

## Chapter 5

# Challenges of Online Exam Systems in the COVID-19 Pandemic Era: E-Assessment of Perception, Motivation, and Performance

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### **ABSTRACT**

*The swift conversion of courses to online format and online exam systems has identified the COVID-19 pandemic era. All educators on the globe have faced the obstacles of abrupt adoption of distance education learning methods. This unexpected shift has presented numerous challenges as preparing an online course content requires developing detailed course plan design, audio and video content, and technical support equipment. This chapter focuses on determining the problems and developing solutions based on the student perceptions about the online exams, which were compulsorily transitioned during the pandemic process. A survey about student perceptions of online exams has been developed and applied to the students after they have taken the exam. Descriptive statistics is used to analyze the data. E-assessment of perception about the online exam system and its impacts on motivation and performance are discussed, and suggestions to improve the system are provided in the chapter.*

DOI: 10.4018/978-1-7998-8661-7.ch005

## **INTRODUCTION**

With the sudden Covid -19 pandemic in the globe, the educational agenda in the world had to swift rapidly to online or TV based distance education in all levels. Many universities experienced an unexpected and rapid transition from traditional face-to-face education to online or distance education. Distance education had gained vast importance in the education system over the past decade that is triggered by intense research on the field and advanced technology development. In the past decade, online exams were conducted using various online means, without being the only option to evaluate the students. 12% of exams at the Australian University Department of Arts, Commerce, Engineering, Humanities and Science were conducted online (Hillier, 2014). In Finland and in Saudi Arabia, several exams have been conducted online and have been a part of their assessment systems (Laine et al., 2016; Alsadoon, 2017). Converting from traditional paper-pen exam to online exam has been exercised in many different configurations representing the advantages of time reduction, test security, secure data collection, quick assessment, cost effectiveness, paper saving and automatic record keeping for item analysis and learning analytics (Ilgaz et al., 2020). However online exams also include disadvantages like technical hurdles, help required from external resources, and examinees' feelings of tiredness due to technological tool usage, necessity to train students for new technology usage, exam security (Bayazit et al., 2012; Gvozdenko et al., 2007; Nguyen et al. 2017; Parshall et al., 2002; Smith et al., 2007; Clark et al., 2020). The discussion whether to convert the exams to online exam system or keep them traditional paper-pen format has been an ongoing issue. With the abrupt Covid-19 pandemic, whole education system had to transform rapidly into distance or online education all over the world, which forced the lecturers to offer the courses online. This unexpected swift has presented numerous challenges, due to the fact that preparing an online course content requires developing detailed course plan design, audio and video content, technical support equipment. The universities had to renew and modify their course content delivery methods and focus on cloud-based technologies. This adaptation was not a choice anymore, but a necessity that required structural changes. Most faculty members faced hurdles in terms of online teaching experience, technical support issues, and early preparation issues (Bao, 2020). While the students had to adopt the new from home learning methods, it dampened face-to-face, personalized experience-based learning on campus (Arora et al., 2021). The abrupt adoption was a challenge in terms of new teaching methods required and the necessity to train the students to use new technology. Open book exam has become the new normal and controlling the exam environment has presented itself as an issue. The threat of cheating in online exams has become one of the essential hurdles. The attempts to minimize the cheating attempts have increased and the instructors were challenged

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