SDEA

SPECIALIST DIPLOMA IN EDUCATIONAL ASSESSMENT

Infopack

Singapore Examinations and Assessment Board

1. Introduction

The Ministry of Education (MOE) has introduced greater diversity and flexibility of education pathways and programmes to maximise the strengths of our students and to foster an innovative and enterprising outlook. The teacher is the key to everything we do in education. Through the use of appropriate learning programmes and pedagogical tools, teachers can engage and motivate students as active participants in their own learning. Curriculum, pedagogy and assessment are the three cornerstones for students' learning. The Singapore Examinations and Assessment Board (SEAB) aims to facilitate teachers' acquisition of knowledge and skills in the area of educational assessment by introducing a course in educational assessment that leads to the award of a Specialist Diploma in Educational Assessment (SDEA).

2. An overview of the Specialist Diploma in Educational Assessment (SDEA)

The SDEA is a professional qualification in educational assessment. It comprises four 60-hour modules conducted over a 12-month period and is awarded to participants who have successfully completed the requirements of the course in educational assessment, including passing an examination and the successful completion of a practical module. The course is designed to equip participants with the knowledge and skills to function as effective facilitators, coaches or mentors in assessment in schools. Besides learning the best practices of assessment, participants will also learn the theoretical underpinnings of current and emerging assessment concepts and methods that are applicable in Singapore schools.

3. Aim and Objectives of the course

The aim of the course is to equip educators with knowledge and skills in educational assessment including summative assessment.

Participants will be able to understand and apply the general principles and best practices of assessment to do the following for their school programmes:
 (1) select or develop assessment methods;   (2) interpret and use assessment results.

4. Information for Participants

The participants of this course should have sustained interest in acquiring and applying knowledge and skills in assessment. As effective and proficient teachers in the classrooms, they should have the capacity to develop and function as facilitators to initiate assessment innovations in schools and as coaches and mentors to new teachers. Classes will be conducted during the school holidays and teachers could continue to work full time in school and there is minimal disruption to schools. Upon successful completion of the diploma course, teachers will receive the award of Specialist Diploma in Educational Assessment.

5. Course Structure

The course comprises four 60-hour modules taken over a 12-month period. The first three modules are designed to engage participants in classroom instruction, self-study, assignments, preparation for the Practical Module and contact time with instructors/supervisors. Participants must sit for an examination covering all three modules. The fourth module which is the Practical Module will require participants to translate assessment knowledge into practice.

Module 1 - Assessment and Curriculum

Unit Code	Topic
SDEA101	Role of assessment in the education system
SDEA102	Context of Assessment - Assessment of learning and Assessment for learning
SDEA103	Purpose, context, and nature of curriculum
SDEA104	Relationship between assessment and curriculum
SDEA105	Assessment of language achievement
SDEA106	Assessment of mathematics achievement
SDEA107	Assessment of humanities achievement
SDEA108	Assessment of science achievement

Module 2 – Principles and Practices of Assessment

Unit Code	Topic
SDEA201	Criteria of quality in assessment
SDEA202	General principles in task/item writing
SDEA203	Use of MCQs, short answer and essays items
SDEA204	Marking of Written Scripts and Assessing Performance

Module 3 – Techniques in Assessment

Unit Code	Topic
SDEA301	Test development
SDEA302	Item analysis
SDEA303	School-based assessment
SDEA304	Understanding basic statistics
SDEA305	Moderation – Purposes & Methods
SDEA306	Grading and review of borderline cases
SDEA307	Interpretation and use of results

Module 4   - Practical Module

Unit Code	Topic
SDEA401	Assessment Literacy Programme (ALP)
SDEA402	Oral presentation of ALP
SDEA403	Reflective Essay on ALP

6. Typical Programme Schedule

Period	Duration	Programme
Mar	30 hours	Instruction of Module 1
Jun	46 hours	Instruction of Module 2 and Module 3
Jul – Aug	20 hours	Preparation of a proposal of an Assessment Literacy Programme (ALP)
Sep – Dec	40 hours	Preparation of ALP
Dec	3 hours	Examination
Jan – Mar	4 hours	Oral Presentation of ALP in school
Jan – Mar	37 hours	Preparation of a 3000-word reflective essay based on ALP for submission by mid March

7. Delivery and Assessment Methods

The course will be delivered through lectures, discussions, readings, and assignments during the instructional periods. There will be four assessments throughout the course:

(a)   a proposal for Assessment Literacy Programme (ALP);

(b)   submission of training materials and an oral presentation of the ALP;

(c)   a 3000-word reflective essay on the ALP; and

(d)   a three-hour examination.

Participants must meet all the course requirements and produce satisfactory performance in all the assessments for the award of the SDEA.

8. Unit Synopsis

Module 1 – Assessment and Curriculum

SDEA101 Role of Assessment in the Education System
This topic explores the fundamental question of "Why do we assess?" Participants will examine the varied purposes of assessment, especially in enhancing the effectiveness of teaching and learning, and in interpreting and using the evidence of student achievement. There will also be a discussion of the positive and negative impact of the uses of assessment, particularly in the contexts of assessment as a support for learning, assessment as an evaluation of learning, and assessment as part of learning. Participants will also learn how assessment can be aptly integrated into the teaching-learning process to achieve the intended purposes of education through appropriate pedagogical approaches in the classroom.

SDEA102 Context of Assessment – Assessment of Learning and Assessment for Learning
This unit focuses on the two common contexts of assessment in schools: assessment of learning (for summative purpose) and assessment for learning (for formative purpose). Besides clarifying and comparing the definitions and the key characteristics of the two contexts of assessment, there will be in-depth analysis of assessment for learning – the context that is less familiar. A useful conceptual framework of assessment for learning will be presented as a foundation and context for a discussion on strategies to implement formative assessment in the classroom.

SDEA103 Purpose, Context and Nature of Curriculum
This unit focuses on the purpose, context and nature of curriculum. It will examine how the nature of curriculum is shaped by the key question, "What is the purpose of education?" This question is viewed through the lenses of ideological models as well as a consideration of the context of society and forces of change that affect the society. In addition, it will examine how the purpose of education is reflected in the curriculum in terms of the aims, goals and objectives, the content and assessment. As curriculum, instruction and assessment form the educational triad, an understanding of the purpose, nature and context of curriculum is critical for informed teaching and learning, and assessment of students' learning so as to realise the outcomes intended in the curriculum.

SDEA104 Relationship between Assessment and Curriculum
This unit focuses on the relationship between assessment and curriculum. The degree to which curriculum, instruction and assessment work together to facilitate student learning is often referred to as alignment. Ways to align assessment to curriculum are considered at the curriculum design, curriculum implementation and test design stages. Notwithstanding, tensions exists at the various stages, particularly in a high-stake educational environment. Understanding ways of alignment and managing sources of tension will help participants to achieve a greater congruence among curriculum, instruction and assessment.

SDEA105 Assessment of Language Achievement

The unit discusses the concepts of construct, construct under-representation and construct irrelevant variance in the context of assessment of language achievement. Understanding such concepts will enhance participants' competency in developing assessment instruments that are valid for ascertaining language achievement. The understanding of such concepts will also help them to be better able to evaluate tests for construct validity.

SDEA106 Assessment of Mathematics Achievement

Results from Mathematics tests are often used as proxies for students' learning of the subject.   The results are based on evidence elicited from assessment tasks.   The setting of these tasks is guided by the articulation of the Mathematics achievement constructs in the curriculum.   This unit introduces the concept of an achievement construct and its relationship with assessment, and ways to collect evidence of achievement for both formative and summative assessments. The unit provides an overview of the steps involved in designing a conceptual framework to assess Mathematics achievement and shares some useful teaching and learning points from the TIMMS and PISA frameworks.   It also shares some research findings on assessment for learning on Mathematics.

SDEA107 Assessment of Humanities Achievement

This unit looks at the value of studying the humanities, discusses what humanities achievement encompasses and examines key considerations in the assessment design for humanities subjects. Assessment items and tasks for various humanities subjects will be drawn upon for illustration.   The development of appropriate scoring rubrics for assessing humanities achievement will also be discussed.

SDEA108 Assessment of Science Achievement

This topic first explores the underlying knowledge and skills on the study of Science. This will then provide the foundation and framework for examining achievement in Science as a distinct discipline from other subjects. Different views of the construct of science achievement and their assessments will be discussed to provide better appreciation and understanding of current practices in assessment. Current assessment practices in Singapore and those in the international arena will also be shared and discussed.

Module 2 – Principles and Practices of Assessment

SDEA201 Criteria of Quality Assessment

This unit introduces the principles of assessment: validity, reliability and fairness. These are the key guiding principles for the development and conduct of assessment. Participants will be introduced to the concepts, requirements, and implications of validity, reliability and fairness in assessment. For better understanding of these principles, participants will also learn to identify sources of validity evidence and threats to validity, and factors affecting reliability and fairness. Practical suggestions to improve the validity, reliability and fairness of assessment will be also shared with participants.

SDEA202 General Principles in Task/Item Writing

This unit aims to discuss the general principles in task/item writing and the related procedures, processes and concepts of task/item writing. 'Evidence Centred Design', a procedure which relates the evidence available in student performance to intended inferences about the students, will be introduced. In addition, the cognitive processes that occur as candidates answer a test question will be covered in the "Model of Question Answering Process". Other concepts to be discussed include items as units of measurement, the relationship between assessment objectives, specifications and item writing, and sources of difficulty and easiness.

SDEA203 Use of MCQs, Short Answer and Essays Items

This unit aims to equip participants with knowledge to understand and select appropriate item types in test design. The advantages, constraints, requirements, and implications of using various item types will be discussed.

SDEA204 Marking of Written Scripts and Assessing Performance

This unit will introduce participants to concepts, principles and practices of marking of written examination scripts and assessing performance. Participants will be introduced to various types of mark schemes and learn about the development and use of these mark schemes for standardisation, marking and post-marking procedures. Theoretical bases and principles for methods and processes of marking will also be discussed. Participants will have opportunities to apply their understanding of marking through practice sessions and to share and reflect on their school marking practices.

Module 3 – Techniques in Assessment

SDEA301 Test Development

This unit is concerned with the four important phases of test development: test design, item writing, test assembly, and quality assurance. In test design, participants will discuss the rationale and the procedural knowledge of working on a test specification. In item writing, participants will be introduced to four techniques that can be used by teachers in schools: imitation, improvement, innovation, and invention. In test assembly, participants will learn the procedural knowledge of putting a test together. In quality assurance, participants will learn about the aspects of a test that need to be covered in vetting to prevent errors in tests.

SDEA302 Item Analysis

This unit covers the classical method of analysing item responses numerically. The concepts of facility index (FI) and discrimination index (DI) will be covered. There will be hands-on activities (based on real items and item responses) for participants to derive useful information about the functioning of the test items. Participants will also learn how to use the information from the analysis to identify good quality as well as malfunctioning test items.

SDEA303 School-based Assessment

This unit sets out to examine how school-based assessments (SBA) offer an alternative mode of assessing learners where certain skills or understanding cannot be adequately assessed through a conventional pen-and-paper examination.

This unit will examine how SBA can be used for both formative and summative assessments. The advantages and disadvantages of adopting school-based assessment and the role of teachers, assessors, moderators and the impact on learners will be discussed. Issues such as validity, reliability and fairness and how to ensure the integrity of the assessment will be covered. Examples of SBA in relation to some GCE subjects will also be discussed throughout the course.

SDEA304 Understanding Basic Statistics

This unit introduces the common statistical tools and concepts that are used in interpreting and understanding examination data and findings from further analyses of the data. These include data display, measures of central tendency, measures of variability, transformed scores, and correlation. The main focus of the unit is in developing an understanding of the factors and assumptions that affect the statistical concepts. There will be a hands-on session requiring participants to work with a set of data to produce the descriptive statistics to inform test design, marking and grading.

SDEA305 Moderation – Purposes and Methods

This unit discusses moderation as a tool for quality assurance control of marking in order to achieve valid, fair and consistent results, both across tasks and across markers. An overview of moderation methods, including a simplified procedure that teachers can use to carry out moderation in the school, will also be shared.

SDEA306 Grading and Review of Borderline Cases

This unit gives an overview of the principles in standard setting. It will also introduce various procedures and considerations in the determination of grade thresholds. Participants will be introduced to approaches of gathering evidence to support and promote fair, equitable and informative grading practices. The needs for reviewing of borderline cases will be also discussed.

SDEA307 Interpretation and Use of Results

Appropriate interpretation of test results requires an understanding of the limitations of data sources and the sources of measurement errors. This unit relates the interpretation of results to the purpose of the test. Concepts and best practices in gathering evidence of student achievement and reporting of results will be discussed. The challenges in interpreting and making decisions from test results will also be highlighted. Illustrations and discussions will be in the context of classroom assessment.

Module 4 – Practical Module

The intention of Module 4 is to engage participants in applying the content knowledge of the educational assessment course which they have undergone in Modules 1 to 3. Participants will engage in a work-based study where they work out an Assessment Literacy Programme (ALP) to raise the level of assessment literacy among the teachers they work with. Each participant will be offered up to 7 hours of supervision for this module.

Module 4 builds on the Programme Proposal (PP) that would have been completed by the participants after the first three modules. While the PP contains the rationale and the plan for implementing a customised ALP initiated by the participant, the actual work of operationalising the ALP in terms of preparing the training materials and learning activities is done as part of Module 4.   The outcome of the preparation is a half-day training session that meets the learning needs of a group of teachers in the school or the cluster of schools that the participants work with and gather the teachers' feedback on the ALPs.   The half-day training session will take place from January to March.

The assessment of Module 4 consists of three components. The first component is an assessment of the training materials (ALP). The second component is the oral presentation of the training materials in a half-day training session. The assessment criteria includes: the application of appropriate theoretical concepts and principles; delivery of the planned training session; engagement of audience in answering questions; and achievement of the objectives of the training session. The weightings for the assessment of training materials and oral presentation will be 60% and 20% respectively.   The third component is an assessment of a 3000-word reflective essay on the ALP.   In the essay, the participants will record the observations and thoughts that have led to the formulation of the ALP, personal reflection on the development and execution of the ALP, and the improvements that they will make to the ALP after they have completed the educational assessment course.   The assessment criteria include the participant's awareness and control in using acquired knowledge to promote assessment literacy in schools and the scalability of the ALP for wider usage. This third component will have a weighting of 20%.

A breakdown in assessment for module 4 is detailed as follows:

Assessment Component	Weighting
Training Materials (ALP)	60%
Oral Presentation of ALP	20%
3000-word Reflective Essay on the ALP	20%

If, for some valid reasons, participants are unable to plan and execute an ALP, an acceptable alternative work-based study would include the preparation of a developmental portfolio of item-writing (e.g. producing a test paper), an assessment plan for an educational programme (e.g. designing an

assessment plan for a school curriculum), a literature review of assessment topics or an action-research on an assessment topic (e.g. an action research on a specific area of a subject such as an oral examination or a new mode of assessment for Science). In such cases, participants would need to show that they have successfully applied the content knowledge of the educational assessment course they have undergone in Modules 1 to 3 in an educational setting. The assessment criteria will be adapted accordingly and considered on a case-by-case basis but with weightings that are close to those for the assessment of the ALP.

9. Our Instructors

The various units of the course will be conducted and facilitated by experienced specialists of SEAB. Besides conducting the course units, they will also supervise the participants for the practical module.

10. Selection Criteria

Participants will be selected based on the following criteria:

- employment history;
- personal statement of past and present interest in assessment; and
- principal's recommendation.

11. Application Details

To complete your application for admission, you are required to submit the Application Form and the relevant supporting documents as outlined in the Application Form. Upon submission of your application, you will receive an acknowledgement email. Please provide us with a valid email address and allow up to five working days for the acknowledgement e-mail to be sent upon receiving your application.

The course fee is $9,630 ($9,000 plus 7% GST). However, Education Officers of MOE will pay a special rate of $8,025 ($7,500 plus 7% GST). The fee should be made payable to the "Singapore Examinations and Assessment Board" within two weeks from the date of the acceptance letter. A refund less $802.50 ($750 plus 7% GST) administrative charge will be made for cancellation received in writing two weeks before the commencement of the course. There will be no refund of course fee for cancellation received after this period or if the participant terminates at any point during the course or if he/she does not meet the course requirements or fails any of the assessments.

12. Application Form

See enclosed.

13. Contact Information

For enquiries, please contact:

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