

Chapter 16

Assessment in the Modern Age: Challenges and Solutions

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ABSTRACT

This chapter aims to address assessment in the modern age in terms of its importance, challenges and solutions by examining the views of 1,423 users at UK test centres following their recent experience of using two systems which employ computer-based assessment (CBA) and computer-assisted assessment (CAA). Generally speaking, based on the research, which informs the findings presented in this chapter, both systems face similar challenges but there are challenges which are specific to the CAA system. Similarly, both systems may require common solutions to improve user's future experience, but there are solutions which are more relevant to the CAA system. The chapter concludes with a discussion around the UK apprenticeship and a case study of a pilot apprenticeship programme in which CBA and CAA are also integrated.

INTRODUCTION

Assessment is a major facet of education and one of the key activities in candidate learning (Apampa, Wills & Argles, 2010) because of its transformative impact on the learning process, regardless of the mode of delivery, i.e. traditional or online assessment. The first part of this chapter examines, through a literature review, assessment in the modern age in terms of its importance, challenges and potential solutions to address

these challenges. It starts with a brief comparison between traditional and e-assessment. In the second part of the chapter the research findings are presented, discussed and linked to the literature. The findings, which are split in two online surveys, are based on the views of 1,423 users at UK test centres on e-assessment. The surveys focused on two systems, which employ computer-based assessment (CBA) and computer-assisted assessment (CAA). The chapter concludes with a discussion around the UK apprenticeship and

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a case study of a pilot apprenticeship programme in which CBA and CAA are also integrated to explore the topics examined in part 1.

PART 1: BACKGROUND AND LITERATURE REVIEW

This part, which is *mainly* a literature review, begins with a brief comparison between traditional and e-assessment. It then discusses e-assessment in much more detail in relation to its definition, importance, types, challenges and solutions to overcome these solutions.

Traditional and E-Assessment Comparison¹

Both assessment types have common characteristics when it comes to the principles of quality assessment (ANTA 2001 cited in Booth et al., 2003; DTWT, 2012), i.e. both should be:

- **Valid:** E.g. the assessment has measured what it is supposed to measure and evidence will prove that the individual has the required skills and/or knowledge.
- **Reliable:** E.g. same results would be obtained overtime.
- **Flexible:** E.g. assessments can be either on/off-the job, and at a convenient time and place.
- **Fair:** E.g. objective (Livingston Institute of Vocational Training, 2010) and adjusted to meet particular needs of candidates in terms of disabilities/cultural differences. No unnecessary higher levels of English or literacy than what is required to meet the standards in the competencies being assessed.

Traditional assessment are commonly considered as manual face to face tests taken with paper and pencil that are usually true/false, matching,

or multiple choice. These assessments are easy to grade, but only test isolated application, facts, or memorised data at lower-level thinking skills (Learn NC, 2014). However, this is not to suggest that traditional assessment does not use other forms of tests or assess higher level thinking skills. E-assessment, on the other hand, uses computers to create, deliver or mark candidates' work (Marriott & Teoh, 2012). A brief comparison could be made between the operation and delivery of both assessments. *Operationally*, in the short to medium term, traditional assessment methods may be less expensive (Nekoueizadeh & Bahrani, 2013). However, once developed, e-assessment methods become less costly in the long run (see also challenges of e-assessment below). E-assessment may reduce the time assessors spend in marking (with the exception of human marking on screen), but this is merely a reflection of the shift in their focus of effort to before, rather than after, the examination period (Kumar, 2012). In relation to the *delivery* of both assessment types, e-assessment is believed to be fairer to candidates in the sense that it is less "susceptible" to subjectivity, only when used in CBA mode (Nekoueizadeh & Bahrani, 2013, p. 95). E-assessment can support personalisation and the facility to be taken anytime and anywhere unlike traditional assessment. It might also have the upper hand when it comes to the improvement of candidates' (including those with cognitive and some physical disabilities) experiences of being more engaged in their learning (Kumar, 2012). Despite opponents to this view, it is argued that e-assessment is more likely than traditional assessment to enhance "candidates' critical thinking, effective decision-making, collaborative skills, or the ability to solve practical problems" (ibid, p.16) and this largely depends on the topic of assessment and form chosen (see types of e-assessment).

Regardless of these differences, there are key points to develop valid, reliable, flexible and fair assessment (Booth et al., 2003) such as a) making assessment a coherent part of the e-learning process b) using a range of methods to collect evidence

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