

Analysis of the Academic Achievement of Teacher Education Students of Abra State Institute of Sciences and Technology

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Abstract

This research sought to find out if there was a relationship between the ASIST College Admission Test (ACAT) scores and the academic achievement in the subject areas Filipino, English, Science and Mathematics of freshmen teacher education students during the AY 2013-2014. In this study, the data were gathered and analysed using the descriptive-correlational research method.

Among the four subject areas, Filipino ranked first with the highest average grade followed by English, Science and Mathematics. Also, it was found out that one section (BSEd 1A) out of eight sections topped in all subject areas based on average grade. Further, the ACAT mean score revealed that Filipino received the highest rating with "High Average" followed by English and Science with "Average" rating and Mathematics with "Low Average" rating. The results indicated that students who performed well in ACAT also did well in their academics.

Based on the findings, it was recommended that ASIST Bangued should regularly review and enrich the admission tests as well as the instructional materials and activities used and done in the subject areas English, Science, Mathematics and Filipino; validate the effectiveness of the ACAT by conducting the same study yearly and a parallel study in the College of Teacher Education and other colleges using other independent variables like leadership potentials of students and teachers, pre-service trainings and seminars, field study or experiential learning gains of students, students' membership to teacher education organizations as determinants of academic performance is highly recommended..

Keywords

ASIST College Admission Test, Academic Achievement, Teacher Education, Philippines

I. Introduction

In the Philippines, public and private State Colleges and Universities (SUCs) have their own College Admission Tests. Although institutions consequently differ in the process of selecting college entrants, a large number of colleges and universities have found that tests particularly the intelligence tests have a great utilitarian value in making college admission decisions. The selection of students for admission to college has become a controversial issue to and a concern of not only college entrants but also of the educational institution. It is for this reason that admission tests have become an integral part of every collegiate school system not only for the purpose of determining applicants' eligibility for acceptance to a collegiate program but also measuring students' ability to learn and succeed in the college of teacher education.

In the Abra State Institute of Sciences and Technology, Bangued campus, College Admission Tests (CATs) are designed to identify students suitable for admission into a graduate or undergraduate curriculum. It is designed to assess problem solving, critical thinking, written analysis and knowledge of educational concepts and principles. It is a paper-and-pencil test. The Guidance and Testing Services Department and the heads of the different collegiate departments admit and counsel the incoming freshmen based on the results of the ASIST College Admission Test (ACAT). Personal interview is also an integral part of the admission. The ACAT consisted of items in English, Science, Mathematics and Filipino to test their suitability in the college. If it could be shown that the entrance test (ACAT) scores and the academic achievement of the college students are highly correlated, then the college admission tests scores could predict the students' performance or achievement in the academe.

It was in this light that this study attempted to determine the relationship between the ACAT scores and the academic achievement of the ASIST freshmen specifically the Education students.

The results of this study would help in the prediction of the

academic achievement of teacher education students based on their entrance test scores. The study could serve as a guide to the College of Teacher Education in evaluating the instructional program and providing data to enable the department in reviewing its existing curriculum. The overall results of this study would also be useful particularly to the Guidance and Testing Services of the college as it would make certain that the Filipino, English, Science and Mathematics tests of the ACAT are useful tools in selecting and screening freshmen teacher education students.

It was hoped that the study would not only be valuable to the education students and the faculty but also to the institution particularly the academic board which is responsible for the development of policies geared towards the improvement of the academic performance of its studentry.

This study aimed to find out the degree of relationship between the ASIST Admission Test scores and the academic achievement in the subject areas of Filipino, English, Science and Mathematics of Freshmen teacher education students of Abra State Institute of Sciences and Technology, Bangued campus, during the Academic Year 2013-2014.

It attempted to answer two general questions: (1) to what degree are entrance test scores and academic achievement related? And (2) do the entrance test scores predict freshmen teacher education students' academic success in the subject areas of Filipino, English, Science and Mathematics?

Specifically, this study sought answers to the following questions:

1. What are the mean scores of freshman teacher education students in the subject areas of Filipino, English, Science and Mathematics?
2. What are the mean scores of freshmen teacher education students in the ACAT subject areas of Filipino, English, Science and Mathematics?
3. Is there a significant difference among gender, sections, academic performance in Filipino, English, Science and

- Mathematics, and overall average grade?
4. Is there is a significant relationship between the ACAT scores and their academic performance in each subject area Filipino, English, Science and Mathematics?

II. Methodology

In this study, the data were gathered and analysed using the descriptive-correlational research method. Descriptive research gives information regarding the variables being studied. Basically, it describes the situation and not the cause. Furthermore, correlation research method determines the extent of relationship between variables.

The secondary data used in this study were obtained from the concerned departments of the institution such as the Office of the Registrar, Guidance and Testing Services Department, and the College of Teacher Education.

The researcher utilized the Statistical Package for the Social Sciences for Windows (SPSS) program to determine the relationship between the ASIST Admission Test Scores and Academic Achievement of Freshman Teacher Education Students in the Academic Year 2013-2014. Both descriptive (such as t-test and F-test) were used.

This study is similar to the study of Silon in such a way that it analysed the relationship of the ACAT to the academic achievement of the teacher education students. However, this paper differs from it for the reason that this study did not look into the impact of the high school graduated from and the gender of the respondents. They were treated as a group instead.

III. Results and Discussion

In the discussion of the results of this study, the researcher maximized the use of textual presentation.

Findings revealed that out of 335 teacher education students, 267 or 80% are female and 68 or 20% are male. The results also indicated that freshmen teacher education students in the Academic Year 2013-2014 came from schools in Abra and nearby provinces. The top three feeder schools were Abra High School with 80 students (24%), Mark Ysrael B. Bernos Memorial National High School with 60 students (18%); and Northern Abra National High School with 44 students (13%). Majority of them were from Bangued and the other nearby towns of Bangued. Five students out of 335 did not indicate the previous school attended.

Results showed that out of 335 students, 300 attained a passing overall average grade. Their grades ranged from 70 to 94 or "Failed" to "Very Good", however, it was noticed that the grades of majority of both male and female students were "Fair". The statistical analysis showed that the female respondents acquired a mean grade of 82% with a standard deviation of 4.56 while the male students obtained an average grade of 80% with a higher standard deviation of 5.24. Using t-test, this indicates that there is a significant difference between the overall average of male and female freshmen teacher education students at 0.05 levels. Further, it showed that female teacher education students in the AY 2013-2014 performed better than male students based on their average grade in the subject areas of Filipino, English, Science and Math.

Students' Overall Grade Grouped According to Course/Section

BSEd I-A ranked first among the eight (8) sections based on the average grades of students in Filipino, English, Science and

Mathematics subjects combined with 85%; BEEd I-A was second with 81%. All the remaining sections had a mean grade score of 80% except for BEEd I-D which ranked lowest with an average grade of 79%.

The statistical test shows that BSEd I-A attained the highest mean grade of 85.56% with a standard deviation of 4.00. BEEd I-D, however, has the lowest grade of 79% with a slightly higher standard deviation of 4.14. The ANOVA test further indicates that there is a significant difference among the overall average grades of all sections at 0.05 level. As a support to the said results, the Waller-Duncan Post Hoc Tests shows that BSEd I-A truly surpassed all other sections with regards to their average grade in Filipino, English, Science and Mathematics combined in the AY 2013-2014.

Students' Filipino Grade Grouped According to Course/Section

BSEd I-A got the highest number of students with a "Very Good" rating. Further, students in BSEd I-A and BEEd I-D did not have any failing mark in the Filipino subject. The ANOVA test result shows that BSEd I-A attained the highest mean grade of 86.75% with a standard deviation of 3.41. On the other hand, BEEd I-D got the lowest mean grade of 79% with a higher standard deviation of 4.34. This further indicates that there is a significant difference in the Filipino grades of all sections at 0.05 level. As a support to the said results, the Waller-Duncan Post Hoc Tests shows that BSEd I-A truly topped all other sections with regards to their Filipino grades in AY 2013-2014.

Students' English Grade Grouped According to Course/Section

BSEd I-A got the highest number of students with a "Very Good" rating. Further, students in BSEd I-A and BEEd I-D did not have any failing mark in the English subject. The ANOVA test result shows that BSEd I-A attained the highest mean grade of 85.05% with a standard deviation of 3.61. On the other hand, BEEd I-D got the lowest mean grade of 79% with a higher standard deviation of 4.42. This further indicates that there is a significant difference in the English grades of all sections at 0.05 level. As a support to the said results, the Waller-Duncan Post Hoc Tests shows that BSEd I-A truly topped all other sections with regards to their English grades in AY 2013-2014.

Students' Science Grade Grouped According to Course/Section

Results indicate that BSEd I-A got the highest number (6) of respondents with "Excellent" rating; however, BEEd I-D had the most number (3) who "Failed". The statistical test result showed that BSEd I-A attained the highest mean grade of 82.69% with a standard deviation of 4.19. On the other hand, BEEd I-D had the lowest mean grade of 79.12% with a higher standard deviation of 6.28. The ANOVA test further indicates that there is a significant difference in the Science grades of all sections at 0.05 level. As a support to the said results, the Waller-Duncan Post Hoc Tests shows that BSEd I-A truly surpassed all other sections with regards to their Science grades in the AY 2013-2014.

Students' Math Grade Grouped According to Course/Section

Based on the findings, majority or 195 of the respondents got "Passing" grades in Math. BSEd I-B, BEEd I-A, BEEd I-B and

BEEed Pre-school had the highest number of students who obtained a "Very Good" rating; however, BEEed I-D had the most number of students that "Failed". The statistical result showed that BEEed I-B attained the highest mean grade of 80.19% with a standard deviation 4.81. On the other hand, BEEed I-D had the lowest mean grade of 75.73% with a slightly lower standard deviation of 4.41. The ANOVA test further indicates that there is a significant difference in the Mathematics grades of all sections at 0.05 level. As a support to the said results, the Waller-Duncan Post Hoc Test shows that BEEed I-B truly achieved the highest average Mathematics grade in the AY 2013-2014.

Relationship Between Average Grade and ACAT Score

Among the four (4) subjects included in the study, Filipino ranked the highest because the respondents obtained an average grade of 83% trailed by English in which respondents got only an average grade of 82%. Science ranked third in which respondents got an average grade of 81%. As observed, Mathematics received the lowest rank with a mean grade score of 78%. The computed average score of the respondents in the Filipino test is 43 out of 50 points. Using the stanine rating, the result is equivalent to High Average which means that the respondents are good in pag-unawa sa binasa, Talasalitaan, mangkasingkahulugan, magkasalungat ang ibig sabihin, wastong gamit, isang dulog. The computed average score of all respondents in the English test is 60 out of 100 points. Using the stanine rating, the result is equivalent to Low Average which means that the teacher education student examinees have difficulty in reading comprehension and identifying errors in grammar. In terms of numerical or mathematical ability, the students scored 31 out of 50 which is equivalent to a stanine rating of "Average". For Science, the students got 29 out of 50 which corresponds to "Average". This implies that majority of the respondents had average knowledge on the basic principles of Chemistry, the nature of matters, different physical laws, and human ecology and development.

The correlation of the ACAT score with the academic performance of the respondents revealed that ACAT-Filipino and Filipino subject achieved a high positive correlation with a value of 0.71. The two variables were significant at 0.01 level. ACAT-English and the English subject achieved a moderate positive correlation with a value of 0.54. Further, the two variables were significant at 0.01 level. Another result showed that ACAT-Mathematics and the Mathematics subject achieved a moderate positive correlation with a value of 0.40. The two variables were significant at 0.01 level. Moreover, the correlation between ACAT-Science raw and the grades obtained in the Science subject has a coefficient of 0.36 which is considered as a moderate positive correlation. The two variables were significant at 0.01 level. Essentially, the result indicates that students who performed well in ACAT tended to do well also in their academics, while students who did poorly also demonstrated poor performance as they progressed through the curriculum.

IV. Conclusions

There is a significant difference between the grades of the male and female students in the subject areas of Filipino, English, Science and Mathematics combined. Female students tend to be more successful in their academics than male students. The results of the study indicated that there is a significant difference among the eight sections in terms of their overall average grade at 0.01 level of significance. BSEd I-A tends to be more successful in

their academic performance than the other five sections within the AY 2013-2014 in the Teacher Education program.

An analysis of the Filipino, English, Science and Mathematics subject areas revealed a moderate positive correlation between the ACAT raw scores and academic performance among the Teacher Education students. Students who scored high in the ACAT are more likely to be successful in achieving academic success in the Teacher Education program than students who scored poorly in this examination. Therefore, the ASIST College Admission Test scores is a valid predictor of student success in the subject areas of Filipino, English, Science and Mathematics. However, the correlation coefficient showed only positive moderate relationship.

V. Recommendations

On the basis of the findings of this study, the researcher recommended the following to the college:

1. ASIST Bangued should regularly review and enrich the admission tests as well as the instructional materials and activities used and done in the subject areas English, Science, Mathematics and Filipino;
2. Validate the effectiveness of the ACAT by conducting the same study yearly.
3. A parallel study in the College of Teacher Education and other colleges using other independent variables like leadership potentials of students and teachers, pre-service trainings and seminars, field study or experiential learning gains of students, students' membership to teacher education organizations as determinants of academic performance is highly recommended.

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Author's Profile



Dr. Dionisio A. Visco is presently the Executive Dean of the Abra State Institute of Sciences and Technology (ASIST) Bangued Campus in Bangued, Abra, Philippines and held past designations like Chairperson of the College of Teacher Education, Professional Education Discipline Chair and Coordinator of Research, Planning, Alumni Affairs and National Service Training Program (NSTP).

Dr. Visco finished Bachelor of Science in Industrial Education, major in Mathematics (cum laude) at the Abra School of Arts and Trades in 1991 after graduating First Honorable Mention at Bangued East Central School, Bangued, Abra and First Honorable Mention at Abra School of Arts and Trades. He earned his degrees in Master of Arts in Education and Doctor of Education major in Educational Administration at the University of Northern Philippines, Vigan City Ilocos Sur in 2000 and 2013 respectively.

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