An Evaluation of the Efficiency of Formative Assessment Integrated With Educational Technology

Peiran Dong

PEIRAN-DONG@e.ntu.edu.sg

qj16601@gmail.com

Abstract

Objective: As we all know, assessment contributes a crucial part in evaluating learning. During Covid-19, educational technology has played a significant role in school assessment. The purpose of this study is to evaluate the efficiency of formative assessment integrated with educational technology.

Methodology: an 18 students group of 16 to 18 years old participates in the study. I set up performance metrics including the student’s responding time, the student’s responding rate, and accuracy rate of response to measure the efficiency of the formative assessment integrated with educational technology. Then students sit for 4 sets of 3 randomly chosen formative assessments (12 in total) covering listening, reading and writing over the academic year. I use the same online learning platform to distribute all chosen formative assessments, therefore the system captures student’s responses to every single question simultaneously. Not only that, but I use the scheduled class time to conduct all formative assessments based on the unit’s plans. In this way, both quantitative and qualitative data were collected timely.

Findings: 1)The whole class responded to 4 sets of questions within the assessment time limit. There are no notable differences in students' performance between the traditional paper-based formative assessment and assessment integrated with educational technology; 2)There has obvious increase of responding rate to the formative assessment; 3) Findings have also shown that the formative assessment integrated with educational technology provides immediate feedback on students’ learning outcomes, which provides equal opportunities of learning to students who have different learning styles.

Future Scope: The limitations of traditional education methods lead to unequal learning opportunities. With educational technology, students receive prompt and accurate feedback equally via formative assessment, while teachers can make timely adjustments to the curriculum and teaching methods accordingly. Formative assessment integrated with educational technology will lay the foundation for the optimizing and reform of the curriculum and pedagogy in the post-Covid19 era.

Keywords: √ Formative assessment

 √ Educational technology

 √ Qualitative data and quantitative data

 √ SMART

 √ Empirical research