

Implementation of SPN21 Curriculum in Brunei Darussalam: A Review of Selected Implications on School Assessment Reforms

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Abstract

In the past twelve years (1997-2009), Brunei Darussalam has implemented three major educational policies: (1) inclusive education, in 1998; (2) the National Education System for the 21st Century known in Malay as Sistem Pendidikan Negara Abad 21 or SPN21, 2008; and (3) education for the gifted / talented students, 2009. These changes are partly designed to diversify and broaden the provision of education and the development of the country's human resources. However the success of these reforms will depend on many factors such as the suitability of the teachers, availability of funds, quality of schools, and changes in examinations. The present qualitative study analyses and reviews selected technical innovations to examinations that need to be undertaken concurrently with the ongoing curriculum reforms to support the new initiatives. The issues discussed include over-emphasis on examinations; assessment of affective skills; assessment of vocational and technical subjects; use of informal assessments in school-based evaluations; moderation of marks for borderline students; the relationship between formative and summative assessments; changes to teacher education courses that deal with school assessments; and nationalization of the senior secondary school examinations. A content analysis of the skills measured by current school examinations and a needs assessment research to reform the present school evaluation procedures were recommended to gain in-depth insights.

Keywords: Policies, Curriculum, Reforms, Assessments, Examinations, Development

1. Introduction

Most of the knowledge and skills taught formally in schools end up being assessed in tests. This relationship between teaching and examinations applies to many education systems and implies that mere reform of the curriculum alone may not succeed without also innovating the assessments. A great deal of effort and careful work has already been undertaken in Brunei to refine school examinations which are now much improved. Following the implementation of the policy of inclusive education (Ministry of Education, 1997; 1998), examinations were adjusted to accommodate the needs of students with disabilities. Brunei students with mild, moderate and severe special needs now attend regular schools and write the same examination papers as their non-disabled peers. Some of the accommodations that need to be made for such students are discussed in detail by Murray (1996). Another major change undertaken was the removal or abolition of the "N" Level examinations. In 2008 Brunei implemented the National Education System for the 21st Century known in Malay language as Sistem Pendidikan Negara Abad 21 code-named SPN21 (Ministry of Education, 2007). With implementation of the current and ongoing curriculum reforms and the program for the education of the gifted and talented students in 2009, Brunei is poised to make more adaptations to school assessments. For example the Ministry of Education (2007) has promised to reform the emphasis of the national examinations from norm-referencing to criterion-referencing. This has wide ranging implications. The Department of Examinations in the Ministry of Education will need to define and develop new criteria or benchmarks for success at various class levels in the system of education. New items tapping the new contents and skills will, in turn, need to be constructed and pre-tested to determine their quality (reliability, validity, and bias). The whole process may require creating a new item bank for each subject. The new tests will need to have adequate predictive validity (as an additional quality) to help school authorities in making realistic and meaningful counseling, remedial, selection, and placement decisions. If continuous assessment (CA) was adopted to supplement / complement final examinations, then CA assessments will also need to be criterion-referenced to equally emphasize the achievement of desired competency or mastery levels. In addition, an appropriate formula (way or procedure) for linearly combining CA and final examination marks meaningfully will need to be found or worked out. This might require standardizing marks or equating the scores before combining them to obtain composite scores.

Weighting or scaling of component marks for some practical subjects may be considered important. Furthermore there is need to incorporate informal assessments in CA to cater not only for needs of students with disabilities but also to meet the needs of gifted / talented students in the education system.

1.1 The need for reform of public examinations under SPN21 curriculum

In various SPN21 curriculum documents (Ministry of Education, 2007), the government of Brunei has rightly called for the reform of the school assessments both informal continuous assessments (Student Progress Assessment, School-Based Assessment, and Student Progress Examination) as well as formal summative national school leaving examinations at primary (Year 6) and junior high school (Form 3) levels. Most teachers in Brunei would be familiar with School-Based Assessment which is formative evaluation but not so with the Student Progress Assessment and the Student Progress Examination. These various forms of continuous assessment are also known as “Check-Point Assessments” in Brunei under the ongoing curriculum reforms. To minimize or clear confusion, some schools are organizing seminars and workshops to brief teachers on the possible implications of SPN21 on school assessments and the various types of assessments that will be used (see Clark, 2009). Specifically the government wants to change these assessments from being norm-referenced to criterion-referencing to emphasize mastery of knowledge and skills. But this might not be enough. To achieve the overall comprehensive objectives of the SPN21 curriculum, school summative examinations and teacher education may need to be innovated in several other ways.

1.2 Academic performance on public examinations

The performance of students on senior secondary school leaving examinations (GCE “O” and “A” Level) in key subjects (such as English, Mathematics and Science) is at present a source of concern to the Ministry of Education (see Mohd, 2007). The cause of unsatisfactory performance on national examinations can be many. For example, previous research indicates that students who don’t study efficiently do not usually perform well on tests of academic achievement (Putwain, 2009; Sander, 2009; Sanders, Sander, & Mercer, 2009). Despite lack of research on students’ poor academic achievement in some subjects, the need to diagnose and reform school assessments is apparent from a variety of informal sources. For instance, the mushrooming of tutorial schools in the country to help weak students provides indirect evidence that some students might not be performing optimally. Advertisements for examination coaching services by private instructors regularly appear from time to time in Brunei’s two main English newspapers (The Borneo Bulletin and The Borneo Times). This too, suggests that some students are not achieving the desired results in popular and key subjects such as English, science, and mathematics. Also the increasing number of repeaters in various school grades seems to imply that some students may not be functioning adequately. In addition the setting up of the Special Education Unit (SEU) by the government Ministry of Education (1997; 1998) to assist, among others, the learning disabled (LD) students appears to suggest that there are many students in the inclusive education system that might benefit from diagnosis and reform of school assessments. Furthermore the Department of Examinations in the Ministry of Education recently reported a drop or decline in annual statistical trend in the number of high or good grades at “O” and “A” Level examinations in various school subjects which may be due to many causal factors (Mohd, 2007). The implementation of the ongoing SPN21 curriculum reforms by the Ministry of Education (2007), introduction of the education program for gifted and talented students (Ministry of Education, 2008), and current changes in teacher education policy at the Sultan Hassanal Bolkiah Institute of Education (SHBIE) at the University of Brunei Darussalam (2009) are altogether partly intended to introduce new ways of teaching, learning, and studying to help the students to achieve higher but this may not be enough. To be successful, the curriculum reforms might need to be supplemented or complemented with the reform of school assessments particularly the public or national examinations to force instructors in schools to teach the new contents and skills. Moreover, the new skills to be taught under SPN21 and the new teacher education programs at the University of Brunei Darussalam (UBD) should preferably include non-traditional qualitative assessment strategies, effective learning strategies, higher-order critical thinking skills, concept mapping, effective study strategies, and anxiety / stress reduction techniques to assist students to improve their understanding, mastery, internalization, and retention of the learned knowledge and skills. The book by Davis, Sirotowitz, and Parker (1997) discusses a wide range of techniques that students at all levels of education may use to increase their marks in academic tests and examinations.

2. Objectives of the study

The present study explores and discusses other major changes Brunei may need to consider making to formal school tests and examinations to support the ongoing curriculum reforms and enhance their success. The suggested additional reforms on school assessments may center on the following problems:

- Current over-emphasis on the selection function of examinations in the school system which needs to be reduced.
- Assessment of affective skills currently accorded low status.
- Assessment of vocational and technical skills subjects.
- Care and caution regarding the use of optional questions in CA tests and final examinations.
- Determining the relationship between CA and final examination marks.
- The teaching and assessment of affective skills need to be emphasized.
- Finding an objective and fair method of moderating marks for borderline students.
- Pre-service and in-service school assessment teacher education courses at the University of Brunei

Darussalam (UBD) will need to be innovated to emphasize new SPN21 contents and skills in order to support the ongoing curriculum reforms.

2.1 Over-emphasis on examinations

The considerable significance accorded to the selection function of examinations by the country at the present stage of socioeconomic development does, in itself, necessitate a continual review of the examinations. For example, selections for: (1) progression from one level of education to another, (2) training places, (3) employment opportunities, and (4) scholarships for further studies heavily rely on external public examination results. Examinations are thus used to make very important selection decisions which affect individual lives and legitimize the selections made. Unfortunately examinations are never perfect instruments and the reliability and validity of selections based on single external assessments is questionable (see Gipps, 1994; Ellerton & Clement, 1996). There are often many things that are wrong with examinations and exams are known to make mistakes (Mundia, 1996). Despite the extreme care taken in the construction, administration, scoring, and reporting of the results, there is still much that remains to be done to further improve the quality of examinations. Teachers in Brunei have occasionally remarked that the Brunei education system is examination-oriented (SANSWE, 2005). In short, this means that tests and examinations dominate and obsess the scene in schools. Excessive school assessments undermine good teaching which emphasizes understanding. The use of the present school-based assessments (continuous assessment) might help in wading off the backwash effects of examinations such as drilling or coaching students for success on tests. However the increase in the number and types of continuous assessment (e.g. addition of the Student Progress Assessment, SPA and the Student Progress Examination, SPE under the SPN21) implies that the dominance of tests and examinations in schools may continue unabated. The government is currently planning to increase the number of external examination boards in future in addition to the present Cambridge GCE “O”, “AS”, and “A” Levels (Ministry of Education, 2007). The new boards may include EDEXCEL (Business Technology Education Council affiliated with the University of London Examination and Assessment Council), the Assessment and Qualifications Alliance (AQA), and the Oxford Cambridge and Royal Society of Arts (OCR). All these examination boards will increase the importance of examinations in the school system.

2.2 Assessment of affective skills

The Bruneian school system can be described in terms of the usual cognitive, psychomotor, and affective objectives of education which deal with knowledge, skills, and behaviors respectively. The problems related to the assessment of affective skills in the Brunei system of education may be grouped into three broad categories to aid comprehension of the issues at stake: (1) what is taught, examined, and used; (2) what is taught and examined but not regarded as important; and (3) what is not taught and examined but needed. Much attention is paid to the first issue while the second and third seem to be neglected. The present study argues that all these three areas of concern are equally important. Each of these three areas is briefly explained below.

2.2.1 What is taught, examined, and used

From the lower secondary school level, highest attention in assessments is paid to the core subjects and the achievement of cognitive objectives by imparting academic skills necessary for those who continue in schooling from one grade to another and from one level of education to another. The examples of core subjects at lower secondary school level (Form 1 to Form 2) under SPN21 curriculum are English language, mathematics, science, history and geography. Public examinations at the junior high school level are the selection instruments and teaching emphasizes the compulsory subjects and their assessment. Not much emphasis is placed on practical subjects such as metal work or carpentry relevant to the skill needs of dropouts and early school leavers. Such

students may include those with severe to profound disabilities who had been integrated in the regular schools or who are still in special schools (known as Special Centers in Brunei). The goal of education for all (EFA) should be to equip all learners with basic education that has essential skills both academic and non-academic.

2.2.2 What is taught and examined but not regarded as important

Though practical, vocational and technical subjects are taught and examined at the lower secondary school level, they are not core or compulsory subjects but rather optional courses. At the junior high school level each school streamlines the classes and chooses one optional subject the class will study. The examples of optional subjects in the practical (vocational / technical) category are: art and music (in humanities); cookery, needlework and nutrition (home science); typing, bookkeeping, and office practice (commerce); and woodwork, metalwork, and carpentry (technology). Under the current SPN21 curriculum, there are 21 elective subjects (mostly practical courses) between Year 9 (Form 3) and Year 11 (Form 5 or GCE "O" Level). Students can select or choose to study any three. Statistically there are 1,330 different ways of combining 21 subjects taken 3 at a time. Agriculture, metal work, and physical education are not included among the optional subjects. In view of this, these subjects are rarely chosen for teaching and hence not emphasized by examinations although they have high relevance, practical value, and use to dropouts and school leavers alike. Due to their low status and possible none use in selection, students may have negative attitudes towards the elective practical subjects despite their potential in helping the development and growth of the economy's informal sector. The present emphasis on the diversification of the Brunei economy should be matched with an equal emphasis in the diversification of the country's skill needs. A careful reform of the school examinations might help to foster the development of a wide range of skills in human resources.

2.2.3 What is not taught and examined but needed

Though sometimes included in curricula or syllabuses, affective objectives are the least emphasized by teaching because they are neither examined nor used in selection in many educational systems of developing countries including Brunei. Affects include traits such as attitudes, feelings, interests, creativity, values, preferences, cooperation, self-motivation, communication skills, self-assertion, and leadership. Self-actualization components of behavior include attributes such as one's initiative, effort or industry, will, ambition, determination, persistence, and perseverance. Studies show that affective skills are usually neglected in education in terms of teaching and assessment (Raven, 1988; Hope, 1985; Dockrell & Broadfoot, 1977). The classification of educational objectives into three strictly distinct categories (cognitive, psychomotor, and affective) as discussed above is rather arbitrary or inappropriate and was done solely for illustrative purposes because these objectives overlap and it does not make much sense to attempt to assess them separately (Raven, 1988). For example, attitudes have cognitive (thinking), affective (feeling), and action (behavioral) components. However, the point implied here is that all educational objectives are important. To be successful at examinations in a school environment, for instance, one needs to have qualities such as interest, initiative, docility, industry, determination, persistence, and perseverance. These are the same qualities which are important for success in home and work settings. Previous research shows that the economic and social development of societies and effective job performance within them is dependent on the development of such qualities as initiative, industry, perseverance, cooperation and leadership (Raven, 1988; Inkeles & Smith, 1974; McClelland, 1961). Further research needs to identify the reasons why these useful skills are not emphasized by teaching and assessments in the Brunei context under SPN21 curriculum.

2.3 Assessment of vocational and technical subjects

As pointed out above, practical (vocational and technical) subjects are quite important in any education system including Brunei (see Mundia, 1998). Although mere vocationalization of the school curriculum does not, in itself, lead to employability (Kelly, 1986; Sifuna, 1986; Somerset, 1987), the need to equip school leavers and dropouts in Brunei with useful practical skills that could help them lead more productive, independent, and meaningful lives in towns and villages might be essential. Vocational and technical subjects such as Agriculture, Basic Industrial Arts, Home Economics and others are the best disciplines to impart the desirable practical skills. Unfortunately these subjects in Brunei appear to be accorded a low status in terms of: (1) their not being compulsory or core subjects; (2) the slightly lower number of teaching hours allocated to them; (2) training and appointment of fewer instructors; and (3) having fewer teaching and learning resources in regular schools. The combined result and effect of all these negative factors is that teaching does not emphasize them, examinations neglect them, and students are also less interested in the subjects despite their value in daily life. These negative attitudes might be reversed by raising the status of the subjects concerned and including them among the public national examinations used in making selection decisions under the ongoing SPN21 curriculum. In this way

teaching may emphasize the vocational and technical subjects. These subjects might be helpful in terms of facilitating self-employment to dropouts and school leavers alike who may not easily be able to get gainful employment in the country.

2.4 Use of informal assessments in school-based evaluations

The adjustments to formal test instruments discussed above are intended not only to make them suitable for use by all learners (none disabled, disabled, and gifted) but also to ensure that such learners are accorded a fair chance or opportunity of experiencing success as well as to create and maintain their motivation in learning. In addition to modifying the formal evaluations, an inclusive education system in Brunei may also need to use a number of informal assessments, also known as authentic assessments, like those recommended for South Africa (Englebrecht et al., 1999). This is because some formal assessments (both school-based and public examinations) may be either irrelevant or inappropriate for certain categories of learners in Brunei under SPN21 curriculum such as those with special needs or the gifted / talented. A few examples of useful informal assessments are (1) experimental assessments; (2) observational assessments; (3) parental assessments; (4) peer assessments; (5) self-assessments; and (6) portfolio assessments. Unlike the formal evaluations, the informal assessments are not well known by most regular school teachers. There are no norms derived from these informal assessments. The informal assessments are however helpful in diagnosing problems to teaching and learning. They provide valuable and insightful feedback information that is important in making meaningful interventions to solve teaching and learning problems and thus contribute to the academic progress and success of all students. Informal assessments and continuous assessment are also both essential in evaluating young children in preschools. The informal assessments could be enhanced by incorporating in them a range of information and communication technology (ICT). Teacher education programs (pre-service and in-service) need to embrace them. Although the above informal assessments are well known by teachers in developed countries, they are unfamiliar to many teachers in developing nations including Brunei. In view of this, a brief description of each of these authentic assessments is provided below.

2.4.1 Experimental assessments

Brunei students with special needs might benefit from the use of experimental assessments. Experimental assessments are informal assessments conducted by teachers and parents to discover the effective learning conditions under which a disabled child works best. For example a series of parallel tasks could be devised for a student to perform: (1) alone at home, (2) alone in class, (3) in a group in class, (4) in a group outside class, and (5) other structured conditions. Careful observations of the student will indicate what a learner can and will do in various test situations. This type of assessment will not tell us anything about how a student performs in relation to others in class but will be insightful in suggesting how she or he can be assisted. At present, experimental assessments are not used in Brunei schools and homes and therefore unfamiliar to teachers and parents. Brunei teachers and parents may need in-service training workshops to equip them with the necessary skills for using experimental assessments.

2.4.2 Observational assessments

For mildly and moderately disabled children alternative methods of assessment are essential. One way to do this is to observe the pupil's everyday activities (cognitive, psychomotor, and affective) and use some kind of developmental scale as a standard by which to reach a measure of a pupil's achievement. The kind of activities observed can then be related to the age that the nondisabled children achieve each one and an approximate developmental level determined. Observations of this nature can also be used in the assessment of the student's everyday behavior. To reduce cautious or defensive reactions and improve the quality of the data obtained, both informal and formal observational schedules should be well constructed and administered by trained adults with whom children are familiar in the usual home or school environment (Van Tassel-Baska, Quek, & Feng, 2007). With implementation of the ongoing inclusive education, SPN21 curriculum, and education for the gifted program, observations will be useful to teachers and parents in identifying how regular and exceptional students are functioning in the reformed school system. However both regular teachers and parents may need in-service training workshops to acquire observational skills. Special needs teachers and school counselors may serve as facilitators in these workshops.

2.4.3 Learning assessments

A learning assessment could be designed and implemented to inform the teacher what a child is capable of learning. In an ordinary achievement test, a particular task is given only once (occasionally two times) and the examinee is recorded as passing or failing. In a learning assessment the pupil is first taught something in the assessment situation. She or he is then given the assessment task as many times as she needs to succeed or until

the instructor gets a useful measure of the rate at which she/he learns. There are no norms for this kind of assessment and we cannot say how the child's learning compares with her/his age group or with that of a large group of non-disabled peers. Three benefits are derived from a learning assessment. First, we would know more about the learning pace of the pupil. Second, we would get to know the type of reinforcements that are effective to the child. Third, the learner would eventually experience success, a desired motivating event. Brunei teachers (both pre-service and in-service) would require additional training to be able to use learning assessments effectively. Current serving teachers could obtain this training through in-service workshops conducted by special education teachers and school counselors within schools.

2.4.4 Parental Assessments

Children are raised in two main environments: home and school. At home children are always and constantly under the critical eyes of the parents. Some of the educated parents help their children with school work regularly or many times. Many of these literate parents even make detailed developmental notes in diaries or journals regarding their children. It would therefore be reasonable to expect parents to be partners in the assessment of school children. With a reasonably high literacy rate in the country, most Brunei parents would be able to assess their school children at least at the primary school level. At the secondary school level, many Brunei parents would be able to assess their school children if they were given appropriate training in diagnostic observations, clinical interviews, and educational measurement to enhance and improve their assessment skills. When necessary, parents could be part of an assessment team (dyadic or triadic) with special education teachers, school counselors, educational psychologists and other specialists such as speech therapists. Parental assessment is especially critical when dealing with students with high support needs in challenging behaviors (e.g. defiant, oppositional, violent, school refusal, autism, EBD, and ADHD). At the moment it is absurd to note that parents in most developing countries are only often told, rather than asked, about their children's performance at school (Engelbrecht et al., 1999). More parental involvement in assessment is needed as advocated by many parent-teacher associations.

2.4.5 Peer Assessments

Learners can help teach each other and this is called peer tutoring. Similarly learners can also assess each other to some extent, a system known as peer assessment. Many practicing teachers have for example seen students form informal study groups, discussing taught topics and asking each other spelling, arithmetic, science and social studies questions. In answering academic questions from peers students express themselves freely without fear or intimidation and without anxiety, tension and stress. Peer assessment has potential to help students master concepts and skills learned in various lessons. To be more useful and valuable, students involved in peer assessment need to be trained in social interaction skills, critical observation, and constructive appraisal. This is where special education teachers and school counselors can be used as resource persons to train students in the effective use of peer assessment. Peer assessment works better when a student has a buddy and if students work in small groups. When properly used, peer assessment can be a valuable learning tool. Peer assessment does not replace teacher assessment but rather enriches the process (Engelbrecht et al., 1999).

2.4.6 Self-assessments

In this mode of assessment a learner tests himself or herself and then reflects on his/her own capabilities (strengths and weaknesses). Self-assessment and self-reflection are key ingredients in the process of active learning. By doing this repeatedly, students learn to take control and responsibility for their own learning and eventually gain self-discipline. Self-assessment helps students master the learned contents and skills in several ways. Through repeated self-testing a student eventually experiences success which raises intrinsic motivation. Under self-assessment, a student competes against himself/herself and self-competition has fewer negative effects compared to competition with others. In self-competition there is no damaging anxiety, tension, and stress. The success achieved through self-assessment and self-evaluation helps to boost a student's self-confidence, self-esteem, and self-image or self-concept. In view of all these advantages, self-evaluation is a valuable process for all learners (disabled, gifted and nondisabled). It ought to be taught to and practiced by students. At present, Brunei students may not know how to use self-assessment effectively. There is need to mount awareness or sensitization programs in schools to alert students about the potential benefits of using this study strategy to improve achievement. Students who develop and maintain a habit of self-evaluation often perform better in school work.

2.4.7 Portfolio Assessments

A portfolio could be a file or container holding work examples or samples tasks performed by a student (Engelbrecht et al., 1999). Examples of work samples could be pieces of writing, drawing, crafts, diary/journal

entries, or anything that the student and teacher think is of value in assessing a learner. The pieces of work can then be evaluated by teachers, parents, members of the parents-teachers association (PTA) or governing body as well as special support teams. It is important to ensure that different pieces of work examples or samples are included in the portfolio. Diagnostic observations of the work samples, clinical interviews of the student on the work samples, and counseling discussions based on the portfolio contents can reveal quite a lot about a learner's weaknesses and strengths and provide insights about the best possible and available interventions. Portfolio assessment is important and valuable to all learners but more so for those with special needs and the gifted students. Teachers and students need training in assembling and critically evaluating a portfolio. Portfolio assessment is a relatively new form of evaluating students in Brunei. This kind of assessment has been proposed as an alternative to standardized, norm-referenced tests (see Taylor, 2000; Venn, 2000; Salvia & Ysseldyke, 2004). In Brunei, recent studies show that portfolio assessments and other informal evaluations would be a good non-traditional way of accommodating the needs of students with disabilities as well as a simpler procedure for identifying gifted / talented students instead of using complicated traditional strategies such as tests of intelligence which may have linguistic and cultural bias (Lohman & Lakin, 2008; Olszewski-Kubilius & Kulieke, 2008). Portfolio assessment may also be used in conjunction with problem-based assessment (PBA).

2.5 Moderation of marks for borderline students

According to the Ministry of Education (2007) School-Based Assessment marks will be moderated by using weights to ensure that the continuous assessment scores awarded by various schools are comparable. In addition to this, the Ministry of Education should also consider finding a standardized procedure of moderating the marks for borderline students rather than using the arbitrary rule of thumb which may differ from one selection context to another. A standardized procedure would be useful when making uniform or fair selection decisions and would greatly benefit the disabled students in inclusive schools whose marks often fall in the borderline region. The problem here is that a student's true score may never be known due to the effect of measurement errors. This might require employing the standard error of measurement (SEM) for individual scores (if the reliability of the test is known) to obtain confidence limits per subject in which a true score might lie at a given probability level. The SEM may also be viewed somewhat like the reliability of the test. The smaller the SEM value, the more reliable a test is and vice versa. Borderline cases whose marks fall within the interval $[(Z1.96) (SEM)]$ below the cut off point are usually selected and are known as false negatives. Though selected automatically, cases falling within $[(Z1.96) (SEM)]$ points above the cut off point are called false positives. This is because the "true" score of any obtained point (X) lies between the interval $X - [(Z1.96) (SEM)]$ and $X + [(Z1.96) (SEM)]$. This range is called the 95% confidence interval because we use a Z-value of 1.96 (or 2) in constructing it. Similarly, a 99% confidence interval may also be determined using a Z-value of 2.58 (or 3). The upper and lower limits of these intervals are called confidence limits. In moderating marks for borderline students who either fail a test or miss a grade marginally or narrowly, it would be advisable to increase a student's marks only up to the upper limit score of the confidence interval. The SEM for individual scores may be calculated using the formula: $SEM = S \sqrt{1-Rel}$ (where S = standard deviation of test scores; $\sqrt{\quad}$ = square root; and Rel = reliability of the test).

2.6 Relationship between formative and summative assessments

This will need to be studied carefully (preferably by inter-correlations) to ensure that there is no redundancy or duplication in items between formative and summative school assessments. When items in the two types of assessments do not repeat each other, the inter-correlations will be negative or nearly zero. The correlations may be positive but low and non-significant. Such correlations would indicate that the curricula contents and academic skills emphasized in the two assessments were different and did not replicate each other. Technically and ideally, continuous assessment is supposed to be used in assessing practical contents and skills that are not testable in public examinations. The probability of repeating the items could be high if, for example, both school-based assessments and the public examination board draw their items from the same item bank subject by subject and year by year (Mundia, 1996). In this instance the inter-correlations would be positive, high, and significant but the value of such school assessments would be zero or redundant. Under the ongoing SPN21 curriculum school-based assessments and national examinations will both contribute towards the student's composite score in each subject. Brunei will need to carefully watch and study the relationship between the two forms of assessments subject by subject and year by year for signs of redundancy.

2.7 Careful use of optional questions in examinations

In some educational systems, examinations are curriculum oriented rather than measurement oriented. To cover more contents in a long syllabus a large number of essay questions (say 18) may be given to examinees in the subject (e.g. history) at one sitting who are then asked to select and answer any few questions (e.g. 3) they like.

Optional questions should be very few (1 or 2) or totally discouraged because they give rise to many measurement problems (see Commonwealth Secretariat, 1973). Reducing the number of optional questions would ensure that examination candidates do the same test as far as possible and that the results are comparable for selection purposes. Giving optional questions is a democratic process but causes a lot of measurement problems listed and briefly discussed below:

- For example, there would be 816 different combinations of 18 essay questions taken 3 at a time. Students who chose to answer Items 1, 2, and 3 would have written a different exam from those who answered Items 4, 5, and 6 or those who answered Items 7, 8, and 9.
- Students' performance or achievement on different combinations of questions (different exams) can not be reasonably compared because they will have written different questions.
- Questions on different and non-overlapping combinations will differ in difficulty, reliability and validity.
- Examinees of different ability will choose and combine questions differently.
- Different combinations of questions can not easily be scored in the same way by one or more markers.
- The skills tested in different combinations of the questions would not necessarily be the same.
- The higher the number of optional questions the more different combinations of questions there would be.

2.8 Changes to teacher education courses

To effectively support the ongoing SPN21 curriculum reforms and implementation of other educational policies (inclusive and gifted education), the current pre-service and in-service teacher education courses that deal with school assessments need to be modified to make them responsive to innovations and adaptations. The Sultan Hassanal Bolkiah Institute of Education (SHBIE) is one of the faculties of the University of Brunei Darussalam (UBD) charged with the responsibility of training teachers for government schools. Prior to August 2009 SHBIE prepared teachers for various undergraduate teaching qualifications (certificate in education, diploma in education, postgraduate certificate in education, and bachelors degree in education) as well as postgraduate level credentials (master of education and doctor of philosophy in education). In the middle of 2008 the government of Brunei Darussalam, through the Ministry of Education, introduced a new policy in teacher education that required SHBIE to train teachers at only the postgraduate levels such as master of teaching (MTeach), master of education (MEd), and doctorate of philosophy (PhD). The MTeach degree has four specialization strands (early childhood education and care; primary education; secondary education; and vocational and technical education). Implementation of the new policy started effective from August 2009. From then onwards students who are interested in becoming teachers have to do an undergraduate degree in other faculties and acquire in-depth content in a subject(s) teachable in schools before they take the MTeach degree to qualify them to teach in schools. Details of the new teacher education policy and the current MTeach teacher education programs under the ongoing reforms in SHBIE are available on the University of Brunei Darussalam (2009) website. Meanwhile there are still undergraduate students in SHBIE and it will take about three years to phase out these students. The main reason given by the government for this change is that the country wanted to raise the qualifications of teachers and thereby improve the overall quality of education in the nation. The issue of teachers' possible lack of adequate knowledge of the subject matter is, however, outside the scope of the present study and requires a different investigation.

To achieve the above assessment-related changes in teacher education programs at UBD the following short-term and long-term plans and activities regarding school assessments may be required:

- A continuation of the short in-service courses, workshops, seminars, and conferences on school assessments mounted by the Ministry of Education, schools, and the University of Brunei Darussalam (UBD).
- All pre-service and in-service teacher education courses should have strong components both quantitative and qualitative in educational measurement, testing, and evaluation.
- All pre-service and in-service courses in educational evaluation should incorporate and emphasize hands-on-experience strategies when teaching key assessment skills.
- Selected Brunei nationals should be sent overseas for advanced training in educational measurement and evaluation at the masters and doctoral levels. Through the multiplier effect these would train other

Bruneians on return.

2.9 The need to localize senior secondary school examinations

At a recent First Sultan Hassanal Bolkiah Institute of Education Annual National Seminar / Workshop on Education (SANSWE 2005, held at the University of Brunei Darussalam, 12-14 February 2005) secondary school principals called for a reform of the school examinations to make them more relevant to the intellectual, skill, and human resource needs of the country. One of the things that could be done to achieve this broad goal is perhaps to nationalize the senior secondary school examinations (GCE “O” and “A” Levels) and carefully analyze and innovate the contents and skills embedded in both the curricula and examinations and tailor them to the human resource needs of the country. In this way Brunei could have her own Examinations Board or Council. The infrastructure and resources for doing this are already available if the present Department of Examinations was upgraded or converted into an examination council or board. Initially the staff would need further training overseas and seek guidance from expatriates the first few years. This would create employment and give an opportunity for the country to decide what contents and skills to evaluate in examinations. It would also give opportunities to nationals to trainee locally and specialize in the administration and management of school examinations since Brunei cannot continue to depend on foreign examination agencies for ever. The current dependence on foreign examination boards is due partly to shortage of local expertise but is also designed to ensure quality in examinations and to gain international recognition of the qualifications. Localization would thus drastically reduce the cost of school examinations and dependence on foreign examination institutions. The idea of localization may sound too radical and hence resisted but Brunei may seek technical assistance from the international community during the initial years.

3. Concluding Remarks and Recommendations

The present study explored and reviewed a number of thoughts regarding the possible reform of school examinations in Brunei following the implementation of the SPN21 curriculum in 2008.

In this early evaluation of the SPN21 curriculum the main issues discussed included: over-emphasis on examinations; assessment of affective skills; assessment of vocational and technical subjects; use of informal assessments in school-based evaluations; moderation of marks for borderline students; the relationship between formative and summative assessments; changes to teacher education courses that deal with school assessments; and nationalization of the senior secondary school examinations. All these were found to have direct implications on the reform of examinations. The study recommends doing a thorough content analysis of the present school assessments to determine the skills that they measure and foster. Based on the outcomes of this initial document inquiry, a needs analysis research for the reform of the school assessments could be carried out, if necessary. If the needs assessment study confirmed the necessity of reforming the school assessments, then the process of initiating the reforms could be embarked upon step by step. This would be a long-term project whose results and benefits could take long to obtain.

4. Limitations of the study

The main limitation of the present qualitative study is that it is solely based on the content analysis and review of the Ministry of Education (1997; 1998; 2007; 2008) documents regarding inclusive education, SPN21 curriculum, and education for the gifted. As a simple review of examination problems, the study did not need to have either empirical data or a conventional research design. However in a study of this nature, an interview component using focus groups was needed to obtain opinions of school administrators, teachers, parents, and the Department of Examinations personnel regarding changes that need to be made to school evaluations as a result of the ongoing SPN21 curriculum reforms. Despite the absence of an interview component, the study identified the problems on examinations that need fixing and suggested some strategies to address them. In addition the study made recommendations to inform and guide future research on the issue. Overall, the study may be deemed a meaningful contribution to the ongoing debate on the sensitive and contentious problems surrounding school assessments in Brunei.

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