

Balasio & Tan, 2020

Volume 6 Issue 2, pp. 01-21

Date of Publication: 15th July 2020

DOI- <https://doi.org/10.20319/pijss.2020.62.0121>

This paper can be cited as: Balasio, C. L. & Tan D. A., (2020). Predictors of Performance of Central Mindanao University Laboratory High School Students. *PEOPLE: International Journal of Social Sciences*, 6(2), 01-21.

This work is licensed under the Creative Commons Attribution-NonCommercial 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

PREDICTORS OF PERFORMANCE OF CENTRAL MINDANAO UNIVERSITY LABORATORY HIGH SCHOOL STUDENTS

Carmela Llagas Balasio

Faculty, College of Education, Central Mindanao University, University Town, Musuan, 8710
Bukidnon, Philippines
carmelabalasio@cmu.edu.ph

Denis Abao Tan

Faculty, College of Education, Central Mindanao University, University Town, Musuan, 8710
Bukidnon, Philippines
denistan@cmu.edu.ph

Abstract

Several factors affect the performance of students. This investigation was conducted to find out the predictors of performance among students in the Central Mindanao University Laboratory High School (CMULHS). Results showed that CMULHS students performed well in English, Mathematics and Science in their elementary years. Their parents were actively involved in their children's school activities. They have slightly positive attitude towards schooling, fairly good study habits, highly motivated to study, and attributed their achievement for their efforts. Almost one-third of the students were not qualifiers of the University Laboratory High School Admission Test (ULHSAT). The proportion was an offshoot of the Board of Regents Resolution approving the admission of children of employees of the university. All variables included in this investigation were positive correlates of students' performance except for gender. The relationship ranged from weak positive to moderately high positive relationship. Regression

analysis indicated that 57.7% of students' performance was accounted for by all the variables included in this research investigation. The rest of the predictors of students' performance were Grade 6 English Grade, Grade 6 Math Grade, parental involvement, school graduated from, attribution, self-efficacy and motivation. Stepwise linear regression analysis showed that the best predictor of students' performance was the admission rating (ULHSAT rating) of the students with 36.6% coefficient of determination.

Keywords

Performance, Previous Academic Achievement, Parental Involvement, Admission Rating

1. Introduction

The Central Mindanao University Laboratory High School (CMULHS) is a laboratory school of the teacher education programs of the College of Education, College of Home Economics and College of Agriculture. It offers pure science curriculum since 2006 when the Dologon National High School was established by the Department of Education. By virtue of RA 10533 otherwise known as Enhanced Basic Education Act of 2013 and through BOR Res. No. 30, s. 2013, CMULHS offers Junior High School Science Curriculum alongside DepEd in 2013.

CMULHS operates with selective admission since it was established. Only qualifiers of the University Laboratory High School Admission Test (ULHSAT), conducted by the Central Mindanao University College Admission Test Board (CMUCAT), are admitted to the curriculum. Only when BOR Res. No. 10-A s. 2010 was passed by the Board of Regents that CMULHS admitted students who were non-ULHSAT qualifiers. These are children of employees or children of those parents who are connected with partner agencies of Central Mindanao University (CMU) with ULHSAT score of at least 60.

The unit has given much weight on the admission (ULHSAT) rating as the only admission requirement of students since its operation. But with this BOR resolution, faculty and staff find this sole admission requirement insufficient to ensure students success in a science curriculum for the past four years of its implementation.

The scientific endeavor hoped to determine the predictors of performance among selected students in CMULHS. Also, it would serve as basis for admission policy revision or modification as it tries to identify the variables that influence performance of the students in the

unit. As the aforementioned BOR resolution is on its fifth year of implementation next school year, it is just fitting that a research be conducted to determine the factors that predict success of students in a science curriculum.

Numerous studies were already undertaken to shed light on the factors that would affect students' performance. Since time immemorial, teachers are doing its best to come up with innovative teaching approaches, methods, strategies and techniques that would enhance students' academic performance. With the vast and very rich literature on academic performance of the students, one could hardly say that there exist universal truths about the factors that influence these phenomena. One can barely imagine that every set of respondents would provide difficult results even if correlates under investigation where almost the same.

Nevertheless, the researchers felt the urgent need to have a solid background on the predictors of students' performance in this one unique laboratory high school especially that its admission is selective which is only based on the admission results. Needless to say that result would be similar to the previous works. However, the researchers were inspired by the thought that the findings of this research will be utilized as bases for policy revision of the school and hence, a rigid and thorough investigation of these variables should be conducted.

1.1 Objectives of the Study

This research investigation attempted to determine the predictors of academic performance among selected students of CMULHS for SY 2015-2016. Also, it would become basis of the policy makers in revising the unit's admission policy.

Specifically, the study aimed to:

1. identify the profile of the students in terms of:
 - a. gender;
 - b. type of school graduated from;
 - c. ULHSAT rating;
 - d. grades in Grade 6 in:
 - c.1 English;
 - c.2 Mathematics; and
 - c.3 Science.;
 - e. average grade in Grade 6;
2. determine the respondents' parental involvement and support;

3. find out the level of the students psychological factors in terms of:
 - a. Attitude towards schooling at CMULHS;
 - b. Study habits;
 - c. Motivation;
 - d. Self-efficacy; and
 - e. Attribution.
4. ascertain the academic performance of the selected students in terms of their general weighted average and their grades in the following subject areas:
 - a. English;
 - b. Mathematics; and
 - c. Science.
5. relate students' academic performance and the following variables:
 - a. Profile;
 - b. Parental involvement and support; and
 - c. Students' psychological traits.
6. predict students' performance with the following independent variables:
 - a. Profile;
 - b. Parental involvement and support; and
 - c. Students psychological traits.

2. Review of Related Literature

In 2005, Sunitha conducted a study among 240 students from aided and unaided co-educational high schools of Dharwad City in India on their academic learning environment. The collected data from different administering home learning environment scale was developed by the researcher and the academic achievement was the average percentage marks of the students from previous year and two semesters of the current year. Test for difference revealed that there was no significant different in academic achievement between boys and girls. Educational attainment of parents was found to have positive and significant relationship with student academic achievements. The study of Sunitha is somewhat different from the present study since performance in this case is regarded as students' general weighted average in all subjects in SY 2015-2016.

In 2006, the effect of motivation, family environment, and student characteristics on academic achievement was studied by Halawah. Three hundred eighty-eight (388) secondary students from Abu Dhabi district in United Arab Emirates with 193 male and 195 female students were taken as samples of the study. The academic achievement was the Grade point average of the students. Similar to Sunitha (2005), Halawah (2006) found that gender resulted to no significant difference in academic achievement of the students. However, this result was contradicted by the longitudinal study that was conducted by Deary et al. (2004) which examine the association between psychometric intelligence and educational achievement. In this investigation they found that girls performed better than the boys. These sample comprised 70,000 school students of England. Students' scores from the national public examination was considered their academic achievement. The results indicated differences in the academic achievement between boys and girls.

On that same year, Bruni et al. (2006) tried to explore the association among academic achievement, demographic profile and psychological factors of 380 high school students in Italy with school achievement index as measurement used to determine student academic achievement. Results showed significant difference in the academic achievement between male and female students. Females have higher academic achievement than males.

Moreover, Freiss and Franova (2006) explored the association between depressive symptoms, academic achievement and intelligence of 635 school students with 304 boys and 331 girls. Wechsler's intelligence scale for children was used to determine student IQ while grade point average was taken as students' achievement. The findings revealed that boys and girls do not differ in academic achievement.

Waters et al. (2006) studied medical students performance and identified if they significantly depending on where they lived. From 575 medical students in two settings: rural and urban learning in Australia, it was noted that their learnings do not differ significantly. The study was supported by Nuthana (2007) when she carried out a gender analysis of student academic achievement in Karnataka. Six hundred (600) students including 325 boys and 275 girls were taken as samples of the study. Academic achievement was measured as the average grades of students for the two (2) previous years. The findings indicated that boys and girls performed comparably. However, significant difference in academic achievement of urban and

rural students was noted with urban students had higher academic achievement than rural counterparts.

Two years after, Leeson et al. (2008) studied 639 high school students of New South Wales, Australia on their cognitive ability, personality and academic performance. Results showed that girls performed better than boys. It was noted that there is a unique role of gender play in predicting academic achievement. This result opposed the previous findings of researchers.

A study on culture and achievement motivation was conducted by Navarrete et al. (2007) among 149 high school students of USA in California. Data were collected by floating culture value orientation and attribution-emotion scale to the students. The grade point average was considered as student academic achievement. Socio-economic status and parent's educational attainment had been found to influence academic achievement of the students of both the cultures.

An investigation on the impact of motivation on academic achievement in mathematics was conducted by Tella (2007). Among the 450 secondary school students of both sexes drawn from ten schools of Ibadan, data collected from achievement test in mathematics as a measure of academic achievement indicated that there was a significant difference in the academic achievement in mathematics between male and female. Male students have better achievement in mathematics. This finding was contradicted by Chaturvedi (2009) when he found that girls scored significantly higher than boys. Findings of Jackson et al. (2006) supported this claim.

In 2009, Naderi et al. investigated the association among intelligence, creativity, self-esteem and academic achievement of 53 Iranian undergraduate students in Malaysian universities. Results showed no significant gender difference in academic achievement of the students. But Umunadi (2009) contradicted this result when his study showed that males performed better than their female counterparts. It was also found that urban students performed better than their rural counterparts. With the above mentioned researches, it was noted that result varied. There was no more general rule that one sex group is better than the other.

A year later, empirical predictors of poor academic performance was investigated by Bonga (2014). Two hundred high school students of Zimbabwe were interviewed and floated with questionnaire. The findings showed male students significantly performed better and that education of parents and their involvement significant influence on academic achievement of the

students. However, this finding was negated by Muola (2010) who studied about the relationship between standard eight pupils' academic achievement motivation and home environment. With 235 standard eight Kenyan pupils from six urban and rural primary schools from Machakos district, it was found that there was a low but positive relationship (0.15) between parents' educational qualification and student academic achievement. While Sarsani and Ravi (2010) found a significant difference between the mathematics scholastic achievement of the boys and girls in favor with girls. Again, the above findings were opposed by Asthana (2011) on the fact that girls perform better than boys. Consequently, the researches on academic achievement and performance added support or contradiction to recent findings (Bahago, 2011).

Figure 1 below illustrates the relationship between the independent variables and the dependent variables in this study.

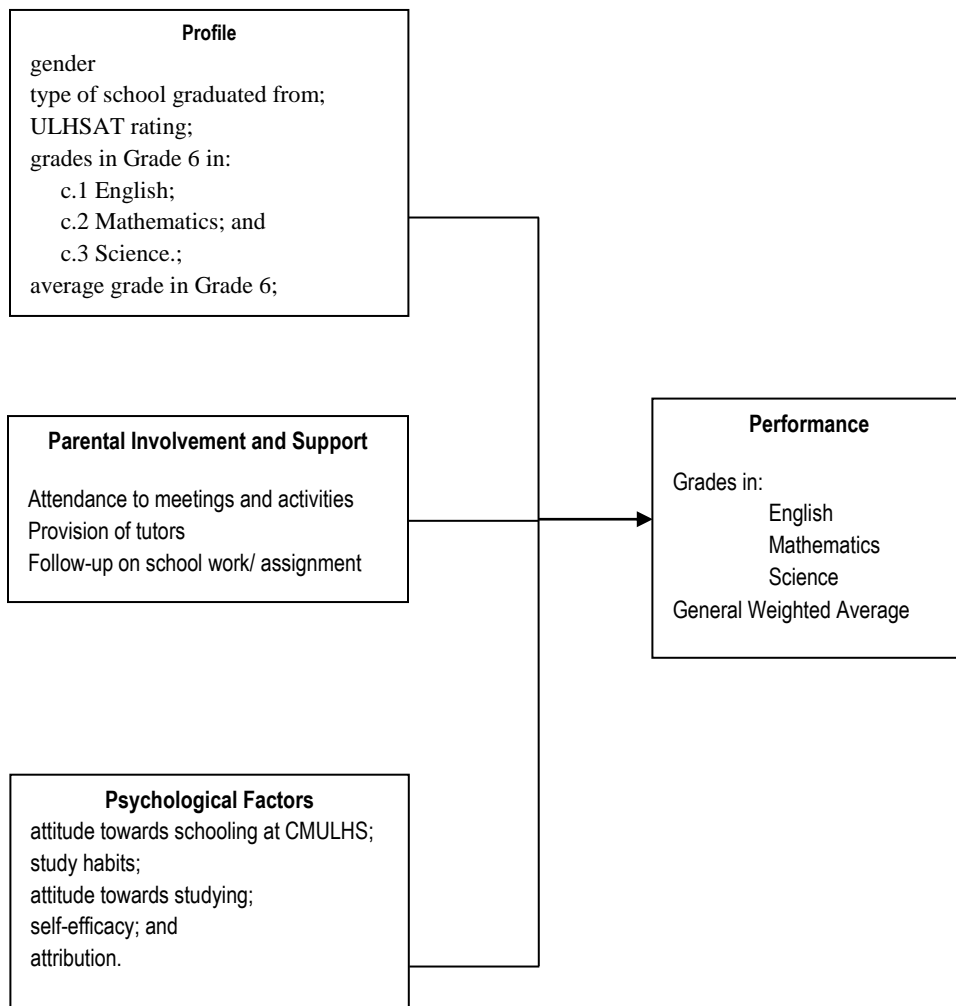


Figure 1: Research Paradigm showing the relationship of the variables.

3. Methodology

The study was conducted at CMU Laboratory High School, College of Education, Central Mindanao University, University Town, Musuan, Bukidnon, Mindanao, Philippines. The respondents of this study were all students of the CMULHS, College of Education, CMU who are officially enrolled during the SY 2015 – 2016 and who were admitted to the high school through BOR Res. No. 10-A, s. 2010 and through Presidential Discretion. There will be respondents from Grade 7 to Grade 10 with varying number. The list of respondents was secured from the office of the Records-in-charge and the secretary.

This proposed study made use of voluminous secondary data on respondents' academic performance from CMULHS records-in-charge. Questionnaires were floated, students were interviewed and observation was conducted to determine and triangulate the data gathered from the respondents in all independent variables included in the study. These data were coded, encoded and analyzed to obtain information in order to answer the questions put forward for this investigation.

The data was treated using the descriptive statistics such as averages, weighted means, frequency counts, and percentages to describe the variables under study. Pearson-product moment correlation was used to establish relationships between the dependent and independent variables. Regression Analysis was utilized to determine the predictors of academic performance.

3.1 Research Limitations

This investigation was limited only to the students of the Central Mindanao University Laboratory High School. Results of this study may be utilized as basis for policy revision of the said laboratory high school. This investigation may be replicated for the next years especially that the Philippines implemented the enhanced basic education curriculum and it was still in the transition when this study was conducted.

4. Results and Discussion

The presentation of the results of this study is arranged logically as it appears in its objectives as follows: profile of the respondents, parental involvement, psychological factors; performance of the students; correlations between the independent variables and academic performance; and predictors of students' academic performance.

4.1 On Students' Profile

Table 1 presents the profile of the CMULHS students who are officially enrolled in SY 2015-2016. It shows that there were 210 (39%) males and 328 (61%) females who were involved in the study. Two hundred eighty one (281, 52.2%) of these students graduated from public elementary schools while the remaining 257 (47.8%) were from private schools. The mean ULHSAT rating of the students is 89.48 with a standard deviation of 21.8529. This indicates that the students belong to a moderate average group; however, their scores are not clustered around the mean, indicating heterogeneity.

The mean Grade 6 grades of the students in English, Mathematics, and Science are 90.41, 89.65 and 90.04, respectively. The measure of variability indicates that the data is somewhat clustered around the mean indicating homogeneity of students performance in the indicated subjects.

Table 1: Profile of the respondents

Profile	Male	%	Female	%	Total
Gender	210 (39%)	39%	328 (61%)	61%	538
Type of School	Public		Private		
	281	52.2%	241	44.8	538
ULHSAT Rating	Mean	Percentile	SD		
	89.48	75.00	21.8529		
Grade 6 Grades in	Mean		SD		
English	90.41		4.1308		
Mathematics	89.65		4.9306		
Science	90.04		4.4130		
GWA	91.99		35.6105		

The GWA of the students is 91.99 with standard deviation of 35.6105 showing good academic performance of the group but were scattered indicating heterogeneity of the group performance.

Results specify that CMULHS students enrolled in SY 2015-2016 were mostly females. Majority of them graduated from public elementary schools with average rating in the admission examination. They performed on the average level in English, Mathematics and Science. And they were diverse in academic performance in terms of their GWA in Grade 6.

4.2 On Parental Involvement and Support

Table 2 reflects the mean and standard deviation of the respondents' parental involvement in the different benchmark statements which are school related. Parents supported their children in all tasks, activities and responsibilities rank first with mean equal to 4.29 and a standard deviation of 1.0360. This statement implies that parents of CMULHS were very supportive to their students' school affairs. More so, parents never fail to assist their children with their school tasks and encourage them to study hard every day as the 2nd in rank.

Table 2: *Mean and Standard Deviation of Respondents' Parental Involvement*

Statement	Mean	SD
My parents:		
Attend meetings	4.17	0.9928
Provide me with tutors	2.18	1.2869
Find time to assist me in my assignment	2.87	1.2367
Ask me on my school activities	3.74	1.0929
Visit me at school	2.45	1.1839
Join school activities when their presence are required	4.03	1.1813
Initiate communication with my teacher	3.15	1.1999
Encourage me to study hard everyday	4.21	1.0507
Are aware of my school activities	4.03	1.0450
Support me in all my school tasks, activities, and responsibilities	4.29	1.0360
Over-all	3.37	0.9524

Among the benchmark statements, the lowest in rank includes provision of tutors and parents visit at school with mean equal to 2.18 and 2.45, respectively. Corresponding measure of

variations, $sd=1.2869$ and 1.1839 , reflects that the aforementioned statements holds true to all of the students in the unit. This is indicative of the confidence that parents shown to their children in coping up with school daily tasks. Holistically speaking, CMULHS parents were actively involved in their children’s school related activities as reflected by its mean 3.37 and $sd=0.9524$.

4.3 On Students’ Psychological Factors

Table 3 depicts the level of mean and standard deviation of the psychological actors of the respondents. Among the factors included in the investigation, students rated very high on their motivation, both intrinsic and extrinsic, with mean equals 4.92 and 4.51 , respectively. Rank second is their self-efficacy beliefs with mean equal to 4.69 and $sd=1.2156$. These data show that respondents were highly motivated to learn and study in CMULHS. They also had high beliefs on their ability to succeed in specific situations or accomplish a task.

Table 3: *Mean and Standard Deviation of Respondents’ Psychological Factors*

Factors	Mean	SD
Attitude towards schooling	3.35	0.6262
Study Skills and habits	3.39	0.7077
Motivation		
Intrinsic	4.92	1.3039
Extrinsic	4.51	1.4764
Self-efficacy Beliefs	4.69	1.2156
Attribution		
Ability	3.17	0.8851
Control	2.17	0.9862
Effort	3.93	0.9438
Luck	2.46	1.0609

Respondents rated lowest in their attribution to success and failure. Specifically, rank lowest were attribution to control ($\bar{x} = 2.17$, $sd=0.9862$) and luck ($\bar{x} = 2.46$, $sd=1.0609$). Students viewed these factors similarly as evidenced by a small value of dispersion ($sd=0.9862$ and $sd=1.0609$). The findings imply that respondents tend to characterize their success or failure to

events beyond their control and out of fortune. They attributed their success and failure to their efforts ($\bar{x} = 3.93$) and ability ($\bar{x} = 3.17$), instead.

4.4 On Students' Academic Performance

Table 4 presents the CMULHS students' academic performance in SY 2015-2016. The general weighted average (GWA) of the students was computed using ordinary weighted mean formula with each subject having 1-unit credit except for Science which has 2-unit credit. As shown in the table, students performed best in Values Education subjects with components of attendance, behavior and participation aside from the usual written daily examinations, journals and periodical test included in the grading system for almost all of the subjects. Second and third in rank are MAPEH and Mathematics A with mean grades equal to 87.42 and 87.36, respectively. However, they performed lowest in Mathematics, Science A and Science subjects with mean grades equal to 82.42, 84.01, and 84.53, respectively. However, the mean standard deviation score for each subject shows that students' performance was so dispersed during the school year as evidenced by its high values. This is also true in terms of their over-all mean for the GWA with values 85.39 and 7.1314 for mean and standard deviation, respectively. The disparity of students' GWA is high as shown in the high standard deviation value. This implies further that CMULHS populace is a heterogeneous group.

On the other hand, the mean GWA of the students specifies that respondents were more or less good performing students. Despite diversity in their performance, a mean of 85.39 is relatively high. This means that this group of students was one of those highly selected fellows because of their good performance.

Table 4: *CMULHS Student's Academic Performance*

Subject Areas	Mean	Std. Deviation
Science	84.53	3.4781
Mathematics	82.42	4.6564
Filipino	86.37	4.0145
English	86.07	3.3361
Social Science	85.84	3.8832
Science A	84.01	4.1332
Technology and Livelihood Education (TLE)	85.20	4.7832
Mathematics A	87.36	2.9441
MAPEH	87.42	3.4241
Values Education	90.79	2.2900

General Weighted Average (GWA)	85.39	7.1314
--------------------------------	-------	--------

4.5 Relationship between Students' Performance and the Independent Variables

Table 5 presents the relationship between students' academic performance as measured by their GWA and the independent variables included in this study. It shows that all independent variables have significant positive association with performance except for gender and Grade 6 GWA.

The correlation ranges from weak positive ($r=0.121$, school graduated from) to almost perfect positive relationship ($r=0.933$, Grade 6 Science grade). These positive relationships imply that as any of the independent variables increases, then students' academic performance increases as well. To be specific, high previous grade of students in Science, Mathematics, and English would mean high students' performance in high school. Also, positive attitude towards schooling, high parental involvement, better study habits, high motivation and self-efficacy beliefs, and appropriate attribution are associated with better performance of students in secondary. However, gender and Grade 6 GWA do not associate with performance.

Table 5: *Relationship between Students' Performance and Independent Variables*

	GWA	Gender	SGF	UR	G6E	G6M	G6S	G4GWA	PI	ATS	SH
GWA	1										
Gender	0.048	1									
SGF	0.121**	0.024	1								
UR	0.300**	0.031	0.091*	1							
G6E	0.331**	0.144**	0.461**	0.483**	1						
G6M	0.271**	0.084	0.311**	0.438**	0.751**	1					
G6S	0.933**	0.036	0.092*	0.560**	0.766**	0.690**	1				
G6GWA	0.010	0.065	0.100*	0.086**	0.084	0.008	0.068	1			
PI	0.239**	0.027	-0.020	-0.042*	-0.055	-0.021	-0.016	-0.045	1		
ATS	0.334**	-0.004	-0.064	-0.107*	-0.056	-0.045	0.070	-0.021	0.577**	1	
SH	0.348**	0.024	-0.024	-0.033	0.018	0.043	0.014	-0.042	0.600**	0.801**	1
Min	0.276**	-0.028	0.106*	0.037	-0.007	0.036	-0.005	0.003	0.464**	0.599**	0.713**
Mex	0.227**	0.000	0.107*	-0.078	-0.063	-0.050	-0.082	-0.042	0.494**	0.656**	0.627**
SE	0.287**	-0.003	-0.044	0.065	0.006	0.041	0.011	-0.025	0.475**	0.581**	0.662**
At	0.242**	0.028	-0.041	-0.084	-0.091*	-0.048	-0.071	-0.032	0.460**	0.677**	0.576**

Results of this study confirm the findings of other researchers when they found out academic performance is associated with parental involvement and cognitive outcomes

(Blaskwell et al., 2007), motivation (Tella, 2007), attitudes (Andamon & Tan, 2018; Cordova & Tan, 2018; Duque & Tan, 2018), beliefs in self (Chamoro-Premuzic, et al., 2005; Skaalvik, et al., 2006), attribution (Leeson et al., 2008); study habits (Semp, et al., 2015), and mother's educational qualification (Cordova & Tan, 2018). The relationship between student's academic performance and the independent variables is presented in table 8. It can be gleaned from the table that almost all independent variables except creativity were positively correlated with student's academic performance ranging from weak ($r=0.120$, GWA vs. planning & decision) to moderately strong ($r=0.377$, GWA vs. mathematical ability) relationship with student's academic performance represented by their general weighted average.

These positive relationships indicate that as any of the independent variables or competency increases, and then student's academic performance increases as well and vice versa. Specifically, high student's scientific ability, reading comprehension, verbal ability, mathematical ability, general scholastic ability, clerical ability, visual manipulative skill, technical-vocational ability, non-verbal ability, logical reasoning ability, business, management and forecasting, and entrepreneurial skill would mean a high performance. However, creativity has no association with academic performance. Regardless of student's creativity, academic performance may be low, average or high.

These findings support the result of the study of Sackett as cited by Tan and Balasico (2018) which found out that there is a strong relationship between student's aptitude and their academic performance.

4.6 On Predictors of Students' Performance

The influence of or contribution of the independent variables under investigation to students' academic performance is presented in Table 6. As indicated, 57.7% of CMULHS students' performance can be explained by the independent variables which include ULHSAT rating, Grade 6 English and Math Grade, parental involvement, school graduated from, attribution, motivation and self-efficacy beliefs.

Among the variables included in the prediction model, only attribution and school graduated from have negative influence to students' academic performance. School graduated from with code 1 for public and 2 for private elementary school indicates that graduating from public elementary school was of a little advantage compared to those in private.

Table 6: Predictors of Student's Academic Performance

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	51.875	2.562		20.250	0.000
ULHSAT Rating	0.050	0.005	0.349	10.010	0.000
Grade 6 English Grade	0.228	0.038	0.298	5.947	0.000
Grade 6 Mathematics Grade	0.117	0.028	0.185	4.100	0.000
Parental Involvement	0.307	0.095	0.099	3.225	0.001
School Graduated From	-0.667	0.212	-0.107	-3.151	0.002
Attribution	-0.690	0.214	-0.098	-3.228	0.001
Motivation	0.390	0.121	0.108	3.221	0.001
Self-Efficacy	0.318	0.120	0.101	2.652	0.008

R = 0.759 R² = 0.577 p < 0.01

The best predictor for academic performance is ULHSAT rating with beta weight of 0.349 with p < 0.01. This implies that the higher the ULHSAT rating of the students, the better is their academic performance in high school. The second best predictor of performance is Grade 6 English grade with beta weight of 0.298 with p < 0.01, while Mathematics ranked third with beta weight of 0.185 (p < 0.01).

Based on the above results, it is therefore necessary to include performance of students in English and Mathematics in Grade 6 in their admission to CMULHS. Thus, admission to CMULHS should include not only ULHSAT rating but as well as their grades in the above mentioned subjects. This is reiterated by the study of Shields, Cook and Greller (2016) when they found out that there is an anticipated difference in the academic achievement of students consistent with initial placement criteria or entry assessment. Similar to the findings of this study, admission requirement predicts academic performance.

However, the study of Dubey and Srivastava (2013) negates this finding when they found out that parental approval emerged as the most significant predictor of achievement and

performance of students instead of admission rating. Nevertheless, parental involvement is one of the predictors of performance in this study.

4.7 Scope for Future Research

Future researchers may conduct a study similar to this investigation when the enhanced basic education curriculum is already fully implemented and with five (5) classes of graduates. The factors affecting the performance of students may vary during this time especially that the curriculum was enhanced. Variables not included in this investigation which are associated with students' performance may be added like engagement (Murillo & Tan, 2019) and the like. This future endeavor may also include teacher factors like teaching styles, assessment tools (Bucayong, 2019; Pagtulon-an & Tan, 2018), teaching methods or models (Saligumba & Tan, 2018; Lee & Sulayman, 2018), and incorporation of technology in the classroom (Segumpan & Tan, 2018; Gumban & Tan, 2019) which were found to be effective in enhancing students' performance.

5. Conclusion

On the bases of the findings of this study, the following initial conclusions were drawn: Students are mostly female, graduated from public elementary school, with moderately average ULHSAT rating in terms of raw score and are performing well in their English, Science and Mathematics subjects when they were in Grade 6. Their average ULHSAT rating in terms of percentile score is just slightly on the average.

Parents of the students are actively involved in the school activities of their children. They always attend meeting and conferences and join activities when their presence are required. Parents are always aware of their children's school activities and encourage them to study hard every day. However, tutors are only sometimes provided by their parents and they seldom visit their children in school.

Students have slight positive attitude towards schooling, fairly good study habits and have high intrinsic and extrinsic motivation. They are also self-efficacious and they attributed their success in their exerted efforts. However, students tend to attribute their failures in outside factors outside their locus of control.

The academic performance of the students is fairly better. They perform very well in Values Education, MAPEH and TLE subjects but least in the Mathematics and Sciences. All

variables in this study are positive correlates of academic performance. It varies on their degree of relationship with the dependent variable. Grade 6 Mathematics, Science and English grades are high positively correlated with academic performance while it has weak positive relationship with their school graduated from. The rest of the variables are moderate positively associated with performance.

The best predictor of academic performance is the ULHSAT rating, followed by their Grade 6 English grade, Grade 6 Math grade, parental involvement, attribution, self-efficacy and motivation.

6. Recommendations

Based on the findings and conclusions, the following recommendations were given:

There is a need for CMULHS Administration to come up with students' database to fast track data access as needed by the administration in an event when decision making is crucial.

The school may encourage parents' involvement in the school activities of their children. The administration may present the result of the study to them in one of the general meetings or parent teachers' conference (PTCs).

School activities may be designed to impact positive attitude of students towards school, to develop their study habits, and to motivate them to study hard. Career guidance program of the school may sponsor activities to improve psychological concepts of students on self, self-efficacy and attribution.

Student's mathematics performance will be given more attention. A study may be conducted to determine strategies that will help students perform better in Mathematics. If possible, tutorial or remedial classes will be provided to students.

Mathematics, Science and English teachers may provide free consultation and tutorial classes to students who find these subjects difficult to understand.

The school may organized family day activities to strengthen the bond between parents and students. It may design a program to develop positive outlook of students and develop them holistically. Review for ULHSAT shall be discouraged. As the best predictor of performance, ULHSAT rating of the students should speak for her stock knowledge and not those knowledge acquired due to review or enhancement activities.

The school may revise its admission policy based on the findings of this study. It shall be approved by the BOR and strictly implemented and evaluated.

Acknowledgment

The researchers would like to extend their heartfelt gratitude to the University President, Dr. Maria Luisa R. Soliven, the University Vice President for Research and Extension, Dr. Luzviminda T. Simborio, the Director of Research, Dr. Maria Estela B. Detalla and the Research Coordinator of the College of Education at the same time the Dean, Dr. Raul C. Orongan for the research grant. Also, we would like to extend our thanks to the student-teachers, colleagues and friends for the help extended during the conduct of this study.

REFERENCES

- Andamon J. & Tan, D.A. (2018). Conceptual Understanding, Attitude and Performance in Mathematics of Grade 7 Students, *International Journal of Scientific & Technology Research*, 7(8), August 2018, 96-105.
- Asthana, M. (2011). Self-Concept, Mental Ability and Scholastic Achievement of Secondary School Students of Varanasi. *Journal of Community Guidance and Research*, 28, 1, 82-88.
- Bahago, B.A. (2011). Intelligence of Achievement Motivation and Demographic Characteristic on Academic Performance of Nomadic Fulani Girls in Adamawa State. Submitted to the School of Postgraduate Studies, University of Jos.
- Blackwell, L.S. Trzesniewski, K.H. & Dweck, C.S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, 78, 246-263. <https://doi.org/10.1111/j.1467-8624.2007.00995.x>
- Bonga, W.G. (2014). An Empirical Analysis of the Determinants of Poor Academic Performance. Social Science Research Network, <https://ssrn.com/abstract=2524890>.
- Bruni O, Ferini-Strambi L, Russo PM, Antignani M, Innocenzi M, Ottaviano P, et al. (2006). Sleep disturbances and teacher ratings of school achievement and temperament in children. *Sleep Med* 2006; 7: 43–8. <https://doi.org/10.1016/j.sleep.2005.09.003>

- Bucayong, C. O., (2019). Mixed Method Analysis in Assessing the Effectiveness of Intentional Learning Instruments in Teaching Circuits. *PEOPLE: International Journal of Social Sciences*, 4(3), 1426-1442. <https://doi.org/10.20319/pijss.2019.43.14261442>
- Chamorro-Premuzic, T., & Furnham, A. (2005). *Personality and intellectual competence*. Mahwah, NJ: Lawrence-Erlbaum Associates.
- Chaturvedi, M. (2009). School Environment, Achievement Motivation and Academic Achievement. *Indian Jjournal of Social Science Research*. Vol.6, No. 2, 29- 37.
- Cordova, C., & Tan, DA. (2018). Mathematics Proficiency, Attitude and Performance of Grade 9 Students in Private High School in Bukidnon, Philippines. *Asian Academic Research Journal of Social Sciences and Humanities*, vol. 5, issue 2, pp. 103-116, February 2018.
- Deary, I.J., Whiteman, M.C., Starr, J.M., Whalley, L.J., & Fox, H.C. (2004). The impact of childhood intelligence on later life: following up the Scottish mental surveys of 1923 and 1947. *Journal of Personality and Social Psychology*, 86(1), 130-147. <https://doi.org/10.1037/0022-3514.86.1.130>
- Dubey, A., & Srivastava, A. (2013). Parental factors, achievement motivation and performance of adolescents. *International Journal of Education and Management Studies*. 3(1), 66-70.
- Duque, C. & Tan, D. (2018). Students' Mathematics Attitudes and Metacognitive Processes in Mathematical Problem Solving. *European Journal of Education Studies*, 4(11), 1-25.
- Freiss, M., Franova L. (2006). Depressive symptoms, academic achievement and intellectual intelligence. *The Central European Journal of Social Sciences and Humanities*. 48 (1), 56-67.
- Gumban, RJ. B. & Tan, D.A. (2019). Students' Mathematics Performance, Engagement and Information and Communication Technology Competencies in a Flipped Classroom Environment. *International Journal of English and Education*, 8(3), 186-200.
- Halawah, I. (2006). The effect of motivation, family environment, and student characteristics on Academic Achievement. *Journal of Instructional Psychology*. 33(2).
- Jackson, D. N. and J. Philippe Rushton. (2006) "Males have greater g: sex differences in general mental ability from 100,000 17–18 year olds on the Scholastic Assessment Test". *Intelligence*. 34, 479–486. <https://doi.org/10.1016/j.intell.2006.03.005>

- Lee, M. & Sulaiman, F. (2018). The effectiveness of Practical work in Physics to Improve Students' Academic Performance. *PEOPLE: International Journal of Social Sciences*, 3(3), 1404-1419. <https://doi.org/10.20319/pijss.2018.33.14041419>
- Leeson, P. Ciarrochi, J., Heaven, P. C.L. (2008). Cognitive ability, personality, and academic performance in adolescence. *Personality and individual differences: Elsevier*. 45(2008), p. 630-635. <https://doi.org/10.1016/j.paid.2008.07.006>
- Muola, J.M. (2010). A study of the relationship between academic achievement motivation and home environment among standard eight pupils. *Educational Research and Reviews*, 5 (5), 213-217.
- Murillo, J. A. & Tan, D. A. (2019). Students' Mathematics Performance and Engagement in an Inquiry-Based Learning Approach, *International Journal of English and Education*, 8(3), 64-74.
- Naderi, H., Abdullah, R., Aizan, H.T, Scarir, J., Kumar, T. (2009). Creativity, Age And Gender As Predictors Of Academic Achievement Among Undergraduate Students. *Journal of American Science*. 5(5):101-112.
- Navarette, B., Betancourt, H., Flynn, P. (2007). Culture and achievement motivation in Latino and Anglo American High School Students in USA. Paper presented to the 31st Interamerican Congress of Psychology, Mexico City.
- Nuthana, P.G. (2007). Gender analysis of academic achievement among high school students, M.Sc. (Ag.) Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).
- Pagtulon-an, E. & Tan D. (2018). Students' Mathematics Performance and Self-efficacy Beliefs in a Rich Assessment Tasks Environment. *Asian Academic Research Journal of Multidisciplinary*. 5(2), 54-64.
- Saligumba, I.P., & Tan, D. (2018). Gradual Release of Responsibility Instructional Model: Its Effects on Students' Mathematics Performance and Self-Efficacy. *International Journal of Scientific & Technology Research*. Volume 7, Issue 8, August 2018.
- Sarsani, M. R. and Ravi, M (2010). Achievement in Mathematics of secondary school students in selected variables, *Edutracks*, 9(6), 38-43.

- Segumpan, L., & Tan, D. (2018). Mathematics performance and anxiety of junior high school students in a flipped classroom, *European Journal of Education Studies*, Volume 4, Issue 12.
- Shields, K.A., Cook, K.D., & Greller, S. (2016). How Kindergarten entry assessments are used in public schools and how they correlates with spring assessments. (REL 2017-182). Washington, Dc: U.S. Department of Education, Institute of Education Sciences, National Center for Educational Evaluation and Regional Assistance, Regional Education Laboratory Northeast & Islands. Retrieved from <https://ies.ed.gov/ncee/edlabs/>
- Skaalvik, E.M., Skaalvik, S. (2006). Self-concept and self-efficacy in Mathematics: relation with mathematics motivation and achievement. Proceedings of the International Conference on Learning Sciences, Bloomington, India. Available at <http://www.findarticles.com/https://doi.org/10.1037/e538922013-113>
- Sunitha, N.D. (2005). Academic learning environment of students from Aided and Unaided Co-educational High Schools. Online Thesis Available at <http://krishikosh.egarnth.ac.in/handle/1/81590>
- Tan, D. A., & Balasico, C. L. (2018). Students' Academic Performance, Aptitude and Occupational Interest in the National Career Assessment Examination. *PUPIL: International Journal of Teaching, Education and Learning*, 2(3), 01-21. <https://doi.org/10.20319/pijtel.2018.23.0121>
- Tella, A. (2007). The impact of motivation on students' academic achievement and learning outcomes in Mathematics among secondary schools students in Nigeria. *Eurasia Journal of Mathematics, Science, & Technology Education*, 3(2), 149-156. <https://doi.org/10.12973/ejmste/75390>
- Umunadi, K. (2009). A Relational Study of Students' Academic Achievement of Television Technology in Technical Colleges in Delta State of Nigeria. *Journal of Industrial Teacher Education*. 46(3), 113-131.
- Waters, B., Hughes, J., Forbes, K., Wilkinson, D. (2006). Comparative academic performance of medical students in rural and urban clinical settings. *Medical Education*. 40(2), 117-200. <https://doi.org/10.1111/j.1365-2929.2005.02363.x>