



Assessment Schemes in the Senior High School in the Philippine Basic Education

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Abstract

The present report provides the different opportunities where assessment can be conducted in the Senior High School. The levels of assessment range from entry to end of cycle assessment and from classroom level to international level assessment. The levels of assessment are described in terms of best practices, purposes, how it translates into students learning, and accountability from the classroom teacher to policy makers. The levels of assessment in the Senior High School described in this report include: (1) Placement of students in the senior high school tracks, (2) Classroom-based assessment, (3) Assessment of achieved competencies, (4) Participation in international benchmarking of competencies, (4) College readiness assessment, and (5) Career assessment.

Keywords: Assessment, Senior High School, SHS tracks

Introduction

The Philippines has recently embarked on an educational reform in improving the curriculum and spreading the number of years of learning from 10 years to 13 years. This reform is nationally implemented through passage of the “Enhanced Basic Education Act of 2013” or RA 10533. The Act institutionalized the implementation of the K to 12 education program in the Philippines. The K to 12 covers kindergarten and 12 years of basic education. These 12 years is divided into three levels, which are: six years of primary education, four years of Junior High School, and two years of Senior High School (SHS).

The lengthened years is an effort to decongest and enhance the basic education curriculum in order to provide sufficient time for mastery of concepts and skills, develop lifelong learners, and prepare graduates for tertiary education and employment (Republic Act No. 10533; Magno, 2011).

The K to 12 program aims to produce graduates who are holistically developed, equipped with 21st century skills, and prepared for higher education, middle level skills development, employment, and entrepreneurship. This aim is mostly carried out by one salient feature of the program which is the Senior High School (SHS) that includes grades 11 and 12.

The SHS includes two years of specialized upper secondary education. It is one where the student has the option to choose a specialization based on their aptitude, interests, and school capacity. The students' choice of career track will define the content of the subjects they will have to take which will fall under either the core curriculum or specific tracks (SEAMEO INNOTECH, 2015).

Under the present SHS model, the student can choose among four tracks, namely: (1) Academic, (2) Technical-Vocational-Livelihood, and (3) Sports, and (4) Arts and Design. Under the Academic track are four strands, namely: General Academic Strand, Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HUMSS), and the Science, Technology, Engineering, and Math (STEM).

In the SHS core curriculum, there are 15 core subjects which will have to be taken by a student irrespective of the track they are in. These core subjects are distributed to eight core learning areas. Furthermore, there are 16 track subjects, seven contextualized subjects, and nine specialization subjects which total to 31 subjects each student will have to take to earn a SHS diploma. The student will take these subjects in four semesters.

The SHS program is the realization of what is stated in Section 2, paragraph (a) of the RA 10533 that the state shall “broaden the goals of high school education for college preparation, vocational and technical career opportunities as well as creative arts, sports and entrepreneurial employment in a rapidly changing and increasingly globalized environment.” The main thrust, therefore, of the SHS is to produce “productive and responsible citizens” who are equipped with

the essential competencies, skills and values which will make them both a life-long learner and employment-ready.

Given the additional years of senior high school and new features of the basic education program, it is important to report on the opportunities on different levels of assessment that can be conducted in order to ensure quality implementation. By reporting on the levels of assessment in the SHS, policy makers, curriculum developers, teachers, and school administrators can start to develop and implement better assessment as integral part of the curricular programs in schools and within education at a national level. There is also a greater call for looking at assessment within a multilevel approach to monitoring learning outcomes at the local, national and international levels (Ho, 2012). Looking at the senior high school as additional leg to the Philippines basic education, there are assessment processes that will take on a different approach given the age of students and the system of implementing the SHS. At the same time, some assessments that were implemented in the previous years can be adapted and moved within the duration of the SHS.

The present report is conducted on the following purpose: (1) Guide policy-makers on the different opportunities where information can be taken coming from various evidences of learning in the newly implemented levels in senior high school. The data coming from assessment of learning in senior high school directs better decision on programs. (2) Provision of various levels of assessment enable schools offering senior high school to carefully evaluate the program and effectiveness of the implementation. (3) Having identified the various areas where assessment can be conducted in the senior high school, these areas serve as indicators when conducting large scale evaluation of the new program for the K to 12.

Senior High School in United States and Australia

The SHS model in the Philippines was patterned from models which are developed and being used in some first-world countries like the case of the United States of America (USA) and Australia.

In the USA, the model includes three to four years of SHS, depending on the state. The student spends grades 10 to 12 in order to earn an SHS diploma. SHS students must take core curriculum courses or subjects for a prescribed number of years (depending on the state).

These generally include English, Mathematics, General Science, Health, Physical Education, and Social Sciences. And as reported by the International Student and Scholar Services (ISSS) of the University of Minnesota, some high schools stream students for academic subjects where the brightest students are put on a ‘fast track and are given the opportunity to take enriched classes in their academic subjects. After the satisfactory completion of SHS, the student will be given a diploma which will enable him or her to take tertiary education (Corsi-Bunker, 2009). The national assessment taken in high school in the USA includes the Scholastic Assessment Test (SAT) for college admission and the American College Testing (ACT) to assess college readiness.

In Australia, the SHS model includes grades 11 and 12. There are 14 ‘senior secondary’ which fall under four core learning areas, namely: (1) English, (2) Mathematics, (3) Science, and (4) History. These 14 subjects will have to be completed (in addition to the Foundation to Year 10 of schooling in order for the student to be qualified for tertiary education. The Australian Curriculum, Assessment and Reporting Authority manages and delivers national assessments in Australia and overseas. They implement the National Assessment Program that provides tests endorsed by the Ministerial Council for Education, Early Childhood Development and Youth Affairs including the National Assessment Program Literacy and Numeracy (NAPLAN) and three-yearly sample assessments in science literacy, civics and citizenship, and ICT literacy (see acara.edu.au).

Assessment in the K to 12

There have been several reports that dealt with different kinds of classroom assessment in the K to 12. The report of Magno and Lizada (2015) described and explained the important features of formative assessment when used with instruction. The study came up with nine assessment principles that explain both theory and practice in the conduct of formative assessment inside the classroom. The study of Trey, Schmitt, and Allen (2012) explained that “those crucial elements which remain result in a description of a classroom assessment task that involves the student deeply, both in terms of cognitive complexity and intrinsic interest, and are meant to develop or evaluate skills and abilities that have value beyond the assessment itself.

It is this type of assessment experience that is, realistically speaking, authentic.” Assessment is supposed to engage the student works when the student has found it to be rewarding for its own sake. This practice of assessment is presently translated in the classroom where a large part of students grading and summative assessment is devoted on performance-based tasks in the Philippine setting (see DepEd order no. 8).

Assessment has salient and crucial contribution to the operation implementation, and success of the curriculum (Mikre, 2010). Through documenting the kinds of assessment that can be conducted in SHS, the teachers can further develop better functions and purposes of assessment. This will contribute to the successful conduct of classroom assessment which will ultimately result to success in the implementation of the SHS subjects and the K to 12 curriculum as a whole. Teachers are also better able to implement classroom assessment if they are equipped with assessment literacy which entails understanding the appropriate use of classroom assessment.

Assessment and the SHS

The Enhanced Basic Education Act of 2013 spells out features of the K to 12 program in terms of the goals, intentions, outcomes, curriculum, and learning areas. These features needs to ensure that students improve better overtime where the necessary 21st century outcomes are achieved by the students that includes college employment readiness. Assessment takes an important role to ensure that students have developed the 21st century skills. Assessment in the K to 12 becomes more functional where it is seen as an integral part of contributing to student learning. This is even indicated in the Department of Education Order No. 8 where assessment “allows the teachers to track students progress... and assessment informs the learners, their parents and their guardians of their progress.” Furthermore, assessment is defined as “a process that is used to keep track of learners’ progress in relation to learning standards and in the development of 21st century skills; to promote self-reflection and personal accountability among students about their own learning; and to provide bases for the profiling of student performance on the learning competencies and standards of the curriculum.” Because of

the many critical roles played by assessment, it is described as an essential component of curriculum practice (Akker, 2003).

The addition of the SHS levels in the basic education provides several pathways on making assessment functional. The present report specifies assessment opportunities in the SHS in order to better realize appropriate instruction for learners and better scaffolding students learning in the classroom and national level. The level of assessment in the SHS described in this report is seen as an array covering assessment in an individual level, classroom level, and a larger scale such as the national and international arena. These assessment levels range from entry level assessment, classroom level, national level assessments, and international level. The array also describes another dimension in terms of the accountability. The smaller is the scope of the assessment within the classroom, the more specific interventions can be provided for learners. The larger is the scale of the assessment covering national and international level, the more policy makers are informed to make better decision on educational development and programs across the country. The smaller is the scope of the assessment, the more the teachers and curriculum implementers are accountable on students' progress. The larger is the scale of the assessment, the more policy makers are accountable for creating educational support.

1. Placement of Students in the Senior High School Tracks

The students entering the senior high school has gone through a curriculum where the learning areas are spiralled within 11 years including the language and literacy, mathematics, science, social studies and history, technology and livelihood education, music, arts, physical education, and health. On the other hand, the SHS is structured where the learning areas (subjects) change every semester (or trimester in some schools). Aside from common subjects taken (core and applied), the students go through a track that they have selected. The tracks include Academic Track (Science, Technology, Engineering, and Mathematics [STEM], Accounting and Business Management Track [ABM], Humanities and Social Science [HUMSS], General Academic Strand [GAS], Technical-Vocational Livelihood Track (Home Economics, Industrial Arts, Agri-fishery, and Information and Communications Technology), Sports track, and Arts and Design.

Students are differentiated in these tracks depending on their aptitude and interests. The students entering the SHS need to have the necessary aptitude, interest, and cognitive capability matching the tracks that they will be entering (SEAMEO INOTECH, 2014). The cognitive capacity, aptitude, and interest are basis that can provide information in order to determine the appropriate tracks that students can enter. The combination of cognitive capacity, aptitude, and interest are appropriate indicators in the entry level assessment in the SHS. The cognitive capacities of the students in the core learning areas directly give information on the specific strengths and weaknesses at the end of grade 10. The grade 10 is the last level before entering the SHS and assessment of the recent competencies provides an accurate basis of what students has mastered overtime in terms of the common core capacities (language, mathematics, and science). The assessment of cognitive capacity can be operationally defined in the form of an achievement test in English, mathematics, and science covering the competencies in grade 10. Part of the assessment is a component of aptitude. Aptitude measures the degree of students' potential for future training (Barret, 2011). The aptitude test results give information whether learners will be successful in the tracks they have chosen. The skills involved in aptitude measures fluid intelligence where capacities are innate among the learners. These innate capacities that learners excel should match the capacities required in the track they have selected. Both achievement and aptitude are measures of mental capacities where students' strengths and weaknesses are determined. The assessment model for entry level in SHS needs to include an affective domain. The specific affective construct that can be measured is 'interest' in the areas of the SHS track. Interests are measures of preferences of different situations (Holland, Fritzsche, & Powell, 1997).

If achievement, aptitude, and interest serve as basis for the entry level assessment to determine the appropriate track of students, specific constructs in the forms of variables, skills, and competencies required in each track needs to be specified. For instance, students entering the science, technology and engineering track at least needs to have mastered competencies in science and mathematics, posses an aptitude in syllogism (inferring conclusions) and deciphering series of events, interest in life sciences, medicine, and engineering. A model is needed that specifies how skills and characteristics are required for

each track. A model is provided by the Center for Learning and Assessment Development - Asia on the specific factors of achievement, aptitude and interest required in each track (Center for Learning and Assessment Development-Asia, 2015). The model used the learning competencies of the Department of Education in the K to 12 curriculum guide for the achievement (following a Standards-Based Assessment approach). The taxonomy of aptitude items were used for the components of aptitude (see Magno, 2009). And the factors of the basic interest markers by Liao, Armstrong, and Rounds (2008), which is intended as public domain, can be used for the interest. The factors identified under each track provide a strong indicator of the skills needed for learners to be successful on each track. The factors for each track were decoded using a sample of students who participated in the early implementation of the SHS. Factor analysis was conducted among the component scores and the specific factors that highly loaded on a track ($>.40$) was the basis for the selection of the factor. The selected factors of achievement, aptitude and interest are shown below.

Table 1
Factors of Achievement, Aptitude, and Interest for each SHS Track

Tracks	Indicators		
	Achievement	Aptitude	Interest
Academic Tracks			
<ul style="list-style-type: none"> ▪ Science, Technology, Engineering, and Mathematics (STEM) 	Students entering this track should exemplify science and mathematics skills.	Show aptitude in syllogism, number and letter series, visual discrimination and series	Inclinations on life science, medical services, physical science, engineering, and technical writing
<ul style="list-style-type: none"> ▪ Accounting and Business Management Track (ABM) 	Students entering this track should exemplify English and mathematics skills with	Show aptitude in verbal analogy, number and letter series, visual discrimination and series	Inclinations on human relations management, personal service, business, management, sales, family activity, finance, and office work
<ul style="list-style-type: none"> ▪ Humanities and Social Science (HUMSS) 	Students entering this track should exemplify English and science skills.	Show aptitude in verbal analogy, syllogism, number and letter series	Inclinations on social science, creative arts, human relations management, personal service, politics,

			professional advising, religious activities, social service, teaching family activity, and religious activities
▪ General Academic Strand (GAS)	Students entering this track should exemplify English, math, and science skills.	Show aptitude in verbal analogy, syllogism, number and letter series	Inclinations on social science, creative arts, technical writing, human relations management, business, management, and social science
Sports Track	Students entering this track should exemplify English skills.	Show aptitude in verbal analogy, syllogism, number and letter series	Inclinations on physical or risk taking, athletic coaching, human relations management, personal service, professional advising, and teaching
Arts and Design Track	Students entering this track should exemplify English skills.	Show aptitude in visual discrimination and series, figure and ground perception, object assembly, and surface development	Inclinations on creative arts, creative writing, performing arts, religious activities, and social science
Technical-Vocational Livelihood Track			
▪ Agri-fishery Arts	Students entering this track should exemplify math and science skills.	Show aptitude in visual discrimination and series, object assembly, surface development.	Inclinations on manual labor, outdoor agriculture, physical/risk taking, protective, skilled trades, life science
▪ Home Economics	Students entering this track should exemplify English, math and science skills.	Show aptitude in visual discrimination and series, figure and ground perception, object assembly.	Inclinations on manual labor, outdoor agriculture, physical/risk taking, protective, skilled trades, family activity, human relations management, and personal service
▪ Information and Communications	Students entering this track should	Show aptitude in verbal analogy,	Inclinations on mathematics,

Technology	exemplify English, math, and science skills.	syllogism, number and letter series, visual series and discrimination, and object assembly.	creative arts, information technology, and office work
▪ Industrial Arts	Students entering this track should exemplify math and science skills.	Show aptitude in visual discrimination and series, figure and ground perception, object assembly, and surface development.	Inclinations on manual labor, outdoor agriculture, physical/risk taking, protective, skilled trades, and physical science

Note. Table taken from <http://cladasia2015.wix.com/cladasia#!senior-high-school-placement-test/c1cof>

The entry level assessment in SHS serves the function of assessment “as” learning. In this approach, assessment information is used by the learner to make decision in the improvement of their learning. In the case of the results of the entry level assessment, students use this information in order to decide on the appropriate track given what they have mastered overtime, what they can do in the future, and what they are interested about. This actually prevents students becoming undecided on the track they will take. Having assessment information help students match their strengths on the required tasks in the subjects they will go through in the SHS.

2. Classroom-Based Assessment

The accountability of the classroom-based assessment is directed to the quality of instruction and how it is supervised in the school setting. Instruction greatly accounts for students’ performance when assessment results are reported within the classroom level. Even when accountability of assessment result is high at this level, the impact of intervention is more feasible. Assessment results are easily used inside the classroom in order for the teacher to decide on who needs further scaffolding in the required competencies to be learned following the approach on assessment “for” learning.

The model for the classroom-based assessment is detailed in the memorandum provided by the Department of Education. The framework for the K to 12 describes assessment in two forms: Formative assessment and summative assessment. Formative assessment is emphasized as a way to improve students’ learning

(Hattie & Timperley, 2007). The purpose of formative assessment for the students and the teachers are emphasized. The students needs to realize the value of formative assessment on how it helps them learn and at the same time the teacher needs to see the value of formative assessment to improve their instruction. The purposes of formative assessment are also cross-tabulated with the kind of assessment that is done before, during and after instruction. This shows that formative assessment is closely integrated with instruction where it is used as a tool to observe student progress. The study by Magno and Lizada (2015) has presented a model of formative assessment and a set of principles on how it becomes useful in developing teachers' perspectives and classroom practice. They have defined formative assessment in the classroom as a continuous process where interventions are provided based on learning targets and ultimately observing students progress towards this target overtime. There were nine principles of formative assessment provided, namely:

- (a) Formative assessment works along with the perspectives of assessment " for " and " as " learning;
- (b) Formative assessment is embedded with instruction;
- (c) Helping the students focus on the learning goal;
- (d) Diagnostic assessment on the target competency serves the function of formative assessment;
- (e) Formative assessment moves from determining discreet skills to integrated skills;
- (f) Using continuous and multiple forms of assessment;
- (g) Feedback practices using assessment results;
- (h) Working out with students to reach the learning goal; and
- (i) Deciding to move instruction to the next competency.

On the other hand, summative assessment is conducted when the students have mastered the required competencies. The results of the summative assessment are commonly included as part of students marking. Summative assessment provides information on how well the students have achieved the learning competencies that has been shaped through formative assessment and instructional interventions.

The benefit of classroom-based assessment is that both formative and summative assessment can be directly translated into improvement of instruction and eventually observe student progress overtime. Assessment within the classroom setting is largely flexible in

a way that the teacher decides on the appropriate form of assessment given to students.

3. Assessment of Achieved Competencies

The standard competencies learned by students can be assessed using national exams or summative assessments at the end of a school cycle. The basis of the national exam is the standard curriculum that is agreed and common for all schools. It is necessary to have a set of national standards in order to have common direction on what to teach in schools. Assessment of achievement actually refers to what students have acquired within the school year which is usually administered towards the end of the school year. These exams either come in the form of national assessment or assessment from private institutions. These exams, either developed by the government or by private institutions, all follow the same targets that come from the curriculum. These targets that are assessed in the curriculum are considered as standards.

National Assessment. The government of a country usually administers national assessment through its ministry of education. According to Kellaghan and Greaney (2001) that national assessments measure and monitor learning outcomes of a whole education system, or defined part of an education system. Usually the national assessment includes measures of competencies in different subject areas such as English, mathematics, science, social studies, and native language. Usually, the core subjects are covered in the examination if the assessment is a measure of achievement or what students have learned from the instruction of the curriculum. The assessment serves as accountability on students' progress overtime. The government through its public schools use the results of the national assessment to determine how effective is the curricular program, quality of instruction in schools, decisions on school systems improvement, and further training and programs to be implemented in the senior high schools. The national assessment that will be designed for the senior high school will be a good indicator for the implementation of the curriculum for the first time. The batch that will graduate for grade 12 on 2018 will be the first product of the new curriculum for the senior high school. The results of their end of cycle assessment at the end of

grade 12 can provide information on the areas of strengths and improvement about the intentions of the curriculum that was implemented within the span of six years starting from school year 2012-2013. Lessons learned will be derived from the results of the assessment of the first batch of graduates. The results of the assessment will be used to inform policy makers on the improvement that needs to be done with the senior high school curriculum.

Standards-Based Assessments (SBA). The practice involves comparing each student's performance to academic standards that are developed in the national or international setting. The goals are communicated to the school systems, schools, teachers and students that need to be achieved, providing targets for teaching and learning, and shaping the performance of teachers and students. National assessments are commonly standards-based, because the content domains involved in the assessment are based on the competencies include in the curriculum.

According to Magno (2015) that the SBA model requires that assessment practices needs to be closely aligned with the required competencies that students need to learn. The general intention of the SBA is to focus more on the learning of competencies of every student. These learning competencies are focused as the outcomes of instruction and directly assessed. For an assessment task to be standards-based, the task should be directly aligned with the students learning competencies. If the competency in chemistry is for students will explain the relationship between gas temperature and pressure, the assessment should require students to explain their conceptual understanding of the two concepts. If the task is a multiple choice, the stem of the item needs ask about the relationship between the two concepts and the options are all possible explanation. If the competency in English is for students to compose a five line poem, the assessment should be a performance-based task where students will write the required poem and the marking will use a rubric with a set of criteria. Likewise, if the mathematics competency is for students to add two similar fractions, a set of exercises will be provided to students

where they have to determine the sum of $\frac{3}{4} + \frac{2}{4} = x$ in a written work.

Constructive alignment ensures the direct assessment of the competency that is included in the curriculum. The quality of

assessment task (i. e. test, exercises), especially the content validity of the test, is ensured when the items directly measure the competency. Constructive alignment will work well when the competencies are clearly written as measurable standards in the curriculum.

4. Participation in International Benchmarking of Competencies

International benchmarking are those kind of assessment participated by different countries within a specific region that shares some commonalities in the educational standards or learning competencies and specific learning objectives. According to Clark (2011) that aside from looking at commonalities, cross-national variations on student learning, education systems and processes are also explored in international assessments. According to Lockheed (2010) that international assessments involves multiple countries, use standardised instruments, implementation and analyses, sample large student populations that are comparable across participating countries. Results of international assessment provide information on how far is the performance of a country as compared with other countries. The results of international assessment inform policy makers on the specific directions on educational reforms that needs to be made for a particular country. For example in the Philippine setting, when the K to 12 was initiated in 2010, the results of the TIMSS were used in order to justify the reforms needed in the basic education program.

Trends in International Mathematics and Science Survey.

In the previous years, the Philippines have participated in the Trends in International Mathematics and Science Survey (TIMSS) as part of international benchamarking studies in 1999 and 2003. The purpose of the TIMSS is to provide information on mathematics and science achievement of grade 4 and grade 8 students across different countries. TIMSS is sponsored by the International Association for the Evaluation of Educational Achievement (IEA). In 1999, there were 38 countries that participated in the TIMSS and the Philippines ranked 35th on science and mathematics. In 2003, there were 23 countries that participated for fourth graders and the Philippines ranked 23 on both science and mathematics. For the eighth graders, there were 46 countries that participated and the Philippines ranked 41st in Mathematics and 42nd in Science (nces.ed.gov/timss/).

Programme for International Student Assessment (PISA).

The PISA is an international survey that evaluates the educational systems on reading, mathematics and science. The assessment is administered to 15 year old students for more than 70 countries. The PISA is sponsored by the Organisation for Economic Co-operation and Development (OECD), and has been administered in three year cycles since 2000. The Philippines has not participated in the PISA, however, the results of the TIMSS is predicted by the results of PISA. In a study conducted by Care (2010) on the review on large scale assessments, she computed that scores on the TIMSS explains 21% of the variations on the PISA. This indicates that given the Philippines' score on the TIMSS, the predicted score on the PISA can be determined. The score of the Philippines in the TIMSS is relatively low, more likely, scores in the PISA will also be low.

When the Philippines participate in the TIMSS and PISA for the next cycle, information will be provided about the effectiveness on the educational policies implemented for the K to 12 program. The results should be able to provide policy makers with action on specific educational policies to improve the curriculum on K to 12.

5. College Readiness Assessment

The Commission on Higher Education at the onset of the K to 12 educational reform has prepared initiatives to support the smooth transition from basic education to higher education. Part of this transition is the proposed college readiness framework for the Philippines. College readiness is defined by Conley (2007) as “the level of preparation a student needs in order to enrol and succeed, without remediation, in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program” (p. 5). Success was operationally defined by Conley (2007) as “completing entry level courses at a level of understanding and proficiency that makes it possible for the student to consider taking the next course in the sequence or the next level of course in the subject area” (p. 5).

It is important to create a college readiness framework in order to share with basic education the expectations of higher learning systems from pre-university education. If the expectations of college

education are provided, the curriculum in the K to 12 will be able to be well aligned with the advance studies. College applicants will be better prepared for college given the set of expectations developed in basic education. The college readiness framework with a set of specific competencies for different subjects allows basic education to conform with international standards. The specific competencies indicated in the college readiness framework provide capacities for students to be prepared for college life.

The college readiness framework details the topics and competencies that a typical high school graduate need to have in the areas of science (biology, chemistry, physics, earth science), mathematics, English, Filipino, Literature, humanities, and social science. The college readiness provides a set of standards and the specific learning competencies should be used in developing items for assessment tools to assess college readiness. This will ensure that the contents of the test are well aligned with college readiness standards.

Given the competencies stated in the college readiness framework, there are two major implications on assessment in the transition from senior high school to college: (1) HEIs and schools offering grade 12 needs to diagnose readiness based on the given competencies of the college readiness framework; (2) Entrance exams needs to be built using the college readiness framework.

The assessment of college readiness at the end of grade 12 is viewed as an accountability of the school that gives information whether they have produced graduates that are ready for college or advance studies. The assessment results provide information whether students which have achieved the competencies in high school will be able to meet the necessary skill qualifications for college. The assessment of college readiness can be given either at the end of grade 12 or in the college level during the freshmen year. If the assessment of the college readiness is given at the end of grade 12, then the information serves as achievement of the students by high school. Serving as an achievement, it provides information if the students have attained the college readiness competencies across time. If the assessment is given at the start of college during freshmen year, it serves as a diagnostic test on identifying students strengths and weaknesses, what they know and do not know, and what students can do and cannot do so that the curriculum in college can scaffold the

necessary skills that the students are still weak at especially in subjects such as English, science, and mathematics.

Another implication of the college readiness framework is on the contents of the entrance exam. If the entrance exams intend to assess whether students have possessed the necessary characteristics for college, then the contents of the entrance exam should cover the college readiness standards on the different subject areas. It is important to include an assessment of the college readiness standards in the entrance exam since the competencies are prerequisite skills necessary to succeed in the general education subjects in college. The college readiness standards in the entrance should be good predictors of the grades in English, mathematics, and science subjects in college.

6. Career Assessment

Another area of assessment opportunity for the senior high school is on career assessment. Career assessment is conducted as part of career counseling or career guidance before students graduate in the basic education program. Career assessment can be both quantitative and qualitative (McMahon, Patton, & Watson, 2003). Quantitative assessment involves the use of psychometrics and standardized tools where quantitative results are interpreted on the dominant career suitable to the test taker. Likewise, this approach quantifies the characteristics as set of factors. On the other hand, qualitative assessment uses a constructivist approach focuses on the understanding of client's personal meaning where they make sense of their experiences overtime. The transition that occurs from grade school to the senior high school is supported as the students are empowered in the tracks if their choice. Some devises used for qualitative career assessment would be the use of card sorts, genograms, and lifelines (Neimeyer & Neimeyer, 1993).

The standardized tools that are used in career assessment are based on career development theories. Example of these theories that are translated to standardized test are the Holland's hexagonal model and Strong's career development theory. Holland's model features six traits that influences ones career choice: Realistic, investigative, artistic, scientific, enterprising, and conventional. On the other hand, the Strong Interest Inventory measures measures individual interest in six

areas: Occupations, subject areas, activities, leisure activities, people, and characteristics.

The assessment protocols that can be used in qualitative assessment are card sorts, genograms and lifelines. Card sorts are helpful in identifying interest of certain skills in a potential career, selecting a career or expanding career options, and adding insight to improve professional relationships. A genogram is a diagram where standard symbols are used to map at least three generations of the person's family system (Bakshi & Satish, 2015). The genogram can provide patterns of emotions, interpretations, and other family characteristics that can help the client decide on the career. Lifelines show the important events that occurred in the student's life. The progression of the lifeline shows upward and downward movements manifesting the experience of the client. The lifelines provide the direction of the individual's life and insights lead to reflection on the future direction of the client.

Career assessment can be conducted as a school-based assessment through the guidance program or part of a national career assessment program. In the school setting, career guidance is conducted that starts when the child is taught to look forward in their future vision of themselves. This process often involves self-awareness and self-exploration of skills, abilities and interests, understanding the requirements of the program that students intend to enter, and supporting students in their decision making skills (DepEd Order no. 41, 2015). These activities are implemented through the guidance office and integrated with various subject areas. In these activities both qualitative and quantitative assessment are conducted especially in the self-awareness and self-exploration phase. On the other hand, career assessment is also conducted in the national level. In the case of the Philippines the National Career Assessment Examination (NCAE) is administered to public school students. In the previous school years, the purpose of the NCAE was to improve the quality of fourth year high school graduates who will enter college. The results of the NCAE help students' to decide on the programs they will take in higher education institutions matching their aptitude and interests. The NCAE measures student aptitude on the following areas: Reading comprehension, clerical ability, mathematical ability, visual-manipulative skills, verbal ability, scientific ability, logical reasoning, non-verbal ability, and entrepreneurial skills. The private schools in the

Philippines also administer their own career assessment using standardized tools that measures equivalent constructs with the NCAE. In the senior high school, these career assessments supports the students by the end of grade 12, that they are ready to make their career decisions whether they will pursue higher education in universities, colleges and other advance courses, start working and become employed, and initiate their own business.

The aim of the enhanced basic education program (K to 12) is to develop holistic learners with 21st century skills. The addition of two years in high school provides more time and opportunity for students to develop the necessary learning competencies to be ready for their career paths. Assessment takes an important role in delivering students towards 21st century skills. Assessment at the beginning of the senior high school ensures that students select a track of specialization matching their interest, achievement, and aptitude. During grades 11 and 12, classroom-based assessment, assessment of achievement, and international benchmarking help students to acquire the necessary competencies that need to be learned. At this juncture assessment can serve to diagnose student difficulties to provide more appropriate instruction, help students progress overtime through formative assessment ensuring and ensuring proficiency by the time the summative, national, and international assessment are conducted. Assessment also plays an important role to deliver students in their career path after senior high school. Assessment ensures that students acquired the necessary learning to enter college through college readiness assessment. Assessment also ensures their qualifications to work through assessment of employment readiness. The specific programs that they pursue after the senior high school are further clarified through career assessment.

Given the levels of assessment identified in the senior high school level, the following recommendations are derived:

- (1) Provide classroom teachers with the specific results of the assessment that will serve as diagnostic in order to provide instruction based on the students learning needs.

- (2) The periodic assessment conducted in the classroom level should also allow teachers to address immediately students who are at risk of not learning a competency.

- (3) Use the various levels of assessment as indicators in evaluating the senior high school curricular program.

(4) Schools need to consider the competencies covered in the national and international assessments when designing their curriculum. Being able to see the similarities and differences of the schools' curriculum with the national and international competencies allows the school to form students based on important standards.

References

- Akker, V. (2003). Curriculum perspectives: An introduction. In V. Akker, W. Kuiper, & U. Hamyer (Eds.). *Curriculum landscapes and Trends* (pp. 1-10). NY: Springer.
- Bakshi, A., & Satish, V. (2015). Qualitative career assessment using a genogram. In M. McMahon, & M Watson (Eds.), *Career Assessment* (pp. 69-80). India: Sense Publisher.
- Barret, J. (2011). *The aptitude test workbook*. London: Kogan Page.
- Black, P., & William, D. (1998). Assessment and classroom learning. *Assessment in Education*, 5(1), 7-71.
- Center for Learning and Assessment Development-Asia (2015). The Senior High School Placement Test. [Online Available] cladasia2015.wix.com/cladasia#!senior-high-school-placement-test/c1cof
- Clarke, M (2011). *Framework for Building an Effective Student Assessment System READ/SABER Working Paper*. Washington DC: The World Bank Group.
- Corsi-Bunker, A. (2009). *Guide to the educational system of the United States*. University of Minnesota, Minnesota: International Student and Scholar Services.
- Conley, D. T. (2007). *Redefining college readiness*. Eugene, OR: Educational Policy Improvement Center.
- DepEd Order no. 8, s. 2015. Policy guidelines on classroom assessment for the K to 12 basic education program.
- DepEd Order no. 41, s. 2015. Senior high school career guidance program and early registration.
- Republic Act No. 10533 (2013). Enhanced Basic Education Act of 2013.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112.
- Ho, E. S. (2012). *Student learning assessment: Asia-Pacific Education System Review Series No. 5*. Bangkok, Thailand: UNESCO Bangkok.

- Holland, J. L., Fritzsche, B. A., & Powell, A. B. (1997). *The self-directed search technical manual*. Odessa, FL: Psychological Assessment Resources.
- Kellaghan, T., & Greaney, V. (2001). *Using assessment to improve the quality of education*. Sweden: UNESCO, International Institute for Educational Planning.
- Liao, H., Armstrong, P., & Rounds, J. (2008). Development and initial validation of public domain Basic Interest Markers. *Journal of Vocational Behavior*, 73, 159-183.
- Lockheed, M. 2010. The craft of education assessment: Does participating in international and regional assessments build assessment capacity in developing countries? NJ: Princeton.
- Magno, C. (2008). Taxonomy of aptitude test items: A guide for item writers. *The International Journal of Educational and Psychological Assessment*, 2, 39-53.
- Magno, C. (2011). *Analysis of the basic education in the Philippines*. Manila, Philippines: SEAMEO INNOTECH.
- Magno, C. (2009). Taxonomy of aptitude test items: A guide for item writers. *The International Journal of Educational and Psychological Assessment*, 2, 39-53.
- Magno, C. (2015). Editorial Note: On Standards-Based Assessment. *Journal of SBA Research*, 3, 1.
- Magno, C., & Lizada, G.S. (2015). Features of classroom formative assessment. *Educational Measurement and Evaluation Review*, 6, 23-31.
- McMahon, M., Patton, W., & Watson, M. (2003). Developing qualitative career assessment process. *The Career Development Quarterly*, 51(3), 194-202.
- Mikre, F. (2010). The roles of assessment in curriculum practice and enhancement of learning. *Ethiopian Journal of Education and Sciences*, 5(2), 101-114.
- Neimeyer, G., & Neimeyer, R. (1993). Defying the boundaries of constructivist assessment. In G. Neimeyer (Ed.), *Constructivist assessment: A casebook* (pp. 1-30). Newbury Park CA: Sage.
- SEAMEO INNOTECH. (2015). K to 12 toolkit part II: Resource guide for the senior high school program in the Philippines.
- Trends in International Mathematics and Science Survey. Evaluation of Educational Achievement. Retrieved from nces.ed.gov/timss/

Trey, S., Schmitt, V., & Allen, J. P. (2012). Defining authentic classroom assessment. *Practical Assessment, Research, and Evaluation*, 17(2), 1-18.