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STUDENTS' ACADEMIC PERFORMANCE, APTITUDE AND OCCUPATIONAL INTEREST IN THE NATIONAL CAREER ASSESSMENT EXAMINATION

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

Carmela Llagas Balasico
Faculty, College of Education, Central Mindanao University, University Town, Musuan, 8710 Bukidnon, Philippines
carmelabalasico@cmu.edu.ph

Abstract

An investigation had been conducted to determine student's academic performance, occupational interest and aptitude in the National Career Assessment Examination (NCAE) and ascertain predictors of their performance. This endeavor was put in place by the administration to have a research-based Senior High School curriculum that fits students need in Central Mindanao Laboratory High School. Results of NCAE from the Department of Education and grades of students from the laboratory high school records-in-charge were collected, coded, analyzed and interpreted. Data gathered within the three school year period became bases of the results of this research endeavor. Descriptive statistics showed that based on the NCAE results, students had better general scholastic aptitude but poor entrepreneurial skill. Occupational interests of students were so varied ranging from highly preferred to least preferred. Career in the sciences was moderately preferred by the students. Most of the students had no highly

preferred occupation. Correlation showed that creativity was not associated with student's academic performance while the rest such as, general scholastic aptitude (science ability, reading comprehension, verbal ability and mathematical ability), technical-vocational ability (clerical skill and visual manipulative skill), non-verbal ability, logical reasoning ability, and entrepreneurial skill (planning and decision making, budgeting, marketing and forecasting) were positively correlated to student's performance. Stepwise linear regression analysis indicated that mathematical ability, verbal ability and logical reasoning ability were predictors of student's academic performance.

Keywords

Aptitude, Occupational Interest, Academic Performance, Career Assessment

1. Introduction

The Philippines basic educational system has been undergoing curricular reforms beginning school year 2012-2013 when the DepEd Secretary Br. Armin A. Luistro issued DepEd Order No. 31 s. 2012 otherwise known as the Policy and Guidelines on the implementation of Grades 1 to 10 of the K to 12 Basic Education Curriculum (BEC). This issuance was made because of the directive of His Excellency Pres. Benigno Simeon C. Aquino III to implement the enhanced Basic Education Curriculum as part of his 10-point agenda. The implementation started with a roll-out of Grades 1 and 7 in all public elementary and secondary schools. Private schools are enjoined to do the same, however, they are allowed to further enhance the curriculum to suit their vision and mission. The Philippine Science High School System (PSHS) also implemented Grade 7 on the same year of DepEd's implementation upon the Board of Trustees (BOT) instruction.

The CMU Laboratory High School (CMULHS) as a Secondary Education Department of the College of Education is well aware of this issuance however, it decided to delay its implementation until proposal of the curriculum was thoroughly studied, prepared, reviewed and approved by the Central Mindanao University (CMU) Board of Regents (BOR). As its initial steps in response to the President's directive, the department tried its best to be updated with this curriculum through attendance of trainings and seminar-workshops. Upon the approval of the University President, the unit renamed the First Year to Grade 7 alongside with DepEd's implementation because the first year subjects offered in this institution have found to be comparable with the Grade 7 Science Curriculum offered by DepEd. This was found out and

validated by the faculty members of CMULHS during series of curriculum reviews conducted in their level. Finally, the unit offers the Junior High School (JHS) Science Curriculum when the Board of Regents approved its proposed JHS curriculum through BOR Res. No. 31, S. 2013.

With the approval of the Enhanced Basic Education Act of 2012 through the signing of RA 10533 otherwise known as "Enhanced Basic Education Act of 2013" by President Aquino on May 15, 2013", the institutionalization of the additional two years of senior high school is already a mandate for all public and private school system in the country. While the CMULHS Proposed Senior High School curriculum is still at the College Academic Council for review and approval during this time, initial steps have been undertaken to ensure that the proposed curriculum is research-based and is at par with all schools in the country.

This study would not only provide baseline data about the students' academic performance, aptitude and occupational interest in the National Career Assessment Examination (NCAE). Also, it would give curriculum developers significant data on students' career interest as basis for designing curriculum for the Senior High School at CMU Laboratory High School. Such information is necessary to the college in its hope to offer relevant curricular program for the Senior High School that best fit the aptitude and interest of its junior high school students.

In the study conducted by Ferrer and Dela Cruz (2017), they found out that among the subject areas in the NCAE, students from the University of the City of Manila performed better in Science, followed by Mathematics, then English with an average percentile ranks of 89.5, 88.4, and 86.8, respectively. Moreover, a significant relationship was established between these subject areas to their Grade 10 and Grade 11 grades.

With the aforementioned information, a localize basis of curricular development is essential as CMULHS offers its Senior High School (SHS) curriculum which should be research-based prior to the approval by the Board of Regents (BOR), hence this investigation.

1.1 Objectives of the Study

This study aimed to determine the academic performance, aptitude and occupational interest of students in the National Career Assessment Examination. Specifically, it intended to:

1. describe students' aptitude in the NCAE in terms of:

a. general scholastic aptitude (GSA);

a.1) scientific ability (SA);

a.2) reading comprehension (RC);

a.3) verbal ability (VA); and

a.4) mathematical ability (MA);

b. technical vocational aptitude (TVA);

b.1) clerical ability (CA); and

b.2) visual manipulative skill (VMS);

c. non-verbal ability (NVA);

d. logical reasoning ability (LRA); and

e. entrepreneurial skills (ES);

e.1) planning and decision making (PDM);

e.2) budgeting, marketing and forecasting (BMF); and

e.3) creativity (C).

2. find out the occupational interest of the students based on the NCAE result.
3. ascertain the academic performance of students in the following subject areas:
   a. Science 4;
   b. Mathematics 4;
   c. Filipino 4;
   d. English 4;
   e. Social Science 4;
   f. Science 4a;
   g. Ecology;
   h. PEHM 4;
   i. Values Education 4;
   j. Science Research; and
   k. Mathematics 4a.
4. Correlate students' aptitude and their academic performance.
5. Identify the best predictor of students' performance.

2. Review of Related Literature

The National Career Assessment Examination (NCAE) is an assessment test taken by fourth year high school students in the Philippines before the enhanced basic education act of 2013 was approved. Beginning 2016, Grade 9 students are required to take NCAE. Out-of-school youth and Accreditation & Equivalency (A & E) test passers my also take this assessment examination. It determines the students' strengths in different career fields. It intends to sustain

the highest eminence of education in the Philippines by supervising and monitoring the progression of high school graduates to the courses in which their skill is better. In January 2007, the test was first conducted and eventually National College Entrance Examination (NCEE) was replaced in 1994 with NCAE (DepEd Order No. 55, s. 2016). Unlike the NCEE, the NCAE is mandatory, but the results are recommendatory and will not result into a student's passing or failing mark in any academics in high school.

Accordingly, job skills mismatch is a major challenge at present (DOLE, 2010). A large number of trained graduates are left unemployed or underemployed because they do not fit the requirements of the job market (Lapus, 2002). This has ensued in joblessness and excess supply of college graduates in white-collar jobs while there are limited number of available work force which has the skill needed by the employer.

The National Education Testing and Research (NETRC) said that out of the 1,305,211 examinees who took the 2007 NCAE, 777,236 or 59.55 percent garnered low scores in the general scholastic aptitude test of the exam. Based on the result, only 468,901 of the high school graduating students have the aptitude to tackle college courses. The NCAE results showed 54.51 percent or 711,526 of the students have a high aptitude for technical-vocational education. The test results also revealed that many are interested in a career in the arts after getting their high school diploma. In the occupational field interest, 427,116 or 32.72 percent had artistic as their first preference and 14.24 percent or 185,886 students are inclined to social pursuits as their second choice of career (NETRC, 2008).

General Scholastic Aptitude is an aptitude test that measures what knowledge of fourth year high school students have already acquired prior to taking the test. It measures the Scientific Ability, Reading Comprehension, Verbal Ability, and Mathematical Ability of Students. Another part of the NCAE is the occupational field of interest of students that has 23 items. The NCAE results also reveal the occupational interests of the students such as Outdoor Interests, Mechanical Interests, Investigative Interests, Artistic Interests, Social Interests, Enterprising Interests, and Clerical Interests, thus, it helps the students to realize in what field they really excel.

One way to begin a student in searching for a career is to think about the things he is good at doing and then find careers that match his skills (Escudero, 2016). All of these areas can then suggest to the choice of career of students. In its totality, the four domains of NCAE provide an assessment to graduating students that serve as a career guide on whether they should go on to

higher studies, choose a technical-vocational course or opt for entrepreneurship. Additionally, interest inventory displays that the students has leanings towards a specific occupational turf. These will be helpful to the curriculum makers in designing curricular offerings for the Senior High School.

Moreover, numerous studies were conducted to improve students' academic performance utilizing varied teaching strategies, methods and approaches (Lee & Solaiman, 2018; Sontillano, 2018). The utilization of new teaching approaches, strategies and techniques compared to traditional teaching methods showed positive potential in enhancing students' academic performance. Saligumba and Tan (2018) identified gradual release of responsibility model (GRRIM) had improved students' learning. Subsequently, Asparin and Tan (2018) enhanced the GRRIM and found out that it resulted to positive outcomes on students' learning in Calculus. Moreover, current studies on the utilization of rich assessment tasks by Pagtulon-an and Tan (2018), on flipped classroom by Segumpan and Tan (2018), on concrete-pictorial approach by Salingay and Tan (2018), on dyad cooperative learning by Aguanta and Tan (2018), on reciprocal learning by Guita and Tan (2018), on communication strategies by Ciubal-Fulgencio and Tan (2018) showed that these innovative teaching methodologies and strategies indeed increased students learning outcomes. With these initiatives, students' performance in school will definitely improve and the chances of choosing a career that fits their aptitude will be favorable.

The related literature and studies presented above were some of the relevant information that support this study aside from its theoretical and conceptual bases. It was in the above mentioned findings that the researcher found a need to investigate the academic performance, aptitude and occupational interest of CMULHS students in the NCAE for the past four consecutive years to lay down strong foundation for the school in offering a SHS curriculum that fits its students' occupational interest as well as their aptitude to optimize their performance.

3. Methodology

This section includes the locale of the study, the selection of the respondents, the data collection procedure and the statistical data analysis used.

3.1 Locale of the Study

The study was conducted at CMU Laboratory High School, College of Education, and Central Mindanao University.

3.2 Selection of Respondents

The respondents of this study were the students of the CMULHS, College of Education, CMU who were officially enrolled during the SY 2011 – 2012 to SY 2014-2015, who took up the National Career Assessment Examination. They were either the third year or fourth year or Grade 9 students of CMULHS.

The list of respondents was secured from the office of the Records-in-charge and the secretary.

3.3 Data Collection

This study made use of the voluminous secondary data on NCAE taken from the DepEd and student's academic performance from CMULHS records-in-charge. These data were coded, encoded and analyze to obtain information in order to answer the questions put forward for this investigation.

3.4 Data Analysis

The data were 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. Predictors of student's performance was determined using stepwise linear regression analysis.

4. Results and Discussions

Results of the research investigation is presented logically as it appears in its objectives as follows: level of student's aptitude in NCAE, occupational interest of students, their academic performance, relationship between variables in the study and the predictors of students performance.

4.1 Students' Aptitude in NCAE in terms of General Scholastic Aptitude

Table 1 and Figure 1 present the General Scholastic Aptitude (GSA) of the CMULHS students from SY 2011-2012 to SY 2014-2015. It shows that students got the highest mean in verbal ability in two school years 2011-2012 (87.97) and 2013-2014 (85.10) while student's mathematical ability was the lowest, with mean 71.57, 77.29, 75.48, and 77.20, in SY 2011-2012, SY 2012-2013, SY 2013-2014 and SY 2014-2015, respectively. However, in SY 2012-2013, and SY 2014-2015 students reading comprehension was the highest with mean equals 88.79, and 86.30, respectively.

Table 1: *Level of Students' Aptitude in the NCAE in terms of General Scholastic Aptitude*

General Scholastic Aptitude (GSA)	SY 2011-2012		SY 2012-2013		SY 2013-2014		SY 2014-2015		Over-all GSA	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Scientific Ability (SA)	81.91	20.587	84.89	18.395	77.17	23.343	85.54	19.025	82.51	20.530
Reading Comprehension (RC)	86.63	15.959	88.79	13.262	84.93	15.104	86.30	17.386	86.72	15.521
Verbal Ability (VA)	87.97	13.773	87.74	15.179	85.10	15.297	82.08	18.816	85.80	15.971
Mathematical Ability (MA)	71.57	26.188	77.29	21.730	75.48	22.924	77.20	22.451	75.30	23.510
Over-all	87.84	15.248	90.02	12.935	85.25	15.745	83.42	24.32	86.71	17.698

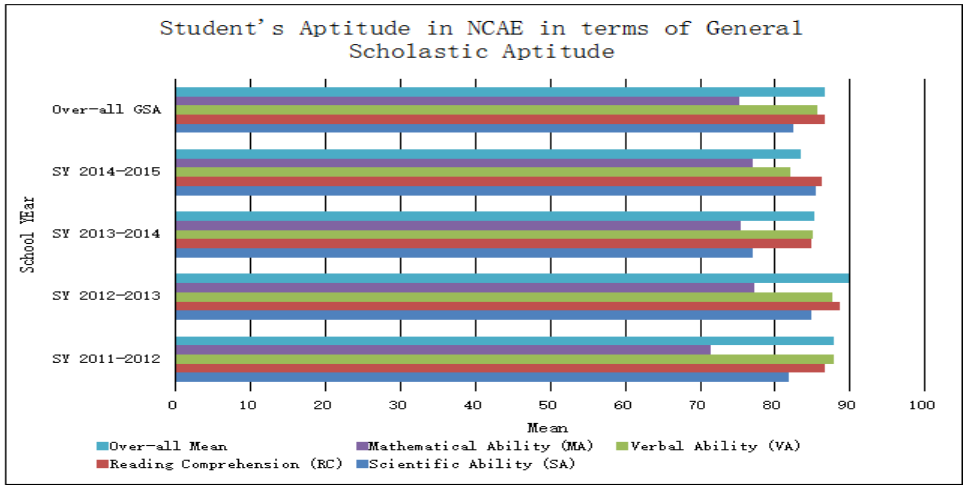

Figure 1: *Student's Aptitude in NCAE in terms of General Scholastics Aptitude*

Based on the above data, there were decreases in the mean scores of students in all areas from SY 2012-2013 to SY 2013-2014. On the other hand, there were some increase in the aptitude of students in three areas except for verbal ability from SY 2011-2012 to SY 2012-2013. Also, results from SY 2013-2014 to SY 2014-2015 indicated that students had improved their performance in three major areas except for verbal ability. The NCAE results for the four school years show that CMULHS batch of students had varied strengths and weaknesses. However, they had aptitude above 75% in all areas in the four school years except for mathematical ability with mean equals 71.57 in SY 2011-2012. These results indicate that students in the CMULHS had moderate scholastic aptitude level.

This finding indicates that among the students who took the NCAE, CMULHS students belong to the upper 40.45 percent who have high scores in the GSA and have the aptitude to tackle college courses (NETRC, 2008).

4.2 Students' Aptitude in NCAE in terms of Technical-Vocational Skills

Table 2 and Figure 2 show the aptitude of student in NCAE in terms of their technical-vocational skills. It can be gleaned from the table and figure that student's clerical ability is below 80.00 in three succeeding school years from SY 2011-2012 to SY 2013-2014 (79.14, 78.82, and 79.79). More so, students have poor visual manipulative skill as evident by the mean scores lower than 80.00 in all school years (74.26, 78.44, 71.35, and 78.52). However, in SY 2014-2015, students had a drastic increased their clerical ability and manipulative skills. Notice that this batch of students is the first product of the Enhanced Basic Education Act of 2013 of the school. Student's technical-vocational skills is indeed below average (over-all mean=81.606) with clerical ability of 81.76 and visual manipulative skill of 75.73.

Table 2: *Student's Aptitude in NCAE in terms of Technical-Vocational Skills*

Technical-Vocational Skills (TVS)	SY 2011-2012		SY 2012-2013		SY 2013-2014		SY 2014-2015		Over-all TVS	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Clerical Ability (CA)	79.14	15.765	78.82	16.120	79.79	16.144	89.42	14.53	81.76	16.21
Visual Manipulative Skill (VMS)	74.26	19.079	78.44	18.131	71.35	22.686	78.52	18.90	75.73	19.83
Over-all	79.956	15.561	81.920	15.705	78.382	18.527	86.00	12.56	81.606	15.85

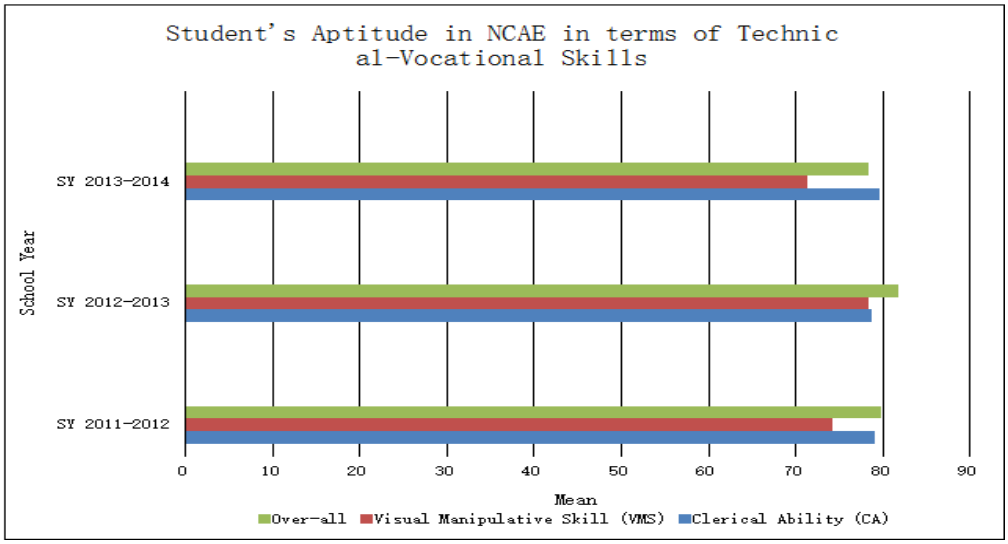

Figure 2: *Student's Aptitude in NCAE in terms of Technical Vocational Skills*

The results suggest that students in the CMULHS have poor technical-vocational skills like clerical ability and visual manipulative skills. This can be explained through the curriculum

in which the students are enrolled and the type of learning experiences that they are exposed to. This finding contradicts the result of NETRC (2008) when they found out that majority of the students have high aptitude in technical-vocational education.

However, in the recent NCAE 2014, students of the CMULHS had improved their performance in the technical vocation skills. This improvement can be explained by the type of curriculum that they are exposed to. The last three batches were product of the old science curriculum of the unit while the takers of NCAE 2014 were the first who were exposed to the new curriculum were subjects on Technology and Livelihood Education (TLE) are added for the former third year and fourth year students now called the Grade 9 and Grade 10. This finding supports the claim of the Enhanced Basic Education of 2013 curriculum where middle level skills of students will be developed (RA 10533).

4.3 Student's Aptitude in NCAE in terms of Non-verbal and Logical Reasoning Ability

Student's aptitude in NCAE in terms of non-verbal and logical reasoning ability is reflected in Table 3 and Figure 3. As shown, student's non-verbal ability average mean score is 78.79 which is below average. Also, students logical reasoning ability average mean score in the three school years is 75.53 which is just passing. These data show that students are below average on their non-verbal ability and logical mathematical ability.

Table 3: *Student's Aptitude in NCAE in terms of Non-verbal and Logical Reasoning Ability*

	SY 2011-2012		SY 2012-2013		SY 2013-2014		Over-all Abilities	
Abilities	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Non-verbal Ability	78.59	19.048	84.78	19.347	72.24	28.144	78.79	22.736
Logical Reasoning Ability	73.37	27.017	80.89	21.540	72.07	28.997	75.53	26.157

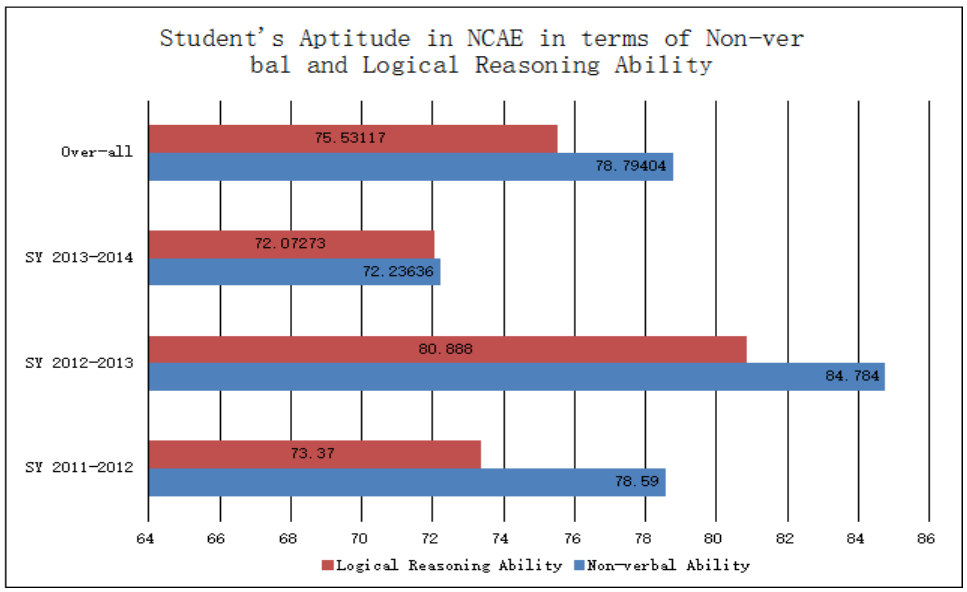

Figure 3: *Student's Aptitude in NCAE in terms of Non-verbal and Logical Reasoning Ability*

These results indicate that students in CMULHS have poor non-verbal ability and logical mathematical ability as reflected by the average mean score. This implies that the new curriculum of the unit be studied for the next five years of implementation if this has helped the students develop these competencies. The first batch of students had shown significantly increase of improvement on these aspects.

4.4 Student's Aptitude in NCAE in terms of Entrepreneurial Skill

The entrepreneurial skill of students is presented in table 4 and figure 4. It is shown that student's average means in all sub-areas of this competency were need improvement. Student's planning and decision making average mean was 67.65, budgeting, marketing and forecasting was 73.88, and creativity was 60.40. The over-all entrepreneurial skill of students was 74.466 which means that it is way below average and not even passing.

These data imply that student's entrepreneurial skills need to be improved. Students in CMULHS had gained less skill in business and commerce compared to their academics. This finding opposes the result of NCAE presented by the NETRC that most of the students who took the test have high aptitude in the technical-vocational skills as well as in entrepreneurship (NETRC, 2008).

Table 4: *Student's Aptitude in NCAE in terms of Entrepreneurial Skill*

Entrepreneurial Skill (ES)	SY 2011-2012		SY 2012-2013		SY 2013-2014		Over-all ES	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Planning and Decision Making	60.40	28.568	77.91	19.123	64.82	29.505	67.65	27.081
Budgeting, Marketing & Forecasting	71.08	27.149	79.14	24.624	71.29	28.041	73.88	26.793
Creativity	54.45	28.080	65.41	25.997	61.97	27.069	60.40	27.420
Over-all	69.223	26.988	81.656	21.547	72.682	26.432	74.466	25.595

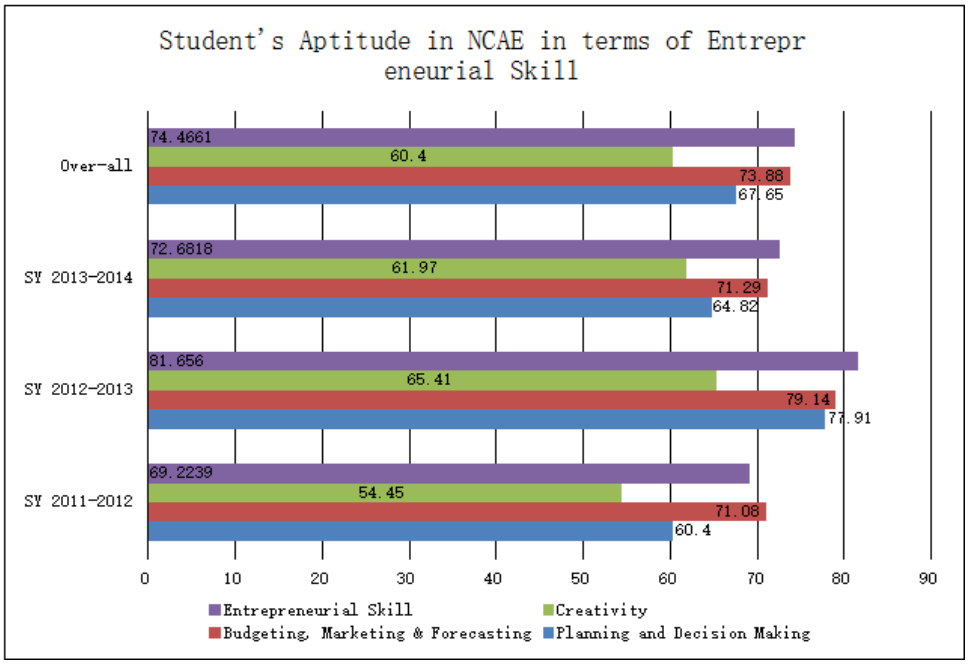

Figure 4: *Student's Aptitude in NCAE in terms of Entrepreneurial Skill*

The NCAE results in 2014 do not include the assessment of the above-mentioned skills hence, SY 2014-2015 was not represented in the presentation of results.

4.5 Student's Aptitude in NCAE

Student's aptitude based on the NCAE result is shown in table 5 and figure 5. As reflected on these table and graph, students in CMULHS had good general scholastic aptitude with over-all average mean of 87.80. This is followed by their technical-vocational aptitude with average mean equal to 80.15, non-verbal ability with mean of 78.79, logical reasoning ability with mean of 75.53 and the lowest in rank was their entrepreneurial skill with mean equal to 74.47.

Table 5: *Student's Aptitude in NCAE*

	2011-2012	2012-2013	2013-2014	Over-all
General Scholastic Aptitude	87.84	90.02	85.25	87.80
Technical-Vocational Aptitude	79.96	81.92	78.38	80.15
Non-verbal Ability	78.59	84.78	72.24	78.79
Logical Reasoning Ability	73.37	80.89	72.07	75.53
Entrepreneurial Skill	69.22	81.66	72.68	74.47

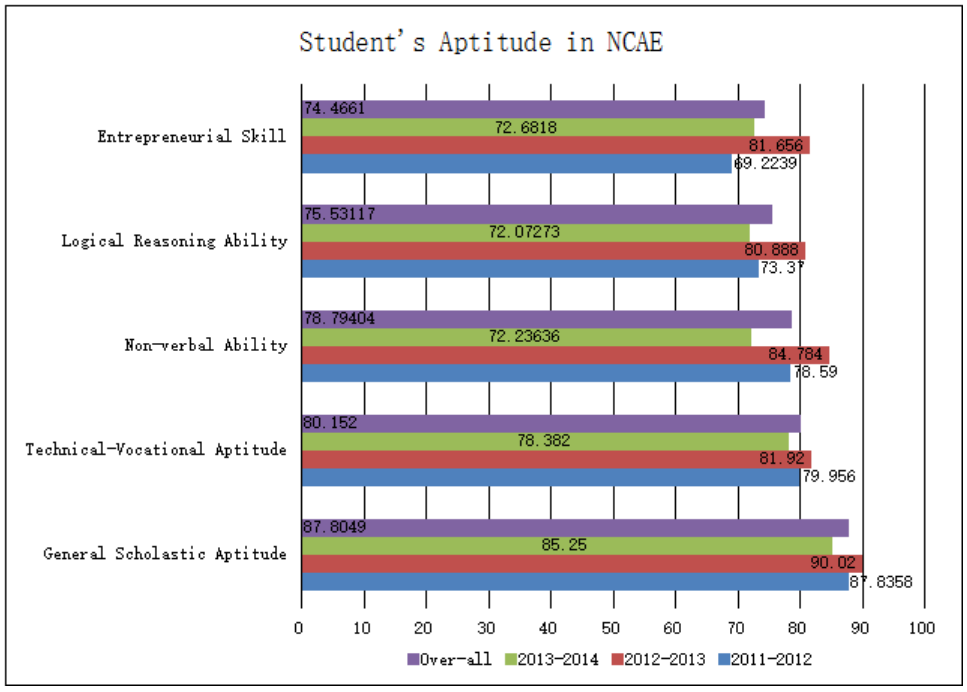

Figure 5: *Students Aptitude in NCAE*

Though students aptitude in the different competencies vary from school year to school year or students to students, data show that CMULHS students are better off in their academics compared to the rest of the competencies. More so, CMULHS students have very low aptitude in entrepreneurship. Findings of this study contradict the result of NCAE in 2007 when NETRC reported that majority of the students have low GSA but high in technical-vocational education (NETRC, 2007).

The NCAE results in 2014 do not include the assessment of the above-mentioned skills hence, SY 2014-2015 was not represented in the presentation of results.

4.6 Occupational Interest of Students

Table 6 and Figure 6 show the students occupational interest based on the result of their NCAE. It can be gleaned from the table that 47.24% of the students did not have high preference in any subject areas. Nobody considered agriculture and fishery as highly preferred, and a few students highly preferred spiritual vocation (13.39%) as their future career. Among the occupations listed, science is mostly moderately preferred by the students (21.26%), then followed by spiritual vocation (14.17%) and careers related to environment (11.02%). Twenty nine point ninety two percent (29.92%) of the students has no less preferred occupation. A few considers aesthetics (11.81%) and spiritual vocation (10.24) with less preference.

Table 6: *Occupational Interest of Students*

Occupational Interest	High Preference	Moderate Preference	Low Preference
None	47.24	3.94	29.92
SCIENCE	5.51	21.26	6.30
ENGINEERING	3.94	6.30	7.09
COMMERCE	4.72	9.45	7.09
PROFESSIONAL SERVICE	2.36	7.87	6.30
PERSONAL SERVICE	0.79	1.57	3.94
CYBERSERVICE	3.15	6.30	5.51
AESTHETICS	1.57	7.87	11.81
ENVIRONMENT	8.66	11.02	4.72
MILITARY TRAINING	8.66	7.87	6.30
SPIRITUAL VOCATION	13.39	14.17	10.24
AGRICULTURE AND FISHERY	0.00	2.36	0.79

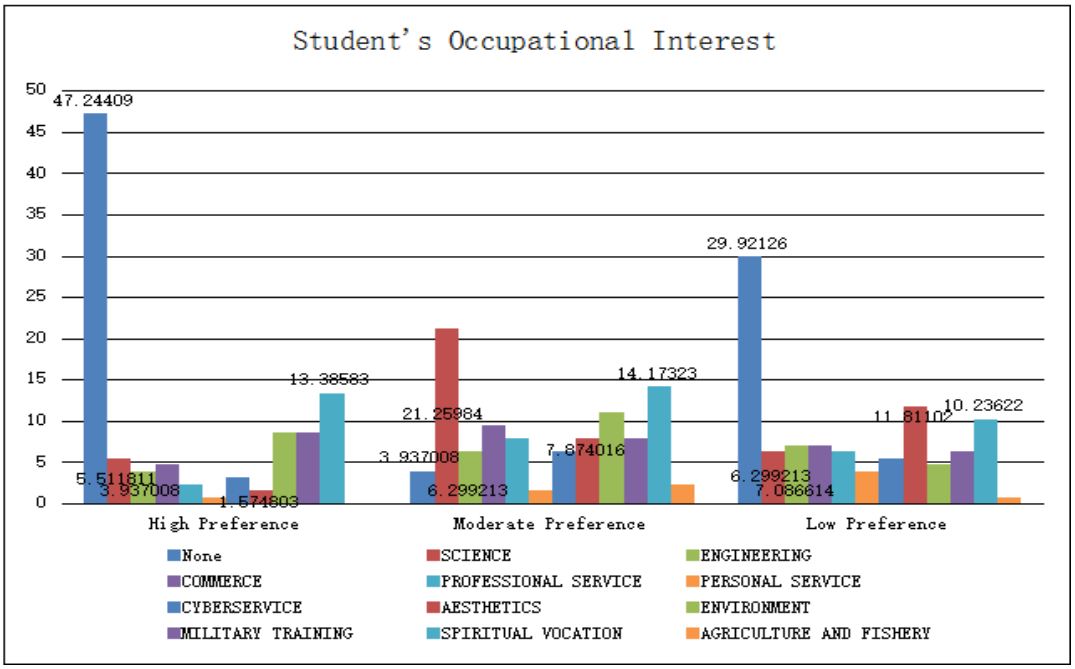

Figure 6: *Student's Occupational Interest*

The findings indicate that student's occupational interest leaned towards the sciences and spiritual vocation. Most of them had not decided yet on what course to take in college. This can be explained by the curriculum offered by CMULHS, which is science. And the unit's primary objective is to develop among students the love of sciences. Results oppose the NCAE test result in 2007 when NETRC found out that many of the students are interested in a career in the arts after getting their high school diploma (NETRC, 2007).

This finding may also imply that career guidance program in the unit will be made comprehensive to include Grade 7 students. This early exposure of students on how to choose their future career may help improve the result of their NCAE.

4.7 Student's Academic Performance

Student's academic performance is reflected in table 7. As shown above, students performed best in Values Education (mean=88.95), followed by MAPEH (mean=88.54) and Filipino (mean=87.72). However, students perform the least in Mathematics (mean=82.04), Science (mean=82.17) and Science 4 (mean=83.03). The general weighted average of the students is 85.655 which indicates that they perform better in general.

Table 7: *Student's Academic Performance*

Subject Areas	Mean	Std. Deviation
Values Education 4	83.03	4.222
MAPEH 4	82.17	5.327
Filipino 4	87.72	4.423
Social Science 4	86.15	4.025
Science Research 1	86.16	4.361
English 4	84.37	5.038
Ecology	85.39	4.219
Mathematics 4A	88.54	3.955
Science 4a	88.95	3.045
Science 4	87.26	4.664
Mathematics 4	84.41	4.854
General Weighted Average	85.6554	3.64945

These findings imply that CMULHS students have good performance in school within the four school year under studied. They are better off in Values Education and not so good in Mathematics although their average grade is above 80.00.

4.8 Relationship between Student's Aptitude and Performance

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, 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.

Table 8: *Relationship between Student's Aptitude and Performance*

	SA	RC	VA	MA	GSA	CA	VMS	TVA	NVA	LRA	PD	BMF	C	ES
SA	1													
RC	.562(**)	1												
VA	.526(**)	.601(**)	1											
MA	.457(**)	.369(**)	.430(**)	1										
GSA	.783(**)	.835(**)	.806(**)	.647(**)	1									
CA	.423(**)	.441(**)	.393(**)	.434(**)	.530(**)	1								
VMS	.357(**)	.328(**)	.316(**)	.271(**)	.394(**)	.343(**)	1							
TVA	.475(**)	.466(**)	.450(**)	.416(**)	.570(**)	.779(**)	.823(**)	1						
NVA	.477(**)	.364(**)	.406(**)	.373(**)	.522(**)	.342(**)	.402(**)	.464(**)	1					
LRA	.450(**)	.471(**)	.457(**)	.394(**)	.553(**)	.367(**)	.271(**)	.400(**)	.427(**)	1				
PD	.218(**)	.244(**)	.193(**)	.228(**)	.258(**)	.125(*)	0.093	.131(*)	.208(**)	.327(**)	1			
BMF	.423(**)	.527(**)	.397(**)	.281(**)	.519(**)	.339(**)	.243(**)	.337(**)	.381(**)	.448(**)	.332(**)	1		
C	.140(**)	0.058	0.093	0.095	.115(*)	0.097	.113(*)	.112(*)	.168(**)	.197(**)	0.056	.202(**)	1	
ES	.412(**)	.448(**)	.359(**)	.314(**)	.474(**)	.296(**)	.247(**)	.311(**)	.374(**)	.474(**)	.511(**)	.844(**)	.557(**)	1
GWA	.229(**)	.262(**)	.307(**)	.377(**)	.345(**)	.203(**)	.102(*)	.175(**)	.172(**)	.291(**)	.120(*)	.223(**)	0.082	.246(**)

These findings support the result of the study of Sackett (2015) and Ferrer and Dela Cruz (2017) which found out that there is a strong relationship between student's aptitude and their academic performance.

4.9 Predictors of Student's Academic Performance

Table 9 shows the influence of or contribution of the independent variables under investigation to the dependent variable, student's academic performance. It revealed that independent variables, namely, mathematical ability, verbal ability and logical reasoning ability had attributed 44.5% to respondents' performance. All of these independent variables have influence positively to the dependent variable. Among these variables, mathematical ability with a beta weight of 0.415 with $p<0.01$ indicate that the higher the student's mathematical ability, the better is their academic performance.

Table 9: *Predictors of Student's Academic Performance*

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	71.917	1.852		38.841	.000
Mathematical Ability (MA)	.069	.012	.415	5.763	.000
Verbal Ability (VA)	.083	.024	.260	3.400	.001
Logical Reasoning Ability (LRA)	.030	.012	.184	2.513	.013

$R = 0.667$ $R^2 = 0.445$ $p<0.01$

Verbal ability is the second predictor of performance. It has a beta weight of 0.260 and is statistically significant at $p<0.01$. This implies that the higher the verbal ability of the students, the better is their performance in school.

Logical reasoning ability is the third predictor of student's performance. It has a beta weight of 0.184 with $p<0.01$ which is statistically significant.

Findings of this study support the result of researches conducted on student's aptitude that actually predict student's performance (Sackett, 2015).

5. Conclusions and Recommendations

This section contains the conclusions and recommendations put forward in this investigation.

5.1 Conclusions

On the bases of the findings of this study, the following conclusions were drawn:

Students have better aptitude in the NCAE in terms of the general scholastic aptitude but have poor entrepreneurial skill. Among the general scholastic aptitude, students' verbal ability is on the average while their mathematical ability is low.

The occupational interest of students based on NCAE results vary from highly preferred to least preferred occupation. Career in the Sciences is moderately preferred by the students. Spiritual vocation is highly preferred while careers on aesthetics is least preferred. Most of the students have no highly preferred occupation.

The students have better performance in general. They perform well in Values Education subjects while good in Mathematics.

Creativity is not associated with student's academic performance while the rest of the variables are positively correlated with it. Their relationship ranges from weak positive to moderately high positive relationship.

The predictors of students' academic performance are mathematical ability, verbal ability and logical reasoning ability. Among the three predictors, student's mathematical ability is the best predictor of student's performance.

5.2 Recommendations

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

The students will be given opportunities to be exposed to other teaching strategies that will enhance their other competencies besides academics. Integration of business related examples and activities be given to students to possibly develop their entrepreneurial skill. Development of student's mathematics ability will be given more attention.

The school may provide students more avenue to widen student's knowledge on the different occupations not only related to science but to other science-related careers and the rest of the discipline. The school will continue to develop student's love of the sciences.

Career guidance program of the school may be made available not only to Grade 10 students but to all.

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.

There may be integration of activities that will develop student's creativity. Teachers are encouraged to designed instructional activities that will promote the development of this skill and the rest of the competencies included in this study.

The school is encouraged to design a curriculum that will help develop student's mathematical ability, verbal ability and logical reasoning ability because these are predictors of student's academic performance.

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