

# Measuring Student Engagement with Assessment Tasks in Higher Education

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## Abstract

Modern assessment practices emphasize student learning, skill development, and mastery, but the benefits of assessment tasks depend on effective student engagement, an area that remains underexplored in the literature. This review examines research on student engagement with a focus on engagement assessment tasks in higher education and identifies a significant gap in studies that focus on the subject. While student engagement is widely studied as a measure of educational quality and for accountability purposes, limited research has explored how students interact with assessment tasks, and how these tasks influence engagement and learning outcomes. This review evaluates various measurement approaches, including self-report surveys and virtual learning environment data, highlighting the challenges of capturing the multidimensional nature of engagement. Given these limitations, this review advocates for further empirical research using comprehensive mixed-methods approaches to better understand and enhance student engagement with authentic assessment tasks, ultimately improving learning outcomes.

## Introduction

The role of assessment practices in enhancing student learning in higher education has been widely explored and debated in the literature (e.g., Ashford-Rowe et al., 2014; Boud, 1995, 2010; Shepherd, 2000). Grounded in psycho-pedagogical theories, modern assessments aim to foster deep learning and skill development, ultimately leading to mastery (Darling-Hammond & Snyder, 2000; Shepherd, 2000; Wiewiora & Kowalkiewicz, 2019). One prominent approach is authentic assessment, designed to promote meaningful learning and the development of workplace-relevant skills (Ashford-Rowe, 2014; Gulikers et al., 2004). Such assessments involve tasks that require students to apply skills similar to those used in professional settings to solve real-world problems (Gulikers et al., 2004). Educational theories, particularly constructivism, inform the design and implementation of these assessments (Ashford-Rowe, 2014; Honebein et al., 1993; Richardson, 2003). Constructivism emphasizes the active construction of knowledge through experience (Ertmer & Newby, 2013; Fosnot, 1996; Maclellan & Soden, 2004; Richardson, 2003). Based on this approach, assessments are viewed as promoting active engagement, collaboration, and interaction—elements that align closely with the principles of authentic assessment and support learners in constructing meaning from their experiences.

Within constructivist epistemology, engagement is fundamental to learning (Ertmer & Newby, 2013; Taylor, 1998) and central to authentic assessment. Active involvement in such tasks fosters deeper understanding, skill acquisition, and mastery. The emphasis on engagement in authentic pedagogies underscores the need to examine how students interact with these assessments and to develop systematic methods for conceptualizing and measuring this engagement. Research in

this area can provide insights that enhance student participation in authentic assessment and maximize its benefits. The importance of engagement in teaching and learning has been widely recognized. Shulman (2002), for instance, equated education with engagement, arguing that the essence of higher education lies in students' interaction with diverse perspectives, ideologies, and experiences. Similarly, engagement with assessment tasks is essential for realizing the full educational potential of assessment. Therefore, valuing engagement as an integral part of education (Shepard, 2000) and understanding how best to foster it are crucial. This highlights student engagement in assessment tasks—particularly authentic assessment—as a significant area for scholarly inquiry.

This paper reviews existing research on student engagement in higher education, with a focus on task-specific engagement, to identify valid and reliable measures of this construct. Such measures are essential for investigating how students perceive and interact with specific tasks, such as authentic assessments, within the teaching and learning context. The review begins with a discussion of broader student engagement and its implications for learning, followed by an analysis of engagement at the course and assessment task levels. The findings of the literature review are then summarized. Ultimately, this review seeks to answer the following question: How do students engage with authentic assessment tasks in higher education, and what measures effectively capture this engagement?

## **Method**

To address the research question, a systematic search strategy was employed to identify empirical studies examining student engagement with authentic assessment tasks in nursing education. The databases searched included PsycINFO (1806–Ovid), ERIC (ProQuest), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Google Scholar. A combination of keywords and Boolean operators was used, such as “authentic assessment” OR “performance-based assessment” AND “nurs” AND “student engagement.” In PsycINFO and CINAHL, searches were limited to the abstract field, while ERIC searches were conducted using the “Everything except full text” option. Google Scholar results were manually screened by reviewing titles and abstracts for relevance.

Studies were included if they:

- Were empirical and published in peer-reviewed journals;
- Were published between 2003 and September 2023;
- Focused on post-secondary/higher education settings;
- Were written in English;
- Specifically examined student engagement in relation to authentic assessment tasks in nursing education.

The search initially returned 765 articles. After title and abstract screening and applying the inclusion criteria, 18 studies were selected for full review and thematic analysis. Although the review used a structured search and inclusion strategy, it adopts a narrative synthesis approach. Studies were selected based on their relevance to the research question and are discussed thematically to explore how engagement with authentic assessment is conceptualized and measured.

## **Student Engagement**

Literature consistently presents student engagement as a multifaceted construct comprising several interrelated dimensions (Hampton & Pearce, 2016; NSSE, 2023; Trowler, 2010). Fredricks et al. (2004) identified three core dimensions: behavioral, emotional, and cognitive engagement. Behavioral engagement refers to students' active participation in academic and extracurricular activities. Emotional engagement involves affective reactions, including positive and negative feelings toward academic work, peers, teachers, and the overall school environment. Cognitive engagement reflects the psychological investment students make in learning, particularly the effort and persistence they demonstrate in mastering complex concepts and skills. Trowler (2010) emphasized that each dimension exists along a continuum from positive to negative engagement, with a neutral midpoint representing non-engagement. According to her, positive engagement is productive, negative engagement is counterproductive, and non-engagement results in no discernible academic contribution.

Student engagement has been conceptualized in numerous ways across disciplines and educational contexts, further highlighting its complexity. While some frameworks emphasize psychological dimensions, others focus on behavioral patterns or institutional participation, and some integrate multiple dimensions to provide a more holistic understanding of student engagement. These varying perspectives are often shaped by contextual factors such as educational level, cultural norms, institutional missions, and pedagogical approaches. For instance, what constitutes meaningful engagement in a North American university may differ from the expectations in a non-Western setting. As such, attempts to define engagement must account for these variations. One widely recognized institutional model, the National Survey of Student Engagement (NSSE), categorizes engagement into four key areas: academic challenge, learning with peers, experiences with faculty, and campus environment (NSSE, 2023). While helpful for benchmarking and assessment, NSSE's framework reflects North American higher education context and may not fully capture student engagement in other systems. These examples illustrate just a few of the many conceptualizations that have emerged, underscoring how broad, significant, and context-dependent the concept of student engagement is within educational research.

Reflecting its broad significance, scholars have defined student engagement in diverse ways. It is widely recognized both as an indicator of educational quality (Fosnacht & Gonyea, 2018) and as a measure of students' investment in learning-enhancing practices, often shaped by institutional efforts (Kuh, 2003; Kuh et al., 2001). Kuh (2009) defined student engagement as "the time and

effort students devote to activities empirically linked to desired college outcomes, and what institutions do to encourage student participation in these activities” (p. 683). Similarly, Kuh et al. (2008) described it as encompassing “both the time and energy students invest in educationally purposeful activities, and the effort institutions put into employing effective educational practices” (p. 542). Francis (2018) framed engagement as “a student’s psychological investment, effort, and interest in learning” (p. 3), underscoring its role in facilitating participation in enriching academic experiences (Price & Baker, 2012). Given these varying definitions and models, it is clear that student engagement is shaped by context and purpose. The contextual factors surrounding learning environments influence both the expression and interpretation of engagement. As a result, establishing a universally accepted definition remains a challenge. While some conceptualizations adopt a narrower lens, they may still capture the construct effectively within specific educational contexts.

### **The Importance of Student Engagement**

Assessing the quality of higher education and measuring students' educational experiences and learning outcomes poses significant challenges (Fosnacht & Gonyea, 2018; Kuh et al., 2001). Consequently, higher education institutions and stakeholders prioritize the understanding of student engagement as a means of evaluating educational quality and students' investment in their education (Bryson & Hand, 2007; Fosnacht & Gonyea, 2018; Kuh, 2001). This shift has led to a growing emphasis on student engagement to enhance both the overall quality of education and student experience. Fosnacht and Gonyea (2018) assert that "the measurement of student engagement has emerged as a viable alternative for institutional assessment, accountability, and improvement efforts" (p. 62). Moreover, it is directly correlated with students' learning experiences (Carini et al., 2006; Thomas, 2012). Consequently, indicators of student engagement serve as reliable measures of educational quality (Kuh, 2001) and provide valuable insights that enable universities to enhance their educational practices (Beer et al., 2010).

Extensive research has highlighted the benefits of student engagement (Carini et al., 2006; Trowler, 2010). It is widely recognized as a strong predictor of student learning and academic progress (Carini et al., 2006) and is deemed essential for learning (Foronda et al., 2020). Shulman (2002) argued that engagement is the first stage of student learning, emphasizing that the fundamental purpose of higher education is to facilitate engagement with diverse perspectives, ideas, and experiences. He contended that engagement is not merely a means of learning, but an essential objective of education itself. Student engagement is associated with academic success, learner motivation, student retention, and institutional effectiveness (Beer et al., 2010). Additionally, it plays a critical role in fostering student autonomy (Bryson & Hand, 2007). Beyond academic success, engagement is linked to post-graduate quality of life. Carini et al. (2006) suggested that being engaged is a valuable trait for leading a successful life after graduation as it cultivates the discipline necessary for lifelong learning and personal development. Shulman (2002) further emphasized that student engagement fosters habits that contribute to continuous intellectual and personal growth. Hence, student engagement is a vital component of the educational process. As higher education institutions strive to enhance the quality of education,

understanding and fostering student engagement have become increasingly essential. The insights gained from measuring engagement can inform educational practices, leading to improved learner experiences and outcomes (Kuh et al., 2001). Ultimately, prioritizing student engagement not only prepares students for academic success, but also equips them with the skills and habits necessary for lifelong learning and meaningful contributions to society. As the landscape of higher education continues to evolve, ongoing research and commitment to enhance student engagement will be crucial in shaping the future of education.

### **Measurement of Student Engagement: Engagement Indicators**

Measuring student engagement is a complex task because of its broad, multidimensional nature, and the influence of various contextual factors (Beer et al., 2010). These complexities also make it difficult to establish clear links between engagement and learning outcomes (Beer et al., 2010; Bulger et al., 2008). Consequently, researchers face significant challenges in developing precise measurement approaches for student engagement (Beer et al., 2010). Nonetheless, interest in understanding student engagement in higher education continues to grow, as reflected in extensive scholarship on the subject.

Given these challenges, researchers have explored various indicators to assess student engagement, each with its own strengths and limitations. These indices serve as direct and indirect measures of engagement and learning (Carini et al., 2006; Klein et al., 2005). Direct indicators typically include achievement test scores such as the Graduate Record Examination (GRE), Scholastic Assessment Test (SAT), licensure examination scores, and pass rates. Student portfolios and similar assessment methods have also been considered direct indicators. However, these have been criticized for their inconsistencies in demonstrating student engagement, while grades are often viewed as unreliable because of grade inflation (Klein et al., 2005). Indirect indicators of student engagement include graduation rates, awarded degrees, and self-reports of learning and educational experiences (Klein et al., 2005; Kuh et al., 2001). Other indirect indicators include improved communication, equitable workload distribution, and better group dynamics (Adesina et al., 2023). Indirect measures are generally more cost-effective and easier to collect (Carini et al., 2006; Klein et al., 2005). Additionally, direct measures may be limited in scope, as standardized tests cannot capture every aspect of student learning (Kuh et al., 2001).

In higher education, surveys are the most employed method for measuring student engagement (Kuh et al., 2001), particularly in comparison with direct measures (Carini et al., 2006). This preference is primarily due to the lower cost, ease of development, and efficient administration of self-report surveys (Carini et al., 2006). In addition to being cost-effective, well-designed surveys offer meaningful insights into students' experiences, including their ability to collaborate with others and the extent to which their values and ethics evolve (Kuh, 2003; Kuh et al., 2001). However, surveys are not without limitations, as self-reported data primarily reflect respondents' perceptions rather than objective measures of engagement (Klein et al., 2005; Scharkow, 2016). The accuracy of surveys depends on respondents' ability and willingness to provide truthful and precise information (Aaker et al., 1998, as cited in Kuh et al., 2001; Kuh, 2001). Despite these limitations, surveys remain an essential component of multimethod approaches for measuring

engagement, as a comprehensive assessment typically incorporates multiple indicators (Carini et al., 2006; Klein et al., 2005). Qualitative methods such as interviews and peer assessment were used to explore and measure student engagement.

### **Measuring Student Engagement at the Task Level**

Research indicates that student engagement varies both within and across institutions, with intra-institutional variations being more pronounced (Kuh, 2003). Engagement levels also fluctuate across classrooms, learning activities, and assessment tasks (Bryson & Hand, 2007). These variations highlight the complexity of student engagement and suggest that a deeper understanding of its dynamics across different settings is essential for improving educational practice. However, limited research has explored the specific impact of assessment on student engagement (Francis, 2018; Adesina et al., 2023), largely because of limited investigations of engagement at the task level. This gap underscores the need for further studies on engagement within specific contexts such as programs, courses, learning activities, and assessments (Francis, 2018). Some measures of student engagement in these narrow contexts are discussed below.

### **Measurement of Task-Specific Engagement in Virtual Learning Environments**

Virtual Learning Environments (VLEs), often referred to as Learning Management Systems (LMS), are now central to higher education infrastructure (Beer et al., 2010; Coates, 2007; Dale & Land, 2007; Holmes, 2018). These platforms support broader student engagement by centralizing course content, facilitating communication, and enabling access to learning materials, assessment tools, and interactive features (Blin & Munro, 2008). Through their design and functionality, VLEs promote consistent interaction and participation, which has been linked to deeper learning and improved academic outcomes (Knight, 2010). Additionally, they generate extensive behavioral data—such as login frequency and content interaction—that enables large-scale analysis of student engagement (Beer et al., 2010).

While VLEs support various educational functions, their role in shaping assessment-specific engagement deserves particular attention. They offer structured access to assessment materials, submission portals, and feedback tools, all of which contribute to student accountability. For example, Holmes (2018) implemented a low-stakes, continuous assessment model and tracked online behaviors such as time spent on tasks and content interactions. Results showed increased engagement compared to prior cohorts, suggesting that well-designed assessments within VLEs can help sustain student effort over time.

Quantitative instruments have also been employed to assess engagement in these contexts. Dixon's (2010, 2015) Online Student Engagement Scale (OSE), though not tailored solely to assessments, evaluates engagement across four dimensions: skills, emotions, participation, and performance. Validation studies using VLE data found strong correlations between self-reported engagement and behaviors like quiz participation and forum activity. Complementing survey methods, Bulger et al. (2008) used behavioral tracking to show that interactive, simulation-based

assignments significantly increased on-task behavior compared to traditional tasks, as measured by the Classroom Behavioral Analysis System (CBAS). These findings suggest that integrating assessment into immersive digital tasks enhances measurable engagement.

However, poorly designed digital platforms may inadvertently hinder engagement. Over-reliance on automation or a lack of clarity can particularly affect students with limited digital literacy or self-regulation. Furthermore, tools like the OSE may not capture affective aspects of engagement, such as anxiety or intrinsic motivation. This underscores the importance of integrating qualitative methods with quantitative tools to fully understand how students engage with assessments in digital learning environments.

Emerging technologies like Virtual Reality (VR) have expanded the landscape of assessment in VLEs, especially in applied disciplines. In nursing education, for example, VR-based assessments have been used to evaluate procedural skills in immersive environments (Fealy et al., 2019). Thompson et al. (2020) examined student engagement with VR simulations using an adapted version of the Perceived Engagement Questionnaire (PEQ) (Hu et al., 2009), finding that students reported high levels of engagement when assessment tasks were experiential and interactive. These findings highlight the potential of innovative digital platforms to deepen engagement when assessments are authentic, contextual, and well-integrated into course design.

### **Student Engagement with Authentic Assessment**

Research on student engagement with assessments focuses on determining whether students actively participate in assessment activities and whether this involvement benefits their learning. Specifically, it examined the effectiveness of assessment tasks in enhancing learning outcomes and overall student development. While this area of research may seem narrower than broader studies on student engagement, it is essential to understand the role of both formative and summative assessments in fostering learner autonomy and achieving the desired competencies (Zepke, 2015). Despite extensive research on student engagement (Trowler, 2010; Zepke, 2015), studies specifically addressing engagement in assessment tasks and their educational benefits remain limited. Consequently, much remains unknown about the relationship between different assessment types, their impact on student engagement, and their influence on learning outcomes (Francis, 2018; Adesina et al., 2023).

In particular, formative assessments are believed to enhance student engagement (Cook & Babon, 2017; Dobson, 2008) by fostering deeper interactions with learning content, leading to meaningful engagement and improved learning (Hughes et al., 2020). Authentic assessment tasks, which often incorporate formative elements, provide opportunities for deep learning, knowledge acquisition, and skill development (Trigwell & Prosser, 1991). Various authentic assessment approaches, such as portfolios (Thanaraj, 2012), peer assessment (Adesina et al., 2023; Casey et al., 2011; Kearney, 2013; Kearney et al., 2016), and self-assessment (Kearney, 2013)—have been implemented to enhance student engagement. As different assessment tasks influence engagement in distinct ways (Hughes et al., 2020), further research on how students

engage with authentic assessments could inform the effective design and use of assessments for maximum educational benefit.

Engagement is crucial for fostering student autonomy, highlighting the importance of pedagogies that actively promote student engagement in higher education (Carini et al., 2006; Casey et al., 2011). For example, peer assessment has been shown to enhance engagement by encouraging collaboration and making the assessment process more enjoyable (Casey et al., 2011; Kearney et al., 2013). Similarly, e-portfolios serve as valuable authentic assessment tools for both formative and summative purposes, providing evidence of students' work quality, while promoting reflection on learning experiences and personal development (Yang et al., 2016).

The literature indicates that student engagement with assessment tasks can be measured through a range of methods, including surveys (e.g., Hughes et al., 2020), interviews (e.g., Casey et al., 2011; Flaherty et al., 2011), peer-assessment (Adesina et al., 2023), and evaluations of the influence of formative assessments on summative performance (Gijbels & Dochy, 2006). Some studies have combined these approaches to offer a more holistic perspective (Adesina et al., 2023; Raymond et al., 2013).

Casey et al. (2011), using a qualitative interpretive descriptive design, investigated the role of peer assessment in enhancing student engagement. Their interviews revealed that peer assessment fostered enjoyment, collaboration, and autonomy. Nonetheless, concerns were raised about grading reliability, fairness, and associated challenges. Similarly, Flaherty et al. (2011) employed focus groups to explore students' perceptions of participation as an assessment strategy. Their findings highlighted that while participation encouraged motivation and personal growth, its effectiveness relied heavily on transparent criteria and diverse evaluation methods. Notably, students perceived that grades were not always necessary for encouraging active participation. Hughes et al. (2020) adopted an exploratory mixed-method design to study engagement among undergraduate nursing students. The intervention involved low-stakes weekly participation tasks that allowed students to interact independently with course material before group tutorials. Drawing from both virtual learning environment (VLE) analytics and student surveys, the study found that weekly quizzes enhanced both engagement and learning experiences. This format was particularly effective for students with lower English proficiency, helping them to build comprehension and confidence. Raymond et al. (2013) also used a mixed-method approach—including surveys, focus groups, and instructor discussions—to examine engagement with authentic assessment tasks. Their results emphasized that such tasks fostered skill development and boosted student confidence through real-world application and peer collaboration. However, participants expressed discomfort with being recorded during assessments, citing increased anxiety. Adesina et al. (2023) examined student engagement in group-based authentic assessments that incorporated peer evaluation. Thematic analysis of interview data revealed cognitive, behavioral, and affective dimensions of engagement. Peer assessment was found to promote a sense of ownership, fairness, and consistent contribution, as students were more motivated when their input was visible and evaluated by peers. The authentic, collaborative nature of the tasks—emphasizing problem-solving and professional



relevance—deepened both cognitive and emotional engagement. Peer feedback also served as a measure of engagement, capturing both behavioral participation and affective responses. This underscores the value of integrating structured peer assessment with reflective qualitative methods to comprehensively assess student engagement. Finally, Francis (2018) investigated the use of performance rubrics and student perceptions to assess engagement with assessment tasks. Rubrics were employed not only as evaluative tools but also as mechanisms for promoting task-specific engagement. Quantitative findings showed a strong correlation between rubric-informed tasks and academic achievement. Additionally, student feedback suggested that rubrics clarified expectations, supported self-assessment, and improved performance. The study recommended the integration of rubric performance data with student self-reports and qualitative insights to provide a more complete understanding of engagement.

These studies, did not, however, consider in detail the diverse backgrounds and varying levels of prior knowledge and experience among students. While these studies address methods of measuring engagement and provide insights into peer assessment, anxiety, and the benefits of formative assessments, a deeper exploration of how different demographic and personal factors such as socioeconomic status, cultural background, or prior educational experiences influence student engagement with assessment tasks is required. Understanding these factors could provide a more nuanced perspective on engagement and help tailor assessment strategies to meet the needs of all students better.

Overall, studies on student engagement with assessments demonstrate that task-level engagement provides valuable insights into how assessments impact student learning. These studies reveal how students approach different tasks, and how both their approaches and the tasks themselves shape their learning experiences. Importantly, they highlight the necessity of multimethod approaches in engagement research, allowing for a more nuanced understanding of how various assessment strategies influence learning outcomes. Just as broader student engagement research informs instructional practices, investigations of assessment-specific engagement can guide the design of assessments to improve teaching and learning in higher education.

## **Conclusion**

This literature review explored the conceptualization of student engagement and the methods used to measure it in higher education, with a focus on student engagement with assessment tasks, particularly in the context of nursing education. This review highlights a significant gap in research on engagement with assessment tasks. While a substantial body of scholarship has examined broader student engagement in higher education (Trowler, 2010; Zepke, 2015), studies specifically investigating engagement with assessment remain scarce (Adesina et al., 2023; Francis, 2018). Despite the strong emphasis on learning assessment in higher education and the potential formative benefits of various assessment strategies, research on how these tasks contribute to student engagement and learning outcomes is limited. Additionally, the effectiveness of different authentic assessment tasks in promoting engagement has not been

explored extensively. Furthermore, many existing studies have failed to incorporate student perspectives, overlooking the learner's voice in assessing the value of these tasks (Kahu, 2013).

To gain a more comprehensive understanding of how students engage in assessment tasks and develop strategies that foster deeper engagement, further research in this area is imperative and necessary. Investigating engagement in both summative and formative authentic assessments will expand the body of knowledge of student engagement and enhance the role of assessment as a potent learning tool. Future empirical studies should adopt a multifaceted approach that integrates both quantitative and qualitative methodologies, drawing from diverse data sources such as surveys, self-report instruments, interviews, systematic observations, and instructor evaluations (Carini et al., 2006; Klein et al., 2005). Such research should meticulously consider demographic variables and personal factors, including prior studies and antecedent experiences, to elucidate the nuanced interplay between individual characteristics and engagement in assessments. By focusing on the granular aspects of engagement with specific assessment tasks, researchers can uncover the intricate mechanisms by which engagement manifests and influences learning outcomes. This targeted approach will not only contribute to the theoretical understanding of assessment engagement but also provide deeper insights into how assessment tasks shape student learning and engagement, ultimately informing evidence-based assessment practices in higher education.

### **Scope and Limitations**

The review intentionally focuses on authentic assessment practices within nursing education, such as clinical case studies, clinical placements, clinical simulations, Objective Structured Clinical Examinations, and portfolios. The primary objective was to identify validated, task-specific measures of student engagement relevant to this field. Although this disciplinary and methodological focus allowed for a targeted review, it is acknowledged that it may have excluded relevant literature from other disciplines or broader educational contexts. This limitation is particularly important given the growing interest in authentic assessment across higher education. Future reviews might benefit from expanding the search to include studies from a wider range of disciplines to gain a more holistic understanding of student engagement with assessment tasks.

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The author is an educator with over a decade of secondary school teaching experience. He is currently a graduate student in Learning Sciences at McGill University in Montreal, Canada. His research focuses on learning assessment, with particular interest in student engagement in authentic assessment and gradeless learning. He is also interested in the role of education in national and international development, as well as the economics of education.

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