COMPUTER-BASED ASSESSMENT: CREATING THE WAY FOR FUTURISTIC TESTS

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Computer-Based Assessment (CBA) is an assessment which is both delivered and marked by a computer (JISC, 2007:6). This sets it apart from Computer Assisted Assessment (CAA) which simply incorporates computers into some of the assessment processes.

The CBA can be applied to summative, formative, or diagnostic assessment tasks, with or without the delivery of related feedback to students. Multiple Choice Questions (MCQs) or other "objective" question types are often the foundation of computer-based assessments, while non-objective questions (such as essays and short answers) can also be used.

As opposed to paper-based assessment, good assessment development necessitates careful consideration of design and delivery challenges.

The CBA can be used to provide fast feedback, make testing available whenever and wherever it is needed, and help enhance assessment frequency (without necessarily increasing the marking load). Additionally, it is possible to develop many evaluations using a single, shared question bank (also called a Question Library). This enables the reuse of questions and the randomization of their order within a specific evaluation. Feedback on students' performance can be automatically sent for the entire assessment or for each individual question.

Additionally, the CBA has been used to replicate practice-based activities that standard paper and pen evaluations are unable to, for instance by adding video and audio. There are numerous instances of this usage in clinical subjects, for example.

Bull and McKenna (2004) mentioned several reasons to use CBA. First is to increase evaluation frequency in order to motivate students to learn and encourage students to practice skills. Also, to increase the scope of knowledge evaluated, increase feedback to students and lecturers, increase the variety of assessment techniques, increase objectivity and consistency, decrease marking loads, and lastly, aid in administrative efficiency.

Employing CBA has more to offer. If a teacher wants to provide additional diagnostic or formative assessment opportunities, detailed feedback can be built into CBA assessments, whether the main focus is diagnostic, formative, or summative. It is a venue to provide timely feedback that can be delivered immediately and/or automatically. This can be particularly useful for formative use. With CBA, a teacher can mark work quickly through pre-programmed computer automation. It increases the flexibility of assessment delivery since CBA tests can be made available anytime, anywhere. The duration of the test, the period for which the assessment is available, and the number of attempts allowed, can all be varied. Tests for each learner may also be unique with one another because the order of questions can be programmed to be shuffled to encourage them to work individually. Finally, if a teacher wishes to create a set of questions to use and reuse across multiple assessments, CBA is the tool to utilize since question libraries can be copied across a number of learning rooms. Therefore, the task of creating question banks can be shared across modules or course teams to maximize efficiency.

However, there are a few things to keep in mind when organizing CBA:

In the beginning, setting up and using the CBA could take more time. Novices will need to improve their capacity to design efficient tests and questions. If the instrument will be used for summative evaluation, students might also need to be instructed on how to utilize it. Additional procedures should be implemented for high-stakes summative applications to verify students' identities and deter cheating.

Additionally, it is critical to have ready access to technical help as well as backup plans in case the system fails.

Before the assessment is made available to students, a thorough quality check must be performed on the marking scheme because it will be applied to all entries. If manual feedback is required, such as for questions requiring a short or long answer, CAA may be a better option than CBA.

A diagnostic, formative, or summative emphasis can be employed with CBA. At the beginning of a course or module, as well as at other crucial moments, it can be applied with a diagnostic focus. This enables a tutor to assess pupils' prior knowledge and comprehension and, if necessary, offer criticism. Staff members can utilize it to uncover comprehension gaps among a cohort of students.

Formative assessment, or evaluation that is developmental for students' learning but does not count toward credit points can be provided through CBA. Directed study or in-class work are both options for this. Instant feedback is possible with CBA; it can be written to address immediately students' misconceptions or lead them to pertinent resources to aid in their own learning.

Summative assessment, or evaluation that results in a final mark (and feedback) that represents the level of achievement of the student work in comparison to the targeted learning outcomes can be provided by the CBA. For large cohorts or distant learning, when "economies of scale" are most relevant, summative CBA may be extremely helpful. By adding movies and simulations, for instance, a wider range of scenarios can be provided than would be conceivable in a paper-based exam. However, creating assessments of this kind can take some time.

Presently, the CBA is being implemented in different schools in the Department of Education, Science City of Muñoz. Through several issuance such as Division Memoranda No. 161, 367, 550, 564 & 556, all series of 2022, the office is serious in utilizing computers for learner assessments. Programs such as the Wondershare QuizCreator, Microsoft PowerPoint, and FreeOnlineSurveys were some of the tools used during the capacity building of teachers and school heads. Though these are great tools, there are limitations in their uses. The free versions of Wondershare QuizCreator and FreeOnlineSurveys are extremely limited, while the paid versions are quite expensive. Moreover, Microsoft PowerPoint does not offer automated checking and scoring.

In some selected schools like Ricardo Viola Adriano Elementary School, Curva Elementary School, and Rizal Elementary School, there is a CBA strategy being exclusively employed. The **E**lectronic **A**ssessment **S**preadsheet for the **Y**outh (Project EASY) is an Excel workbook that can serve as a quiz, mastery assessment, or worksheet in electronic format. Teachers will have to first encode the questions and choices, mark the correct one, and save the accomplished file on the computers to be utilized. It is absolutely free and anyone can use its full features without spending a single peso. Project EASY showcases automated checking in which the results can be easily viewed by the teachers for recording. It is also paperless and does not require an internet connection or email account. With a recent update to the project, it is now SOLO taxonomy compliant, which means the teacher can assign points to each of the choices. This innovation directly supports the CBA thrust of the

Department of Education. Because of this program, the mentioned schools benefit through reduced consumption of printing materials, checking automation, and much faster feedback.

Change is unavoidable, especially in this fast-paced, ever-changing, technology-driven and modern world. The field of education is especially no exception. In order to make progress, educators must accept change.