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BLENDED METHOD OF ASSESSMENT LEADS TO SUCCESSFUL EVALUATION OF ENGINEERING FACULTY STUDENTS AT A SRI LANKAN UNIVERSITY

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Abstract

Study was carried out at General Sir John Kotelawala Defence University, Sri Lanka. this study was done at the Faculty of Engineering. A course outline containing these details is given to the students at the beginning of the semester. Relative weights of the mark allocations for this module are 70% for end semester examination as written examination and 30% for continuous assignments. There were 150 students at one single batch and 30% continuous assessment was converted for one group as paper based and other group breakdown for two in class online virtual assessment and a group practical where it can be done online for online and another group physically. We observed that students who split assessment perform extremely well and got higher scores gives the significant difference. Stress level also minimal level when compared to physical examination. We have introduced distribution of marks in a table with the module content to student at the beginning of the lecture series. It helps students to identify their targets and the type of assessments. Further, use of formative assessment in this manner provides several numbers of opportunities for improvements. Student can identify their weaknesses and area for improvement with this way of assessment.

Keywords: Blended, Assessment, Online, End Semester, Sri Lanka

Introduction

Understanding is the main aim of education. Students won't be able to comprehend the material if we as teachers educate improperly. In such unfavorable circumstances, students may have a tendency to turn to self-teaching techniques, read additional books, do Internet searches, and engage in peer conversations in an effort to evade or escape poor instruction (Tenenbaum et al., 2020). Can they, however, avoid unfavorable judgment? As a result, evaluation should be treated carefully. because education, and particularly evaluations, determine students' futures.

There are many different definitions of assessment in the context of education. It is simply the vast range of techniques or instruments that teachers employ to assess, monitor, and record students' academic preparation, learning progress, acquisition of skills, and educational requirements (Succi and Canovi, 2020). Typically, assessments are made to gauge particular aspects of learning. These evaluation techniques can also be used to identify each student's unique strengths and weaknesses, allowing teachers to offer the right level of support or tailor their instruction to them.

Since the entire teaching and learning process exists to motivate students, learner-centered assessment can be seen as the most efficient method of evaluation. The chance to jointly assess learning will be given to teachers and students through learner-centered assessment (Butler et al., 2021). This study focused on online evaluation as well because of the online instruction.

We might need to rank the kids or determine their level before making a decision. Exams are typically given to students to gauge their progress (Matai et al., 2020). In order to encourage the students, we also administer assessments. We can divide assessments into two types based on the purpose.

Summative assessment: A summative assignment is a form of evaluation that gauges students' general comprehension and level of mastery of a subject or topic. Summative assignments are often provided at the

conclusion of a unit, course, or academic period, in contrast to formative evaluations, which concentrate on continual feedback and learning progress. Exams, final projects, and research papers are frequently the formats for these tasks. By asking students to apply what they've learned in a thorough way, they hope to gauge their knowledge, skills, and critical thinking abilities. Summative assignments offer a summary of a student's performance and are a crucial part of the grading process and outcome determination.

Formative assessment: The fundamental goal of formative assessment is to keep track of students' progress. The instructor's goal in these evaluations is to offer continuous feedback that may be applied to both teacher and student learning as well as instruction. The grades from formative tests are not used to determine grades. Specifically, formative evaluations: Assist pupils in identifying their talents and areas for improvement (Mohammed et al., 2020). Supporting educators with physical and online systems to quickly identify areas where students are suffering.

In this study we have checked whether online assessment can be done efficiently. Continuous assessment was converted for one group as paper based and other group breakdown for two in class online virtual assessment and a group practical where it can be done online for online and another group physically. Analysis was done to check whether there is a correlation between virtual assessment and physical assessment.

Methodology

Research Design

In this study, we looked at how cadet and civilian students at General Sir John Kotelawala Defence University (KDU) responded to virtual and physical testing, particularly to see if there was a relationship between the platform for continuous and final examination outcomes at the Defense university system. This subject was deemed to be of utmost importance in order to gain a conceptual understanding of what constitutes instructional methods and determine whether virtual examinations are used for evaluation. Figure 1 displays the research design used in this investigation. The Staff Development Center gave the study its blessing. The study's target population consists of 30 cadets and 120 civilian undergraduate engineering students. All students were evaluated based on the findings of their continuous and final examination marks. The study comprised 150 students who agreed to participate and granted their approval. At the start of data collection, the study's objective was explained to the students. The cadet students who agreed to take part in the study were each issued a tag and were individually tagged. (n=150).

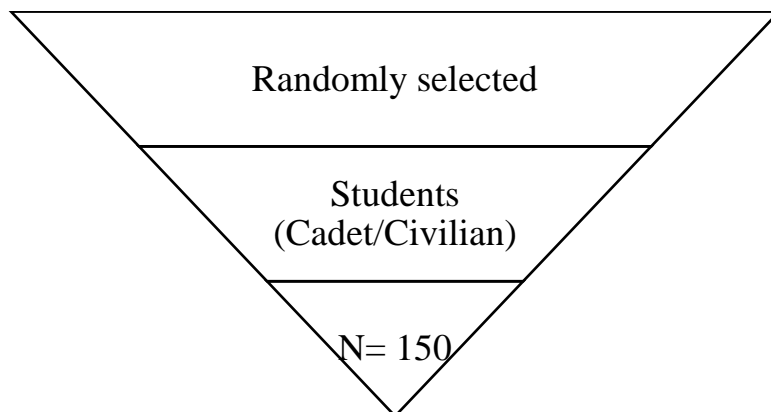


Figure 1. Study Design

Research Context and Participants

In this study, 150 cadet and civilian students participated. As cadet officers registered as students, all cadet students were hired at the institution. Engineering second-year students made up the civilian students. The only Defence University in Sri Lanka, KDU is home to a varied community of students from all walks of life in the Western Province.

Continuous and Final assessment

The continuous evaluation process was divided into two parts: the first involved open exercises in the classroom and homework both physically and online, and the second involved individual tests taken through a web-based self-assessment platform that used Moodle. We used the KDU's Learning Management System (LMS) to carry out these intermediate assignments. Regardless of whether a student is adhering to the

continuous evaluation method or not, all students took the same final exam at the same time. Four questions were included in a three-hour written exam, and the results were examined in relation to blended, which refers to both virtual and physical elements working together.

Data Presentation and Analysis

We contrasted the informal reasoning used by people with high and low levels of comprehension of instructional strategies with regard to evaluation by physical and blend approaches in order to analyze the questions. Two observers who are fluent in English separately evaluated the translation's validity. We looked at our statistics as a balanced figure in terms of application %. Utilizing the fundamental statistical analysis software, we transformed all of our data for statistical analysis.

Results

The statistical measure of the degree and direction of a linear relationship between two variables on a scatter plot is called the correlation coefficient, or r . Correlation values are always positive or negative. For the Engineering course, there is a 0.78 connection between continuous assessments (CAS) and final grades (END S) (Figure 1). This shows that the link between the two components is strongly uphill (positive). In other words, both CAS and END S student performance are about equal. The CAS standard deviation is 11:34004237, while the END S standard deviation is 10:31174139. These show that students' performances for CAS and the end of the semester are largely comparable.

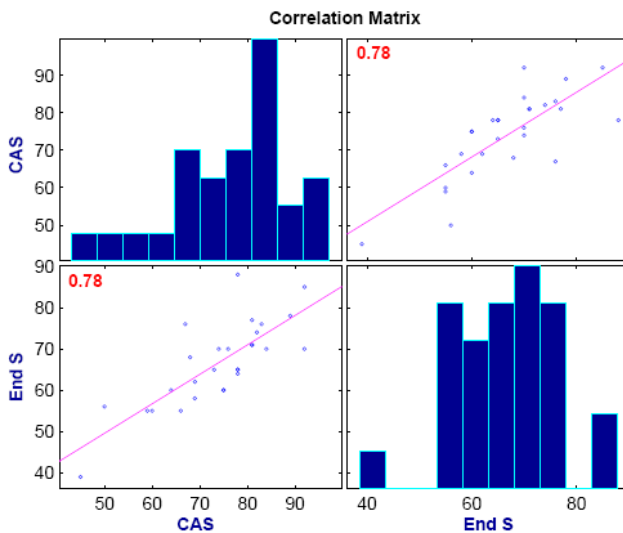


Figure 1- Correlation Matrix between CAS and End semester marks for the course Engineering students physical examination

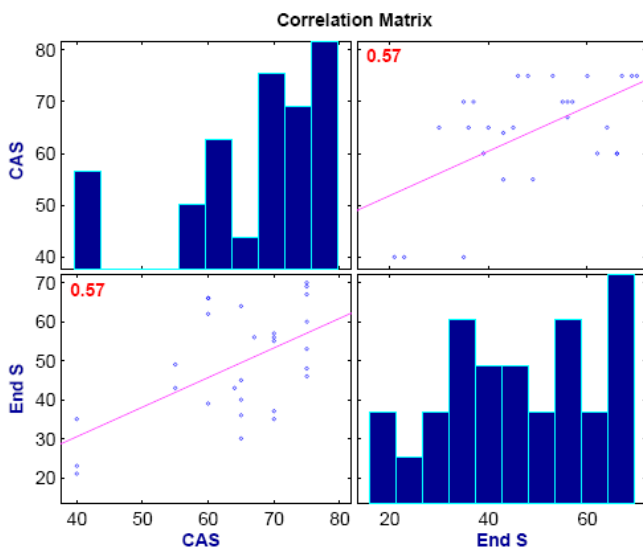


Figure 2. Correlation Matrix between CAS and End semester marks for the course Engineering student Virtual platform

The correlation between the end-of-semester grades and the virtual and blended assessment for this course is 0.57 (Figure 2). Figure 2 shows a moderately upward (positive) association, which implies that the two do not get along well. In terms of the physical examination, the standard deviations 10:52705006 and 13:98009734 also support the conclusion.

Conclusion and closing words

With regard to the blended technique, there is generally a favorable association between continuous assessment and final assessment. For CAS and the end of the semester on this virtual platform, engineering students did equally well. One explanation is that CAS required a midterm exam. As a result, there may be some overlap in the assessment techniques employed. The learning capacity of the students could not have changed significantly over the course. Or students' varied learning preferences cause them to approach the course in a variety of ways. There isn't a substantial correlation for the physical exam for the engineering course. Most students performed higher on CAS and a written exam at the conclusion of the semester when take-home assignments were used for CAS. They can receive a different score depending on the evaluation technique or students may pay less interest to the subject.

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