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Gender Disparity in School Participation and Achievement: The Case in Malaysia

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Abstract

Gender differences with regard to academic performance remain one of the more challenging issues in educational research. Gender disparity in education has traditionally focus on the under participation of girls and still is in some parts of the world. In a number of countries, including Malaysia, gender disparity in basic and higher education are in favor of girls both in terms of participation and performance. The dual purpose of this paper is to address and to understand the nature of the issue by analyzing the trends of student participation and performance; and secondly, to seek whether student engagement and burnout are possible factors contributing to school dropout and low achievement. There are evidence in the literature to show student engagement and student burnout accounted for gender differences in school performance. The results of the analysis of secondary data reflected a trend that shows girls outperformed boys in national examinations across school levels and types. These trends are confirmed by results of a survey of the level of student engagement and student burnout on a sample of students aged 12, 14 and 16 which seems to suggest that boys are less engaged than girls, and experience more burnout. The findings are discussed in the context of developing support for students, particularly boys, to be more engaged, and less burnout in school and in learning.

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1. Introduction

Gender differences in educational outcomes has been on the international research agenda in the last few decades, and still is a challenging issue in Malaysia. Boys' underachievement has been the highlight of gender analysis research by the Ministry of Education (2001; 2013) and other educators (Zalizan, Saemah, Roselan & Jamil 2005; Nor Aniza, Zalizan & Manisah 2011). Previous research in Malaysia has focused their studies on the impact

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of students' style and skill of learning as well as learning strategies that are in favor of girls than boys. In order to address this problem it is important to learn more about the factors that might be impeding the academic progress made by all children, but particularly by those who have traditionally experienced problems in keeping up with their peer group and especially the boys. The purpose of this paper is to analyse gender patterns in school attendance and educational attainment and to relate the trends to patterns in student engagement and school burnout as factors affecting their school performance. There is evidence in the literature to show student engagement and school burnout accounted for gender differences in school performance (Lam et al. 2012; Furlong & Christenson 2008; Salmela-Aro & Tykkynen 2012; Zhang, Gan & Cham 2007). The data reported in this paper is part of a larger study to investigate the gender gap in education in order to suggest strategic steps to narrow the gap.

2. Gender in Education

Recent international assessment reports on the gender gap in educational outcomes conclude that girls achieve better than boys (EURYDICE Network 2010; CDEG 2011; UNGEI 2012) and that motivational and psychological issues has been cited as one of the factors that influence boys under participation and under performance. For example, some studies suggest that (some) boys show a lower motivation compared to girls in completing their homework and have low self-esteem and not very enthusiastic to continue their studies at a higher level (Darom & Rich, 1988; Warrington, Younger & Williams, 2000); and that these boys are able students who are particularly 'demotivated' (Van de Gaer et al. 2006). Theorists such as Eccles et al. (1993) and Roeser, Eccles & Sameroff (1998) have argued that schools that fail to meet the psychological needs of the adolescents would reduce the students' motivation and academic interests, and thus contribute to the reduction of student engagement and lower their academic performance in the transition from primary to secondary school. Several studies have shown that students' engagement is a predictor of academic performance (Vasalampi, Salmela-Aro & Nurmi, 2009; Wu, Hughes & Kwok, 2010; Wang & Eccles, 2012; Li & Lerner 2013).

The concept of school burnout among students, especially adolescents has been a subject of study in the last decade. Although the concept has been widely studied to work-related stress, a number of studies applied the burnout concept to school-related stress among students (Schaufeli et al. 2002; Salmela-Aro & Näätänen 2005). School-related burnout is seen as a consequence of excessive demands of schooling and the pressure to perform well in examinations that lead to depleting energy resources in students. School burnout may then lead to low motivation, absenteeism and finally dropping out of school (Finn 1989; Skinner et al. 2008; Parker & Salmela-Aro 2011). By using data from a total sample of 2359 adolescents, the current study attempt to develop a profile of their engagement in school as well as their level of burnout based on age and achievement of both boys and girls.

3. Methodology

3.1. Sampling

The sampling is done through stratified random sampling based on school year, gender and location (rural and urban) of students in day schools. Respondents in this study are from a population of students whose age ranges between 12 and 16 years who are in year 6 of primary school (age 12 years), Form 2 (age 14 years) and Form 4 (age 16 years) of secondary schools. Students from boarding schools and students from special education programs are not included in this study. The sample consisted of 1170 male students and 1189 female students.

3.2. Instrument

Two sets of questionnaires are used in this study. The School Engagement Scale (SES) (Lam et al. 2012) and The School Burnout Inventory (SBI) (Salmela-Aro et al. 2009) were translated to the Malay language and used to measure students' school engagement and school burnout respectively. The SES consisted of three subscales, as measured by a five point Likert scale, namely, Affective Engagement Subscale (9 items), Behavioral Engagement Subscale (12 items) and Cognitive Engagement Subscale (12 items). The SBI composed of 10 items measuring three factors of school burnout namely exhaustion at school, cynicism toward the meaning of school and sense of inadequacy at school. Reliability for the translation of the questionnaire was analysed through test-retest procedure

and a split-half correlation value between Malay and English version is .73, while the Cronbach Alpha coefficient for the SES is .93, and the Cronbach Alpha coefficient of the SBI is .86.

3.3. Data Analysis

Secondary data was used to analyse trends in school participation and achievement based on education statistics from the Ministry of Education. A profile of student engagement and school burnout of the sample in this study on the basis of gender, year of schooling and achievement was developed based on descriptive statistics.

4. Findings

This paper addresses three categories of findings: firstly, an analysis of trends in enrolment; secondly, national trends in achievement based on secondary data and thirdly, differences in levels of boys' and girls' engagement and burnout in school based on year of schooling and achievement.

4.1. Trends in School Enrolment

Population trends in Malaysia for the last twenty years suggest that the ratio of male to female has been consistent at 106:100 (Dept. of Statistics Malaysia 2010). This trend is reflected in the enrolment of primary education as shown in Table 1 based on education statistics in the year 2010. However, at the Lower Secondary level, while there are more boys in the schools the gap in enrolment between boys and girls narrows. It must be cautioned that the data reported here are based on schools that are under the purview of the Ministry of Education. After primary education, students are free to choose to attend schools that are not under the Ministry of Education, such as religious schools and private schools run by non-government bodies. School enrolment in the year 2010 reflects the trends in the past ten years where the enrolment of girls exceeds the boys in middle and upper secondary and almost double at the post secondary and tertiary level (Ministry of Education 2001).

Table 1: Enrolment in Schools and Institutions under the Ministry of Education
Based on Gender and School Year in 2010

Education Level and Age Group	Enrolment		Total
	Male	Female	
Primary (6+ - 11+)	1,492,014 (51.5%)	1,40,7214 (49.1%)	2,899,228
Lower Secondary (12+ - 14+)	715,307 (50.7%)	693,715 (49.2%)	1,409,022
Middle Secondary (15+ - Form 4)	209,441 (49.2%)	215,481 (50.7%)	424,922
Upper Secondary (16+ - Form 5)	199,601 (49.0%)	208,790 (51.0%)	408,391
Post Secondary & Tertiary (17+)	19,622 (35.6%)	35,393 (64.3%)	55,015
Post Secondary & Tertiary (18+)	16,797(35.3%)	30,749 (64.7%)	47,546

Source: Malaysia Ministry of Education Statistics 2010 <http://www.emisonline.moe.gov.my>

Table 2 reflects the dropout rate of boys as compared to girls for the cohort of students in Form 1 in 2007 through Form 5 in 2011 when they sit for the School Certificate Examination (SPM). The dropout rate of boys is triple that of girls when they reach the final year of school. Truancy cases are more prevalent in boys. The gender gap in school participation remains in favour of girls. Since more boys drop out of school, evidently there are more girls than boys that sit for the SPM and complete their upper secondary education.

Table 2: Student Enrolment for Form 1 - 5 Cohort Year 2007-2011

Year/ Form	Male	Female	Difference		Total Difference
			Male	Female	
2007/1	228353	220838	-	-	
2008/2	228737	224193	+384	+3355	+3739
2009/3	220875	220975	-7862	-3218	-11080

2010/4	188971	203170	-31904	-17805	-49709
2011/5	199888	210482	+10917	+7312	+18229
No/Percent	28465/	10356/			
Dropout	12.5%	4.7%			

Source: Malaysia Ministry of Education Statistics 2010 <http://www.emisonline.moe.gov.my>

4.2. Gender Patterns in National Examinations

Malaysia holds three national examinations which are taken by students at the end of primary education (UPSR), at the end of lower secondary education (PMR) and at the end of upper secondary education (SPM). An overview of gender patterns in educational attainment based on national examination results, as shown in Tables 3 and 4, reveal that girls perform better in all the national examinations and across all types of schools. However, boys who are in single-sex schools seem to perform better than boys in co-educational schools, both in the day school setting as well as in the boarding school setting. Both boys and girls seem to do better in a single-sex school setting.

Table 3: Achievement Trend Based on National Grade Point Average (GPN)*
Among Male (M) and Female (F) Students in Single-Sex and Co-ed Day Schools 2006-2011

Year	UPSR				PMR				SPM			
	Single Sex		Co-ed		Single Sex		Co-ed		Single Sex		Co-ed	
	M	F	M	F	M	F	M	F	M	F	M	F
2006	2.13	1.72	2.58	2.18	2.42	2.17	3.08	2.73	4.79	4.33	6.16	5.50
2007	2.09	1.71	2.54	2.11	2.33	2.12	3.05	2.70	4.73	4.23	6.04	5.37
2008	2.14	1.71	2.58	2.15	2.34	2.10	3.05	2.69	4.60	4.16	5.98	5.27
2009	2.12	1.72	2.55	2.13	2.30	2.05	3.02	2.63	4.45	3.86	5.87	5.05
2010	2.11	1.71	2.53	2.10	2.30	2.02	2.98	2.58	4.31	3.75	5.74	4.86
2011	2.14	1.72	2.50	2.11	2.25	2.00	2.96	2.54	4.28	3.59	5.58	4.72

*GPN the lower the better grade

Table 4: Achievement Trend Based on National Grade Point Average (GPN)*
Among Male (M) and Female (F) Students in Single-Sex and Co-ed Boarding Schools 2006-2011

Year	PMR				SPM			
	Single Sex		Co-ed		Single Sex		Co-ed	
	M	F	M	F	M	F	M	F
2006	1.06	1.06	1.13	1.14	1.94	1.97	2.20	2.40
2007	1.05	1.03	1.09	1.11	2.11	2.14	2.23	2.43
2008	1.06	1.06	1.11	1.13	1.98	2.15	2.15	2.24
2009	1.05	1.04	1.11	1.11	1.49	1.66	1.78	1.87
2010	1.02	1.03	1.10	1.11	1.42	1.77	1.82	1.92
2011	1.03	1.04	1.08	1.07	1.31	1.32	1.79	1.85

*GPN the lower the better grade

4.3. Level of Student Engagement and School Burnout

The next aim of this paper is to relate the trends in enrolment and achievement with levels of student engagement and school burnout as a prerequisite to a more indepth study of its relationship. Recent research in student engagement has established it as the primary theoretical model for understanding dropout and promoting school completion with sufficient academic and social skills to continue into postsecondary educational opportunities and in employment (Christenson, Reschly & Wylie 2013). Figures 1 and 2 below show the level of boys and girls engagement based on their achievement and school year, as well as their burnout.

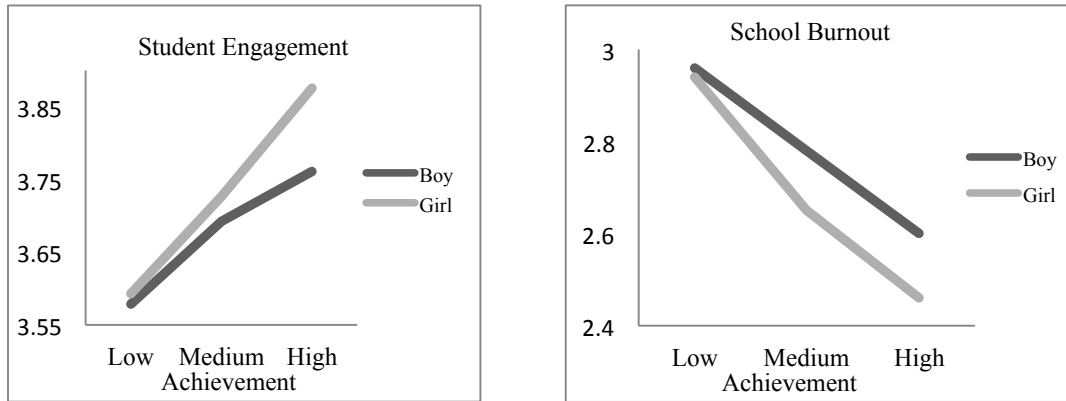


Figure1. Levels of Student Engagement and School Burnout Based on Gender and School Achievement

The data in this study suggest that levels of student engagement and school burnout for both boys and girls show a similar trend across school year and levels of achievement, although, in general, boys are less engaged than girls and experienced more school burnout. The data also reflects that high achievers reported more engagement and low burnout and within this group, girls are reportedly more engaged and experienced less burnout than boys. Alternatively, both boys and girls who are low achievers are less engaged in school and experience high burnout. The data also suggest that students in Form Two (age 14) seemed to be least engaged and highest burnout among the three groups of students.

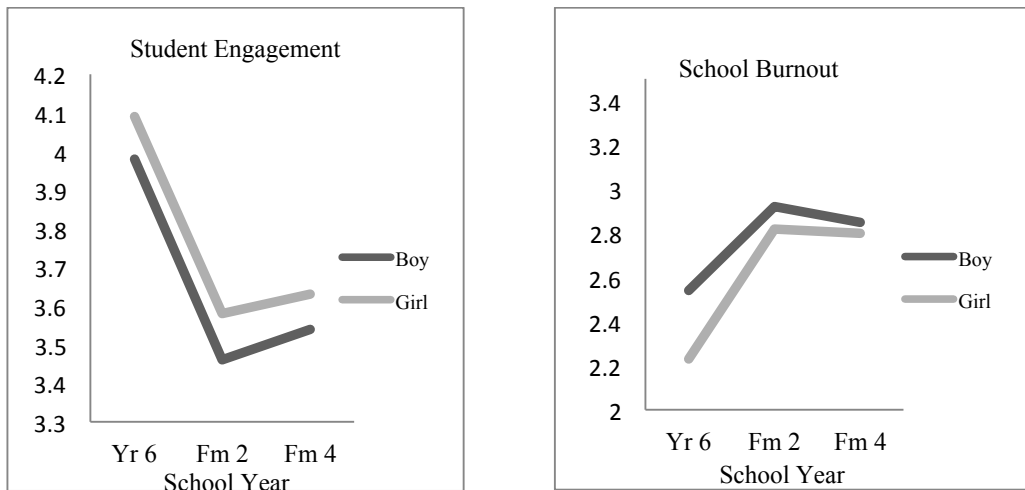


Figure2. Levels of Student Engagement and School Burnout Based on Gender and School Year

5. Discussion

This paper outlines the Malaysian scenario on gender disparity in school participation and achievement with an assumption that student engagement and school burnout are possible factors that contribute to the disparity. The findings in this study shed light on the possible relationship between school participation and achievement with

student engagement and burnout. Although a more in depth study and analysis is necessary to understand the nature of the relationship, this study seems to support previous studies that investigated the extent student engagement and burnout influence participation and achievement in school (Lam et al 2012; Wang & Eccles 2012; Vasalampi et al. 2009; Fall & Roberts 2012). Student engagement is seen as an antidote to school burnout (Schaufeli et al. 2002; Frederiks et al. 2004) and it is argued that engagement, as a multidimensional construct has a considerable potential to be studied fully in the Malaysian situation in order to address actions that needs to be taken to improve participation and achievement of all students.

6. Conclusion

In sum, this paper has provided an insight into the many perplexing questions about gender differences in school participation and academic achievement. Research in student engagement and school burnout has led researchers and educators to many more questions. The association between gender and achievement is likely to be mediated by other factors, such as parent and teacher support, as well as personality and motivational factors. What are these factors and what is the extent of their influence? What may have contributed to the disparity in educational attainment of boys and girls? These unanswered questions needs to be investigated by researchers in future studies.

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