POVERTY REDUCTION STATISTICS ATTRIBUTABLE TO EDUCATIONAL SERVICES: 2000 – 2010

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ABSTRACT

This investigation attempted to find out the statistical evidences of poverty reduction in the Province of Zamboanga del Norte from 2000 to 2010 due to the educational services in the province by profiling basic education, alternative learning system, vocational/technical education, and the higher institutions services. Results revealed that Zamboanga del Norte registered poverty reduction statistics for the past three survey periods: 2003, 2006 and 2009. Poverty incidence reduced by 5.4 percent from 2003 to 2006 and 1.2 percent from 2006 to 2009. However, the province still registered poverty incidence of 52.9 percent in 2009 which indicated that more than 50 percent of its households were still living below poverty line. The study revealed further that poverty reduction statistics did not strongly link to the educational services in the province.

KEYWORDS: poverty reduction statistics, attributable, education services

INTRODUCTION

The linkages between education and poverty broadly can be seen in two ways. First, investment in education increases the skills and productivity of poor households. It enhances the income level as well as the overall standard of living. Second, poverty is also a big impediment in educational attainment. Poverty affects the educational achievement in three dimensions. The very first one is from resource-side, learning and financial resources. Second one is the generation of such social pressures which mutilate the mindset of poor students, and lastly when poverty grabs any institution, it deteriorates the teaching standards (Bramley and Karley, 2005).

Lack of education is a key factor in income poverty, and conversely, absence of sufficient income/earnings leads to education poverty (Tilak, 2005). Moreover, education helps in the fulfillment of basic needs, eradicating poverty, and basic needs themselves include the education availability, hence provision of education and fulfillment of basic needs both reinforce each other (Bonal, 2007).

Bradshaw (2005), succinctly stated that "poverty is cyclical interdependence". He stressed that the cycle of poverty also means that people who lack ample income fail to invest in their children's education, thus are left behind behind when they go to get jobs

It is for this reason that the researchers believed that not only how education can impact on poverty reduction but poverty reduction could also be significantly attributable to education. Figure 1 shows the schematic interrelationships of poverty reduction, basic education, alternative learning system, higher education, and technical/vocational education services.
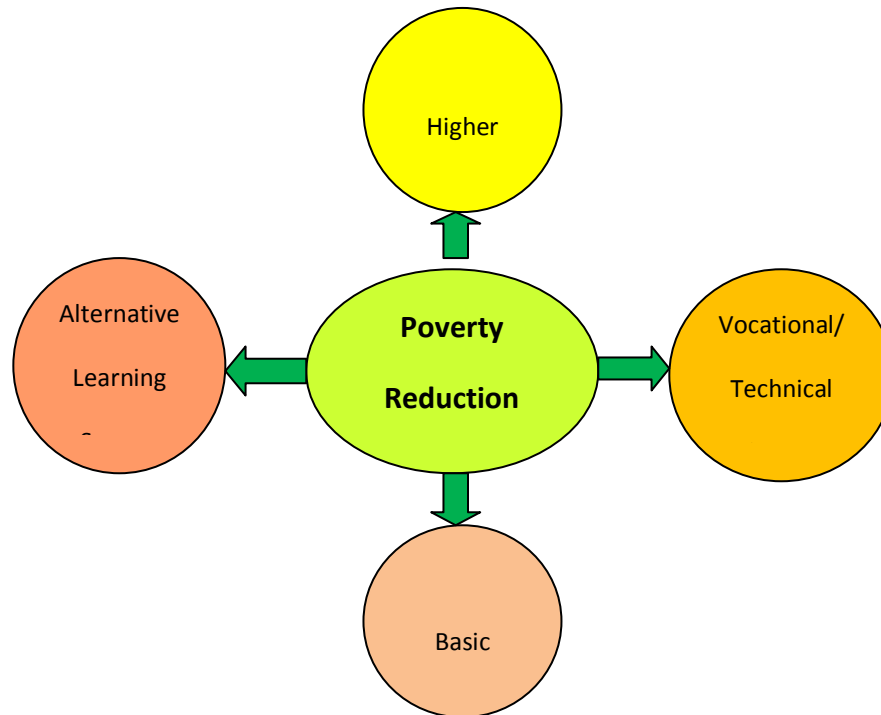

Figure 1   The Schema of the Study

OBJECTIVES OF THE STUDY

This investigation attempted to find out the poverty reduction statistics of the Province of Zamboanga del Norte from 2000 to 2009. It also aimed to determine the educational services in the province by profiling basic education in terms of participation rate, cohort survival rate, completion rate, and dropout rate and the basic literacy program of the alternative learning system in terms of numeracy and functional literacy, enrolment, and completion. It also profiled its higher institutions in terms of enrolment, number of graduates, extension programs, teaching staff, and non-teaching staff and the Technical Education and Skills Development Authority (TESDA) in terms of enrolment, graduates, assessed and certified graduates. And most importantly, this study was purposely conducted to find out whether poverty reduction statistics is significantly attributable to educational services.

METHODOLOGY

This study employed the descriptive method of research particularly survey and documentary analysis. This study examined the current available poverty data of the province which was derived using information from various sources, particularly the National Statistics Office (NSO) and the National Statistical Coordination Board (NSCB). Basic education and the Alternative Learning System data were taken from the three divisions of the Department of Education (DepEd) of the province, namely: Dipolog City Division, Dapitan City Division, and the Division of Zamboanga del Norte. Data from the higher institutions were taken from the various colleges and universities in the province, namely: Jose Rizal Memorial State University (JRMSU) Dapitan City Campus, JRMSU Dipolog City Campus, JRMSU Katipunan Campus, JRMSU Tampilisan Campus, JRMSU Siocon Campus, Saint Mary's Academy, Saint Joseph's College, San Estanislao Kostka College, Dipolog Medical Center College Foundation, Andres Bonifacio College, Saint Vincent's College, Dipolog City Institute of Technology, Colegio de San Francisco Javier, and Rizal Memorial Institute Dapitan City, Inc. Technical Education and skills Development Authority (TESDA) data were taken from the TESDA Provincial Office. In treating the surveyed data, frequency counting and percentage were utilized. In determining the significant relationship between poverty statistics and the profile of the various education services of the province, Pearson r Product-Moment Coefficient of Correlation was employed and to test the strength of the computed r, the t – test was used.

RESULTS AND DISCUSSION

Poverty Statistics of Zamboanga del Norte, 2000 – 2009. Table 1 shows the poverty statistics of Zamboanga del Norte for four survey periods: 2000, 2003, 2006, and 2009. The province was declared the country's poorest province in 2003 when it registered a poverty incidence of 59.5% i.e. about 60% of the families lived below the poverty threshold at that time. This Asian Development Bank (ADB report on poverty, 2005) came as a surprise considering that these years earlier, more than half of the families were well-off and living above the poverty threshold (47% poverty index in 2000). The report of the ADB seemed to have initiated a series of poverty reduction measures by the government so that poverty incidence statistics consistently decreased to 54.1% in 2006 and finally to 53.9 % in 2009. From 2003 to 2009 or a period of 6 years, poverty incidence dropped by an average of about 1.10% per annum.

Table 1   Poverty Statistics of Zamboanga del Norte, 2000 – 2009

Years	2000	2003	2006	2009
Poverty Incidence	47.0	59.5	54.1	52.9

Source: 2009 Official Poverty Statistics, NSCB

Elementary Education Profile of Zamboanga del Norte, 2000 – 2010. Table 2 presents the elementary education profile of Zamboanga del Norte from 2000 – 2001 to 2009 – 2010. The table revealed the highest participation rate of 90.34 percent in 2009 – 2010 and the lowest participation rate of 75.0 percent was registered in 2007 - 2008. Cohort survival rate of 73.37 percent was the highest in 2008-2009 but lowest rate was observed registering 64.60 percent in school year 2005 – 2006. Completion rate, on the other hand, was found high in 2007 – 2008

which marked 69.25 percent, but, it was registered lowest in 2003 – 2004 which obtained 60.19 percent. Moreover, the table showed the highest dropout rate of 0.45 percent in 2006 – 2007 but dropout rate was registered low in 2009 – 2010 which marked 0.09 percent. As a whole, the table showed fluctuating figures in participation rate, cohort survival rate, completion rate, and dropout rate. It can be deduced that these fluctuating records may be attributed to population and economic growth of the province which are beyond the scope of this investigation.

Table 2   Elementary Education Profile of Zamboanga del Norte, 2000 – 2010

School Year	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Participation Rate	77.99	78.46	79.64	76.22	77.45	76.76	75.41	75.00	75.38	90.34
Cohort Survival Rate	65.06	64.77	66.50	64.80	66.35	64.60	71.70	72.94	73.37	69.80
Completion Rate	63.39	64.00	65.33	60.19	63.61	59.65	69.23	69.25	65.71	67.48
Dropout Rate	3.2	3.1	3.6	1.3	1.7	3.6	4.5	2.5	1.2	0.9

Secondary Education Profile of Zamboanga del Norte, 2000 – 2010. Table 3 shows the secondary education profile of Zamboanga del Norte from 2000 – 2001 to 2009 – 2010. The table registered the highest participation rate of 59.36 percent in 2009 – 2010 and the lowest participation rate of 43.62 percent was registered in 2000 - 2008. Cohort survival rate of 72.98 percent was high in 2003-2004 but lowest rate of 56.68 percent was observed in 2000 – 2001. Completion rate was found high in 2007 – 2008 which marked 57.95 percent but, it was lowest in 2006 – 2007 which obtained 50.10 percent. Moreover, the table showed the highest dropout rate of 6.87 percent in 2001 – 2002 but low in 2009 – 2010 which marked 6.87 percent. The table also showed fluctuating figures in participation rate, cohort survival rate, completion rate, and dropout rate. It can be concluded that the rise and fall of the surveyed data may be attributed to the growth of the population and the economic growth of the province.

Table 3   Secondary Education Profile of Zamboanga del Norte, 2000 – 2010

School Year	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Participation Rate	43.62	46.45	48.16	47.47	43.95	47.17	48.38	49.18	46.38	59.36
Cohort Survival Rate	56.68	60.60	66.08	72.98	62.94	67.26	62.50	68.89	71.25	66.13
Completion Rate	50.89	55.53	56.52	62.79	57.63	56.59	50.10	57.95	55.55	55.75
Dropout Rate	6.52	6.87	7.16	5.26	5.37	5.01	6.22	4.78	4.26	5.35

Profile of the Basic Literacy Program of the Alternative Learning System of Zamboanga del Norte, 2000 – 2010. Table 4 reflects the profile of the basic literacy program of the Alternative Learning System of Zamboanga del Norte, 2000 – 2010. As seen in the table, numeracy and functional literacy rate was high in 2008 – 2009 which registered 95 percent. The low rate of 89 percent was figured out in 2000 – 2001. Enrolment marked high of 1162 in 2009 – 2010 but low count of 642 was recorded in 2000 – 2001. The table revealed further that completion rate was observed high registering 93 percent in 2008 – 2009. However, low completion rate of 84 percent was recorded in school year 2000 – 2001 and school year 2001 – 2002.

Table 4   Profile of the Basic Literacy Program of the Alternative Learning System of Zamboanga del Norte, 2000 – 2010

School Year	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Numeracy and Functional Literacy Rate	89	90	91	90	89	92	94	93	95	94
Enrolment	642	689	737	781	809	857	838	1003	1054	1162
Completion Rate	84	84	86	86	90	88	90	91	93	91

Vocational/Technical Education Profile of Zamboanga del Norte, 2000 – 2010. Shown in Table 5 is the vocational/technical education profile of Zamboanga del Norte, 2000 – 2010. As reflected in the table, the highest enrolment of 30,233 was recorded in 2008 – 2009 while the least enrolment of 3,216 was registered in 2000 – 2001. Highest number of graduates which marked at 20,641 was observed in 2008 – 2009 but in 2000 – 2001 recorded the low enrolment of 2,789. Looking at the number of assessed graduates, the table revealed 10,110 as the highest in 2009 – 2010 but with low number of assessed graduates of 1,249 in 2000 – 2001. Moreover, the highest number of certified graduates was registered in 2009 – 2010 with 7,076 and 202 in 2003 – 2004 as the lowest. It can be observed further in the table that enrolment, graduates and certified graduates recorded figures in rise and fall patterns while the number of assessed graduates registered an increasing pattern.

Table 5   Vocational/Technical Education Profile of Zamboanga del Norte, 2000 – 2010

Indicators	School Years									
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Enrolment	3,216	4,005	3,718	4,323	6,751	15,903	24,559	12,944	30,233	21,757
Graduates	2,789	3,015	2,912	3,989	5,205	13,650	20,237	12,164	20,641	19,688
Assessed	1,249	1,369	1,462	1,790	2,069	3,000	3,494	6,461	9,739	10,110
Certified	212	420	345	202	222	844	1,667	4,318	6,354	7,076

First Semester Profile of Higher Institutions of Zamboanga del Norte, 2000 – 2010. Presented in Table 6 is the first semester profile of higher institutions of Zamboanga del Norte, 2000 – 2010. A closer look at the table, the highest enrolment of 15,072 was recorded in school year 2004 – 2005. Low enrolment was observed in school year 2000 – 2001 with 10776. Extension programs, however, were observed in an increasing pattern which reflected 482 extension programs in school year 2009 – 2010. The table presented also the number of graduates with high marked of 482 in 2009 – 2010. The bulk of teaching staff of 632 was recorded in 2005 – 2006. Moreover, teaching staff which registered 204 in 2009 – 2010 was observed the highest number of teaching staff.

Table 6   First Semester Profile of Higher Institutions of Zamboanga del Norte, 2000 – 2010

School Year	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Enrolment	10776	13258	12944	14545	15072	14319	13914	13653	13285	13798
Extension Programs	2	2	4	4	6	16	27	27	35	33
Number of Graduates	217	247	235	299	229	205	207	162	152	482
Teaching Staff	525	551	577	589	623	632	628	639	624	630
Non-Teaching Staff	171	171	178	180	193	194	196	201	203	204

Second Semester Profile of Higher Institutions of Zamboanga del Norte, 2000 – 2010. Shown in Table 7 is the second semester profile of higher institutions of Zamboanga del Norte. Looking at the table showed that high enrolment of 13,689 was recorded in 2004 – 2005. The highest number of extension programs was made in 2008 – 2009 which registered 42. Bulk of graduates was observed in 2008 – 2009 with 2,798 graduates. Highest number of teaching staff with 638 was recorded in 2007 – 2008 while non-teaching staff was recorded 204 as the highest in 2009 – 2010.

Table 7   Second Semester Profile of Higher Institutions of Zamboanga del Norte, 2000 – 2010

School Year	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Enrolment	9920	11246	12235	12940	13689	12992	12635	12316	12087	12875
Extension Programs	4	4	6	6	8	19	31	32	42	40
Number of Graduates	1927	2235	2068	2242	2418	2356	2647	2741	2798	2257
Teaching Staff	528	550	576	588	623	625	627	638	629	624
Non-Teaching Staff	170	172	178	179	193	195	198	201	203	204

Table 8   Test of Significant Relationship Between Poverty Reduction Statistics and the Elementary Education Services

Elementary Education Services	Computed r	Computed t	Tabulated $t_{0.05(2)}$	Interpretation
Participation Rate	- 0.059	- 0.084	2.290	Negligible Not Significant
Cohort Survival Rate	0.007	0.010	2.290	Negligible Not Significant
Completion Rate	- 0.089	0.126	2.290	Negligible Not Significant
Dropout Rate	- 0.172	- 0.247	2.290	Negligible Not Significant

Table 8 shows the test of significant relationship between poverty reduction statistics and the elementary education services. The test of relationship between the two variables was treated using Pearson r Product Moment Coefficient of Correlation. The strength of the computed r was tested using t – test.

As poverty reduction statistics was related to participation rate, cohort survival rate, completion rate, and dropout rate, computed r - values yielded – 0.059, 0.007,-0.089, and -0.172, respectively. It means that there was an existence of negligible relationship between poverty reduction statistics and the participation rate, cohort survival rate, completion rate, and dropout rate. When each computed r – value was subjected to t – test, it resulted to – 0.084, 0.010, 0.126, and -0.247, respectively whose absolute values were all less than the tabled value of 2.290 with 2 degrees of freedom at .05 level of confidence. This means that poverty reduction statistics did not translate to participation rate, cohort survival rate, completion rate, and dropout rate in the elementary basic education. This indicates that poverty reduction statistics in the province of Zamboanga del Norte did not significantly translate the basic elementary education services in the province. This means that poverty reduction is not an indicator of the status of basic elementary education in the province. It implies that basic elementary education is given importance by the populace despite of being poor. It can be deduced that being poor is not a reason to deter free basic elementary education in the country.

Table 9   Test of Significant Relationship Between Poverty Reduction Statistics and the Secondary Education Services

Secondary Education Services	Computed r	Computed t	Tabulated $t_{0.05(2)}$	Interpretation
Participation Rate	0.415	0.645	2.290	Moderate Not Significant
Cohort Survival Rate	0.745	1.579	2.290	High Relationship Not Significant
Completion Rate	0.939	3.861	2.290	Very High Significant
Dropout Rate	- 0.036	- 0.051	2.290	Negligible Not Significant

Table 9 presents the significant relationship between poverty reduction statistics and the secondary education services. As poverty reduction statistics related to participation rate, cohort survival rate, and dropout rate, computed r–values yielded 0.415, moderate; 0.939, high relationship; and –0.036, negligible relationship, respectively. When r – values were subjected to t-test, results revealed 0.645, 1.579, and -0.051, respectively in which each absolute value is less than the tabulated t-value of 2.290 at 0.05 level of significance with 2 degrees of freedom. This means that poverty reduction statistics did not influence the participation rate, cohort survival rate, and dropout rate of the basic secondary education in the province. However, poverty reduction statistics was related to completion rate of the basic secondary education in the province. Computed r – value of 0.939 which indicated very high relationship yielded t – value of 3.861 which is greater than the tabulated t – value of 2.290 at 0.05 level of significance with 2 degrees of freedom. This means that completion rate was significantly influenced by the poverty reduction in the province. This goes to show that the more reduction in poverty, the higher the completion rate would tend to be.

However, the general analysis of the table showed that poverty reduction statistics did not translate to basic secondary education services of the province. This also means that poverty

reduction statistics is not an indicator of the status of basic secondary education. It can be inferred that basic secondary education of children is a priority regardless of being members of poor family. It can be inferred further that being poor is not a hindrance to free basic quality secondary education.

Table 10   Test of Significant Relationship Between Poverty Reduction Statistics and the Alternative Learning System Services

Alternative Learning System Services	Computed r	Computed t	Tabulated $t_{0.05(2)}$	Interpretation
Numeracy and Functional Literacy Rate	0.174	0.250	2.290	Negligible Not Significant
Enrolment	0.179	0.257	2.290	Negligible Not Significant
Completion Rate	0.105	0.149	2.290	Negligible Not Significant

Table 10 reflects the test of significant relationship between poverty reduction statistics and the alternative learning system services. Looking at the table, poverty reduction statistics as it was related to numeracy and functional literacy rate, enrolment, and completion rate yielded computed r – values of 0.174, negligible relationship; 0.179, negligible relationship; and 0.105, negligible relationship, respectively. When each computed r – value was tested to t – test, results revealed 0.250, 0.256, and 0.149, respectively. It was found out that each computed r – value is less than the critical value of 2.290 at 0.05 level of significance with 2 degrees of freedom. This means that numeracy and functional literacy, enrolment, and completion rate were not influenced by the reduction of poverty in the province. In general, being poor is not a reason to evade from education.

Table 11   Test of Significant Relationship Between Poverty Reduction Statistics and the Vocational/Technical Education Services

Vocational/Technical Education Services	Computed r	Computed t	Tabulated $t_{0.05(2)}$	Interpretation
Enrolment	0.038	0.054	2.290	Negligible Not Significant
Graduates	0.032	0.045	2.290	Negligible Not Significant
Assessed	- 0.012	- 0.017	2.290	Negligible Not Significant
Certified	- 0.036	- 0.051	2.290	Negligible Not Significant

Table 11 shows the test of significant relationship between poverty reduction statistics and the vocational/technical education services. As presented in the table, poverty reduction statistics as it was related to enrolment, graduates, assessed, and certified yielded computed r – values of 0.038, negligible relationship; 0.032, negligible relationship, - 0.012, negligible relationship; and – 0.036, negligible relationship, respectively. When each computed r – value

was treated to t – test, results revealed 0.054, 0.045, - 0.017, and – 0.051, respectively. Each computed r – value is less than the tabulated critical value of 2.290 at 0.05 level of significance with 2 degrees of freedom. It follows that poverty reduction statistics was not significantly related to enrolment, graduates, assessed, and certified. This implies that the choice of vocational/technical education did not depend on the economic status of those who chose vocational/technical education. It can be observed recently that a number of enrollees sought for TESDA certification for abroad purposes and going to abroad is expensive that a poor cannot afford to process.

Table 12   Test of Significant Relationship Between Poverty Reduction Statistics and the Higher Institutions Services during the First Semester

Higher Institution Services	Computed r	Computed t	Tabulated $t_{0.05(2)}$	Interpretation
Enrolment	0.754	1.623	2.290	High Relationship Not Significant
Extension Programs	0.009	0.013	2.290	Negligible Not Significant
Number of Graduates	0.569	0.979	2.290	Moderate Not Significant
Teaching Staff	0.401	0.619	2.290	Low Not Significant
Non-Teaching Staff	0.139	0.199	2.290	Negligible Not Significant

Presented in Table 12 is the test of significant relationship between poverty reduction statistics and the higher institution services during the first semesters of school years 2000 – 2001 to 2009 - 2010 in the province of Zamboanga del Norte. A closer look at the table revealed that as poverty reduction statistics was related to enrolment, extension programs, number of graduates, teaching staff, and non-teaching staff yielded computed r – values of 0.754, high relationship; 0.009, negligible; 0.569, moderate relationship; 0.401, low relationship; and 0.139, negligible relationship. When each computed r-value was tested to t-test, results revealed 1.623, 0.013, 0.979, 0.619, and 0.199, respectively which each is less than the tabulated t-value of 2.290 at 0.05 level of significance with 2 degrees of freedom. This means that enrolment, extension programs, number of graduates, teaching staff, and non-teaching staff status of the higher institutions in the Province of Zamboanga del Norte were not influenced by the poverty reduction in the province. This implies that higher education services during the first semesters of school years 2000 – 2001 to 2009 – 2010 were not affected by the reduction of poor families in the province.

Table 13   Test of Significant Relationship Between Poverty Reduction Statistics and the Higher Institutions Services during the Second Semester

Higher Institution Services	Computed r	Computed t	Tabulated $t_{0.05(2)}$	Interpretation
Enrolment	0.693	1.359	2.290	Moderate Not Significant

Extension Programs	0.003	0.004	2.290	Negligible Not Significant
Number of Graduates	0.353	0.534	2.290	Low Not Significant
Teaching Staff	0.383	0.586	2.290	Low Not Significant
Non-Teaching Staff	0.164	0.235	2.290	Negligible Not Significant

Shown in Table 13 is the test of significant relationship between poverty reduction statistics and the higher institution services in the province during the second semesters of school years 2000 – 2001 to 2009 – 2010. The table revealed that as poverty reduction statistics was related to enrolment, extension programs, number of graduates, teaching staff, and non-teaching staff, computed r – values yielded 0.693, moderate relationship; 0.003, negligible relationship; 0.353, low relationship; 0.383, low relationship; and 0.164, negligible relationship, respectively. When each computed r – value was tested to t-test, computed t-values resulted to 1.359, 0.004, 0.534, 0.586, and 0.235, respectively. Computed t-values, however, were all less than the tabulated t-value of 2.290 at 0.05 level of significance with 2 degrees of freedom. This means that enrolment, extension programs, number of graduates, teaching staff, and non-teaching staff status in the higher institutions of Zamboanga del Norte were not significantly influenced by the poverty reduction in the province. It can be inferred that being poor is not a valid reason to deter to acquire higher education.

CONCLUSION AND RECOMMENDATION

It is figured out that Zamboanga del Norte marked poverty reduction statistics from 2003 to 2009. The province registers poverty incidence more than 50 percent of its households placing below poverty line. There is a need, therefore, to enhance government's strategy and to involve key sectors for a collective and coordinated response to poverty. However, being poor is not a valid reason to deter to acquire quality education. Hence, access to quality education is identified as a key pathway out of poverty.

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