	6.343	0.000
Interactive Teaching Style	0.215	.191	.046	4.136	0.000
Challenging Students	0.266	.227	.045	5.021	0.000
Encouraging Independent Thought	0.352	.307	.047	6.498	0.000
		R	.699		

		R^2	0.48798512		
		ΔR	0.436		
		F	93.718		
		P	0.000		

Specifically, findings has bearing on Inayat (2020) study that students simultaneously perceived both interactive teaching styles, that is, autonomous-supportive and controlling. However, a significant difference was observed between the score of students where they found their teachers to be more supportive and controlling. Furthermore, correlation between perceived interactive teaching style with students' engagement as well as curiosity and exploration. Additionally, result of the study is in line with Sazant (2021) found out in his study that creating a classroom environment in which students are encouraged to make meaningful connections, by thinking critically and reflecting upon their experiences may help engage today's young learners.

Significance on Combined Influence of the Domains of School Culture Elements and Intellectual Stimulation on Student Engagement

Displayed on table 8 is the combined influence of school culture and intellectual stimulation on student engagement. Findings of the study revealed that interactive teaching style, challenging students, and encouraging independent thought significantly influence student engagement since F value is 49.247 and $P < 0.05$. The R2 value of 0.502 implies that 50.2 percent of both school culture and intellectual stimulation was due to student engagement variation. The 49.8 percent is influenced by other factors not covered in this study. The $P<0.05$ signifies the rejection of the null hypothesis set in the early part of this study. Specifically, the data revealed that interactive teaching style, challenging students, and encouraging independent thought significantly influence student engagement, which has values of 0.000 which are less than the alpha value, which is 0.05. Meanwhile, in its singular capacity, encouraging independent thought best influences student engagement with the highest beta coefficient of 0.264. However, other elements can also influence student engagement but with the support of other indicators.

Findings of the study has bearing on Pervez et. al (2020) that school culture produces the school outcomes. Outcomes contain many things like student's aptitude, student's attitude, student's personality, a student's performance in school which can be achieved when engagement of learners is being strengthened. In fact, school main function to produce the student achievement. Also, findings explains Lee and Shute (2021) contention as they mentioned that teacher daily communication with their students and making them engaged promote positive school culture and create high motivation and self-confidence. A positive culture between the school staff leads the student's motivation and high achievement which will be increased school outcomes.

Table 8. Significance on Combined Influence of the Domains of School Culture and Intellectual Stimulation on Student Engagement

Indicators	Student engagement				
	B	B	Std. error	*t*	*Sig*
Constant	0.000	0.875	0.205	4.262	0.000
Leadership	0.088	0.078	0.044	1.779	0.076
Collegial teaching	0.063	0.054	0.043	1.258	0.209
Professional commitment.	0.057	0.050	0.047	1.061	0.290

Interactive Teaching Style	0.176	0.157	0.048	3.261	0.001
Challenging Students	0.223	0.190	0.047	4.047	0.000
Encouraging Independent Thought	0.301	0.264	0.049	5.359	0.000
		R	.709		
		R^2	0.50296516		
		ΔR	0.49275212		
		F	49.247		
		P	0.000		

Significance on the Influence of the Domains of School Culture Elements and Intellectual Stimulation on Student Engagement

Gleaned on Table 9 are the regression coefficients to test the significant influence of the overall domains of school culture elements and intellectual stimulation on student engagement. Using the regression analysis, the data revealed that generally, the both school culture and intellectual stimulation significantly influences student engagement since its F value 113.366 and $P < 0.05$. The R^2 value of 0.500 implies that 50 percent of the *school culture and intellectual stimulation* was due to student engagement variation. The other 50 percent is influenced by other factors not covered in this study. The *P<0.05* signifies the rejection of the null hypothesis set in the early part of this study. Specifically, the data revealed that *school culture* and *intellectual stimulation* significantly influence student engagement, which has P-values of 0.000 which are less than the alpha value, which is 0.05. Meanwhile, in its singular capacity, *intellectual stimulation* best influences *student engagement* with the highest beta coefficient of 0.611. However, the *school culture* can also influence *student engagement* but with the support of other variables. This implies that school culture and intellectual stimulation affects their student engagement.

Further, findings negate Mosyuki et. al (2021) revelation that negative and strong correlation between intellection stimulation and students engagement and performance was observed. It was also emphasized by Otong and Tagadiad (2023) that the classroom behavior of teachers, especially their leadership capacity, impacts their teaching methods. These actions promote independent thought, challenge learners, and employ an interactive teaching approach.

Table 9. Significance on the Influence of the Domains of School Culture Elements and Intellectual Stimulation on Student Engagement

Predictors	Student engagement				
	B	B	Std. error	*t*	*Sig*
Constant	0.000	.864	.204	4.233	.000
School culture elements	0.167	.185	.061	3.012	.003
Student engagement	0.584	.611	.058	10.521	.000
		R	.707		
		R^2	0.500		

		ΔR	147.916		
		F	113.366		
		P	0.000		

CONCLUSION AND RECOMMENDATION

The use of regression analysis strengthened the findings of the study. This allows the study to employ correlations and regression. This also determine what specific domain of predictor variables influences student engagement. Results revealed that the level of school culture is *very high* which implies that the item-statement embodied in the survey were manifested; the level of intellectual stimulation is *high* which denotes that item-statements are manifested; and the level of student engagement is *very high* which describes that teachers manifested the item-statements in the survey.

There is correlation observed between the levels of school culture and student engagement. At some point, there is a significant relationship between levels of intellectual stimulation and student engagement. Further, when the combined influence of the domains of school culture and intellectual stimulation were correlated, interactive teaching style, challenging students, and encouraging independent thought significantly influence student engagement. Generally, when domains of school culture and intellectual stimulation were correlated with student engagement, both the school culture and intellectual stimulation significantly influence student engagement. In its singular capacity, intellectual stimulation significantly influences student engagement having the highest coefficient. This indicates that intellectual stimulation significantly influenced student engagement.

Student engagement can be attributed to many factors. These factors may have been postulated and evaluated by other studies to manifest school culture and intellectual stimulation. It is reasonable that other factors which manifest more protractedly in the respondents were not among those included in this study. The findings in this study confirms Tintos' (1993) Integration Theory which claimed that students were more likely to remain in school and persist if they connected socially and academically within school. Students who integrated into the school by making friends, joining student clubs and/or organizations, or engaging in academic activities were more likely to persist than those students who did not have these type of meaningful connections. Students who did not feel at home in school or believed that there was no place for them in school.

RECOMMENDATION

The first objective of the study is to find out the level of school culture. It was revealed that among the three indicators, collegial teaching and leadership were the lowest is the lowest. Though these were high, there is a need to give concern on the issue hence these initiatives are significant in improving learning. Teachers need to give focus in improving learning for this greatly affect the performance of both teachers and school. Teachers may initiate activities that will strengthen activities that will involve students in teaching and leading.

Another finding from this study revealed that in the level of intellectual stimulation is high. The indicator interactive teaching style is the lowest though high. This implies that students would enjoy working and learning together with their classmates. With this, teachers may initiate teaching activities that will engage all learners in the teaching-learning process. This may help students develop their full potentials. Also, the level of student engagement is very high as shown from the three indicators with very high results. It can be drawn from the findings that students are very cooperative. As revealed, they want to work with others in their learning journey.

Further, there is significant relationship between school culture and student engagement. This indicates the need to maintain a positive school culture for the learners to engage in all the learning activity. Meanwhile, there is a significant relationship intellectual stimulation and student engagement. This implies that teachers' need to exert effort in maintaining the enthusiasm and interest among students. At this point, school leaders may help teachers by initiating trainings that will capacitate teachers with different approaches and strategies in teaching.

Furthermore, in general, both school culture and intellectual stimulation significantly influence student engagement, however, in its singular capacity, intellectual stimulation best influence student engagement having the highest beta coefficient. Therefore, the researcher recommends that the Department of Education formulate programs that may enhance teachers' ability to develop intellectual stimulation among learners.

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