Brunei Lower Secondary Students' Engagement in School and Beliefs about the Self under the Ongoing SPN21 Curriculum Reforms: Implications for Educational and Counseling Interventions

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Abstract

The school involvement of 171 Brunei lower secondary school students (140 females) was surveyed in terms of their ongoing engagement, reaction to challenges, perceived competence, and perceived autonomy in the context of the current SPN21 curriculum. Data were collected using the Research Assessment Package for Schools – Students in Middle schools version, RAPS-SM (Institute for Research and Reform in Education, 1998). Both genders need assistance in improving their school engagement strategies. This is especially important now as Brunei emphasizes inclusive education and the SPN21 curriculum. The absence of negative emotional reactions to challenging school problems suggested that the participants adjusted successfully after transiting from primary school to secondary level. Consistent with findings in previous studies, females asserted that they were more competent and autonomous in school work than males. Further mixed-methods research involving a bigger number of schools was recommended to provide more insights on the issue.

1. Introduction, Background and Setting

Brunei Darussalam has implemented three major and important educational policies: inclusive education (Ministry of Education, 1997; 1998); the curriculum reforms (Ministry of Education, 2007); and education for the gifted students (Ministry of Education, 2008). These changes were partly designed to diversify and broaden the provision of education and the development of the country's human resources. In addition, the educational reforms were intended to improve the quality of education in the country (Ministry of Education, 2007). However the success of these reforms will depend on many factors such as the suitability of the teachers, availability of funds, quality of schools, changes in examinations, and on how students are interacting with teaching and learning activities in the education system. Of all these issues, the present study was interested in learning about the various ways young Brunei lower secondary school students were engaged with their studies. We accorded more attention and priority to this group of learners in the present study for being in two transitional stages. First, these young learners recently moved from primary school to junior secondary level of education and it is important to see how they are adjusting and engaged in learning at this new stage of education. Second, the same young people are also undergoing a biological and developmental transition from childhood to adolescence stage. It is equally important to know how the physical and psychological changes they are experiencing are impacting their adjustment and engagement in a higher level of education. In addition, much research on the Brunei education system tends to focus on either learners with special needs or students in the stage of writing the terminal (public or national) examinations at the end of the primary school, lower and senior secondary school levels. Less emphasis is placed on other categories of students. The present study intends to narrow this knowledge gap. Against this background, we first briefly review below some of the relevant psychological studies that were conducted on Brunei students.

1.1 Psychological Research on Brunei Students

One factor contributing to lack of extensive psychological research on Brunei students is non-availability of

suitable research instruments (see Mundia & Bakar, 2010; Mundia, 2011a). Despite this problem, a small number of studies related to the present study have been conducted. Like all other students elsewhere, the limited available research indicates that Brunei primary and lower secondary students encounter both personal problems (Mundia, 2010a; Mundia; 2010b; Haq & Mundia, 2013) and academic problems (Mundia; 2010c; Mundia, 2010d; Mundia, 2011b; Mundia; 2012a; Hamid et al., 2013; Shahrill et al., 2013; Matzin et al., 2013) in their school life. However, none of these studies had a strong focus on the barriers and facilitators of help-seeking initiatives in these students. Recent research shows that students do not always know how to resolve their problems (Mundia, 2010e; Shahrill & Mundia, 2014). Brunei Darussalam has also implemented three major and important educational policies largely for the sole purpose of helping students and these are: inclusive education (Ministry of Education, 1997; 1998; Mundia, 2009); and the SPN21 curriculum reforms (Mundia, 2010a). These changes were partly designed to diversify and broaden the provision of education and enhance the development of the country's human resources (Mundia, 2010e). In addition, the introduction of SPN21 was also intended to improve the quality of education in the country (Ministry of Education, 2007). However the success of these reforms will depend on many factors such as the suitability of the teachers (Jawawi, 2009; Jawawi, 2010; Mundia, 2012b; Haq & Mundia, 2012; Tait & Mundia, 2012; Tait & Mundia; 2014), availability of funds, quality of schools, changes in examinations (Mundia, 2009), and on how students are interacting with teaching, learning activities and resources in the education system (Jaidin, 2009). Teachers in particular need to interact and engage with both students and colleagues appropriately and available research shows that Brunei teachers have potential and capacity to do this (Mahalle et al. 2013). Another important consideration is that teachers must be in good mental health with no criminal offenses committed against students, colleagues and members of the public. Recent research shows that Brunei trainee teachers have good mental health chracteristics (Mundia, 2012c; Mundia, 2013). In addition we focused on lower secondary school students two reasons. First, these young learners are in a transitional stage and recently moved from primary school to junior secondary level of education. It is important to see how they are adjusting and engaged in learning at this new stage of education. Second, the same young people are also undergoing a biological and developmental transition from childhood to adolescence stage. It is equally important to know how the physical and psychological changes they are experiencing are impacting their adjustment and engagement in a higher level of education. Three main student help-seeking trends have emerged from related research conducted in Brunei (Matzin et al., 2013; Shahrill & Mundia, 2014) and elsewhere (Rickwood et al., 2005). First, students do not normally consult mental health professionals (psychologists, counsellors, and psychiatrists) mainly for fear of stigma associated with seeing such people. Second, females are more likely to seek help at some stage than males. Third, students with personal problems usually prefer to consult family members (e.g. same-sex parent or same-sex sibling) while those with academic problems prefer to consult mostly peers and to a lesser extent teachers. For example, students with mathematics problems rarely consult the teacher due to fear of the mathematics teacher phenomenon (see Hamid et al., 2013). An additional trend for some Brunei students is that they also use religion to seek divine intervention in resolving their problems (Mundia, 2010d; Matzin et al., 2013).

1.2 Behavioral Engagement Methods

Engagement is a form of coping with a problem. According to Reijntjes et al (2006) this consists of two principal behaviors (a) problem-focused behavior - e.g. being actively involved in learning; and (b) behavioral confrontation - e.g. conducting a head-on verbal confrontation with the human stressor, if possible. Problem-focused coping is the most effective positive coping used by both high achievers or successful students and actively failing students (learners who try / work hard but still fail). This mode of coping is variously known as task-oriented coping in the Coping Inventory for Stressful Situations, CISS (Endler & Parker, 1990); planful problem-solving in the Ways of Coping Questionnaire, WCQ (Lazarus & Folkman, 1988); productive coping in the Adolescent Coping Scale, ACS (Frydenberg & Lewis, 1993); planning and active coping in the COPE Scale (Carver et al., 1989); and as proactive coping (Greenglass et al., 1999). Research shows that there are positive and significant inter-correlations between the three variables - engagement, planning, and active coping – all of which also individually correlate positively and significantly with Grade Point Average or weighted average achievement scores (see Reevy, 2011). In addition, the three coping constructs are also positively related to two Big Five personality traits - conscientiousness and openness which, in turn, are predictors of academic achievement (see Tables 10.3 - 10.7 in Reevy, 2011). Confrontation is also measured by other coping scales e.g. the WCQ (confrontive subscale) and COPE Scale (venting subscale). Often, confrontation works well in some counseling and psychotherapy intervention situations when or where other treatment techniques fail and has, for this reason, jokingly been dubbed as the cognitive surgery. However, confrontation should be used carefully and sparingly and perhaps as a last resort since confrontation is many times misinterpreted to be an attack. Similar informal jokes have also been cracked about other effective therapeutic procedures (e.g. proposing cognitive

therapy as an alternative for antipsychotic medicine; and equating cognitive imagery to cognitive vaccine). Birtel (2014) provides a detailed discussion on effectiveness of cognitive imagery.

1.3 Behavioral Disengagement Methods

This comprises of (a) behavioral distraction - doing different things that are pleasing to the self but which are not linked to solving the ongoing presenting problem, and (b) behavioral avoidance – withdrawal, disaffection, or distancing the self from the stressor physically as well as in terms of thoughts, feelings, and beliefs (TFBs). Lazarus and Folkman (1988) refer to behavioral avoidance as escape-avoidance. This includes giving up or quitting and denial (Carver et al, 1989; Reevy, 2011). In Endler & Parker's (1990) CISS scale, behavioral disengagement is measured by the avoidance subscale which consists of distracting and social diversion components. Previous research indicates that Asian students like the avoidance-oriented coping strategy particularly the social diversion component (see Pabiton, 2004, 2007; Chan & Lim, 2006) These two broad types of coping (distraction and avoidance) are defense mechanisms used widely by disinterested, demotivated, and passively failing students who, as a consequence of poor performance, eventually either voluntarily dropout or officially get excluded from school.

1.4 Emotional Engagement and Disengagement Methods

Students are said to be emotionally engaged if they harbor positive feelings of belonging in the school (van Uden et al, 2013) and are "enthusiastic about a class, interested in going to the class, and demonstrate a positive learning attitude" (van Uden et al, 2014 p.22). Emotional engagement is called or known as emotional support in COPE Scale (Carver et al, 1989); emotion-oriented coping in CISS Scale (Endler & Parker, 1990); and as emotional intelligence, EI, in the BarOn Emotional Quotient Inventory - Youth and Adult versions (BarOn, 1997; BarOn & Parker, 2000). According to BarOn and Parker, people who score high on the Intrapersonal Scale of the BarOn-EQ-i:YV are said to be emotionally stable individuals because they have the necessary ability to (a) understand their own personal and others' emotions well; (b) control / regulate their personal and others' emotions appropriately; (c) apply or use their personal emotions effectively; and (d) evaluate their own and others' emotions carefully to avoid unnecessary misinterpretations which often lead to misunderstandings and conflicts. Thus a student with a high EI quotient who receives a failing grade would not see the low marks as the end of the world but rather as a challenge, critically analyze the causes of poor performance, address the observed deficiencies, and try harder in the next assessment test. High scorers on the BarOn EI test are not only emotionally stable but also tolerant to stress, relaxed, composed, and optimistic. They tend to internalize causes of success or failure to personal attributes. On the contrary, a failing student with a low EI quotient would most likely behave in the opposite way (catastrophize the event, breakdown, perhaps cry, get anxious and obsessed with the F grade, be excessively worried or neurotic for a long time, develop negative self-concept and negative self-esteem, begin fostering thoughts of hopelessness and helplessness, and eventually be resigned to the task). Low scorers on the BarOn EI test are emotionally unstable and may fail to address an emotionally stressful problem. They tend to externalize causes of success or failure to outside factors. Furthermore, they are an example of people who use emotional disengagement methods when addressing stressful problems. Based on these scenarios, EI appears to have the potential to impact academic achievement positively or negatively. Research investigating the relationship between EI, coping styles and academic achievement is meagre. However, the recent study by MacCann et al (2011) found that task-oriented and emotion-oriented coping strategies mediated the relationship between EI and academic achievement.

1.5 Cognitive Engagement and Disengagement

According to Reijntjes et al (2006) cognitive engagement includes both cognitive analysis (cognitive activity directed to the stressor or presenting problem) and positive reappraisal (evaluating and reframing the distressing factor as less negative, benign, or positive). In both of these strategy dimensions, the tendency in people is to first make a critical analysis of the stressor before they cautiously select a coping mechanism to be used in attacking the problem. They then defensively cognize (think, reason, and reflect) on the costs, benefits, and consequences their intended coping behavior might produce or bring. In education, students are said to be cognitively engaged "when they understand the importance of their education, specific subjects, and assignments and are able to formulate their own learning goals which they personally want to achieve" (van Uden et al, 2014, p.22). Some researchers claim that cognitive engagement has links or connections with self-regulation, the ability to be self-critical, self-controlled, and self-directed (van Uden et al, 2013). There is also empirical evidence that cognitive engagement is associated with metacognitive, the ability to know oneself (Fredricks et al, 2004). Cognitive disengagement is then the opposite of cognitive engagement and includes mental disengagement (Carver et al, 1989).

1.6 The Self and Self-Efficacy (SE)

In psychology and counseling, "the self" refers to a person's sense of unique existence, internal frame of reference, and attitudes and feelings about him / herself (Flanagan, 2000). Thus there are so many words in everyday spoken English that are prefixed by the term "self" and used to describe self-related concepts such as: self-monitoring; self-control; self-regulation; self-direction; self-motivation; self-acceptance; self-help; self-concept; self-perception; self-esteem; self-actualization; and self-efficacy. These concepts do not mean exactly the same thing and are measured differently but are used in a variety of ways in Carl Roger's person-centered (client-centered or humanistic) therapy. In the context of the present study, the "self" is described mainly in terms of self-efficacy (SE). SE may be regarded to be both a personality attribute and a coping strategy because of its high positive correlations with these two domains as explained below. By definition, SE is the belief in one's abilities and one's confidence in being able to do something without much help from other people (Bandura, 1997; Flanagan, 2000). This description suggests that SE is a multidimensional construct. Thus to be successful, a self-efficacious individual student should also possess several other related traits or dispositions that are embedded in personality theories such as: resiliency (perseverance, endurance, or persistence); desire to be self-controlled and self-directed; being self-critical or conscientious; and having high self-motivation, ambition, determination and goals. Research has consistently found three of the Big Five personality traits - conscientiousness, openness, and agreeableness - to be predictive of academic achievement or GPA at low to moderate levels (Noftle & Robins, 2007; Reevy, 2011). SE is also positively and significantly correlated with both pedagogical and subject-matter competences at $p < .01$; with both behavioral and emotional engagement coping strategies, $p < .01$; and with cognitive engagement, $p < .05$ (see van Uden et al, 2013; 2014). In addition, higher SE scores are positively and significantly related with productive coping scores while low SE scores correlate with procrastination, buck-passing, and nonproductive coping strategies (Mann et al, 2011). Furthermore, SE is a correlate and predictor of academic achievement (for detailed discussions see Caprara et al, 2010). Moreover, trainee teachers with higher SE scores in special education were found to have more positive attitudes to inclusive education (Tait & Mundia, 2014).

1.7 Objectives of the Study

The overall goal of the present study was to identify the participants' coping styles with academic work in the lower secondary school. Specifically, the purpose of the present study was four-fold, namely to:

- Assess the participants' ongoing engagement with school work by gender and type of school attended;

- Determine the participants' reactions to challenges in school work by gender and type of school attended;

- Examine the participants' perceived competence by gender and type of school attended; and

- Establish the participants' perceived autonomy or independence by gender and type of school attended.

2. Method

Under this section, we briefly describe below the design, sample, instruments, procedures, and data analysis techniques used in the present study.

2.1 Design

We study used the field survey approach to investigate the problem. Under this procedure, the investigators went to the research sites to directly collect the data.

2.2 Sample

The instrument was distributed to 211 randomly selected students at two randomly chosen government lower secondary schools in Brunei. However, the final sample was reduced to 171 by the exclusion criteria which include: non-response bias (none return of completed protocols from uncooperative participants); unusable returns (improperly completed scales); and missing values (accumulating too many unanswered items). The only inclusion criteria were that a student was Bruneian attending the selected schools and classes. Of the 171 participants, 140 (81.9%) were females while the rest (31 or 18.1%) were males. In terms of educational level, 142 (83%) of the participants were in Year 7 (known as Form 1, a transitional grade from primary school level) whereas 29 (17%) were in Year 8 (or Form 2). One of the two selected schools enrolled mixed gender students (57, 33.3%) and the other school was for girls only (114, 66.7%). However, the size of the overall sample (N) and subsamples (n) reported in different tables vary due either to pair-wise or list-wise deletion of cases with missing values depending on the type of analysis performed. Although age was not computed, all the participants were estimated to be in the early adolescence stage (approximate age range: ±12-13). In Brunei, children commence two years of preschool at the age of five after which they begin six-year primary school education

and complete it by age 12.

2.3 Instruments

Data for the study were collected using a 3-Parts instrument: (1) Part A - instructions to participants and informed consent; (2) Part B - a researcher-constructed 3-item demographic questionnaire; and (3) Part C - the Research Assessment Package for Schools – Students in Middle schools version, RAPS-SM (Institute for Research and Reform in Education, 1998). The demographic questionnaire (Part B) collected biographical data on independent variables such as gender, type of school attended, and educational level. Altogether, demographical data were used as grouping variables when performing various statistical analyses described under the data analyses section below. The RAPS-SM scale (Part C) is a self-report paper-and-pencil measure of student engagement in school containing 84 items that are divided into 7 subscales assessing: ongoing engagement (5 items); reaction to challenge (6); perceived competence of the self (16); perceived autonomy (9); perceived relatedness (17); experiences of support from parents (17); and experiences of support from teachers (14). However, the last three of these scales (perceived relatedness; experiences of support from parents; and experiences of support from teachers) were not used in the present study. Items on all the seven subscales were scored on 4-point Likert response format (1 Not at all true, 2 Not very true, 3 Sort of true, 4 Very true). All the four RAPS-SM scales used in the present study had satisfactory and acceptable levels of test-retest reliability (average coefficient of intra-rater agreement = .75). In addition, the scales also had good content validity as judged by two educational psychologists at the University of Brunei Darussalam. Furthermore, the study was deemed (by the researchers) to have had high ecological validity since it was conducted in schools and the instruments were administered in the students' classrooms by teachers of the participating children.

2.4 Procedures

Prior to collecting the data, the school administrators, teachers and parents were told about the purpose and objectives of the study as well as the ethical conditions for involving school children in the study. Deception was not used in the study. With regard to English language problems, the meanings of difficult English words, sentences and phrases on the instruments were verbally explained to the participants. Furthermore, the instruments were written in simple English comprehended by Brunei students at lower secondary school level.

2.5 Data Analysis

Demographical data were analyzed using descriptive statistics (frequencies and percentages). Items on the four RAPS-SM scales were scored on 4-point Likert scales response format (1 Not at all true, 2 Not very true, 3 Sort of true, and 4 Very true) according to instructions in the technical manual of the instrument. Negative items were reverse scored to minimize measurement errors. Only raw data were used in the present study. All the frequencies and percentages for the coping prevalence rates were based on raw scores. Raw item scores were analyzed by descriptive statistics (mean and standard deviation) and inferential statistics (t-tests for independent groups).

3. Results

The findings of the study are presented below per subscale and per objectives of the study. The engagement domain as measured by the RAPS-SM instrument incorporates two separate but interrelated subdomains of student adjustment in school, namely: (1) ongoing engagement with school; and (2) reactions to challenge. We explain the findings under each of these dimensions below.

3.1 Ongoing Engagement Subdomain

The ongoing engagement subscale includes the extent to which the student exerts effort on schoolwork, pays attention in class, prepares for class, and believes that doing well in school is personally important. The participants' performance on the five items tapping these aspects of student engagement is presented in Table 1 in which females' and girls' school mean scores are in brackets. No statistically significant differences were detected by gender and type of school attended. However, mean scores of 1-2 magnitude were on the negative side of the item rating scales while mean responses of 3-4 were on the positive side (on a 4-point Likert rating scale (1 Not at all true; 2 Not very true; 3 Sort of true; 4 Very true). The participants' mean scores did not either fall far below to one (1) or go far up to four (4) but lay somewhere in the middle of the range. In this sense both genders and both schools were on the negative side on Items 21 and 54 which were phrased negatively but on the positive side on statements that were worded positively (e.g. Items 2, 31, and 84). Thus they tended to disagree with the negative items while they generally agreed with the positive statements.

Table 1. Ongoing engagement with school by gender and type of school attended

Item†	Mean (genders)[a]	Mean (schools)[b]	T-test (genders)	T-test (schools)
2. I work very hard on my schoolwork	3.148 (3.043)	3.134 (3.026)	0.764	0.323
21. I don't try very hard in school.	1.703 (1.847)	1.788 (1.840)	-0.793	0.719
31. I pay attention in class.	2.963 (3.072)	3.019 (3.070)	-0.886	0.602
54. I often come for class unprepared.	1.814 (1.826)	1.942 (1.769)	-0.066	0.201
84. How important is it to you to do the best you can in school	3.629 (3.826)	3.750 (3.814)	-1.882	0.445

[a]Genders: males, n = 27 (females, n = 138)

[b]Schools: mixed, n = 52 (girls', n = 113)

†Item scoring: 1 Not at all true; 2 Not very true; 3 Sort of true; 4 Very true

3.2 Reactions to Challenge Subdomain

In the context of the present study, reaction to challenges refers to the strategies students use when faced with negative or stressful school events. There are a number of ways in which students may cope with, or react to, negative school-related events. Students may blame negative events on teachers or other individuals (projection). Alternatively, students may cope with negative events by downplaying their importance (denial). At other times, they may perseverate on the events and worry about them without necessarily doing anything to ensure that such events won't occur again (anxiety amplification). Finally, students may cope by examining their own behavior and attempting to make changes to prevent similar negative events from occurring in the future (positive coping). Of these four different reactions to challenge, positive coping and projection appear to be particularly related to positive or negative outcomes for middle school students and were included in the reaction to challenge subscale (see Table 2). A close examination of the responses in Table 2 revealed that there was a general pattern among participants whereby they tended to internalize attributions for failure at school and accept responsibility (Items 22, 43, and 68) rather than externalize low or poor achievement by blaming other people (Items 12, 35, and 57). The desire and sense of responsibility to own, internalize and fix personal academic problems was strongest in females and students in girls' school (see Items 22 and 68).

Table 2. Reactions to challenge by gender and type of school attended

Item†	Mean (genders)[a]	Mean (schools)[b]	T-test (genders)	T-test (schools)
Projection items				
12. When something bad happens to me in school, I say the teacher didn't cover the things on the test.	1.642 (1.742)	1.615 (1.776)	-0.544	-1.092
35. When something bad happens to me in school, I get angry at the teacher.	1.642 (1.345)	1.538 (1.330)	1.953	1.685
57. When something bad happens to me in school (like not doing well on a test or not being able to answer an important question in class), I say it was the teacher's fault.	1.392 (1.338)	1.346 (1.348)	0.372	-0.017

Positive coping items

22. When something bad happens to me in school, I try to figure out what I did wrong so that it won't happen again.	2.821 (3.397)	3.096 (3.392)	-3.629**	-2.259*
43. When something bad happens to me in school, I try to see what i did wrong.	3.500 (3.544)	3.500 (3.553)	-0.301	-0.452
68. When something bad happens to me in school (like not doing well on or not being able to answer an important question in class), I tell myself I'll do better next time.	3.428 (3.705)	3.596 (3.687)	-2.251*	-0.905

[a]Genders: males, n = 28 (females, n = 136)

[b]Schools: mixed, n = 52 (girls', n = 112)

*p < .05 (two-tailed)

**p < .01 (two-tailed)

†Item scoring: 1 Not at all true; 2 Not very true; 3 Sort of true; 4 Very true

3.3 Beliefs about Self Domain

According to the RAPS-SM scale, the beliefs about the self domain incorporate three separate subdomains: (1) perceived competence; (2) perceived autonomy; and (3) perceived relatedness. Of these, only perceived competence and perceived autonomy were investigated in the present study and whose results are presented below.

3.3.1 Perceived Competence Subdomain

The competence subdomain of the RAPS-SM consists of 16 items. Two of these items reflect perceptions of control in the school setting. Six items reflect the student's beliefs about what kinds of strategies are necessary in order to achieve desirable, or avoid undesirable, outcomes. There are four different strategies represented: (1) unknown; (2) powerful others; (3) effort; and (4) luck. A fifth strategy that appeared in earlier versions of the RAPS-SM, ability, was included to reflect students' endorsement of ability as a strategy for doing well in school. In an earlier research, ability did not appear to be associated with student performance and adjustment in school according to the Institute for Research and Reform in Education (1998).

The final eight perceived competence items reflect the student's beliefs that he or she has the capacity to enact strategies. There are two items for each strategy except powerful others and luck strategy. Students do differ in the extent to which they believe that they are smart in school. The unknown strategy items reflect the student's inability to determine what it takes to do well in school. Thus, they more accurately reflect the lack of a strategy. The 16 items included in the revised RAPS-SM are presented in Table 3 together with the obtained descriptive and inferential statistics. No significant difference was obtained on the perceptions of control and unknown strategies items between the genders and schools. However, males and the mixed-gender school scored significantly higher on the powerful others strategy item (see Item 64, Table 3). This finding implies that males attribute their success at school to external factors / significant others such as teachers. Interestingly, the two genders and schools did not differ significantly on the two powerful others capacity items. On the other hand, the two types of schools differed significantly on both effort strategy items with students in the girls only school scoring higher than their counterparts in the mixed-gender or coeducation school. This suggested that girls put more efforts at their education than boys. In addition, females in the present study also confidently thought that they were academically more able than boys by endorsing significantly one of the two ability capacity items (Item 82). There were no significant gender and school type differences on the luck strategy, effort capacity, and luck capacity items.

Table 3. Perceived competence by gender and type of school attended

Item†	Mean (genders)[a]	Mean (schools)[b]	T-test (genders)	T-test (schools)
Perceptions of control items				
28. I can do well in school if I want to.	3.384 (3.353)	3.387 (3.345)	0.174	0.294
66. I can't do well in school.	2.000 (2.045)	2.142 (1.990)	-0.256	1.082
Unknown strategy items				
6. I don't know how to keep myself from getting bad grades.	2.384 (2.308)	2.408 (2.281)	0.359	0.743
48. I don't know what it takes to get good grades in school.	2.269 (2.225)	2.408 (2.154)	0.222	1.621
Powerful others strategy items				
64. The best way for me to get good grades is to get my teacher to like me.	2.538 (2.037)	2.346 (2.018)	2.680**	2.180*
Effort strategy items				
34. If I don't do well on my schoolwork, It's because I didn't try hard enough.	3.153 (3.368)	2.979 (3.490)	-1.134	-3.486**
49. Trying hard is the best way for me to do well in school.	3.461 (3.729)	3.530 (3.754)	-1.976	-2.065*
Luck strategy items				
26. If I'm unlucky, I won't do well in school.	2.000 (2.188)	1.979 (2.236)	-0.805	-1.378
Powerful others capacity items				
23. I can get my teacher to like me.	2.730 (2.496)	2.673 (2.472)	1.239	1.325
80. I can't get my teacher to like me.	2.115 (2.067)	2.163 (2.036)	0.256	0.850
Effort capacity items				
24. I can work really hard in school.	2.923 (3.210)	3.102 (3.190)	-1.791	-0.685
73. I can't work really hard in school.	1.807 (2.067)	2.020 (2.027)	-1.320	-0.043
Ability capacity items				
42. I'm not very smart in school.	2.307 (2.511)	2.326 (2.545)	-1.101	-1.483
82. I'm pretty smart in school.	2.115 (2.481)	2.346 (2.454)	-2.334*	-0.845
Luck capacity items				
15. I'm pretty lucky at getting good grades.	2.961 (2.939)	2.979 (2.927)	0.126	0.381
45. I am unlucky in school.	1.846 (1.774)	1.877 (1.754)	0.588	0.820

[a]Genders: males, n = 26 (females, n = 133)

[b]Schools: mixed, n = 49 (girls, n = 110)

*p < .05 (two-tailed)

**p < .01 (two-tailed)

†Item scoring: 1 Not at all true; 2 Not very true; 3 Sort of true; 4 Very true

3.3.2 Perceived Autonomy Subdomain

The perceived autonomy subdomain of the RAPS-SM is made up of nine items that tap three different types of self-regulation or reasons for doing schoolwork or homework. Three items tap introjected self-regulation (i.e. doing schoolwork to avoid feeling embarrassed or guilty), three items involve identified self-regulation (i.e. doing schoolwork because it is seen as important), and three items tap intrinsic self-regulation (i.e. doing schoolwork because it is fun or interesting). These three forms of self-regulation are positively related to each other and are all expected to contribute to students' academic performance (Institute for Research and Reform in Education, 1998). A fourth form of self-regulation involving doing schoolwork to avoid punishment or because it is the rule (external self-regulation) was included in previous versions of the RAPS-SM but was omitted from the current revised version because it was unrelated to other indices of student performance and adjustment (Institute for Research and Reform in Education (1998). The participants' performance on the autonomy or self-regulation items is presented in Table 4. No significant differences were obtained by gender and type of school attended on introjected and identified self-regulation items (Table 4). The two genders and schools scored equally high (> 3) on the positive side of the rating scales on two introjected self-regulation items and on all three identified self-regulation items. There were no significant gender differences on all the three intrinsic self-regulation items. However, the two types of school differed significantly on all the three intrinsic self-regulation items ($p < .01$). Students in the mixed-gender or coeducation school scored much higher than their counterparts in the girls' only school on all these three items. In the absence of interviews with probes, it is not clear what caused these differences. One plausible or speculative reason could be that there was probably more aggressive competition between students and the two genders in the coeducation school while students in the girls' school only competed among themselves.

Table 4. Perceived autonomy by gender and type of school attended

Item†	Mean (genders)[a]	Mean (schools)[b]	T-test (genders)	T-test (schools)
Introjected self-regulation items				
16. I do my homework because I'll feel bad about myself if I don't do it.	3.037 (3.299)	3.269 (3.250)	-1.287	0.118
51. I work on my classwork because I'll be ashamed of myself if it doesn't get done.	3.148 (3.102)	3.057 (3.133)	0.224	-0.466
72. I work on my classwork because I'll feel guilty if I don't do it.	2.851 (3.043)	2.942 (3.044)	-0.932	-0.622
Identified self-regulation items				
41. I do my homework because I want to learn new things.	3.296 (3.423)	3.423 (3.392)	-0.805	0.240
60. I work on my classwork because doing well in school is important to me.	3.444 (3.510)	3.576 (3.464)	-0.477	1.017
83. I work on my classwork because I think it is important.	3.592 (3.642)	3.692 (3.607)	-0.382	0.822
Intrinsic self-regulation items				
5. I do my homework because I like to do it.	3.037 (2.737)	3.096 (2.642)	1.895	3.702**
11. I work on my classwork because it's interesting	3.333 (3.102)	3.423 (3.008)	1.422	3.281**
46. I do my homework because it's fun.	3.148 (2.810)	3.153 (2.732)	1.831	2.911**

[a]Genders: males, n = 27 (females, n = 138)

[b]Schools: mixed, n = 52 (girls', n = 113)

**$p < .01$ (two-tailed)

†Item scoring: 1 Not at all true; 2 Not very true; 3 Sort of true; 4 Very true

4. Discussion

We present a discussion of the main findings below according to the four objectives of the study.

4.1 Ongoing Engagement Subdomain

The participants scored in the expected direction on this subscale. They agreed with positive statements and disagreed with negative ones. However, the mean scores tended to be in the middle of the range (not too low for negative items and not too high for positive items). These findings suggest that the students need help in developing more active engagement skills. This may be done by mounting sensitization workshops and motivational talks as well as providing counseling interventions to individual students and groups. Resource persons for such educational and counseling interventions could be school psychologists, school counselors, special education teachers, and senior regular school teachers employed by Ministry of Education (Special Education Unit, Counseling Unit, and Department of Schools). The goal of these interventions should be to promote positive and active behavioral engagements (see Reijntjes et al, 2006), emotional engagements (van Uden et al, 2013; 2014), and cognitive engagements (Reijntjes, et al, 2006).

4.2 Reactions to Challenge Subdomain

In general, the participants indicated that they coped positively with challenging educational and personal problems (e.g. school failure) by accepting responsibility for their own actions and behaviors (Items 22, 43, and 68) instead of blaming other people (Items 12, 35, and 57). However, the strongest wish for an individual student to react appropriately in addressing her/his own problems was found in females and students in the girls' school (see Items 22 and 68). This behavior should be encouraged and supported. The ability to use and control emotions wisely is essential as it enables an individual to function positively and effectively with other people (BarOn, 1997; Bar-On & Parker, 2000). Furthermore, MacCann et al (2011) found that task-oriented and emotion-oriented coping strategies mediated the relationship between EI and academic achievement.

4.3 Perceived Competence Subdomain

Evidence from the present study revealed that males externalized the reasons for their success while females internalized them. Ideally, it is better to internalize than to externalize attributional behaviors as discussed above under the self theory. Externalizing success fosters the development of a dependent personality while internalizing promotes the acquisition of independence attitudes. Theoretically, people who internalize their successes and failures tend to have higher self-efficacy (Bandura, 1997; Flanagan, 2000), are more resilient and persistent, and stable emotionally (BarOn, 1997; Bar-On & Parker, 2000). It is quite possible that students in the girls only school scored higher on both effort strategy items than their counterparts in the mixed-gender or coeducation school because females in the present study were internalizers. This metacognition or self-awareness, enabled females to have higher self-confidence in thinking that they were more competent academically than their male peers and thus scored higher on one ability capacity item (Item 82).

4.4 Perceived Autonomy Subdomain

The self is an important concept in counseling, psychotherapy and psychiatry as it forms the basis of independent functioning. The two genders and types of school scored equally high on most items for introjected and identified forms of self-regulations. As a result no significant differences were obtained on these variables by gender and type of school. While no great gender difference was obtained on intrinsic self-regulation, the two types of school differed significantly ($p < .01$) on all the three items of this variable. Since students in the mixed-gender or coeducation school scored much higher than their counterparts in the girls only school on all these three items, we suspected that this was probably due to the aggressive competition between the two genders in the coeducation school while students in the girls' school had no additional competition other than competing among themselves. In a mixed-gender school, girls always want to prove that they can perform just as well as boys, if not better and contrary to societal stereotypes which place males on top of the world. In the context of the present study, perceived autonomy refers largely to personality attributes such as: resiliency (perseverance, endurance, or persistence); desire to be self-controlled and self-directed; being self-critical or conscientious; and having high self-motivation, ambition, determination and goals. We use the term self-efficacy (SE) to represent all these related self-regulation traits in the present study. As pointed out in the literature review above, SE is positively and significantly correlated with both pedagogical and subject-matter competences, emotional engagement coping strategies, and with cognitive engagement (see van Uden et al, 2013; 2014). In addition, previous research also showed that higher SE scores were positively and significantly related with productive coping scores while low SE scores correlated with procrastination and nonproductive coping strategies (Mann et al, 2011). Moreover, SE was found to be a correlate and predictor of academic achievement

in the study by Caprara et al (2010).

5. Conclusion

We investigated the students' ongoing engagement with school work, reactions to challenges, perceived competence and perceived autonomy. The results showed that more needs to be done to improve the students' ongoing engagement with school activities. In the present study, participants did not indicate any negative emotional reactions to challenging school problems. The students need to be encouraged and supported to maintain this healthy disposition. Finally, girls demonstrated that they were both more competent and autonomous in school work than boys. Further mixed-methods research is recommended using a bigger number of schools to provide more insights on the issue.

6. Limitations of the study

The present study was informed by three main limitations. First, as a survey the results could not establish cause-and-effect relationships in the variables investigated. Second, a qualitative interview component was not incorporated but was necessary to triangulate findings from the quantitative survey. Third, the study should have involved more schools for the results to have higher generalizability. Despite these limitations, the study yielded results that we believe will be useful in guiding and informing future research in this area of investigation.

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