THE EDUCATION COST OF SMALL SIZED SCHOOLS IN MALAYSIA

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Abstract— This research is a study on education expenditure of under-enrolled or Small Sized Schools (SSS) in Malaysia. Specifically, this study aims to achieve the following objectives. First; to identify the level of expenses or the cost of education in SSS, and second; to determine the relationship between cost of education with level of enrolment (number of students officially registered). The overall findings reported that; The costs of education at SSM are very huge and are mainly spent on teachers' and staffs' emoluments. In comparing the education costs and enrollment of students, the results provide indication that; the smaller the number of students enrolled, in higher the education costs incurred. The cost difference of larger size SSS compares with smaller SSS is RM6557-57675. The difference in education cost by students enrollment between public primary schools and SSS is; RM2944 for the former and between RM6557-57675 (depending on number of students) for the later. This finding provide indication that education expenditure on SSS is very huge and is not economical. Even though the government is in dilemma dealing with this issue, it is understood that this case has to be treated differently that other ordinary cases. In the existing case, due to the people's limitation and constraints, the government has to take their welfare and well being as the priority. Cost optimization and economic efficiency are becoming secondary issue.

Keywords— Cost of Education, Small Sized Schools (SSS), Education Expenditure Management.

I. INTRODUCTION

Malaysia has 10,000 primary schools, 34 per cent (2071) were classified as under-enrolled or Small Sized Schools (SSS).[1] According to the Ministry of Education, under-enrolled school or SSS is defined as a school that had an enrollment of less than 150 people. The school is also divided into two categories; Grade A and Grade B. Grade A is referring to schools that have students' population of between 101 to 150 people and has a dormitory while Grade B is referring to schools that has students' population of less than 100 people and also has a dormitory. A total of 96.33 percent of these schools are located in rural areas (MoE, 2013).

The establishment of these schools shares the same purpose with other public schools; which aims that students achieve a balanced in terms of intellectual, physical, emotional and spiritual development. This objective is clearly stated in the National Education Philosophy.

1.1 Problem Statement

The SSS, in general, achieve poorer academic performance compares with other public (national) schools. The average composite score for this category of schools is 68 percent, which is 4 percent lower than that of other national schools. The weaker performance of SSS are contributed mainly by three factors; geographical obstacles, infrastructure limitations, and parentals' socio economic status and perception (on the significance of education). Relating to the first obstacle, 73 per cent of the SSS are located in remote rural areas causing the students to travel very long distances to attend schools. Moreover, this geographical reason also is a contributing factor on the issue of limited number of skillful and high profile teachers serving in SSS. The second factor that explains the poorer academic performance of the SSS students is closely associated with the first factor. The geographical distances do not only provide obstacles for these students to go to school and get a fair quality of teachers to teach them (as the other public schools have obtained), but it is also an obstacle for the SSS students to obtain equal benefit in terms of better curriculum, better facilities, and a conducive environment for interaction with peers from diverse backgrounds. These limitations of course have directly limited their capacity and finally affect their academic achievement. As for the last factor, most of the schools are located in the areas of low socioeconomic status. Parents are facing problems in financing the education of their children and this problem gets even worse when the parents have low awareness level on the importance of education. The study by MoE (2013) reported that; low-income families usually had to deal with the challenge of keeping their children in school due to the costs associated with supplies, uniforms, and transportation, which leads to higher rates of student absenteeism (MOE, 2013).

In the existing situation, if we were to improve the SSS academic achievement or to pursue the aim as envisaged in the National Education Philosophy, a lot of improvements need to be done. It requires mobilization and cooperation of all stakeholders and

[1] MoE (2013)

this cooperation does not only focus on the attitudes and awareness of the parents and the students, or the teachers and teaching qualities only, but the focus on the physical aspect also should be taken into serious account. All types of improvements which in the list are not to be implemented at cost free, but involve a huge amount of money. To obtain an estimate on the costs of education on SSM, studies on the existing costs incurred at SSS is urgently needed. The findings of the study help to provide a clear picture of the overall cost involved and the information obtained can also provide guidance in making policies towards cost optimization.

1.2 Research Objectives

In relation with the issue discussed earlier, this study aims to achieve the following objectives;

- to identify the cost of education at Small Sized Schools
- to determine the relationship between education costs and number of students' enrollment.

II. LITERATURE REVIEW

The review of literatures for this study are all associated with the study on cost of education. The scope of discussion covers a number of studies conducted in other countries and a study conducted in Malaysia. .

Ross, Barkaoui, and Scott (2007, in Sharon Huang, 2008) has found 103 studies in the field of education costs. One of the studiers includes a review of education cost at primary and secondary school levels. the focus of the study is mainly on cost-benefit assessment (cost-benefit) preschool services. The study was done in California; known as the California Abecedarian. This study specifically focus on preschool services for 10 hours a day, 5 days a week to 112 children at risk and had low grades. (Barnett;1985 and Barnett; 1995 (in Sharon Huang; (2008)). The objective of the studies is to provide information and guidance to policy-makers in their mission to provide better quality services for the early childhood.

In Malaysia, there are limited number of studies that focus on Cost of Education and these studies are carried out by the Ministry of Education. One of the studies is a an Analysis of the Education Cost of Primary School (BPPDP, 2005).

Results of this study showed that the average cost per student is RM2,944.00. Out of this, the value of personnel costs is RM2,583.00, non-personnel costs (Government finance) is RM340.00, and non personnel Costs (non government finance).

By type schools, the Tamil schools (SJKT) recorded the highest operating cost of RM3,710.99, followed by the public schools known as Sekolah Kebangsaan (SK) totaling RM2,842.50, and the third goes to the Chinese Schools (SJKC) by the amount of RM2,609.52.

In terms of size of the schools, the operating Costs per student for schools with enrollments of 149 and below is RM4,255.22. This amount is the highest compared to other school size. The enrollment of over 2400 students touch the lowest cost, that is RM894.38.

By location schools, the city schools recorded the lowest Operating costs of RM2,312.10, while rural areas had the highest cost of RM3,948.10.

The scope of education and cost is very wide. With limited number studies available for reference, this opens the doors for researchers to explore the issue further. In line with this, the current study is conducted, and this study is similar with the study by BPPDP (2005) but focused specifically on under-enrolled schools.

III. METHODOLOGY

This research is a survey research (exploratory) involving descriptive and quantitative analysis. Most of the data were obtained from an existing document in a school / State Education Department (JPN) and/or District Education Department (PPD). Specific data on size of school, the number of enrollment, academic achievement and other types of cost index and returns are also obtained from the schools involved are listed in the study.

Table 2 Schools by District

District	Number of schools
BAU	10
KUCHING	3
LUNDU	9
PADAWAN	13
JUMLAH	**35**

The population of the study consists of under-enrolled schools in the areas of Kuching Sarawak. There are four districts involved; Kuching, Lundu, Bau and Padawan. A total of 40 schools selected for this study and of this amount, only 35 schools successfully return the full set of questionnaires. Table 2 shows the details on the number of schools involved.

3.1 Data Collection And Analyzing Procedures

Data collection was initiated after permission was obtained to schools and educational organizations in respect of the Planning and Policy Research and the State Education Department and the school principal concerned. Cost data obtained from schools and also from the District Education Office (DEO).

The study involves two main data; the cost of education data and the enrollment data. Education costs include the cost of subjects, non subject costs, SUWA[2], Students Welfare, Staff Development,

[2] Income obtained from renting school's physical properites, donations, school book shop, the charges for the use of property Income obtained from renting school's physical

Maintenance, Equipment, Emoluments / allowance / charge, Utilities, Housing, and security costs.[3] The enrollment data was obtained directly from the school and the time frame of data collected covers a period of three years, namely 2011, 2012 and 2013.
This study use descriptive statistics as the method of analysis in our mission to achieve the two objectives that se have set earlier.

IV. REPORT FINDINGS

The discussion in this section is divided into these topics: Profiles of under-enrolled (SSM) schools; Total Cost Analysis and Cost Analysis by Students Enrollment.

4.1 Enrollment Profile at SSS

Table 4 shows the number of classes and number of students enrollment from 2011 to 2013. Out of 35 SSS in the study only one school that has five classes only, while other schools have six classes; that is one class for each level of studying year. in terms of level of enrollment, the lowest enrollment is 13 students in 2011, 11 students in 2012 and 16 students in 2013. The highest enrollment recorded is 130 in 2011, 142 in 2012 and 130 in 2013. The average number of students that enroll at SSM is 76 for year 2011, 74 in 2012 and 73 in 2013.

Table 4: Number of Classes and Number of Students Enrolment

SSM 2011-2013

year	# of classes		Number of students		
	Min	Max.	Min	Max	Min
2011	5	6	13	130	76
2012	5	6	11	142	74
2013	5	6	16	130	73

Table 5 shows the number of teachers and staff at SSM for years 2011 to 2013. The lowest number of teachers recorded in the findings is 9 in 2011, 10 in 2012 and 11 in 2013. The maximum number of teachers recorded in the findings is 14 people for 2011 and 2012, and 15 people in 2013. The average number of teachers each year 12 people. The minimum number of staff for the three years is one and the maximum is 7 in 2011 and 2012, and 8 people in 2013. The mean value for the number of staff is two in 2011 and 3 in 2012 and 2013.

Table 5: Number of Teachers and Staff SKM 2011 to 2013

year	Teachers			Staffs		
	Min.	Max.	Mean	Min.	Max.	Mean
2011	9	14	12	1	7	2
2012	10	14	12	1	7	3
2013	11	15	12	1	8	3

ANALISIS ON EDUCATION COST

The discussion in this section divided into the following sub-topics; cost analysis by district and cost analysis by year.

Cost Analysis By District

Table 6 provide the summary on education expenditure by district for each year.

Table 6 Cost by District

Year\District	BAU	KUCHING	LUNDU	PEDAWAN
2011	7177217	1876796.91	23137750.6	7610844.61
2012	7984948	2147610.27	48894961.59	8364678.89
2013	7708670.15	2515676.17	68187576.63	10334488.31
TOTAL	**22870835.15**	**6540083.35**	**140220288.8**	**26310011.81**

For the Bau District, the total costs incurred in 2011, 2012 and 2013 are RM7177217, RM7984948 and RM7708670.15. The total amount spent for all three years is RM22870835.15.

For Kuching District, the total costs incurred in 2011, 2012 and 2013 are RM1876796.91, RM2147610.27 and RM2515676.17. The total amount spent for all three years is RM6540083.35.

For Lundu District, the total costs incurred in 2011, 2012 and 2013 is RM23137750.6, RM48894961.59 and RM68187576.63. The total amount spent in the three year period is RM140220288.8.

For Pedawan District, the total costs incurred in 2011, 2012 and 2013 are RM7610844.61, RM8364678.89 and RM10334488.31. . The total amount spent for all three year period is RM26310011.81.

Out of four districts, the lowest cost of education is recorded at the Kuching District followed by the Bau and Pedawan districts. The highest cost is recorded in the Lundu district.

The following figure (Figure 1) illustrate graphically the distribution of educational costs (total costs) for each SSM at each district

properites, donations, school book shop, the charges for the use of property and school facilities, bank interest and variety. The money is used to support school's expenses which must get approval from the headmaster or the school's principal. Money received from this source normally could be used only for certain type of school activities such as;

(i) Expenses carry out the activities of students;
(ii) Expenses bring students get an emergency treatment;
(iii) Expenses that directly benefit the students.

[3] This study, does not take into account the cost of capital and private costs.



Figure 1 Total Cost Analysis for each SSM by District

All figures shows fluctuations in the level of expenditures. for Bau and Pedawan districts, even though there are minor fluctuations and a number of sharp increase and decreases, The overall trend show a climbing pattern. for Kuching and Lundu districts, the trend shows consistent fluctuations of ups and downs in the level of expenditures. Kuching shows an increasing pattern, but Lundu is indeterminate.

The following figure (Figure 1.1) illustrates the variations of education costs for each district for each year.

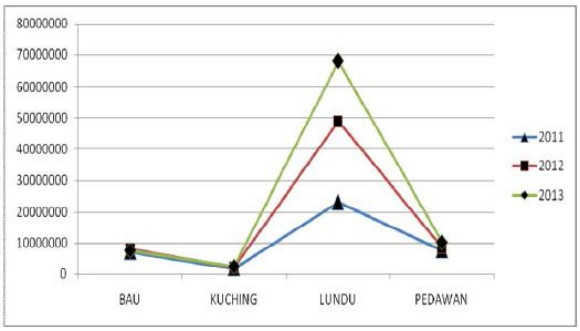


Figure 2 Cost of Education by District for Each Year

Through eyeballing it is obvious, the Lundu District experience highest variations compares to other districts. The overall percent of variations in the education expenditure throughout the three year periods between the four districts are shown in Table 6.1.

Table 6.1 Percent Variations in Education Expenditure for each district for each year.

	2011	2012	2013	AVG
BAU	-	11.25	-3.46	3.90
KUCHING	-	14.43	17.14	15.78
LUNDU	-	111.32	39.46	75.39
PEDAWAN	-	9.90	23.55	16.73
TOTAL	-	69.32	31.69	50.50

For Bau district, the allocation changes from an increment of 11.25% in year 2012 to a decrement of -3.46% in the following year. the average variation rate is 3.9%. For Kuching district, the changes is from 14.43% to 17.14% gives it an average increment of 15.78%. For Pedawan, the rates change from an almost 10% to 23.55%, with an average variation rates is 16.73%. Lundu reported the highest variation rate of 111.32% in 2012 and 39.46% in the following year, and gives the average variation rates equal to 75.39%.

TOTAL COST ANALYSIS BY YEAR

Figure 2.1 illustrates the level of total cost spend on education on yearly basis for all districts.

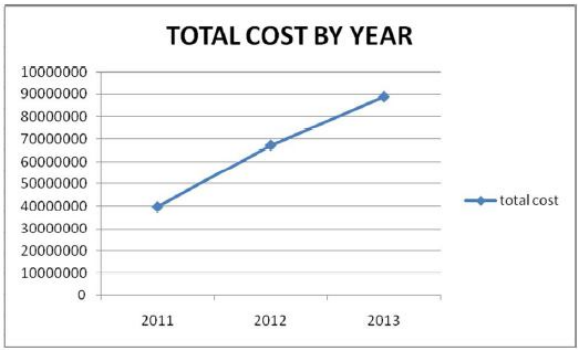


Figure 2.1 Cost Analysis By Year

In year 2011 the total amount of education cost is RM39802609.12, while in 2012 and 2013 the total costs are RM 67392198.75 and RM 88746411.26. The statistic shows an increase of almost 70% between 2011 to 2012, and between 2012 to 2013 the increment is relatively near 32%.

ANALYSIS OF EDUCATION COST BY ENROLLMENT

The following Table 4.7 shows the summary on the overall data relating to education cost (average cost between 2011- 2013) and the level of enrollment.

Table 4.7 Average Cost variations 2011-2013 by Enrolment

Enrollmen	Education Cost			Avg. Cost (RM)	Cost-enrollment ratio
	2011 (RM)	2012 RM)	2013 (RM)		
130-139	4834	6165	8673	6557	1
120-129	6140	7139	8238	7172	1
110-119	5690	6807	7792	6763	1
100-109	5994	6330	7211	6512	1
90-99	6224	7735	8136	7365	1
80-89	10271	12050	13335	11885	2
70-79	8614	12541	11185	10780	2
60-69	10914	11920	13824	12219	2
50-59	10196	12783	14325	12434	2
40-49	12649	14945	18855	15483	2
30-39	19263	20596	23557	21138	3
20-29	36379	54114	40798	43764	7
10-19	46760	45250	81015	57675	9

Table 4.7 demonstrates that schools which had an enrollment of under 20 students showed the highest average cost and the value is nearly nine times more than the schools that have an enrollment of about 130 to 139. For schools with enrollment below 30 people; the average cost is seven times higher compare to schools with enrollment rates between 130 to 139. The average cost of schools with an enrollment of about 40 people is three times higher than those schools which have an enrollment of about 130 to 139. For schools which have an enrollment of about 90 people, the cost is 2 times higher of the average cost incur at schools with the enrollment of between 130 and 139.

The overall findings lead us to conclude that, the average cost appears to be lower in schools that have large enrollments compared smaller enrollment of students. For schools which had an enrollment of about 130 to 139, the average cost for three years (2011-2013) is RM6557 and this value increases to RM57,657 for schools which have enrollment level of 10 to 19.

V. SUMMARY, DISCUSSION AND RECOMMENDATIONS

This research is conducted to identify the level of education cost that incur at Small Sized School (SSS). Apart of the analyses, these costs are then compared with the number of student enrollment in those schools. The overall findings can be summarized as the followings;

• the operating costs of SSS is very large, compares with the ordinary public schools and has very high inclination to continue to increase throughout the year. The SSS schools have made the government allocate a huge amount of money for its development, management and also in paying the teachers' and the staffs' salaries.

• the results from comparison made between the small SSS and the large SSS, The average cost of education appears to be smaller in schools with higher level of enrollment. The finding lead us to conclude that, most of the costs are contributed by the teachers and staff emoluments. This study suggests that very small SSS (with enrollment of less than 30 people) are to think how restructure or to do re-implementation in education at their place in order to optimize financial resources and human resources, especially teachers.

The overall findings lead us to conclude that education expenditure at SSS is obviously not economically efficient. However, it is well understood that no all activities are aimed to achieve economic efficiency. In the case of SSS, the social objective overshadowed the economic objective in which the welfare of the people is taken as a priority here compare to other things.

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