Authentic Assessment: Benefits to Learning and Implementation Challenges

A Literature Review

Authentic Assessment

EDUC 5305G

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May 28, 2014

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AUTHENTIC ASSESSMENT: BENEFITS AND CHALLENGES

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**Introduction**

Assessment, the process of gathering information about student learning and performance, is a critical component of education (Rosemartin, 2013). For much of the twentieth century multiple choice tests were a commonly used format of assessment due to savings in cost and time, as well as the desire for norm-referenced data (Madaus & O’Dwyer, 1999). In recent years, critics of traditional forms of assessment have emphasized the need to develop more authentic forms that require students to complete tasks and solve problems that they will encounter outside of school (Madaus & O’Dwyer, 1999; Wiggins, 1990). As such, there is a need for educators to develop a deep understanding of the purpose of assessment and to reflect on the relationship between assessment design and what information it yields about student learning and performance (Wiggins, 1989).

The purpose of this literature review is to: 1) Determine how authentic assessment has been defined in the literature; 2) Describe the benefits of authentic assessment to student learning; 3) Investigate the challenges of implementation; and 4) Examine the role of digital technology in designing and implementing authentic tasks.

**Definition of Authentic Assessment**

Multiple definitions of authentic assessment, also known as direct assessment, performance assessment or alternative assessment, exist within the literature. Madaus and O’Dwyer (1999) define authentic assessment broadly as “assessment [that] requires examinees to construct, supply answers, perform, or produce something for evaluation” (p. 689). Herrington and Herrington (1998) and Wiggins (1990, 1993) expand on this definition stating that authentic
authentic assessment must include engaging, contextualized tasks that closely resemble problems encountered in the real world. For the purpose of this literature review authentic assessment refers to “the holistic performance of meaningful, complex tasks in challenging environments that involve contextualized problems” (Montgomery, 2002, p. 35).

In defining authentic assessment it is beneficial to describe its distinguishing characteristics. While many authors have provided descriptions of authentic tasks, a thorough review of the literature conducted by Reeves, Herrington and Oliver (2002) identified the following ten characteristics of authenticity: real world relevance, open-ended, complex, allow for multiple perspectives, opportunities for collaboration and reflection, integration, allow for multiple solutions and result in a final product. While open-ended problems, experiments, simulations and essays are commonly used as authentic learning tasks (Linn, Baker, & Dunbar, 1991), reflections, performances and portfolios serve as authentic assessment of those tasks (Cummings, Maddux, & Richmond, 2008).

Benefits of Authentic Assessment

The use of authentic tasks and assessment in the classroom has the ability to improve teaching practice and enhance student learning (Wiggins, 1990). Potential benefits include: increased student engagement and motivation (McCarthy, 2013), enhanced preparation for professional practice, the development of higher order thinking skills such as problem solving and critical thinking (Darling-Hammond, 1993; Montgomery, 2002) and greater collaboration between teachers and students (Wiggins, 1989, 1990).

Learning is enhanced when students are engaged in relevant tasks and meaningful interactions (Kohn, 1994; Linn, Baker, & Dunbar, 1991). Flint and Johnson (2011) state that “if
students do not see the relevance of a task they become frustrated and annoyed” (as cited in McCarthy, 2013, p. 84). A study examining the engagement level of bioscience students found that students felt more engaged when they perceived the activities they were involved in to be a realistic portrayal of the work scientists do (McCune, 2009). The ill-defined, flexible nature of authentic tasks provides students with an opportunity to be actively involved in their learning as they investigate areas of personal interest and exercise choice in how they will demonstrate their learning (McCarthy, 2013). As well, the open-endedness of authentic assessment values social and cultural differences between students by recognizing that each student brings their own background knowledge to the learning environment (Herrington & Herrington, 1998).

In addition, the focus on complex, contextualized tasks supports the development of knowledge and skills that students will need to be successful later in life (Darling-Hammond, 1993). The use of experiments, simulations, and group work provides students the opportunity to solve problems, apply critical thinking skills, communicate knowledge and evaluate their learning (Wiggins, 1990). In turn, educators obtain greater consistency for evaluating student progress as they are provided with direct evidence of student thinking and skill development (Cummings, Maddux, & Richmond, 2008; Wiggins, 1990).

Finally, authentic assessment enhances collaboration between students and educators (Wiggins, 1990). The use of authentic tasks requires careful planning, successful integration and ongoing effort. Educators must effectively combine content and process standards in a manner that is meaningful to students (Madaus & O’Dwyer, 1999). These standards are communicated to students so that they are able to monitor and assess their progress (McCarthy, 2013). In addition, students are provided with timely, ongoing, constructive feedback (Reeves, Herrington, & Oliver, 2002; Wiggins, 1989). Constructive feedback that includes specific comments on
positive aspects of work, the use of faulty strategies or errors, as well as suggestions for improvement allows learners to assess their current understanding and establish goals for future growth (McCarthy, 2013).

Authentic assessment is an ongoing process requiring educators to carefully reflect on the purpose of education. Through the use of engaging tasks and problems it has the ability to foster higher order thinking skills required for success in life, as well as encouraging life-long learning.

Limitations and Implementation Challenges

While there is substantial research describing the positive effects of authentic assessment on learning, limitations exist and several factors must be addressed for successful implementation (e.g., Cumming & Maxwell, 1999; Herrington & Herrington, 1998; Madaus & O’Dwyer, 1999; McNeill, Gosper, & Xu, 2012).

A key criticism of authentic assessment is its limitation to be used for large scale assessments due to high costs and time constraints (Herrington & Herrington, 1998; Madaus & O’Dwyer, 1999, Montgomery, 2002). Critics argue that personal judgement plays a central role in evaluating authentic tasks leading to issues with reliability. Thus, it is difficult to make generalizations and comparisons (Herrington & Herrington, 1998; Madaus & O’Dwyer, 1999).

However, Herrington and Herrington (1998) state that traditional standardized tests also have issues with reliability. In addition, the use of rubrics can improve the reliability of authentic assessment by focusing the evaluator’s attention on specific criteria and levels of achievement (Montgomery, 2002).

Designing authentic tasks and assessments that target higher order thinking skills can be extremely challenging for educators, especially when they lack subject expertise (McNeill,
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Gosper, & Xu, 2012). This may result in what Cumming and Maxwell (1999) refer to as camouflage, where traditional forms of assessment are made to appear authentic. Furthermore, educators may not be able to design an appropriate instructional sequence to support successful performance by students (Cumming & Maxwell, 1999). According to Webb, Gosper, and Xu (2012), to benefit learners, educators must successfully incorporate feedback information, value judgements and improvement decisions into their assessment practices.

Finally, students may experience difficulty with authentic tasks as they often have limited experience responding to problems that require higher order thinking skills (Montgomery, 2002). Cumming and Maxwell (1999) note that both students and teachers may misinterpret the point of the task, focusing more on the medium rather than the underlying learning objective.

The Role of Digital Technology

Advancements in digital technology have the potential to serve as powerful tools in the design and assessment of authentic tasks. Online learning environments can be created to incorporate the ten characteristics of authenticity by providing students with choice as they navigate sites, increasing accessibility to information and allowing learners to communicate and collaborate with peers, teachers and subject specific experts (Reeves, Herrington, & Oliver, 2002). In addition, technology can support students in becoming self-directed learners by offering guided rather than direct instruction and providing opportunities for self-assessment and reflection (Herrington & Parker, 2013). For instance, several authors describe the use of digital technology in the creation of student learning portfolios (e.g., Cummings, Maddux, & Richmond, 2008; McNeill, Gosper, & Xu, 2012; Webb, Gibsont, & Forkosh-Baruch, 2013).
PORTFOLIOS have long been used as an assessment tool in education in order to actively involve students in their learning. Portfolios are thought to provide a richer and more holistic picture of student performance and growth than information obtained from traditional forms of assessments such as tests (Barrett, 2005). According to Paulson, Paulson, and Meyer (1991) portfolios serve as a window into student thinking, helping both the student and educator understand the learning process at a deeper level. They also encourage students to take ownership of their learning as they select and reflect on artifacts (Paulson, Paulson & Meyer, 1991). A criticism from educators of traditional paper based portfolios was the size and time it took to go through them. E-portfolios address these criticisms, allowing learners to display their work in the form of text, audio and visual while offering opportunities for timely and immediate feedback from educators. Cummings, Maddux, and Richmond (2008), assert the digital portfolios are usually more creative and can be made easily accessible to future employees.

Designing digitally enhanced, authentic learning environments is no easy task as it requires significant thought and effort (Reeves, Herrington, & Oliver, 2002). For some educators, the rapid evolution in digital technology leads to fear of incorporating it into current teaching practices (Herrington & Parker, 2013). However, failure to embrace the potential benefits of emerging technologies may create a disconnect between the classroom learning environment and the world in which students live (Herrington & Parker, 2013). If a defining characteristic of authentic assessment is its similarity to the real world, educators must overcome the barriers associated with digital technology and make effective use of its learning potential.

Conclusion

Authentic assessment involves tasks and tools that assess a student’s ability to think critically and creatively while engaged in solving relevant and contextualized problems. While it
is impossible to deny the value of authentic assessment, there is a need to ensure that its design and implementation align with learning expectations and will yield valid information about student progress.

This literature review has addressed the key characteristics, potential benefits and challenges of authentic assessment in education. However, to gain a deeper understanding of the influence of authentic assessment on learning, additional research is necessary. It would be useful to examine the following questions: 1) How might educators ensure that assessment tools accurately assess learning tasks?; 2) Is there a need for current policies in education to change with regards to assessment?; 3) If decisions are based on performance assessments, will educators teach to the assessment, thus sacrificing the validity of authentic assessment?; and finally 4) How can educators and students be supported in the transition from traditional forms of norm-referenced assessments to authentic, criteria referenced assessments?
References


