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PROFILE AND PERFORMANCE LEVEL IN MATHEMATICS OF THE A & E TEST PASSERS IN THE PROVINCE OF SORSOGON, PHILIPPINES

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ABSTRACT

Alternative Learning System Accreditation and Equivalency (ALS A&E) program in the Philippines provides educational opportunities to every Out-of-School-Youths (OSYs), school leavers and adults, non-attendees of the formal school system, OSYs who are visually impaired, learners at home, non–passers of the previous A & E test and others which include unemployed or employed OSY adults, workers, housewives, maids, driver, and other Indigenous Peoples (IPs). The study determined the profile and performance level in Mathematics of the A&E test passers in the province of Sorsogon, Fiscal Years 2012 to 2014. The respondents were 52 A&E test passers in the province. This descriptive correlation method of research used survey questionnaire, unstructured interview and documents to gather the needed data. Profile of the respondents such as age, sex, grade level during the test, status of enrolment, and family income were correlated to their performance level in mathematics using chi-square test. The results imply that most of the A & E test passers were in Grade V during the test, male adults belonging to the poorest families and did not enroll after passing the test. The age of the A & E test passers was significantly related to their performance level in Mathematics.

Keywords: Profile, performance level, Accreditation and Equivalency (A&E) test passers, Mathematics, Descriptive-correlation, Sorsogon, Philippines.

INTRODUCTION:

The 1987 Philippine Constitution provides for the recognition and promotion of non-formal, informal and indigenous learning system as well as self learning, independent and out-of-school study programs particularly those that respond to community needs (Article XIV, Section 2, paragraph (4)). Republic Act 9155, otherwise known as the Governance Act for Basic Education stipulates the establishment of the Alternative Learning System (ALS) to provide out-of-school children, youth and adults with basic education. The Government established ALS to provide Filipinos, the chance to have access to basic education and complete it in a mode that fits their distinct situations and needs.

The Department of Education (DepEd) in the Philippines recognized ALS non-formal education program which is conducted outside the classroom usually at community learning centers, barangay multi-purpose hall, libraries or at home. This system is managed by ALS learning facilitators, such as mobile teachers, ALS district coordinators, instructional managers at an agreed schedule and venue between the learners and facilitators. The ALS curriculum reflects the set of knowledge, skills and competencies that the learners should develop to meet the minimum requirements of the Philippines basic education. The target learners of ALS are those people usually located in far-flung communities with no or limited access to formal schools. A test passer of either the elementary or secondary level gets a certificate which bears the signature of the Secretary of DepEd. This allows a passer to mainstream in the educational system of the country.

LITERATURE REVIEW:

To attain better academic performance has always been noted as the general goal not only of the students but also of every educational institution. Mathematics as one of the tool subjects from primary schools to high school level can be considered as the language of science and technology and early foundation of mathematics skills is necessary in order to attain high academic performance. This provides background to a growing body of research which supports the implementation of curricular resources and program standards for mathematics for early childhood learners (Richardson, 2000).

Some of the causes of poor academic performance for some students are simply poor school elementary base. ALS learners may not be able to focus on tasks easily. Another possible issue could be personal or financial issues which prohibit them from focusing on their studies. There are also other factors that affect students' performance such as home life, health, motivation, learning problems, psychological problems, and family social status. Boado(2013) emphasized that factors affecting academic performance of the students were correlated to family, peers, school and teachers are some of the most influential predictors that significantly relates to academic performance.

Moreover, Kumar & Karimi (2010) posits that quality of students' academic performance is influenced by a wide range of environmental factors rather simply teacher factors and psychological factors within the learners such as motivation and the self, rather than simply by ability. Ball & Cohen (1999) explained that the effectiveness of professional programs merging from the mathematics content, methodology, knowledge to child growth and development and family relationships is a good foundation in mathematics programs as well as enhancing education professionally.

These studies relate to the present study along profile. The former treated socio-demographic profile of parents in relation to students' level of performance in the secondary level were most of these students belong to the group of very low income families. The present study deals on the profile of A& E test passers in the Province of Sorsogon during the Fiscal Years 2012 to 2014 in relation to their performance level in the test along the area of mathematics. This particular group of respondents was chosen as the subject of the study to determine whether they can cope with the content standards of mathematics in the formal school with due consideration to their profile.

There were studies conducted in the Philippines showing the results of the implementation of ALS A&E such as the study of Abao, Apao & Dayagbil(2014) in Region VII which reveals the passing rate is increasing. The increasing trend in passing percentage in most of the division indicates that the program served its purpose of increasing literacy among recipients. In Sorsogon City, records from the documents of City Division of Sorsogon through the current ALS Education Program Supervisor revealed that 16.66% was the passing percentage in 2009, 29.41% in 2010, and 62.96% in 2011. This record demonstrated that there is an increasing percentage rate of passers which signifies that ALS Program is indeed providing better services to the learner with regards to its purpose.

The study traced the status of A&E passers in the present context based on their profile and determined the

reasons why they were not able to finish their study in regular classes and their performance level in Mathematics after taking the examination in Accreditation and Equivalency.

The evolving focus of accreditation is reflected in the standards. In the 1960s, the standards were designed to ensure that essential structures were in place and the necessary resources were available for operations (Beno, 2004). By 1990s, new requirements that focused on student achievement, such as test scores and completion, retention, graduation, and job placement rates emerged. In the early 2000s, another set of requirements was added that focused on assessing student-learning outcomes, or what students have learned as result of attending school (WASC, 2012).

There has been a corresponding shift in focus towards the quality of education that students receive, primarily in the form program review and student-learning outcomes for some time (Armstrong, 1983; Beno, 2004). Some assert that two of the primary purposes of accreditation, to provide accountability and improve educational quality through student learning outcomes assessment (Provezis, 2010). Sykes (2003) concludes that accreditation is achieving exactly what it is designed to do: provide a platform for critical assessment and accountability to stakeholders.

These aforementioned literatures lend support to the present study. The author's ideas relate to the present on some purpose of accreditation to the recipients of services that affect the performance level in mathematics. It demonstrated that the purpose of accreditation is changing from a way to establish legitimacy to one that provides accountability alongside providing funds for action that are suited to these programs and projects.

PURPOSE OF THE STUDY:

This study determined the profile and performance level in Mathematics of A & E Test Passers in the province of Sorsogon, Fiscal Years 2012 to 2014. The following are the specific objectives: (1.) determine the Profile of A & E test passers in terms of: a) Age, b) Sex, c) Grade Level during the test, d) Status of Enrolment e) Family Income, (2.) identify the Performance Level of the A & E Test Passers in Mathematics, (3.) test the relationship between the profile and the performance level in Mathematics of the A & E Passers.

METHODOLOGY:

This descriptive-correlation method of research utilized survey, unstructured interview, and documentary analysis in gathering the needed data. The survey questionnaire was used in determining the current profile of the respondents through face to face unstructured interview. The draft of the survey questionnaire has been submitted to the panel for comments and suggestions. The revised questionnaire was then subjected for the conduct of dry-run. Ambiguous and poorly constructed items were improved. Finally the questionnaire was approved and reproduced for final administration.

The survey was supported with the data from Learners Information System (LIS) of DepEd to determine the legitimacy of their status of enrollment. Records were requested from the office of Education Program Supervisor (EPS) showing the performance of the A & E test passers from fiscal years 2012 to 2014. This was also lead to the determination of the list of 52 passers in the A & E test during the three year period. Out of 52 samples, 8 are A&E test passers in 2012, 22 in 2013 and another 22 A&E test passers in 2014.

Permission to conduct this study and to carry out the survey to the respondents was sought by the researcher both from the City and Province Divisions of Sorsogon. These were administered personally by the researchers to the respondents through the assistance of the EPS for ALS A&E in the Province. Unstructured interview was also conducted to validate the information and data gathered in the records.

The data gathered were analyzed and interpreted using frequency count, percentage, mean, and using chi–square. Contingency coefficient was further used to determine the degree of relationship. The following scale was employed to determine the performance level of A & E test passers which is adopted from DepEd descriptive scale of performance.

Scale	Description
85% - 100%	Excellent
75% - 84%	Mastery Level
60% - 74%	Nearing Mastery Level
35% - 59%	Below Mastery Level
0% - 34%	Poor Performance Level

FINDINGS AND DISCUSSION:

1. Profile of A&E test passers in terms of Age and Sex, Grade Level during the Test, Status of Enrolment, and Family Income

Age and Sex. The data presented in Table 1.A is the profile of A & E test passers according to age and sex. It shows that there are more males than females. Out of 52 respondents there are 33 or 63.46% males and 19 or 36.54% females. It shows that majority of the passers are belong to age bracket of below 20 represented by 29 or 55.77%. Out of 29, 16 or 30.77% are male and 13 or 25.00% were female. Moreover, there is only one or 1.92% male A & E test passer in 31-40 and 41 and above age bracket.

This data suggest that most of the test passers are males since majority of the ALS enrollees are male from the year 2012 to 2014. It implies that most of the recruited (OSY) Out-of-School-Youth, (SL) School Leavers, (MGL) Marginalized Group of Learners, (DO) Drop–Out learners belong to this sex. Because dropping out is influenced by both individual and institutional factors, intervention strategies can focus on either or both sets of factors. That is, intervention strategies can focus on addressing the individual values, attitudes, and behaviors that are associated with dropping out without attempting to alter the characteristics of families, schools, and communities that may contribute to those individual factors (Rumberger, 2001).

Grade Level during the Test and Status of Enrolment. Table 1.B reveals the data regarding the respondents' grade level during the test and status of enrolment in the Province of Sorsogon. From among 52 respondents there are 16 or 30.77% enrolled and 36 or 69.23% are not enrolled after passing the test.

The data shows that most of the A&E test passers were in Grade 5 during the examination which corresponds to a total of 25 or 48.08%. Out of 25 Grade V passers, 18 or 34.62% are unenrolled and only 7 or 13.46% were enrolled after passing the test. It suggests that at this grade level most of the students leave the school for any reason. It implies that almost half the respondents coming from this grade level return to school through ALS and are given a chance to continue schooling and pass to enroll in the secondary level. Studies affecting enrolment of students suggest that results obtained from single equations and joint estimation, allowing for possible endogeneity of academic performance, reveal the importance of the role of academic performance in models of demand for education. Several factors that are at work for a long time, such as household income at different points in time, influence the school-leaving decision through academic performance. These result to the role that stimulating academic performance may play in breaking cycles of disadvantages (Maani and Kalb, 2005).

Family Income. Table 1.C presented the profile of A&E passers in the Province of Sorsogon in terms of family income revealed that out of 52 respondents, there were 19 who earned below ₱2,000 pesos with an equivalent of 36.54%. This table shows that there are 59.62% of the respondents with a total of 31 passers who have family income of 2,001-5,000. There were only two of the respondents who earn 5,001-10,000 pesos family income with a percentage of 3.85%.

The findings revealed that the A&E test passers were all belong to low income family. It implies that the passers belong to the group of poorest families in the province. Studies on family backgrounds mentioned that results from the educational attainment, housing type and students age as reflected by school level were all statistically significant variables and predictors of academic performance. Considine and Zappala (2002) provided additional perspective on family structure, main source of family income and geographical location which did not significantly predict variation in school performance of students from disadvantage background once other factors were controlled.

PERFORMANCE LEVEL OF A & E TEST PASSERS IN MATHEMATICS:

Performance Level of A & E test passers in Mathematics when grouped according to fiscal year is presented in Table 2. The results presented according to fiscal year and computed for their performance level.

It is reflected in this table that, in 2012, the performance level of the A&E test passers is 76.56% with a descriptive equivalent rating of *Mastery level*. It can be noticed that during the year 2013, the performance level of the respondents decreased by 5.58%, which is 68.98% under the descriptive rating of *Nearing Mastery*. Furthermore, the performance level decreases by 9.78% in 2014 which is 59.29% with a descriptive equivalent of *Below Mastery*. The over-all performance level of A & E test passers in Mathematics when grouped according to fiscal year is 66.01% with a descriptive equivalent rating of *Nearing Mastery*.

The data suggest that the passers have declined on their performance in Mathematics every year. It implies that the test passers did not achieved the required skills and competencies in Mathematics subject. Studies on the causes of poor academic performance in mathematics, results show factors attributed to poor performance include poor infrastructure, emotional problems, weakness in Mathematics background, phobia for Mathematics

among others (Zakariya, 2015), under staffing, inadequate teaching/ learning materials, lack of motivation and poor attitudes by both teachers and students, and retrogressive practices (Gegbe and V.K. Sheriff, 2015).

RELATIONSHIP BETWEEN THE PROFILE AND PERFORMANCE LEVEL IN MATHEMATICS OF A & E TEST PASSERS:

Table 3 presented the relationship between the profile and performance level in Mathematics of A& E test passers in the province of Sorsogon. The computed chi-square value between the profile in terms of age of the A & E test passers and the performance level in mathematics 15.81 which is higher than the corresponding critical value of 12.59 when df is 6 and tested 0.05 level of significance. This leads to the rejection of null hypothesis (Ho) of no significant relationship.

The result confirms that the profile of the respondents in terms of age has a significant relationship with their performance level in Mathematics. It also implies that as people grow old they develop skills and knowledge in Mathematics outside the school. They accumulated much experience in the environment and society better than the children. Moreover, the study of Voyles (2011) indicated that student's age had a statistically significant impact on academic achievement for students in their first and third grade years on the mathematics portion of the assessment. Older students within the cohort scored at higher academic levels of achievement on mathematics assessment than did younger students.

The table also revealed that the computed chi square values for sex, grade level, enrolment status, and family income are 4.90, 3.11, 5.20, 4.57 are lesser than the tabular value of 7.82, 12.59, 7.82, 12.59 respectively, when tested at 0.05 level of significance. These results failed to reject the null hypothesis (Ho) of no significant relationship. Hence, there is no significant relationship between the profile and performance level in Mathematics of A & E test passers in terms of sex, grade level during the test, enrolment status and family income. The result is tested at 0.05 level of significance when the degree of freedom are 3, 6, 3, and 6 respectively. It can also be noted that the computed coefficient of contingency for each of the profile are 0.29, 0.28, 0.24, and 0.30 are interpreted as low relationship.

This means that sex, grade level, enrolment status and family income, of the respondents do not affect their performance level in Mathematics. Based from the data collected, it shows that under the grade levels 3–4 and 5–6, the respondents perform excellent. It implies that A & E test passers under these grade levels do extremely well in Mathematics with regards to their age and sex. The study of Cimmiyotti (2013) examined the correlation that exists between reading and mathematics performance at the early elementary level from grades two through five. A correlation did not exist at second grade between reading and mathematics performance; however, a correlation was found at grades three, four, and five. The correlation also appeared to grow in strength at higher grade levels. Consistent with recent literature on sex differences in cognitive performance, conclude that sex-related SAT differences are very small relative to the generally similar levels of performance by men and women, and that using both test scores and high school records to predict first-year college grades continue to work reasonably well for both sexes (Clark and Grande, 1984).

This study also revealed that most of the A & E test passers who perform well in Mathematics do not enroll in any educational institution after passing the A & E test. It implies that the respondents do not continue schooling for any reasons. Studies on drop outs that attempted to explain why students drop out of school are based on two conceptual frameworks that are both useful and necessary to understand this complex phenomenon. Rumberger (2001) provided two frameworks associated with dropping out; the first one focuses on individual factors, and the second one focuses on the contextual factors found in students' families, schools, communities and peers which is base on the institutional perspective. Furthermore, it shows that almost all of the test passers belong to the group of poor families. This signifies that poor students achieve more remarkable heights.

CONCLUSIONS AND RECOMMENDATIONS:

CONCLUSIONS:

Based from the results of the study, the researcher arrived at the following conclusions: **(**1.) Most of the A & E test passers were in Grade V during the test, male adults belonging to the low income families and did not enroll after passing the test, (2.) the performance level of the A & E test passers in Mathematics is deteriorating, and (3.) the age of the A & E test passers was significantly related to their performance level in Mathematics.

RECOMMENDATIONS:

Based from the conclusions, the following are recommended: (1.) Alternative Learning System management programs and projects must be continuously implemented and enhanced regardless of the profile of the learners, (2.) Mobile Teachers, ALS District coordinators, parents, the community and other stakeholders should encourage and provide assistance to the A & E test passers to continue their quest for education (3.) Improve the performance level of the ALS A & E test passers in Mathematics through the use of research and extension services provided by the researchers in the Province Learning Interventions in Mathematics, (4.) The research is a documentary and monitoring study, researchers with similar interest may conduct a case study on the special marginalized test passers who will pursue higher education in the Alternative Learning System.

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Table 1. A: Profile of the A&E Test Passers in terms of Age and Sex

Age	Sex				Total	%
	Male		Female			
	f	%	f	%		
below 20	16	30.77%	13	25.00%	29	55.77%
21-30	15	28.85%	4	7.69%	19	36.54%
31-40	1	1.92%	2	3.85%	3	5.77%
41 and above	1	1.92%	0	0.00%	1	1.92%
Total	**33**	**63.46%**	**19**	**36.54%**	**52**	**100%**

Table 1. B: Profile of A & E Test Passers in terms of Grade Level during the Test and Status of Enrolment

Grade Level	Status of Enrollment				Total	%
	Enrolled		Unenrolled			
	f	%	f	%		
Grade 1	0	0.00%	1	1.92%	1	1.92%
Grade 2	1	1.92%	0	0.00%	1	1.92%
Grade 3	2	3.85%	10	19.23%	12	23.08%
Grade 4	6	11.54%	7	13.46%	13	25.00%
Grade 5	7	13.46%	18	34.62%	25	48.08%
Total	16	30.77%	36	69.23%	52	100%

Table 1. C: Profile of A & E Test Passers in terms of Family Income

Family Income	Frequency	Percentage
Below 2,000	19	36.54%
2,001 - 5,000	31	59.62%
5,001 – 10,000	2	3.85%
Total	**52**	**100.00%**

Table 2: Performance Level of A & E Test Passers in Mathematics Fiscal Years 2012 – 2014

Fiscal Year	Performance Level	Description
2012	76.56%	Mastery Level
2013	68.98%	Nearing Mastery
2014	59.29%	Below Mastery
Over-All	66.01%	Nearing Mastery

Table 3: Relationship between the Profile and Performance Level in Mathematics of A & E Test Passers

Statistical Basis	Statistical Analysis				
	Age	**Sex**	**Grade Level**	**Status of Enrolment**	**Family Income**
df	6	3	6	3	6
Level of Significance	0.05	0.05	0.05	0.05	0.05
Computed C	0.48	0.29	0.24	0.30	0.28
Degree of Relationship	Moderate	Low	Low	Low	Low
x^2 Critical Value	12.59	7.82	12.59	7.82	12.59
x^2 Computed Value	15.81	4.90	3.11	5.20	4.57
Decision on Ho	Reject	Do not Reject	Do not Reject	Do not Reject	Do not Reject
Interpretation	Significant	Not Significant	Not Significant	Not Significant	Not Significant

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