

# Personality Traits as Predictors of Academic Achievement Among Junior College Students of Basilan State College

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**Abstract**— This study delved on the Personality Traits as Predictors of Academic Achievement among Junior College Students of Basilan State College. A total of seventy (70) student respondents participated in the study drawn using the purposive quota sampling technique. In obtaining data, the standardized Sixteen Personality Factor Questionnaire (16 PF) and the Grade Point Average of the student respondents in four subject areas, Mathematics, Science, English, and Social Science were utilized. Results showed that: the students were found to have the following personality traits; (1) less intelligent; (2) affected by feelings; (3) practical; (5) shrewd; and (6) apprehensive; the student's adjectival rating for the academic achievement in Mathematics, Science, English, and Social Science is GOOD; three (3) personality traits for the academic contribute to the variance of the students grades in Mathematics and these are Factors 1 (Tender-minded), Factor M (Imaginative) and Factor Q3 (Controlled); there is a significant difference in the personality traits of the students based on the variable Age. The meaningful difference existed in Factor N between Age brackets of (19 and 21) and (21 and 22); there is a significant difference in the personality traits of the student's respondents based on the variable Gender. The significant difference between male and female students existed in nine (9) factors: Factor A (reserved), B (less intelligent), C (affected by feelings), F (sober), H (shy), M (practical), O (placid), Q2 (group-dependent), and Q4 (relaxed); there is no significant difference in the personality traits based on the variable Socio-economic Status; and there is a significant relationship in the students' academic achievement between and among the following subject areas: (1) Mathematics and Science; (2) Mathematics and English; (3) Science and English; (4) English and Social Science.

**Keywords**— Academic achievement, grade point average, imaginative, personality traits, trade-minded.

## I. INTRODUCTION

### Background of the Study

Learning Outcomes do not depend solely on what the teacher presents, rather they are interactive result of what information is encountered and how the student's process. It based on perceived notions and existing Personal experiences accumulated from childhood period that laid the foundation of their personality trait that might serve as predictors for their academic achievement. Learning outcomes are written statements of what the successful student/learner is expected to be able to achieve at the end of the programmed module/course unit or qualification (Adam, as cited in Mahajan and Singh 2017)

As student's social horizons broaden when they enter school, new factors begin to influence the development of their personalities. Personality is the Overall pattern or integration of a person's structure, mode of behavior, attitude, aptitudes, interests and intellectual abilities. It includes the factors of his being, his social, mental, emotional, cultural and physical aspects.

When studying personality, Sferra (2000) said that personality is concerned with all the behavior of the individual, both overt and covert, it refers to the total person. It is the expression of what one is and what one does it includes the things that one says as well as thinks in the many different situations that one constantly meets.

In Basilan State College, the school deals with students of distinctive personality, which is deeply rooted in the diversity of culture in the province. This interest in personality study is especially needed in Basilan where students come from poor families. Besides, personality traits of the students are influenced by their social environment, educational attainment of their parents as well as peace and order problems.

The educational standards of Basilan Province have been tremendously affected by the notorious Abussayaf and the rebellious Moro International Liberation Front (MILF) and the Moro National Liberation Front (MNLF) Joined forces. The kidnapping and some lawless element who intended to cause terror of some elementary and secondary teachers in upper municipalities led to suspension and disruption of classes which exacerbated the quality of education in the area. Hence, the study was undertaken in order to know how the students' personality traits can predict academic achievement in areas such as Mathematics, Science, English and Social Sciences subjects. This study would be able to identify the personality traits the students have and at the same time, help them strengthen the positive traits that would lead them to be motivated to achieve their goals in life.

### Statement of the Problem

This study sought to determine the significant influence of personality traits as predictors of academic achievement among junior college students of Basilan State College (BasC) Specifically it sought to answer the following questions;

1. What are the personality traits of the college students as revealed by the Sixteen Personality Factor Questionnaire (16 PF)?

2. What is the Grade Point Average (GPA) in the academic achievement of College students in the different areas of the curricula?
  - a. Mathematics
  - b. Science
  - c. English
  - d. Social Sciences
3. Do the students' personality traits significantly contribute to the variance of the academic achievement in the following subject areas:
  - a. Mathematics
  - b. Science
  - c. English
  - d. Social Sciences?
4. Is there a significant difference in the personality traits when data are grouped according to:
  - a. Age
  - b. Gender
  - c. Socio-Economic Status?
5. Is there a significant relationship between and among the academic achievement in the four subject areas namely: Mathematics, Science, English and Social Sciences?

#### *Significance of the Study*

This study was conducted in response to personality traits as predictors of academic achievement among junior college students of Basilan State. The result of this study is to provide knowledge and information about personality traits as predictors of academic achievement, which will help the school administrators to have a background about the personality traits of the students; inspire curriculum planners to look into the present curriculum and co-curricular programs; for Guidance Counselors as a basis for providing counseling service in the areas of personality traits; professionals will be able to review the importance of personality traits as predictors of academic achievement; will make students aware of the strength and weaknesses of their personality and deficiencies; and finally, this study will contribute to the pool of knowledge in Psychology on the aspect of whether the moderator variables, Age, Gender and Socio-economic status may have a significant influence on the relationship of the personality traits and academic performance in selected academic subjects.

#### II. REVIEW OF LITERATURE AND RELATED STUDIES

The following are discussions of some concepts on personality traits. These studies determined the personality traits of the students which were hypothesized to significantly influence the academic performance of the students.

Students have their own personality traits such as their emotional make-up, attitudes, habits, intelligence, imagination and will which may or be associated with their academic performance. A student who has high intelligence and better attitudes towards his/her studies may somehow perform well in his/her academic performance under normal situation and circumstances. Gordon Allport quoted by Cattell (1994), trait theory represents a blend of humanistic approaches to the study of human behavior. That the individual uniqueness is the paramount goal of psychology. Allport viewed personality as

the dynamic organization of those internal psychophysical systems that determines a person's characteristics behavior and thought. He regarded the traits as the lid unit in the study of personality.

Rasonabe (2000) pointed out that the student respondents Personality Traits were: humble, sober, expedient, tough minded, practical and group dependent. There was no significant difference on the comparison of the Personality Traits as to age, gender and nationality, and there was a significant difference on the Japanese Language Proficiency among the student respondents when grouped according to nationality.

This study is anchored on the personality traits by Cattell (1994). Trait theories rest on two assumptions: First it assumed that many traits exist in all people to some degree and can be classified as more or less dependent; Second it assumed that it can be quantitatively measured the degree of a trait that exist in a person.

Cattell (1994) used factor analysis extensively to study personality traits. He identifies the trait tendency to react to related situations in way that remains fairly stable. He distinguishes between two kinds of tendencies: surface and the source traits. Surface traits describe clusters of behavior that tend to go together. Source traits are the underlying roots of causes of their behavior clusters. Example of source traits are the ego weakness or strength, submissiveness, dominance or timidity or venturesome. Surface traits generally correspond to common sense description of behavior. The High School Personality Questionnaire (HSPQ) is one of the more widely researched among the psychological tests (including intelligence, interest achievement, etc.). Over the years, the prediction of academic achievement from the HSP scales has been a very popular research topic. The relationship between personality, as measured by the 16 PF family, and achievement are described in Cattell (1984). This instrument is actually the test used in the study on the ground on Its predictive capability. The cumulative contribution of the High School Personality Questionnaire (HSPQ) scales to achievement as obtained from a regression analysis of 310 West Coast high school students. High achievers are intelligent (Factor B+), conscientious (Factor G+), self-sufficient (Factor Q2+), tough-minded (Factor -) and self-disciplined (Factor Q3+), (Cattell, 1984). In conclusion, more intelligence (Factor B+), conformity (Factor G+), and self-disciplined (Factor Q3+) can predict achievement. Moreover, the traits of warmth (Factor A+), emotional stability (Factor C+) and self-assurance (Factor 0-) show a statistically significant relationship to achievement.

Lahey (1995), likewise, stated that the primary struggle in personality development was the effort to overcome feelings of inferiority in social relationships and to develop feelings of superiority. A feeling of inferiority is the feelings that result from children being less powerful than adults that must be overcome during the development of the healthy personality. In fact, Adler felt that the effort to achieve feelings of Superiority over other individuals was an essentially unhealthy motive. Instead, Adler focused on two other factors as the most important elements in personality development.

Binet quoted by Sprinthall (1990), in his study stressed that a person's intelligence do predict academic achievement with some degree of accuracy Intelligence Quotient (IQ) is measured by means of tests, and grades are determined exactly the same way, by performances on tests. Sprinthall and Sprinthall (1990) stated that Intelligence Quotient (IQ) tests do predict statistics success. Children whose Intelligence Quotient (IQ) scores are lower than other children s but whose grades are higher, because a number of non-intellectual factors influence scholastic success. Academic achievement has been shown to be largely a result of a student's reality orientation, or ego strength. That is, successful students possess strong egos, are willing to postpone pleasure, are not easily distracted, and are generally more able to pursue tasks in an organized fashion. Underachievers, in contrast, have low ego strength, are less able to control these impulses, and are especially unable to postpone gratification.

Most instructional materials in Basilan State College are written in English. Also Mathematics, Science and Social Sciences are taught in English. Considering that learning how to understand, speak, write and read English is important on the part of the students, it is generally believed that those students who have learned English well can also perform well in other subjects, particularly Mathematics and Science that require comprehension and communication abilities. It is commonly observed that many students could not fully grasp the problems in theorems in Mathematics, because of poor background in Mathematics. Mathematics involves conceptual, computational, comprehension, and problem solving skills. "The difficulties o the student's in Mathematics may stem from their indifferent attitudes towards the subject, their inability to comprehend the given theorems and problems, to transform ideas into Mathematical symbols, and to solve problems correctly" (Mira, 1987 p.1).

Sicat, (1992) found out that high self-esteem as a personality trait is a predictor of high proficiency in the Gates-MacGinite Reading Comprehension Test. The findings confirm the view that an individual's performance in a given task depends how he values himself which in turn determines what he believes he can do. On the other hand, extraversion as a personality traits and high tolerance for ambiguity are not predictors of proficiency in the cloze, reading and written composition tests.

Matzelle (1993), study the value of student's personality traits, demographic information, goals, and intentions data. Using discriminant function analysis, a significant difference at the .05 level was found between personality characteristics of the general sample of college per sisters and dropouts However, significant differences were not found between female per sisters and dropouts, traditional and nontraditional per sisters and dropouts. For the general sample, the personality traits of emotional stability and conservatism were most characteristic of per sisters. For males, the rails or Outgoingness and social awareness were predictive of male persistence.

*Conceptual Framework*

The conceptual framework of the study indicates the independent and dependent variables. The personality traits

represent the independent variable while the academic achievement represents the dependent variables. The components of personality traits are the Sixteen Personality Factors. In this study, the Personality traits are measured using Cattell (1969) model. He referred to these 16 traits because, in his view they are cornerstones upon which personality is built, and traits reflect the person's stable and predictable characteristics

The academic achievement represents the dependent variables and thee Components of academic achievement are Grade Point Average (GPA) in four Subject areas namely: Mathematics, Science, English and Social Sciences. The moderator variables are the Age, Gender, and Socio-economic status. The theoretical bases for the inclusion of Age as a moderator variable are the concepts of Sealy and Cattell (1966) Baltes and Nesselroade, Schaie and Fozard. They believe and have proven in their studies that personality vary based on the variable.

Age Gender is Considered another moderator variable in this study because of the findings of several studies which proven that academic achievement, attitudes, and personality traits vary between male and female respondents. The findings of which are theoretical bases for the inclusion of the variables. The bases for the inclusion of Socio-economic status as a moderator variables are the findings of the following studies: The Equality of Educational Opportunity Survey (EEOS) in the U.S. more popular known as the Coleman Report (1966); Barsaga (1977); Department of Education and Culture (1976) entitled Survey of Outcomes of Elementary Education, more familiarly known by its acronym SOUTELE; Andrews, Houston et.al (1981); Medley (1977) Braphy and Evertson (1975); Soar and Soar (1974); Rosenshine (1975) Braulio (1971), Berliner (1976). Mac Donald (1976); Degolacion (1993) National Assessment of Education Progress (NAEP) (1985); Anderson and Faust (1973).

III. METHODOLOGY

*Research Design and Participants of the study*

This research employed descriptive quantitative analysis. The target population of this study was the Junior college students from different courses such as Bachelor of Science in Education, Bachelor in Elementary Education, Bachelor of Arts and Political Science, Bachelor of Arts in Islamic Studies, Bachelor of Science in Industrial Engineering, Bachelor of Science in Criminology, and Diploma in Computer Technology of the Basilan State College enrolled during the second semester of school year 2002-2003. Of a total of 498 Junior college students, only 70 students were chosen using Purposive quota sampling technique because only 10 students per course from the different department were included in this investigation.

*Research Instruments*

A Standardized research instrument was used in the study, which is The Sixteen Personality Factor Questionnaire (16 PF) by Raymond Cattell (1997). This instrument consists of 16 source traits drawn from great numbers surface traits through factor analysis. The 16 PF are the following: Factor A

(Reserved, Outgoing ); Factor B ( Less Intelligent, More Intelligent); Factor (Affected by feelings, Emotionally Stable) Factor E ( Humble, Aggressive) Factor F (Sober, Happy-go-lucky); Factor G (Expedient, Conscientious) Factor H ( Shy, Venturesome); Factor I ( Tough-minded, Tender- minded) Factor L ( Trusting, Suspicious): Factor M (Practical, Imaginative); Factor N (Forthright, Shrewd ) Factor O (Placid, Apprehensive) Factor Q<sub>1</sub> (Conservative, Experimenting) Factor Q<sub>2</sub> (Group dependent, Self- sufficient ) Factor Q<sub>3</sub> ( Undisciplined, Controlled ) Factor 4 (Relaxed, Tense). It consists of 187 items. Each contains three choices: namely, "Yes", "Uncertain" and "No". Each of the 16 factors is independent or the rest. It can be hand scored with the use of the templates or computers.

**Data Analysis Procedure**

The data that was obtained in the study were tabulated to facilitate statistical treatment. Mean was used to present the personality traits of the student respondents. Mean and Standard Deviation were used to determine the academic achievement of the students. The GPA of the student respondents was categorized and given the match levels. Multiple Regressions was used to find out the significant contribution of the Personality traits on the variance of the four subject areas of the respondents. One-way Analysis of Variance (ANOVA) was used to compare the mean differences of the student respondents based on Age and Socio-Economic Status. T-Test for Independent sample was used to compare the mean differences of the student respondents based on Gender, and Pearson Product Moment Correlation was used to measure the relationship between and among the students' academic achievement in Mathematics, Sciences, English, and Social Sciences

**IV. PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS**

**Research Problem 1 -** What are the personality traits of the student responders as revealed by teen Personality Factor Questionnaire (to PF)?

The personality traits of the student respondents can be noted that they strike the balance in the ten factors: except in the following six factors, namely factor B-, C-, F- M-, N+ and O+. As a whole the respondents displayed a personality trait as less intelligent affected by feelings. By the sixteen Personality Factors. Factor B shows an average mean of 3.12 which mean they are less intelligent. They tend to be slow to grasp meanings and use literal interpretation. Factor C reveals that they are affected by feelings which earned a mean of 3.81. This shows that they are sensitive, easily hurt, and easily annoyed or frustrated especially under unsatisfactory conditions. Under Factor M respondents earned a mean of 4.27 which falls under the category of practical. This is interpreted as their tendency d and things and concerned with what is especially in cases of emergencies a problematic situation. Factor O reveals a mean of 7.45 or apprehensive. This means they are depressed and moody and has difficulty to accept challenge to his work because of fear. Generally, this finding is supported by the findings of Reasonable (2000) who pointed out that the student

respondents' personality traits were: sober, practical and group dependent respondents' in this present study were found to be less-intelligent, affected by feelings, sober, practical, shrewd and apprehensive.

**Research Problem 2 –** What are the Grade Point Average (GPA) Academic Achievement of the Junior colleges students in the different subject areas of the curricula:

- a. Mathematics
- b. Science
- c. English
- d. Social Science

**Descriptive:** Grade Point Average (GPA) Academic Achievement of Students in Mathematics, Science, English, and Social Science

Subject Areas	Mean	Standard Deviation	Adjectival Rating
1. Mathematics	2.25	0.7082	Good
2. Science	1.83	0.7064	Good
3. English	2.19	0.3056	Good
4. Social Sciences	2.14	0.3040	Good

**Research Problem 3 -** Do the students' Personality Traits significantly contribute to the variance of their academic achievement in the following subject areas?

- a. 3.1. Mathematics
- b. Science
- c. English
- d. Social Science

The regression equation relating the students' 16 PF scores with their grades in Mathematics, which shows an F ratio of 2.633 with a P-value of 0.007 which is significant at  $\alpha = 0.05$ . This means that at least one of the 16 factors in the 16 PF scale significantly contributes to the variance of the students' grades in Mathematics.

**Contribution on the Academic Achievement in Science**

The regression equation also shows that, relating the students' 16 PF scores with their grades in Science. It shows an F ratio of 2990 with a P-value of 0.926 which is not significantly contribute to the variance of the students' grades in Science. This means that respondents' performances in Science are not dependent on any personality factors.

Results also shows the regression equation, relating the students' 16 PF scores with their grades in Social Science. It shows an F ratio of 2.457 with P-value of 0.926 which is not significant at  $\alpha = 0.05$ . This means that none of the students' grades in Social Science performance. They do not determine the scholastic performance of the respondents.

Post Hoc analysis show that none of the 16PF factors can significantly contribute to the variance of the students; grades in Social Science. All the 16 pF P values are greater than  $\alpha = 0.05$ .

The findings reveal that the personality traits are only Significant contributing to the variance of the students' achievement in Mathematics. The findings further reveal that the personality traits do not significantly contribute to the variance of the students achievement in Science, English, Social Studies. The finding of this study, on the significant

contribution of personality traits on the academic achievement of the student in Mathematics, Supports the theories of McCarthy (1973), Terman (1959) and Cattell (1984), which posit that a very high correlation exist between intelligence and other personality traits and that personality traits predict academic achievement.

*Research Problem 4-* Is there a significant difference in the Personality Traits when data are grouped according to.

- a. Age
- b. Gender
- c. Socio-Economic Status

Differences in the Personality Traits based on the Variables Age.

The Personality Traits of the students classified according to their Age. It is shown that the students significantly differ 0.037 is significant at  $\alpha = 0.05$ . This means that there is a significant difference in the scores of the students in Factor N (Forthright / Shrewd) when classified based on Age. This implies that student's o different Ages vary in this particular aspect of their personality.

This finding, on the significant or meaningful difference of the Personality Traits based on Age, specifically between the comparison of the ages 18 and 22 and above and ages 21 and 22, on factor N, support the concept of Sealy and Cattell (1966) who suggest that people of different ages have different personality traits.

The studies of Baltes and Nesselroade, Schaie, and Fozard support these findings, however, their study showed differences in other factors like Factor F, happy-go-lucky; Factor G, conscientiousness; Factor I, tender-minded; Factor O, apprehensive; Factor Q<sub>1</sub>, experimenting; and Factor Q<sub>4</sub>, tense.

Differences in the Personality Traits based on the Variables Gender.

The findings on the non-significant difference on the factor based on the variables Age, contradict to the findings of the above-mentioned Studies. This study reveals that there is a significant difference in the student's personality traits in these nine factors when data are classified based on Gender. A closer look at this study would reveal that the males obtained a higher score skewed towards a high Score Direction in Factor O which is (apprehensive) and in the other eight (8) factors; they obtained scores skewed towards a Low Score Direction. While the females obtained a score skewed towards Low Score Direction in Factor O- which is (Placid and self-assured), and obtained score skewed towards High Score Direction.

This finding is supported by the findings of Halpern (1997), as cited by Aiken (2000), who pointed out that the findings of the investigation indicate that females tend to be superior to males in verbal fluency, reading comprehension, fine motor dexterity, clerical skills, speech articulation, and in verbal subjects such as literature and foreign languages. Males tends to surpass females in visuospatial ability, task involving moving object, speed and coordination of large bodily movements, and in Mathematics reasoning and science.

*Differences in the personality traits based on the Variables Socio economic Status*

*Research Problem 5-* Is there a significant relationship between and among the students' Academic Achievement in the four

subject areas namely Mathematics, Science, English, and Social Science.

Results shows that the relationship of the academic performance of the students between and among their grades in the four subject areas. It shown that the grades in mathematics significantly correlate with the grades in Science and English. The r-value of 0.633 and the P-value of 0.000 is significant at  $\alpha = 0.05$  (for Math and Science) and the r-value of 0.244 with a P-value of 0.042 significant at  $\alpha = 0.05$  (for Math and English) Likewise, the grades in Science significantly correlate with their grades in English. The r-value of 0.279 with a P-value of 0.19 is significant at  $\alpha = 0.05$ . Furthermore, the grades in English significantly correlate with the grades Social science. The r-value of 0.575 with a P-value of 0.000 is significant at  $\alpha = 0.05$ . This means that the following subjects, Mathematics correlate with Science and English, Science correlate with English, and English correlate with Social Science and they are all significant at  $\alpha=0.05$  level.

This means that student who perform well in Mathematics also perform well in English and Science. Conversely those who did not perform well in Mathematics did not also perform well in English and Science. The students who performed well in Sciences also performed well in English and Mathematics and conversely those did not perform well in Science also did not perform well in English and Mathematics. Lastly those who perform well in English also performed well in Mathematics and Science, and conversely those who did not perform well in English did not also perform well in Mathematics and Science. However, a closer look at the table would reveal that the students who perform well in Social Science did not preterm well in Math and Science and Conversely those who did not perform well in Social Science performed well in Mathematics and Science. The significant relationships between and among the students' score in English, Mathematics, and Sciences are substantiated by their grade point average results which are on the adjectival level of GOOD.

## V. SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

*Summary:*

The following are the findings:

1. The students were found to have the following Personality Trait (1) less intelligent; (2) affected by feelings, (3) sober, (4) practical (5) shrewd, and (6) apprehensive
2. The student's adjectival rating for the academic achievement in Mathematics, Science, English, and Social Science is GOOD.
3. Three (3) Personality Traits significantly contribute to the variance of the students' grades in Mathematics and these are F actors (Tender-minded), Factor M (imaginative) and Factor Q<sub>3</sub> (Controlled)
  - 4.1. There is a significant difference in the Personality traits of the students based on the variables Age. The meaningful difference existed in Factor N between Age brackets of (19 and 21) and (21 and 22).
  - 4.2. There is a significant difference in the Personality Traits o of the student between based on the variable Gender. The significant difference between male and female students existed

in nine (9) factors; Factors A (reserved), Factor B (less intelligent), Factor C (affected by Feelings), Factor F (sober), Factor H (shy), Factor M (practical) Factor O (placid), Factor Q<sub>2</sub> (group-dependent), Factor Q<sub>4</sub> (relaxed).

4.3. There is no significant difference in the Personality Traits based on the variable Socio-economic status.

5. There is a significant relationship in the students' academic achievement between and among the following subject areas (1) Mathematics and science, (4) mathematics and English, (3) Science and English; (4) English and Social Science.

**Conclusion:**

Based on the findings of this study, it is logical to conclude that personality traits significantly influence the academic achievement of students. It was revealed in this study that specifically three (3) personality traits significantly contribute to the variance of the academic achievement. Mathematics. The findings of this study gave empirical support to the theories of McCarthy (1937), Termen (1959), Cattell (1984), that personality traits predict academic achievement.

**Recommendations:**

1. It is recommended that school administrators plan out seminar - workshop to improve teacher's methods and techniques in teaching the four subject areas taking into consideration non-intellectual factors as personality traits.
2. The Guidance and Counseling Office should inform the students of their strengths and weaknesses in order that they can develop desirable traits in response towards academic performance and academic achievement in their studies.
3. Curriculum planners may use the findings of this study as baseline data to revise the present curriculum and co-curricular programs with the end view of giving importance to personality traits in the learning process of college students.
4. The Guidance Counselors should provide counseling service in the areas of personality traits. The data from this study will

help them improve the guidance nonacademic in every college to enhance personality.

5. The teachers may redirect their syllabus skewed towards the learning experiences considering personality traits as predictors of academic achievement.

6. This study delved on simple description of personality traits of college students, it is recommended that a more in-depth study, be conducted to determine the reasons. (1) among many personality traits, only one, two, or three affect academic performance, and (2) only in Mathematics is the influence significant.

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