Chapter 2
Traditional Versus Digital Assessment Methods: Faculty Development

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ABSTRACT
Higher education has focused on adopting emerging digital technologies for teaching and learning in recent years. Regarding the technology changes in empowering skills of students, assessment in teaching and learning started to evolve from traditional to more alternative and finally to digital assessment. For example, augmented reality and learning analytics are becoming more popular in assessments. After a comprehensive literature review, this chapter explains the types of digital assessment methods, their advantages, and disadvantages for both faculty and learners. The role of faculty and needs for faculty development are put forward.

INTRODUCTION
Assessment, creating feedback to improve student performance, is an important approach at every level of teaching and learning, including higher education. In general, the term ‘assessment’ stands for monitoring the students’ learning progress and providing information about their achievement as feedback (Straková, 2016). Giving feedback on learning progress and the level of achievement of the learning objectives aims to make a positive contribution and encourages learning. As well, the brain-based learning research studies also verify that assessment is important for learning (Bonomo, 2017). Since assessment centered teaching and learning helps learners to show how their abilities are developed; teaching and learning activities need to include a set of techniques so that giving feedback will help them improve their
learning (Bransford, Brown & Cocking, 2000). Also, OECD (2008) stresses the importance of students developing their own “learning to learn” skills by themselves. This means that as a result of assessment, learners get a personal reflection on development of their learning skills.

Recently there is rapid growth in the use of digital technologies in higher education. Digital learning is a learning strategy that makes use of a broad range of technology-enhanced teaching and learning strategies. A digital learning strategy that embraces digital technologies can use at least one of the following concepts: robotics, 3D printing, adaptive learning, learning analytics, learning objects, badging, gamification, flipped learning, innovative classroom technologies, e-textbooks, mobile learning, etc. Besides developed countries, online learning is now becoming a trend in developing countries, too. Using these technologies in teaching and learning also exposes the impact of selecting the appropriate assessment techniques.

The digital assessment aims to enhance the assessment process through the use of digital tools, such as online exams and digital portfolios. However, Adeshola and Abubakar (2019) discuss the importance of characteristics of a new generation of students affecting the adoption and acceptance of digital exams and assessment in higher education. Raaheim et al. (2019) look from the perspective of the institutions. They claim that although digital technology opens a gateway for alternatives to the traditional exam, the traditional framework can’t be overridden simply by digital alternatives because the rules and laws of a university, prepared before the existence of digital technology, may not allow. Besides students and institutions, faculty members’ acceptance and role in using digital assessments must not be neglected. There is a gap in the domain literature regarding the types of digital assessments and the motives of faculty members to a move to digital assessment. In this chapter, it is aimed to explain the types of digital assessment methods and their advantages as well as disadvantages for both faculty and learners. Throughout the chapter, the term ‘digital assessment’ will be used instead of frequently referred online assessment, e-assessment and technology-enhanced assessment in the literature.

In particular, the chapter focuses on the following questions:

1. What are the different types of educational assessment?
2. What are the strategies/methods that can be used in the digital assessment?
3. What are the advantages and disadvantages of using digital assessment?
4. What are the examples of implementing digital assessment in higher education?
5. What are the roles of faculty and needs for faculty development in digital assessment?

This chapter discusses the traditional assessment versus digital assessment approaches. A comprehensive literature review identifies important and relevant research on this topic. The types of assessment and subsequent differentiation of traditional versus alternative assessment are described. The evolution of digital assessment, its advantages and disadvantages are emphasized. A comparative analysis of traditional and digital assessment are offered within the context of faculty development. Finally, recommendations are provided.

THE ROLE AND TYPES OF ASSESSMENT IN LEARNING

The potential of assessments is put forward by Hoskins and Newstead (2009) as “The assessment system should be one that encourages conceptual understanding as opposed to rote learning” (p.35). They