

# GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES

## STRUCTURAL EQUATION MODEL ON THE INTEREST IN SCHOOL AMONG CRIMINOLOGY STUDENTS

**Dr. Marco Gemmer**

Science Counsellor, EU Delegation to China  
Formerly: German Federal Institute of Hydrology

### ABSTRACT

The aimed of this investigation was to discover what best fit model for the interest in school among criminology students. Specifically, it explored the interrelationship among variables including level of attitudes towards school, student's engagement and academic self-concept on interest in school of students. Utilized Structural Equation Model, descriptive correlational method, simple random sampling and regression correlation. Data were obtained from 400 criminology students from the two tertiary schools in Davao City. The questionnaire was divided into four sections including attitude towards school, student's engagement, academic self-concept and students interest. Results have shown that the level of attitudes towards the school of students is high; level of student involvement in school is high; level of academic self-concept of students in school is relatively high; and level of interest in school of students is high. Study revealed that the attitudes toward school of students; student engagement of students in school; and academic self-concept of students in school are significantly correlated with interest in school of the students. The model apparently showed the importance that all three factors of attitudes toward school; factors of academic self-concept; and all four factors of interest of students in school have strong interconnectedness with each other. Attitudes toward school has a direct association on interest of students and educational self-concept has direct association with interest of students. The best fit model showed that belongingness, school image and teaching from attitudes toward school, educational confidence, and academic effort of academic self-concept were included. This model indicates that interest in school of students is strongly influenced with attitudes toward school and academic self-concept of students in school. Furthermore, it was also noted that student engagement has a direct effect to students' attitude toward school and academic self-concept.

**Keywords:** *criminal justice, structural equation model, interest in school, attitudes towards school, Philippines.*

### I. INTRODUCTION

The lack of interest in school among criminology students has now become alarming as faced by almost all tertiary schools. Students who lack interest are likely tend to consider college experience does not seem to be fun or worthwhile, leading to a lack of interest in the work of the university. Lack of interest in school is prevalent throughout the world. Indeed, a research among University students in US has been reported that about 20% do not complete their first year. Thomas (2017) indicated that there is a possibility that disinterest has been found even at kindergarten level. Accordingly, involvement affects personal attention, objectives and teaching levels, whereas (Schraw and Lehman, 2001) actually think that it partly helps determine how one choose to learn but how well one learn this information (Subramaniam, 2009).

The researches on identifying factors influencing the desire to participate of students in school are vital, because this would help determine the reasons of lack of interest among criminology students in tertiary schools. As discussed, involvement is a strong inspirational method that stimulates teaching, guides academic and professional life paths and is vital to school achievement involvement is both a behavioral mental state and influences a particular matter or subject, and a constant susceptibility to re-engage over time (Harackiewicz , Smith & Priniski, 2016). Moreover, (Nayir, 2017) emphasized that student engagement and interest in school are important conditions for active learning. In addition, (Cupp, 2015) result of his study that there is a significance of engaging girls in and out of school to ignite their interest and build their confidence.

Because of a strong connection to the well-being of a student, student engagement has become an utmost concern of most schools recently. Researches confirmed that students engagement is closely related to students likelihood of dropping out. Furthermore, it was also cited that it is linked criminology students with an inclination towards drug use

(Bond, Butler, Thomas, Carlin, Glower, & Bowes, 2013), Intellectual as well as mental health and academic achievement (Bakker, Vergel, & Kuntze, 2015). Significantly, criminology students involved in reading and writing have been found to be more educationally able to tune and even have low probability of dropping out and more engaged in participating school activities.

Students attitude is also essential to explore. It directly affects students' interest in learning. It shows that students' negative attitudes towards learning in school have relatively poor performance and higher rate of school failure (Candeaias, Franco, Mendes & Rebelo, 2010). Moreover, students with positive attitude have high regard on learning and will positively impact students' interest. Contextually, attitudes influence individuals on how they interpret their environment and behave socially (Erwin, 2015). Having also an important influence on the decisions, attitudes have a strong effect on what one will do, what kind of profession one will perform, which school one will go to, where one will live, and whether one will accept new ideas (Yıldız & Kisiltaz, 2017).

On the other hand, the idea of self was comprehended as an understanding that every human being has of himself or herself. It is an element of the growth of character and shows who we are and how fit into the world. Dissecting its definition, self-concept embrace problems including the bundle of criminology students' understanding and behavior. In the academic context, self-concept is described on how, when compared to other students that is a criminology student sees his / her academic skills. To always be academically inclined to as a student of criminology, academics need to be part of their self-concept; more specifically, they need to have a positive academic self-concept. However, some earlier research studies suggest that there is a significant relationship between educational self-concept and academic performance of criminology students as measured by the grade point average (Gerardi, 2018).

This study will be used as a point of departure to discuss the important role of the school particularly the crucial role of teachers in a learning situation. Hence, the study established that there is a gap in research with regards to the reasons affecting interest in school of criminology students because no studies have been done representing all of the same parameters mentioned above in Region XI, specifically in private schools offering criminology courses in Davao City. The aim of this investigation is to add scientific evidence to the body of knowledge that helps to develop a new model to give new direction to education techniques in colleges and universities.

## II. RESEARCH OBJECTIVE

The aimed of this investigation was to discover what model best fits on interest in school among criminology students through attitudes toward school, student's engagement in school, and academic self-concept factors. Specifically, this study dealt with the following objectives:

1. To assess the level of attitudes toward school of students in terms of:
  - 1.1 teaching,
  - 1.2 school image,
  - 1.3 loneliness at school,
  - 1.4 testing and feedback,
  - 1.5 reluctance and
  - 1.6 belongingness.
2. To ascertain the level of the students engagement in the school in terms of:
  - 2.1 Affective engagement (liking for learning),
  - 2.2 Affective engagement (liking for school),
  - 2.3 Behavioral engagement (effort and persistence),
  - 2.4 Behavioral engagement (extracurricular activities), and
  - 2.5 Cognitive engagement.
3. To evaluate the academic self-concept of students in terms of:
  - 3.1 Academic confidence, and
  - 3.2 academic effort.
4. To measure the level of interest in school of students in terms of:
  - 4.1 family participation,
  - 4.2 self-efficacy,
  - 4.3 criminology in society, and
  - 4.4 studies and careers.
5. To determine the significant relationship between:

- 5.1 attitude toward school and interest in school of students,
- 5.2 students engagement in the school and interest in school of students, and
- 5.3 self-concept and interest in school of students.
- 6. To determine the singular and combined influence of independent variables to the interest in school of the students.
- 7. To determine what model best fits for interest in school of students.

### **Hypothesis**

The following propositions were tested at a significance level of 0.05:

- 1. There is no significant relationship between:
  - 1.1 Attitude Toward School and interest in school of students,
  - 1.2 Students Engagement in the School and interest in school of students, and
  - 1.3 Academic self-concept and interest in school
- 2: There is no singular and combined influence of independent variables to the interest in school among students in the selected tertiary schools.
- 3: There is no model that best fits for interest in school among students in the selected tertiary schools.

## **III. LITERATURE REVIEW**

### **Attitude towards School**

The attitude of criminology students towards school can be seen as a willingness to learn and to work with other social institutions. On other hand, (Olson & Kemery, 2019) recognized eight circumstances for criminology students to achieve academic, social and emotional success with the Quaglia Institute for Student Aspiration. Moreover, the attitude towards the students of criminology is the first and most important, also known as the sense of belonging and this emphasizes self-esteem, dedication and purposefulness to reading.

In addition, the attitude towards the classroom is an important condition for a student's sense of well-being, social commitment and competence in criminology. On the other hand, a very positive attitude towards school increases the inner motivation that promotes self-confidence and investment in the community and criminology student develop a good sense of belonging and involvement in school. The condition of belonging in this respect means that a student is a valued member of the school community while maintaining its uniqueness. Additionally, the connection between two or more criminology students is characterized by a sense of belonging and promote for the self-realization and advancement. (Ferraro, 2017; Williams, Coleman, Morales, & Cesareo, 2018).

Moreover, (Zee and Koomen, 2016) stated that to improve school excellently-being, evolutionary model of cognition and result, there should be a positive attitude and atmosphere towards school characterized by no risk of self-esteem, no pressure to outperform others, and no unnecessary concerns associated with the evaluation. They also argued that if criminology teachers are caring, communicate impact and mastery goals will provide a secure emotional basis for criminology students to enjoy in school and gain self-competence without undue anxiety and concern about class performance. In other words, such positive behavior meet the needs of criminology students for friendship, freedom, leadership and observed as inherent and widely stipulated, which helps determine the well-being of criminology students when they are satisfied.

Additionally, classroom attitude can be described as how a criminology student sees his or her school performance. On the other hand, typical statements are: ' I feel good when I'm in class, ' I'm glad to go to school " How I know at school is going to help me attain goals for the future (for example, having an exciting career),' ' I have teachers who support me,' ' I have a good working relationship with my friends. '(Affective effects as well as social and personal considerations such as goals). Moreover, the attitude towards class relates to the psychological environment, the social environment, which, following a socio-cognitive approach depends on the interpretation of student criminology in educational principles and qualitative attitudes (Doménech-Betoret, Abellán-Roselló, & Gómez-Artiga, 2017; Tran & Von Korflesch, 2018).

### **Student's Engagement**

Student's engagement refers to an individual's interest and enthusiasm in school. In other words, this involves successful criminology students behaviors such as participation, involvement, and commitment to class, as well as

emotional response and feeling that one is being cared for and respected as part of the school environment (Muenks et al., 2017). On other hand, the commitment of students has an impact on their academic performance and conduct. However, student engagement is based on the idea that learning boosts when students are interested in knowing, willing to engage, or inspired, and that learning seems to fail when students are frustrated, discontented, or otherwise ( Martin & Torres, 2016; Osher, Kidron, Brackett, Dymnicki, Jones, & Weissberg, 2017).

Moreover, student engagement is better described as a student relationship with the following elements of the learning environment: for example, school community, peers, or classmates ( Martin & Torres, 2016; Osher et al., 2017). In addition, some other important advantage of student involvement is that criminology students are less likely to be the perpetrators of probable teenage disorders. In other words, student involvement safeguards towards non-school activities such as drug abuse, risky sexual habits and delinquency (McGee & Mazerolle, 2017).

Furthermore, school and student participation has become an important concept for multiple educational outcomes, such as success, attendance, action, and completion. In other words, Student engagement has been described as a main parameter in comprehending dropout, in particular as a gradual process that operates in the life of a criminology student and affects that final withdrawal judgment. Multiple studies have linked student involvement to better academic performance and have consistently shown a strong predictor of school attainment and attitudes. It has also been associated with both jeopardizing wellbeing (e.g. drug abuse, anxiety, depressive symptoms, aggressive behavior, adult sexual activity) and fostering well-being conduct (e.g. workout, diet, preaching abstinence). (Cleary and Kitsantas, 2017; Leonard, Stiles, and Gudiño, 2016).

On other hand, the area of behavioral engagement concerns problems related to criminology student behavior in the classroom, participation in school-related activities, and interest in their academic work. In other words, Research based on student criminology in the classroom analyzes students ' attitudes towards classroom standards, rules and regulations and can either exhibit positive behaviours (i.e., When the criminology student follows the rules and regulations of the classroom or school), Indicators of higher criminology student involvement or adverse attitudes (i.e. when a criminology student is disruptive in a classroom or disobeys the administrator) are indicators of lower participation or disconnection (Eccles & Wang, 2016).

### Academic Self-Concept

Academic self-concept becomes related to as an individual or group self-assessment of real academic areas or abilities. In other words, how criminology students do school assignments or think about themselves as learners is academic ego-concept. On other hand, Academic self-concept researches also created a dual-faceted hierarchical ego-concept design in which the ego-concept is fragmented into educational and semi-academic personality-concepts (Katrin, Marsh, Pekrun, Lichtenfeld, Murayama, & Vom Hofe, 2017; Marsh, Pekrun, Murayama, Arens, Parker, Guo, & Dicke, 2018).

Meanwhile, established theories and models describing educational self-conception and academic performance showed little proofs that previous academic self-conception influences academic performance or that prior academic performance results in successive academic self-conception. In other words, the self-improvement paradigm, the academic performance, is the product of academic self-conception and the skill-development model illustrates the effect of self-concept on academic performance. In other words, all academic self-conception and academic accomplishment have a direct effect on each other, that is, they are mutually related. Moreover, the discussion among investigators as to whether the previous academic self-concept has an effect on academic performance and the results have been regarded as chicken-chicken issue (Marsh et al., 2018).

Further, as criminology students gets older, their academic self-concept has been more stable, and that academic self-concept appears to decrease from early to mid-adolescent, extending to puberty as well. Academic self-concept, however, hits its lowest level in early adolescence, but it also found that it increases the educational self-concept in early adulthood. In addition, academic self-conception varies as criminology students improve their academic performance in which their academic self-concept tends to increase while other sources point to a tendency to decline. It has been established that there is significant correlation between academic self-concept and academic performance (Banerjee, 2016; Matovu, 2016; Miller-Cotto and Byrnes, 2016).

Additionally, the efforts made by criminology students in their studies and the choices they make to contribute to their academic performance. In other words, if criminology students choose to continue their formal education, these factors

play an important role in determining how well they perform and also in affecting their access and persistence to the next level (Allensworth & Luppescu, 2010; Doménech-Betoret et al., 2017).

### **Interest in School**

Interest plays a crucial role in the learning process of the students. It is not only characterized in terms of 'affective variable' or 'enjoyment while learning. Interest is a multidimensional construct whose operational definition requires emotional, cognitive (knowledge) and related value attributed to the object of interest dimensions (Hidi, 2015; Renninger, 2016).

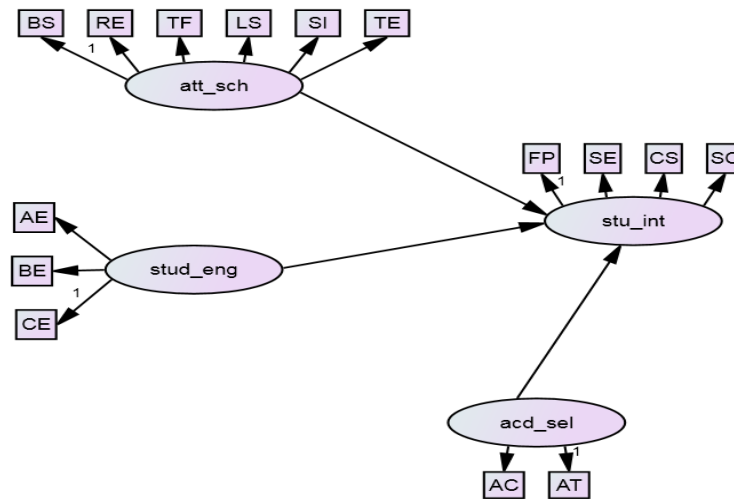
While interest is often described as a connection between a person and an object that comes from an individual's activity with the atmosphere (Keller, Neumann, & Fischer, 2017). On other hand, in the school sense, interest is an important factor, because it can affect the learning process of criminology students, their academic performance and the reliability of a learning skill (Tella, 2017; Kraft, Marinell, & Darrick Yee, 2015).

In addition, the interest of an object gives the students of criminology a desire to learn more about the subject matter. As noted, criminology students who are interested in a specific area of interest and who are not satisfied with the current level of knowledge or skills have a strategy to learn more. Instead, students of criminology are highly willing to learn new information, new expertise and develop skills and capabilities related to criminology. Nevertheless, in situations that do not require new training to stimulate interest-based skills, there is also a high degree of willingness (Busemeyer & Garritzmann, 2017; Chen et. al, 2016)

Furthermore, criminology careers are diverse and varied in the field of specialization, such as forensic psychology, academic pursuits or advanced studies, or provide a solid foundation for a career in criminal justice. Criminology can be an interesting and stimulating field in either way. Moreover, criminology graduates are likely to work in rehabilitation and corrections, customs, law enforcement, research and policy analysis, youth justice, criminal investigation, and the probation and parole board (Karp & Frank, 2016).

## **IV. RESEARCH MODEL**

Shown in Figure 1 is the Hypothesized Structural Model 1 with the single headed arrow representing the causal or direct relationship of latent endogenous variables (att\_sch) Attitude Towards School, (stud\_eng) Student Engagement, (acd\_sel) Academic Self-Concept, to the dependent variable (stu\_int) Interest in School.



**Figure 1**

## V. METHOD

This study employs quantitative non-experimental research design. In the basis of the best fit model, structural equation model was used. First, it utilized descriptive correlational method. According to (Loeb, Dynarski, McFarland, Morris, Reardon and Reber, 2017), explanatory thinking describes the universe or the occurrence — fielding questions about who, how, where, where, and how far. On the other hand, the objective of the investigation is to identify and describe variations in sample populations, to make new calculations of major occurrences, or to describe samples for the recognition of quantitative measurements. Interpretation plays a key role in the process of science in general, and particularly in quantitative research. In addition, the association can be defined as a multivariate regression used to analyse the trend or continuously differing two or more variables and data sets (Creswell, 2012).

Secondly, structural equation modeling as quoted by (Meydan & Şen 2018), is quantitative method has been widely used in scientific research in social sciences, and this multivariate regression is a single model that can be used to calculate direct and indirect relationships between cause and effect variables. On other hand, structural equation modeling is a multivariate regression equation being used by investigator to examine the correlation and covariance among observed and unobserved factors. Observed factors are the calculated variables in the data mining system and the unobserved factors are determined by comparing them to the observed factors as they are not immediately checked. Hence, this technique has been used to measure the connection between interest in school to attitudes toward school, student's engagement in the school and self-concept among Criminology students in the selected tertiary schools in Davao City.

This study aimed to assess the interest of 400 Criminology students interest in selected tertiary schools of Davao City. Hence the researcher utilizes the simple random sampling that decided the number of criminology students per year. The 400 Criminology students enrolled in the second semester, Academic Year 2018-2019 were the subject of the study. The respondents were the third and fourth year Bachelor of Science in Criminology students because they are the one who provides useful information and data to test the hypothesis of the study. Excluded from this study are the 1<sup>st</sup> and 2<sup>nd</sup> year criminology students, senior and junior high school students, instructors and school administrators



because this study focuses on the interest in school among Criminology students. The respondents can be withdrawn from the research study he/she commits falsification, plagiarism and other moral offenses or the respondents have health problems and special needs. A participant can withdraw from the research study at any time if they feel troubled or discomforted. If so, the participants should let the researcher know that he/she wishes to withdraw. A participant may provide the researcher with the reason(s) for leaving the study but is not required to provide their reasons.

The statistical tools that were used in the computation of data and testing the hypotheses at alpha 0.05 level of significance are the following; mean was used to determine the level of attitudes towards school, student's engagement, academic self-concept and interest in school; Pearson was used to determine the interrelationship between attitudes towards school student's engagement, academic self-concept and interest in college; linear regression analysis was used to determine the significant influence among attitudes towards school student's engagement, academic self-concept and interest in college and finally structural equation modeling was used to explore the best fit model Factor analysis the latent variables have been tested.

## VI. RESULT AND DISCUSSION

Presented in Table 1 is the degree of attitudes toward school of students which are measured by six indicators, namely: teaching school image, loneliness at school, testing and feedback, reluctance and belongingness. Each of these describes a specific way for the student's level of attitudes toward school. Generally, overall level of attitudes toward school in terms of belongingness had a very high level with a total average of 4.30, the information showed that criminology students registered a high results of sense belongingness toward school.

The six indicators of attitudes toward school of students generated an overall average rating of 3.42 or *high*. This means that the level of attitudes toward schools in terms of teaching, school image, loneliness at school, testing and feedback, reluctance and belongingness were always manifested by students. The overall degree of attitudes toward school in terms of teaching with high or registered total average of 3.61, which indicates that the students had a highly positive attitude towards school in terms of teaching. In the same way, the overall mean of school image was high with a mean of 3.66, which indicates that the school has provided the students the privilege of studying. In addition, the overall mean of testing and feedback was high with a total average of 3.77. This meant that students were given opportunities to test and give feedback on their exams in order for their examination questions to be clearer and understandable.

Meanwhile, the overall mean of reluctance and loneliness at school were rated as moderate and low with average ratings of 2.71 and 2.47, respectively. This meant that students communication within the family does not necessarily make them feel less positive toward school. Regarding the loneliness at school, students felt that teachers are interested in students whether they are hardworking or not.

*Table 1 Level of Attitudes toward School among Criminology Students*

Indicator	SD	Mean	Descriptive Level
Teaching	0.73	3.61	High
School Image	0.56	3.66	High
Loneliness at School	0.92	2.47	Low
Testing and Feedback	0.66	3.77	High
Reluctance	0.76	2.71	Moderate
Belongingness	0.78	4.30	Very High
<b>Overall</b>	<b>0.40</b>	<b>3.42</b>	<b>High</b>

The respondents of this study assessed the interest in school for attitudes towards school was relatively high indicating high sense of belongingness, followed by testing and feedback; school image and teaching. This means that students really want to go to school and felt they belong to school. This is evident in the study of (Kpolovie et. al, 2014) that positive attitude towards school developed students good and greater sense of belongingness and engagement in school (Linvil, 2014) which in turn contributed to their academic success (Fong Lam, Chen, Zhang, & Liang, 2015; Williams, Bryan, Morrison, & Scott, 2017). Some authors (Ferraro, 2017; Williams et. al, 2018) stated that attitude towards the classroom is an important condition for a student's sense of well-being, social commitment and competence in criminology.

Displayed in Table 2 is the degree of student engagement of students in school which are measured by three indicators. These indicators are affective engagement, behavioral engagement and cognitive engagement that obtained an overall average rating of 3.92 and described as “high”. Specifically, the overall level of student engagement in school in terms of affective engagement had a high level of student engagement with a mean of 3.96, which indicates that the students had a highly positive level of engagement in school in terms of affective engagement. In terms of behavioral engagement obtained high descriptive level of student engagement with a mean of 3.82, which indicates that the students had a highly positive level of engagement in school in terms of behavioural engagement and in terms of cognitive engagement had a high level of student engagement with an average of 3.98, which indicates that the students had a highly positive level of engagement in school in terms of cognitive engagement.

*Table 2 Level of Student Engagement among Criminology Students*

Indicator	SD	Mean	Descriptive Level
Affective Engagement	0.61	3.96	High
Behavioral Engagement	0.59	3.82	High
Cognitive Engagement	0.63	3.98	High
<b>Overall</b>	<b>0.43</b>	<b>3.92</b>	<b>High</b>

Based from the result, student engagement description got a high level and this implies that criminology student is extremely engage in school. Students believed that they are learning with their own experiences, proud of their school, participate in school activities, and are very interested in learning new things in class. This supports the statement of (Martin & Torres, 2016 and Osher et al., 2017) that studying increases when students are intellectually curious, willing to engage, or motivated. This conveys that engagement in school and student participation has become an important concept for multiple educational outcomes, such as success, attendance, action, and completion (Cleary & Kitsantas, 2017; Leonard et. al, 2016).

Depicted in Table 3 is the level of academic self-concept of students in school as measured by two indicators namely: academic confidence and academic effort. These two indicators of level of academic self-concept of students obtained an over-all average rating of 3.46, described as high level. This was a positive result among students since it indicated a high performance of students in their academics.

The level of academic self-concept of students in school in terms of academic effort was high with an overall mean rating of 3.56. Relatively, this indicates that the level of academic effort of the students was highly manifested in their efforts such as learning difficulties to take all the classes within the semester. Meanwhile, the level of academic self-concept of students in school in terms of academic confidence was moderate with an overall average rating of 3.36. This meant that student's academic confidence in terms of working hard in getting good grades, being able to help and working with their course mates was great.

*Table 3 Level of Academic Self-concept among Criminology Students*

Indicator	SD	Mean	Descriptive Level
Academic Confidence	0.57	3.36	Moderate



Academic Effort	0.58	3.56	High
<b>Overall</b>	<b>0.51</b>	<b>3.46</b>	<b>High</b>

The level of academic self-concept of students in school is relatively high. Indicators of the level of academic self-concept of students in school are academic effort, which got the highest mean score over academic confidence. In terms of academic effort, students claimed that they are really interested in course work and they are attention to teachers during discussion. Students also said that they are studying hard for the tests; doing their best to pass all the courses this semester. Many students of criminology believed that when faced with a difficult problem in their research, they would not give up without a fight. Additionally, the efforts made by criminology students in their studies and the choices they make to contribute to their academic performance. These factors play an important role in determining how well they perform and also in affecting their access and persistence to the next level (Allensworth & Luppescu, 2010; Doménech-Betoret, Abellán-Roselló, & Gómez-Artiga, 2017).

Illustrated in Table 4 are the four indicators of the level of interest in school of students. These indicators include family participation; self-efficacy; criminology in society; studies and careers. The four indicators of level of interest in school of criminology students had an overall mean rating of 3.65 and described as “high”. This denoted that the students were highly interested in school particularly with Criminology.

In the aspect of criminology in society, the overall mean was 3.77 or high. This meant that the students were highly interested in terms of criminology in society. Meanwhile, the overall mean of studies and careers was 3.67 and described as “high”. This indicated that the students were highly interested in school in terms of studies and careers. In terms of self-efficacy, it was observed that the overall mean rating was 3.65 and described as “high”. This meant that the students were highly interested in school in terms of self-efficacy. Finally, in terms of family participation, the overall mean was 3.52 and described as high. This result indicated that most of the students were highly interested in school in terms of family participation.

**Table 4 Level of Interest in School among Criminology Students**

Indicator	SD	Mean	Descriptive Level
Family Participation	0.79	3.52	High
Self-efficacy	0.62	3.65	High
Criminology in Society	0.69	3.77	High
Studies and Careers	0.69	3.67	High
<b>Overall</b>	<b>0.53</b>	<b>3.65</b>	<b>High</b>

There are four indicators of the level of interest in school of students. These indicators include family participation; self-efficacy; criminology in society; studies and careers described as high. This denotes that the students were highly interested with school particularly in Criminology. They intended to pursue studies in Criminology; learn more about Criminological careers and have an occupation related to the said field later on. This is a substantiation of the declaration of (Tella, 2017 and Kraft et. al., 2015) that interest is an important factor, because it can affect the learning process of criminology students, their academic performance and the reliability of a learning skill. This coincides to the declaration of (Karp & Frank, 2016) which stated that criminology graduates are likely to work in rehabilitation and corrections, customs, law enforcement, research and policy analysis, youth justice, criminal investigation, and the probation and parole board.

The data in Table 5.1 showed the correlation between the attitude toward school and interest in school of students. Generally, It can be perceived from the results that there was a significant positive strong relationship between the attitude toward school and interest in school of students as reflected in the table, the P-value that was less than 0.05 and correlation coefficient,  $r = 0.542$ . The null hypothesis, that there is no significant relationship between the attitude toward school and interest in school of students was therefore rejected. This meant that attitude toward school was

strongly related to interest in school of students, indicating that respondents who were highly positive toward school in terms of teaching; school image; loneliness in school; testing and feedback; reluctance and belongingness tend to be more interested in school.

Particularly, the data revealed that among attitude toward school indicators, only loneliness in school showed a non-significant relationship to family participation and criminology as their individual P-values are greater than 0.05.

**Table 5.1 Significance on the Relationship between Attitude toward School and Interest in School among Criminology Students**

Attitude toward School	Interest in School of Students				
	Family Participation	Self- efficacy	Criminology in Society	Studies and Careers	Overall
Teaching	.279** (.000)	.219** (.000)	.283** (.000)	.253** (.000)	<b>.343** (.000)</b>
School Image	.298** (.000)	.308** (.000)	.300** (.000)	.292** (.000)	<b>.394** (.000)</b>
Loneliness in School	.069 (.169)	.105* (.036)	.065 (.194)	.110* (.028)	<b>.113* (.024)</b>
Testing and Feedback	.289** (.000)	.312** (.000)	.266** (.000)	.293** (.000)	<b>.380** (.000)</b>
Reluctance	.101* (.043)	.191** (.000)	.180** (.000)	.204** (.000)	<b>.219** (.000)</b>
Belongingness	.297** (.000)	.316** (.000)	.374** (.000)	.266** (.000)	<b>.411** (.000)</b>
<b>Overall</b>	<b>.285** (.000)</b>	<b>.424** (.000)</b>	<b>.429** (.000)</b>	<b>.415** (.000)</b>	<b>.542** (.000)</b>

The investigation disclosed that there was a strong significant relationship among the attitude toward school with interest in school of students. This indicated that attitude toward school is highly connected with interest in school of students which indicates that those criminology students who were highly positive toward school in terms of teaching; school image; loneliness in school; testing and feedback; reluctance and belongingness lead to be more interested in school. Thus, the study found that there has been a close link between the interest in the subject and the attitude towards the school, and their mutual perception of the academic performance of the students of criminology and their attitude towards the school and interest in learning. This was not surprising as the students with much better attitude to school are bound to be more interested in learning and more frequently be engaged in studying, using better information processing styles in learning. This is affirmed by the study of (Snilstveit et al, 2016), criminology students like their teachers can boost their efforts and the value of academic performance by teaching strategy. On the other hand, if they don't like their teachers, their actions or the quality of their work would have little or no progress.

Shown in table 5.2 the test of relationship between student engagement and interest in school of criminology students with registered computed r- value of 0.505 with p-value which is equal to ,000 (significant). On the other hand, the data shows that p-value is smaller than 0.05 which implies that there is importance connection between student engagement and interest in school among criminology students.

In addition, behavioral engagement is correlated with family participation gained with registered computed r- value of .443 with p-value which is equal to ,000 (significant); self-efficacy with registered computed r- value of .433 with p-value which is equal to ,000 (significant); criminology in society with registered computed r- value of .480 with p-value which is equal to ,000 (significant); studies and careers with registered computed r- value of .365 with p-value which is equal to ,000 (significant). The overall results on the correlation between behavioral engagement and interest in school obtained a registered computed r- value of .566 with p-value which is equal to ,000 (significant). This implies that behavioural engagement has a strong correlation with interest in school of criminology students.

Analysing further, affective engagement is not significantly correlated with family participation with registered computed r- value of -.034 with p-value which is equal to .495 (non-significant); self-efficacy with registered computed r- value of -.047 with p-value which is equal to .347 (non-significant); criminology in society with registered computed r- value of -.025 with p-value which is equal to .617 (non-significant); studies and careers with registered computed r- value of .018, with p-value which is equal to .726 (non-significant). The overall result on the correlation between affective engagement and interest in school of criminology students obtained with registered computed r-value of -.029 with p-value which is equal to .564 (non-significant). It is therefore indicated that has no important connection between affective engagement and interest in school of criminology students.

As it also shown in table 5.2 that cognitive engagement was significantly correlated with family participation with registered computed r- value of 0.409 with p-value which is equal to .000 (significant); self-efficacy with registered computed r- value of 0.398 with p-value which is equal to .000 (significant); criminology in society with registered computed r- value of 0.426 with p-value which is equal to .000 (significant); studies and careers with registered computed r- value of 0.401 with p-value which is equal to .000 (significant). The overall result on the correlation between cognitive engagements gained with registered computed r- value of .537 with p-value which is equal to .000 (significant). This indicated that cognitive engagement has positive correlation with interest in school of criminology students.

**Table 5.2 Significance on the Relationship among Student Engagement and Interest in School among Criminology Students**

Student Engagement	Interest in School of Students				
	Family Participation	Self- efficacy	Criminology in Society	Studies and Careers	Overall
Affective Engagement	-.034 (.495)	-.047 (.347)	-.025 (.617)	.018 (.726)	-.029 (.564)
Behavioral Engagement	.443** (.000)	.433** (.000)	.480** (.000)	.365** (.000)	.566** (.000)
Cognitive Engagement	.409** (.000)	.398** (.000)	.426** (.000)	.401* (.000)	.537** (.000)
Overall	.384** (.000)	.368** (.000)	.413** (.000)	.369** (.000)	.505** (.000)

Data revealed that student commitment was importantly correlated with interest in school of students which indicates that respondents who are highly engaged in terms of behavioral and cognitive engagement tend to be more highly interested in school. The results could be further supported by (Broeckelman-Post, Tacconelli, Guzmán, Rios, Calero, and Latif, 2016) which expressed that interest in school and participation of students in criminology has been described as significant communication-related features related to student classroom performance, including learning outcomes and retention. Using criminology student identity and personality building, this academic study investigates the method of student aspects better understanding, promote interest and participation in the classroom.

Shown in table 5.3 is the correlation between academic self-concept and interest in school of students and the overall result gained with registered computed  $r$ - value of 0.568 with  $p$ -value which is equal to .000 (significant). The indication that academic self-concept has strong correlation with interest in school of criminology students.

In addition, data shows that academic confidence is directly correlated with family participation *with registered computed  $r$ - value of 0.288* with  $p$ -value which is equal to .000 (significant); self-efficacy with registered computed  $r$ - value of 0.383 with  $p$ -value which is equal to .000 (significant); criminology in society with registered computed  $r$ - value of 0.325 with  $p$ -value which is equal to .000 (significant); studies and careers with registered computed  $r$ - value of 0.388 with  $p$ -value which is equal to .000 (significant). The overall results on the correlation between academic confidence with interest in school obtained with registered computed  $r$ - value of .451 with  $p$ -value which is equal to .000 (significant). This indicated that academic confidence of criminology students is strongly correlated with interest in school.

As presented in table 5.3 that academic effort was significantly correlated with family participation obtained with registered computed  $r$ - value of 0.416 with  $p$ -value which is equal to .000 (significant); self-efficacy ( $r = 0.464$ ,  $p < 0.01$ ), criminology in society ( $r = 0.422$ ,  $p < 0.01$ ); studies and careers with registered computed  $r$ - value of 0.407 with  $p$ -value which is equal to .000 (significant). The overall results obtained a registered  $r$ -value of .560 with  $p$ -value which is equal to .000 (significant). The results implies that it is significantly related the academic effort with interest in school among criminology students.

**Table 5.3 Significance on the correlation among Academic Self-concept and Interest in School among Criminology Students**

Academic concept	Interest in School of Students				
	Self- Family Participation	Self- efficacy	Criminology in Society	Studies Careers and	Overall
Academic Confidence	.288** (.000)	.383** (.000)	.325** (.000)	.388** (.000)	.451** (.000)
Academic Effort	.416** (.000)	.464** (.000)	.422** (.000)	.407** (.000)	.560** (.000)
Overall	.395** (.000)	.475** (.000)	.419** (.000)	.466** (.000)	.568** (.000)

Study revealed that academic self-concept was strongly correlated with interest in school of students. Hence, the results presented above supports the study conducted by (Arghode et al., 2017), which conveyed that Academic performance was specifically correlated with the learning style of the sample of criminology students. This is a strong belief of the criminology students in the academic field or a certain anticipation of accomplishment. In general, criminology students perform the tasks as well as events in which they think proficient.

Presented in table 6 is the test regression, the researcher examined if there were possible influence relationships and data revealed that the influence is significant. When interest in school of student was regressed on the attitudes toward school, student engagement and academic self-concept, it generated an  $R^2$  of .471 as shown on Table 6. The ANOVA value of this regression was 117.477, significant at .000. It can be stated therefore that the combination of the three exogenous variables significantly influenced interest in school of student. The  $R^2$  of .471 indicated that 47.1% of the variance in interest in school of student was attributed to attitudes toward school, student engagement and academic self-concept. This meant further that 52.9% of the variation in interest in school of student was attributed to other variables not covered in this study. Examining further, the table showed that among the three exogenous variables, academic self-concept had the greatest contribution (Beta =0.371, P-value =.000) followed by student engagement with (Beta =0.359, P-value = .000) and the lowest was attitudes toward school (Beta =0.288, P-value =.000). All of the three variables, academic self-concept; student engagement and academic self-concept is significantly influenced interest in school of student.

**Table 6 Significance on the Influence of the Exogenous Variables on the Interest in School of Students**

Interest in School of Students					
Exogenous Variables		<i>B</i>	<i>B</i>	<i>T</i>	<i>Sig.</i>
Attitudes toward School		.288	.220	4.775	.000
Student Engagement		.359	.294	7.148	.000
Academic Self-concept		.371	.358	8.260	.000
R		.686			
R <sup>2</sup>		.471			
F		117.477			
P		.000			

In the singular capacities of the independent variables, it revealed that attitudes toward school and academic self – concept significantly influence towards the interest in school of students, which is our dependent variable. The result can be supported by the findings from the study conducted by (Snilstveit et al., 2016), which conveyed that when criminology students like their teachers can boost their efforts and the value of academic performance by teaching strategy. On the other hand, if they do not like their teachers, their actions or the quality of their work would have little or no progress. This is also affirmed by the study of (Arghode et al., 2017), which conveyed that academic confidence is the student's belief about performing a task at a particular level in order to attain a specific academic goal. It reflects a strong belief or sure expectation of success in an academic field. Generally, students perform those task and activities in which they feel competent.

Aggregately, the exogenous variables are affecting the endogenous variables significantly. This can be explained by the self-system model of motivational development (Skinner, Kindermann, Connell, & Wellborn, 2009). This model posits the interplay of an criminology seeks 'significance, 'self, 'engagement / disaffection' at a specific point of discussion. It is generally based on the view that the components of the self-system process template are not static 'characteristics; 'somewhat, they constitute processes that are fairly accessible to instructors, parents, and students. Generally, it is viewed that individual has his/her own self-appraisal about his/her capacity and ability that can definitely affect his/her interest on a certain task.

## VII. ESTABLISHING THE BEST STRUCTURAL MODEL FOR INTEREST IN SCHOOL OF STUDENT

This portion provided an analysis of the interrelationships among the variables of the study. The several hypothesized models were tested in an attempt to achieve an identified best fitting model. A discussion on the models and their implications for understanding the impact of the exogenous variables on endogenous variables performance were also presented. Four alternative models were tested in an attempt to obtain the best fit model of personal effectiveness. The summary of the findings of the goodness of fit measures of these five structural models is presented in Table 7. In identifying the best fitting model, all the indices included must consistently fall within the acceptable ranges. Chi-square/degrees of freedom value should be between 0 and 2, with its corresponding p-value greater or equal to 0.05. Root Mean square of Error Approximately value must be less than 0.05 and with registered p close value must be greater or equal to 0.05. The other indices such as Normed Fit Index, Tucker Lewis Index, Comparative Fit Index, and Goodness of Fit Index must be all greater than 0.90.

Furthermore, seen table 7 are the following; generated model 1 considered only the direct impact of academic self-concept; student engagement and academic self-concept to interest in school of student. It suggested a poor fit model to the data as all the index values did not fall within each criterion; generated model 2 suggested a poor fit model to the data as all the index values do not fall within each criterion; generated model 3 index values are in unacceptable range. All the index values hardly meet the criteria which indicate also a poor fit for the model; generated model 4 showed fit index for CMIN/DF and p-value did not meet the criteria which also indicate a poor fit for the model, lastly, generated model 5 presented as Figure 5.1 below is identified best fit model. It included academic self-concept; student engagement and attitudes toward school as the latent variables which are expected to have influence on the latent endogenous variable on interest in school of student. The model fitting was calculated as being highly acceptable. The Chi-square divided by the degrees of freedom of 1.330 with registered  $P > 0.05$ . This indicated a very good fit model of the study. This is also positively supported by RMSEA index of 0.029, which was less than 0.05, level of significance with its corresponding P-close value greater than 0.05. Like-wise, the other guides such as NFI, TLI and CFI were found to be consistently indicating a very good fit model as their values, all fall within each criterion.

It can also be garnered from the figure that all two factors of academic self-concept; three factors of attitudes toward school and all four factors of interest in school of students have strong interconnectedness with each other. As a result, the goodness of fit values changes in all indices and notably achieved the desired range for good fitting model. Examining closely, the model represents the causal relationship between (acd\_sel) academic self-concept and (stu\_int) interest in school of students as well as (att\_sch) attitudes toward school and (stu\_int) interest in school as represented by the single-headed arrows. It further shows that the latent variables as represented by an oval shapes are (acd\_sel) academic self-concept, (att\_sch) attitudes toward school and (stu\_int) interest in school of students. As to the observed variables, academic confidence (AC) and academic effort (AT) under (acd\_sel) academic self-concept are all included. The model also reveals that belongingness (BS); school image (SI) and teaching (TE) are all included in the model. The model also shows that family participation (FP), self-efficacy (SE), criminology in society (CS); studies and career (SC) under (stu\_int) interest in school of students are all included in the model. Moreover, residuals are represented by the symbol e are observed among all the indicators of (acd\_sel) academic self-concept; (att\_sch) attitudes toward school and (stu\_int) interest in school of students.

*Table 7 Summary of Goodness of Fit Measures of the Five Generated Models*

Model	P-value ( $>0.05$ )	CMIN / DF ( $0 < \text{value} < 2$ )	GFI ( $>0.95$ )	CFI ( $>0.95$ )	NFI ( $>0.95$ )	TLI ( $>0.95$ )	RMSEA ( $<0.05$ )	P-close ( $>0.05$ )
1	.000	8.731	.809	.672	.648	.605	.139	.000
2	.000	5.171	.866	.827	.796	.787	.102	.000
3	.000	6.057	.879	.814	.787	.759	.113	.000
4	.000	2.047	.973	.979	.959	.968	.051	.431
5	.089	1.330	.979	.993	.971	.989	.029	.962

**Legend:** CMIN/DF Chi Square/Degrees of Freedom

NFI – Normed Fit Index

GFI – Goodness of Fit Index

TLI – Tucker-Lewis Index

RMSEA – Root Mean Square of Error Approximation CFI – Comparative Fit Index



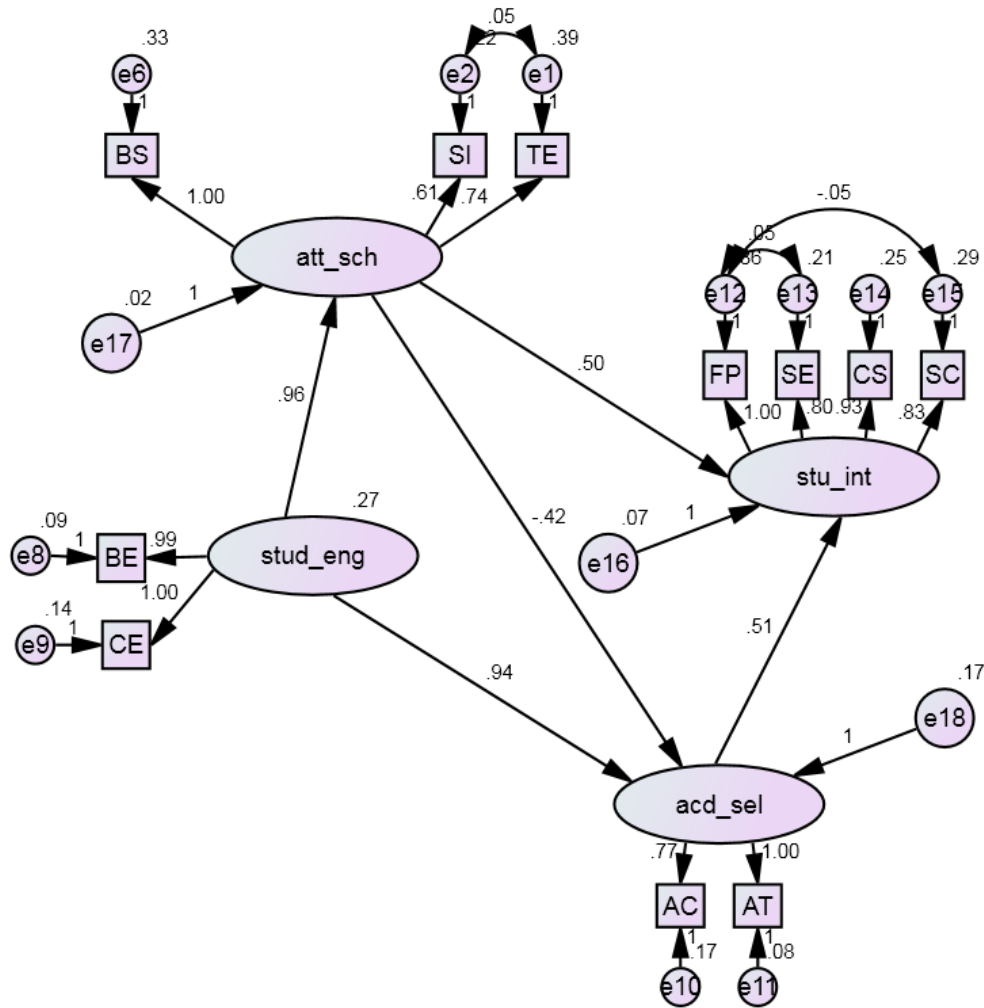


Figure 2

Legend:

*att\_sch* - Attitudes toward School  
*BS* - Belongingness  
*SI* - School Image  
*TE* - Teaching  
*stu\_eng* - Student Engagement  
*BE* - Behavioral Engagement  
*CE* - Cognitive Engagement

*acd\_sel* - Academic Self-Concept  
*AC* - Academic Confidence  
*AT* - Academic Effort  
*stu\_int* - Interest in School of Students  
*FP* - Family Participation  
*SE* - Self-Efficacy  
*CS* - Criminology in Society  
*SC* - Studies and Career

Generated model 5 satisfied the criteria for the best fit model. The model apparently showed the importance that all three factors of attitudes toward school; factors of academic self-concept; and all four factors of interest in school of students have strong interconnectedness with each other. Attitudes toward school has a direct association with interest in school of students; academic self-concept has a direct association with interest in school of students. The best fit model showed that only three out of six indicators from attitudes toward school and two indicators from academic self-concept were included.

These results can be further explained by the point of (Seker, 2016) that belongingness, school image and teaching are all factors affecting attitudes toward school and interest in school of students. The result of the study shows that factors such as student affiliation, community participation in education, the quality of teaching and learning processes in the classroom have varying effects on criminology student academic performance and attitudes towards college. Furthermore, expectations and behavior research of criminology students have shown several factors that affect college attitudes. Factors such as parental behavior, school affiliation, school bonding, peer relationship, teacher likeness, friendship, teaching atmosphere have an impact on student attitudes and schooling.

These results can be further explained by the point of (Guay, Chanal, Ratelle, Marsh, Larose, & Boivin, 2010) that academic confidence and academic effort are all factors affecting academic self-concept and interest in school of students. The result was further highlighted the study found that criminology students considered themselves academically competent to earn higher grades because of their academic up-to-dateness-concept led them to be more efficiently inspired in the classroom.

This result is consistent with the claim of (Fishbein and Azjen, 1975) proposition on the value-expectancy model supports the conceptual configuration of the study. It is stressed that an individual's attitude direct his/her intended behavior that can positively and negatively influence the outcome at varying magnitudes. A positive and negative attitude of a person affects his/her interest to engage in a certain phenomenon or thing (Fishbein and Ajzen 1975). Furthermore, the ABC model also supports the study of (Ajzen, 1993). According to this proposition, a students' interest in school is amalgamated by three distinct components including, affect (a) conduct (b) cognitive ability (c). feelings and emotions touch students' disposition. Behavior on the other hand is considered to be an active element comprising of personality traits to act in a specific way to a specific interest and cognition being the performative aspect is the belief and attitudes of criminology students hold about a particular interest. The distinct mechanisms interplay to define how an individual reflect his/her interest. Self-concept theory also supports the result of the study (Rogers, 1947). It can be understood that self-concept is a perception that indicates and directs an individual on how he/she reflects interest on particular phenomenon or object.

## REFERENCES

1. Allensworth, E. M., & Luppescu, S. (2010). *Why do students get good grades or bad ones? The influence of the teacher, class, school, and student*. Retrieved from <https://consortium.uchicago.edu/publications/>
2. Arghode, V., Brieger, E. W., & McLean, G. N. (2017). *Adult learning theories: implications for online instruction*. *European Journal of Training and Development*, 41(7), 593–609. <https://doi.org/10.1108/EJTD-02-2017-0014>
3. Bakker, A. B., Vergel, A. I. S., & Kuntze, J. (2015). *Student engagement and performance: A weekly diary study on the role of openness*. *Motivation and emotion*, 39, 49-62.
4. Banerjee, P. A. (2016). *A systematic review of factors linked to poor academic performance of disadvantaged students in science and maths in schools*. *Cogent Education*, 3(1), 1–17. <https://doi.org/10.1080/2331186X.2016.1178441>
5. Bond, L., Butler, H., Thomas, L., Carlin, J., Glower, S., Bowes, G., & Patton, G. (2013). *Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes*. *Journal of Adolescent Health*, 40, 357.
6. Broeckelman-Post, M. A., Tacconelli, A., Guzmán, J., Rios, M., Calero, B., &
7. Latif, F. (2016). *Teacher misbehavior and its effects on student interest and engagement*. *Communication Education*, 65(2), 204-212. <https://www.tandfonline.com/doi/abs/10.1080/03634523.2015.1058962>
8. Busemeyer, M. R., & Garritzmman, J. L. (2017). *Academic, vocational or general? An analysis of public opinion towards education policies with evidence from a new comparative survey*. *Journal of European Social Policy*, 27(4), 373–386. <https://doi.org/10.1177/0958928717728713>
9. Candeaia, A., Franco, G., Mendes, P., & Rebelo, N. (2010). *Student' attitudes and motivation toward learning and school – Study of exploratory models about the effects of socio-demographics, personal attributes and school characteristics*. Retrieved from <https://www.researchgate.net/publication/209270454> on July 10, 2019
10. Chen, S. C., Yang, S. J. H., & Hsiao, C. C. (2016). *Exploring student perceptions, learning outcome and gender differences in a flipped mathematics course*. *British Journal of Educational Technology*, 47(6), 1096–1112. <https://doi.org/10.1111/bjet.12278>

11. Cleary, T. J., & Kitsantas, A. (2017). Motivation and self-regulated learning influences on middle school mathematics achievement. *School Psychology Review*, 46(1), 88–107. <https://doi.org/10.17105/spr46-1.88-107>
12. Creswell, J. (2012). *Educational research: Planning, conducting, and evaluating qualitative and quantitative research*, 4th Ed., Toronto: Pearson
13. Cupp, Garth Meichel (2015). *The impact of length of engagement in after-school stem programs on middle school girls*. Retrieved from [https://repository.asu.edu/attachments/150488/content/Cupp\\_asu\\_0010E\\_14718.pdf](https://repository.asu.edu/attachments/150488/content/Cupp_asu_0010E_14718.pdf)
14. Doménech-Betoret, F., Abellán-Roselló, L., & Gómez-Artiga, A. (2017). Self-efficacy, satisfaction, and academic achievement: The mediator role of students' expectancy-value beliefs. *Frontiers in Psychology*, 8(JUL), 1–12. <https://doi.org/10.3389/fpsyg.2017.01193>
15. Eccles, J. S., & Wang, M. Te. (2016). What motivates females and males to pursue careers in mathematics and science? *International Journal of Behavioral Development*, 40(2), 100–106. <https://doi.org/10.1177/0165025415616201>
16. Erwin, P. (2015). *Attitudes and persuasion*. London: Psychology Press. <https://doi.org/10.4324/9781315787855>
17. Fardouly, J., Willburger, B. K., & Vartanian, L. R. (2018). Instagram use and young women's body image concerns and self-objectification: Testing mediational pathways. *New Media and Society*, 20(4), 1380–1395. <https://doi.org/10.1177/1461444817694499>
18. Ferraro, S. (2017). An analysis of students' academic self-ratings and its relationship to student engagement and educator influence. Retrieved from <http://librarydb.saintpeters.edu:8080/handle/123456789/297>
19. Fishbein, M. & Ajzen, Icek. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*. Retrieved from <http://worldcat.org/isbn/0201020890>
20. Fong Lam, U., Chen, W. W., Zhang, J., & Liang, T. (2015). It feels good to learn where I belong: School belonging, academic emotions, and academic achievement in adolescents. *School Psychology International*, 36(4), 393–409.
21. Gerardi, S. (2018). Academic self-concept as a predictor of academic success among minority and low-socioeconomic status students. *Journal of College Student Development*, 31, 402–407.
22. Guay, F., Chanal, J., Ratelle, C. F., Marsh, H. W., Larose, S., & Boivin, M. (2010). Intrinsic, identified, and controlled types of motivation for school subjects in young elementary school children. *British Journal of Educational Psychology*, 80, 711–735.
23. Harackiewicz, J. M., Smith, J. L., & Priniski, S. J. (2016). Interest matters: The importance of promoting interest in education. *Policy insights from the behavioral and brain sciences*, 3(2), 220–227. [doi:10.1177/2372732216655542](https://doi.org/10.1177/2372732216655542)
24. Hidi, S. (2015). Revisiting the role of rewards in motivation and learning: Implications of Neuroscientific Research. <https://doi.org/doi:10.1007/s10648-015-9307-5>
25. Karp, D. R., & Frank, O. (2016). Anxiously awaiting the future of restorative justice in the united states. *Victims and offenders*, 11(1), 50–70. <https://doi.org/10.1080/15564886.2015.1107796>
26. Katrin, A., Marsh, H. W., Pekrun, R., Lichtenfeld, S., Murayama, K., & Vom Hofe, R. (2017). Math self-concept, grades, and achievement test scores: Long-term reciprocal effects across five waves and three achievement tracks. *Journal of Educational Psychology*, 109(5), 621–634. <https://doi.org/10.1037/edu0000163>
27. Keller, M. M., Neumann, K., & Fischer, H. E. (2017). The impact of physics teachers' pedagogical content knowledge and motivation on students' achievement and interest. *Journal of Research in Science Teaching*, 54(5), 586–614. <https://doi.org/10.1002/tea.21378>
28. Kpolovie, P. J., Joe, A. I., & Okoto, T. (2014). Academic achievement prediction: Role of interest in learning and attitude towards school. *International journal of humanities social sciences and education (IJHSSE) Volume 1, Issue 11, November 2014, PP 73-100 ISSN 2349-0373 (Print) & ISSN 2349-0381 (Online) www.arcjournals.org*
29. Kraft, M. A., Marinell, W. H., & Darrick Yee. (2015). School organizational contexts, teacher turnover, and student achievement: Evidence from panel data. *Research Article*, 53(5), 1411–1449. <https://doi.org/https://doi.org/10.3102%2F0002831216667478>
30. Leonard, S., Stiles, A. A., & Gudiño, O. G. (2016). School engagement of youth Investigated by Child welfare services: associations with academic achievement and mental health. *School Mental Health*, 8(3), 386–398. <https://doi.org/10.1007/s12310-016-9186-z>

31. Linvill, Darren (2014). *Student Interest and Engagement in the Classroom: Relationships with Student Personality and Developmental Variables*, *Southern Communication Journal*, 79:3, 201-214, DOI: 10.1080/1041794X.2014.884156
32. Loeb, S., Dynarski, S., McFarland, D., Morris, P., Reardon, S., & Reber, S. (2017) *Descriptive analysis in education: A guide for researchers* (NCEE 2017-4023). Washington, DC: U.S. Department of Education Sciences, National Center for Education Evaluation and Regional Assistance.
33. Marsh, H. W., Pekrun, R., Murayama, K., Arens, A. K., Parker, P. D., Guo, J., & Dicke, T. (2018). *An integrated model of academic self-concept development: Academic self-concept, grades, test scores, and tracking over 6 years*. *Developmental Psychology*, 54(2), 263–280. <https://doi.org/10.1037/dev0000393>
34. Martin, J., & Torres, A. (2016). *User's guide and toolkit for the surveys of student engagement: The high school survey of student engagement (hssse) and the middle grades survey of student engagement (MGSSE) I. What is student engagement and why is it important?* 37, 1. Retrieved from <https://www.nais.org/Articles/Documents/Member/2016 HSSSE Chapter-1.pdf>
35. Matovu, M. (2016). *A structural equation modelling of the academic self-concept scale*. *International Electronic Journal of Elementary Education*, 6(2), 185–197.
36. McGee, T. R., & Mazerolle, P. (2017). *Developmental and life-course criminological theories. Developmental and Life-Course Criminological Theories*, pp. 1–508. <https://doi.org/10.4324/9781315094908>
37. Miller-Cotto, D., & Byrnes, J. P. (2016). *Ethnic/racial identity and academic achievement: A meta-analytic review*. *Developmental Review*, 41(September 2016), 51–70. <https://doi.org/10.1016/j.dr.2016.06.003>
38. Muenks, K., Wigfield, A., Yang, J. S., & Neal, C. R. O. (2017). *How true is grit? Assessing its relations to high school and college*. *Journal of Educational Psychology*, 109(5), 599–620. <https://doi.org/10.1037/edu0000153>
39. Nayir, F. (2017). *The Relationship between Student Motivation and Class Engagement Levels*. *Eurasian Journal of Educational Research*. 17. 59-78. 10.14689/ejer.2017.71.4.
40. Olson, C., & Kemery, K. (2019). *Voice Report*. 44.
41. Osher, D., Kidron, Y., Brackett, M., Dymnicki, A., Jones, S., & Weissberg, R. P. (2017). *Advancing the science and practice of social and emotional learning*. *Review of Research in Education*, 40(1), 644–681. <https://doi.org/10.3102/0091732x16673595>
42. Renninger, K. (2016). *The power of interest for motivation and engagement*. New York, NY: Routledge.
43. Rogers, C. R. (1947). *Some observations on the organisation of personality*. *American Psychologist*, 2, 358-368.
44. Schraw, G., & Lehman, S. (2001). *Situational interest: A review of the literature and directions for future research*. *Educational Psychology Review*.
45. Şeker, H. (2016). *Developing a questionnaire on attitude towards school*. *Learning Environments Research*, 14(3), 241–261. <https://doi.org/10.1007/s10984-011-9096-9>
46. Skinner, E. A., Kindermann, T. A., Connell, J. P., & Wellborn, J. G. (2009). *Engagement as an organizational construct in the dynamics of motivational development*. In K. Wentzel, & A. Wigfield (Eds.), *Handbook of motivation in school* (pp. 223–245). Mahwah, NJ: Erlbaum.
47. Snilstveit, B., Stevenson, J., Menon, R., Phillips, D., Gallagher, E., Geleen, M., Jimenez, E. (2016). *The impact of education programmes on learning and school participation in low- and middle-income countries*. (September 2016). Retrieved from <https://doi.org/10.23846/SRS007>
48. Tella, A. (2017). *Teacher variables as predictors of academic achievement of primary school pupils mathematics*. *International Electronic Journal of Elementary Education*, 1(1), 16-33.
49. Thomas W.H. Ng (2017). *Can idiosyncratic deals promote perceptions of competitive climate, felt ostracism, and turnover?* *Journal of Vocational Behavior*, 99, 118–131.
50. Tran, A. T. P., & Von Korflesch, H. (2018). *A conceptual model of social entrepreneurial intention based on the social cognitive career theory*. *Asia Pacific Journal of Innovation and Entrepreneurship*, 10(1), 17–38. <https://doi.org/10.1108/apjie-12-2016-007>.