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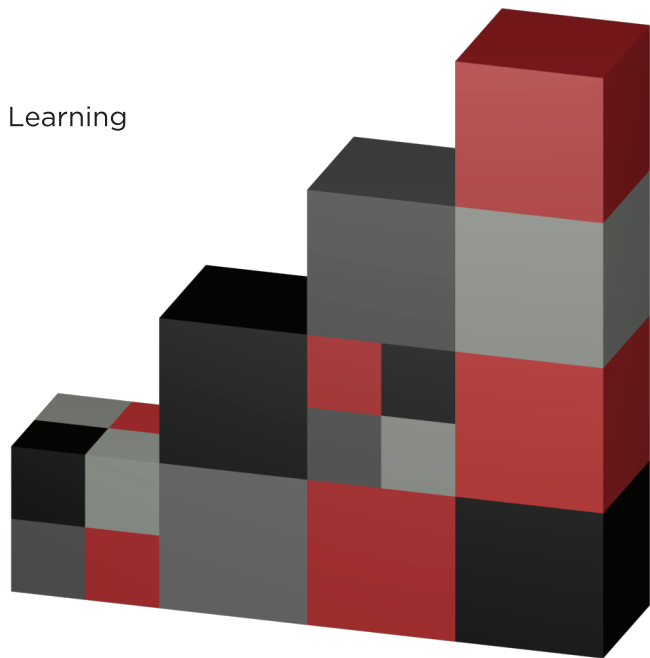
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ASSESSMENT



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of

STUDENTS' LEARNING

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Introduction

Assessment is an essential dimension of our learning experiences. In addition to determining and certifying the degree to which learning outcomes have been met, assessment “directs attention to what is important. It acts as an incentive for study. And it has a powerful effect on what students do and how they do it.” (Boud & Falchikov, 2007, p. 3). The meaning and scope of “assessing student learning” have evolved as our understanding of how assessment practices can motivate and engage learners, and how reflection and feedback on these experiences can have a significant impact on learning (Fink, 2013; Weimer, 2013). Contemporary conceptions of assessment of student learning include all of the ways we systematically provide learners with opportunities to demonstrate their learning with respect to clearly articulated outcomes, generate evidence of that learning, and receive feedback to enhance learning, before we make professional judgments about the extent to which learning outcomes are ultimately achieved (Boud, 2007; Fink, 2013; Wiggins, 1998). The integrity of these judgments is critical. The results are used by multiple stakeholders as evidence of achievement and potential, and influence future opportunities including access to advanced study, scholarships and awards, and employment (Walvoord & Anderson, 2011; Weimer, 2013). Effective assessment practice is an important, complex and intellectually engaging experience – for teachers and learners.

Notwithstanding the impact of effective assessment practices on learning, a notable gap in postsecondary planning and policy documents is an intentional and clearly articulated commitment to a learning-focused approach to assessment. Universities commonly dedicate efforts to enable student success on teaching and learning activities, rather than on assessment reform (Boud, 2000; 2007; 2010, Nicol, 2004; 2007). This challenge is well-evidenced in the scholarly literature (Heinrichs, Berntosky & Danner; 2015; Kaslow, et al., 2007; Luth, 2010; Ndoye & Parker, 2010), and through this discussion paper, we endeavor to catalyze a dialogue around research-informed assessment principles that can guide approaches to assessment in diverse contexts.

The scholarship surrounding assessment practices in postsecondary education is both diverse and broad in scope, and reflects a growing trend towards a learning-centered approach to assessing students’ learning (Boud & Falchikov, 2006; Kaslow, et al., 2007). Underlying effective assessment practices are the institutional principles that serve to provide a conceptual foundation for a mutual understanding, a shared definition of assessment, a strong expression of assessment expectations, and the use of results to enhance future teaching practice and student learning (Ndoye & Parker, 2010). Based on an in-depth literature review (Lindstrom,

2016), we offer a focused and comprehensive overview of the guiding principles that underlie effective assessment models and/or practices in post-secondary education. These principles inform the articulation of principles that can provide a useful guiding framework for assessment practice at the University of Calgary. This guide provides an overview of relevant topics that include:

- What principles characterize effective assessment in post-secondary education?
- How can these guiding principles be translated into practice?
- How can these principles be incorporated to enhance student learning?
- Why are the principles of student assessment important?

The Principles of Assessment and their Practice

The overview of principles of effective assessment summarized below emerged from a literature review conducted in 2016 using the following key phrases: assessment principles in higher education; post-secondary principles of assessment; assessment theory in higher education; and student-focused assessment in higher education. These principles provide an explicit framework that can guide the development of assessment procedures, clarify our thinking about meaningful assessment, and generate discussion about assessment practices that best support student learning (Stowell, 2004). These principles are the “big ideas” that transcend specific assessment practices across disciplines and fields of study. They do not prescribe assessment practices in a particular context. Across diverse discipline contexts, guiding principles help us reflect on, critically assess, and have confidence in the effectiveness of a critical dimension of our students’ learning experiences - how we assess their learning. Specific assessment strategies are determined by individual teachers, based on their discipline and teaching expertise.

Table 1: Summary of major themes emerging from the scholarly literature related to assessment principles in postsecondary education.

Assessment Principle Themes	Translation into Practice
Conceptualizing Assessment	
1- Effective assessment requires a culture shift that moves away from focusing on evaluating student performance in isolation to evaluating student learning as part of a	Plan and distribute assessments to provide opportunities to practice application of knowledge and skills and integrate learning, and to allow students to receive feedback on their learning.

Assessment Principle Themes	Translation into Practice
comprehensive design to support student learning. ¹	
2- Assessment strategies are authentic in that they reflect the work of our disciplines and respect the integrity of epistemologies. ²	Assessment tasks represent aspects of the actual work of our disciplines, adapted to the knowledge level of a particular group of learners. (e.g., provide opportunities for text analysis, case studies, data analysis, problem solving)
3- Assessment is a developmental and sustainable process that fosters self-regulated learning, academic integrity and the ability for students to be life-long learners. ³	As part of selected assessment activities, integrate elements of reflection, self-assessment and goal setting, focusing on how students can use assessment results to influence future work.
4- Assessment is a continuous process that is embedded in the culture of the institution, and curriculum (at the program and course-level), as opposed to a course component meant solely to finalize a specific unit of student learning. ⁴	Reflect on how assessment results can contribute to critical analyses that help identify bottlenecks or gaps to enhance a course or program learning experience.
5- Assessment should include discussion about the assessment process between students and teachers to foster a learning partnership that can evolve based on student learning student feedback. ⁵	Explain the rationale for the assessment strategies used and how the experiences of previous students have informed those choices. Similarly, a strategy for reflection and debriefing on the results of an assessment activity can have a strong impact on both teaching and learning decisions.

¹ Biggs & Tang, 2011; Boud & Associates (2010); Boud (2000); Brown (2004); Brown & Race (2013); Gibbs & Simpson (2004); Kaslow, et al. (2007); Wiliam, (2011).

² Brown, 2004; Brown & Race (2013); James, McInnes & Devlin (2002); Kaslow, et al. (2007).

³ Boud (2000); Brown (2004); Brown & Race (2013); Kaslow, et al. (2007); Nicol (2007); Weimer (2013); Wilson & Scalise (2006).

⁴ Brown (2004); James, McInnes & Devlin (2002); Ndoye & Parker (2010); Stassen (2012).

⁵ Boud & Associates (2010); Laurillard (2002); Nicol (2010); Nicol & Macfarlane-Dick (2004).

Assessment Principle Themes	Translation into Practice
<p>6- There is a balance between summative and formative assessment processes and also some degree of separation between grades and feedback distribution.⁶</p>	<p>Not all assessment activities have to be graded. Short learning activities/questions (for individuals or groups) requiring a response can provide valuable practice opportunities and also feedback on students' levels of comprehension.</p>
<p>Assessment practice</p>	
<p>7- Fair assessment processes are transparent, providing students with clear expectations on what, how and why they are being assessed, and with quality information regarding their progress and status of their learning.⁷</p>	<p>Explain the rationale for assessment strategies used and how they are designed to support, as well as determine, learning. Explicitly describe the expectations for assessment tasks (e.g., provide a rubric or "marking guide" to help students understand the elements of, and expectations for, a task). Rubrics are particularly important in courses in which graduate assistants (teaching) assist with grading. They can also be used to guide specific feedback to students.</p>
<p>8- Assessment strategies are aligned with learning outcomes and instructional strategies.⁸</p>	<p>Engage students in learning activities and assessment strategies that connect transparently to learning outcomes. Learning activities provide opportunities to check understanding and receive feedback, and assessments provide further practice, as well determining the extent to which learning outcomes are achieved (e.g., if learning outcomes include applying knowledge to solve problems or analyzing a particular</p>

⁶ Boud (2000); Boud & Falchikov (2006); Brown & Race (2013); James, McInnes & Devlin (2002).

⁷ Biggs & Tang, 2011; Brown & Race (2013); Evans (2013); Green & Andrade (2010); James, McInnes & Devlin (2002); Luth (2010); Nicol & Macfarlane-Dick (2004); Richardson & Coates (2014).

⁸ Brown (2004); Brown & Race (2013); James, McInnes & Devlin (2002); Laurillard (2002); Luth (2010); Wilson & Scalise (2006).

Assessment Principle Themes	Translation into Practice
	genre of literature, then learning activities provide opportunities to practice these skills before summative assessment requiring these tasks takes place).
9- Assessment feedback is conceptualized as a ‘feed-forward’ approach: future-focused, action-oriented and used to improve student learning. Effective feedback is provided to students with an understanding that they can use it to improve future work. ⁹	Focus feedback on what students should continue doing and how they can improve their future efforts. Some instructors ask students to choose an element of previous feedback and describe how they have addressed it in a future assignment.
10- Multiple opportunities for timely feedback on students’ learning progress are provided throughout a course so students have sufficient time to practice, reflect on the results and incorporate previous feedback. ¹⁰	Provide multiple and different opportunities (graded or ungraded) for students to demonstrate learning and to receive feedback. Feedback close to the assessment event has the greatest impact on learning. Assessments provide practice opportunities essential for learning.
11- Assessment is designed to motivate and foster student learning and confidence, rather than be a source of anxiety. ¹¹	Provide clear expectations about assessment activities and give students opportunities to practice, through learning activities, the kinds of tasks they will be asked to complete during assessment activities.
12- A variety of assessment methods are utilized with some level of student choice in order to maximize student engagement and involvement in the assessment process. ¹²	Use different assessment strategies to build communication skills and to provide opportunities for students to demonstrate their learning in different ways. Offering students choice in topics or tasks, while still

⁹ Boud (2000); Boud & Falchikov (2006); Brown & Race (2013); Drew, Thorpe & Bannister (2002); Evans (2013); Gibbs & Simpson (2004); Luth (2010); Wiggins, (1998).

¹⁰ Brown & Race (2013); Gibbs & Simpson (2004); Luth (2010).

¹¹ Brown & Race (2013); Drew, Thorpe & Bannister (2002); James, McInnes & Devlin (2002).

¹² Boud & Associates (2010); Evans (2013); Brown & Race (2013); Gibbs & Simpson (2004); James, McInnes & Devlin (2002); Richardson & Coates (2014).

Assessment Principle Themes	Translation into Practice
	assessing the intended learning, motivates student effort.
13- Ample opportunities are provided for students to self-assess, and reflect on their own work to enhance self-regulated learning. ¹³	Integrate self-assessment in the assessment plan for a course (e.g., an analysis of how students prepared for an exam/wrote an essay and what they would do differently in the future) promotes engagement in learning and the development of independent learning.
14- Effective, reciprocal peer-assessment processes are premised on formative assessment principles to facilitate learning. ¹⁴	Facilitate low-risk exchanges of respectful peer feedback, guided by a rubric or series of questions, to help feedback providers and receivers gain insights about the work under development.
15- Assessment processes and tasks reflect cultural and individual diversity. ¹⁵	Where it is appropriate, create opportunities to either set assessment tasks in diverse relevant contexts or encourage students to integrate their personal perspectives. Tasks that integrate examples, or forms of expression that reflect students' cultures or experiences, help build meaningful knowledge structures.
Support for Assessors	
16- Teachers recognize the importance of assessment and use assessment as a core element in planning instruction. Resources are invested to ensure that appropriate professional development opportunities are	Seek out meaningful conversations with colleagues about assessment challenges and how to access resources to enhance discipline-appropriate assessment practices and course design support. Detailed guidance for graduate assistants (teaching) is

¹³ Boud (2000); Brown (2004); Evans (2013); Kaslow, et al. (2007); Luth (2010); Nicol, 2009; Nicol & Macfarlane-Dick (2004).

¹⁴ Boud (2000); Boud & Falchikov (2006); Brown (2004); Brown & Race (2013); van den Berg, Admiraal, & Pilot (2006).

¹⁵ Boud (2000); James, McInnes & Devlin (2002); Kaslow, et al. (2007).

Assessment Principle Themes	Translation into Practice
<p>provided to academic staff and teaching assistants so they can gain the required expertise on assessment theory, strategies, and ways to effectively utilize assessment data.¹⁶</p>	<p>essential to fair, consistent, learning-focused assessment experiences.</p>
<p>17- Teachers collect and use assessment data to inform the development of new assessment strategies and instructional interventions.¹⁷</p>	<p>Analyze and reflect on patterns of student success on assessments, and use the results to revise assessment tasks, or work with students to understand and correct misconceptions and focus on areas that need strengthening.</p>
<p>Institutional Support</p>	
<p>18- A consistent institution-wide grade scale system is clearly defined.¹⁸</p>	<p>Use the University’s established grade scale, understand the meanings of those grade standards, and apply them consistently across individual programs and courses.</p>
<p>19- Post-secondary institutions strive to create a culture of assessment that entrenches assessment into policy frameworks, guides change processes, and increases overall organizational sustainability around supporting student learning.¹⁹</p>	<p>Universities are encouraged to create policies to support evidence-based decision making with respect to processes including curriculum development and review, and the recognition of teaching in faculty work.</p>

¹⁶ Boud & Associates (2010); Evans (2013); Havens (2012); Heinrichs, Berntosky & Danner (2015); Kaslow, et al. (2007).

¹⁷ Kaslow, et al. (2007); Stassen (2012).

¹⁸ James, McInnes & Devlin (2002); Luth (2010).

¹⁹ Heinrichs, Berntosky & Danner (2015); James, McInnes & Devlin (2002); Ndoye & Parker (2006); Stassen (2012).

Integrating Principles of Assessment for Broader Impact

As evidenced in Table 1, guiding principles for assessment of student learning arise out of a rich and diverse scholarship that is centred on improving student learning. The findings from each source are elaborated in the literature review (Lindstrom, 2016), but several key findings about their impact on learning and teaching are summarized below.

Enhancing teaching and learning culture

From an institutional perspective, Heinrichs, et al., (2015) contend that explicit guiding principles respond to an increasing need for accountability and transparency in student grading and assessment, and suggest that “[I]nstitutions are looking for ways to implement successful approaches for assessment or the assurance of student learning to ensure it is taken seriously by faculty, and is integrated into the fabric or culture of the institution” (Heinrichs, et al., 2015, p. 60). In a similar vein, Boud (2010) argues assessment principles “can be used to focus debate and action on those features of assessment that have the greatest impact on learning and the quality of courses” (para. 25). Moreover, Boud’s (2000) suggestions for developing sustainable assessment are meant to contribute to formative assessment activities focused on student learning across the various levels in academic communities – from instructor, to program, to institutional policy. Additionally, James et al. (2002) maintain that effective assessment is a way to bridge teacher and student goals in that for teachers, assessment is often the last component to consider in curriculum planning, while students’ first focus is on how they will be assessed. Thus, “repositioning student assessment as a strategic tool for enhancing teaching and learning” (James et al. 2002, p. 4) becomes a vital and relevant endeavor due to the high-stakes nature of assessment. They further report that students “wish to see a clear relationship between lectures, tutorials, practical classes and subject resources” (James et al. 2002, p. 3). Clearly, well designed assessment principles such as those identified above, align with a more learning-centered approach to teaching and learning (James et al., 2002; Nicol, 2007).

From an institutional perspective, underlying principles of equity and justice (Stowell, 2004) are important in better understanding our own institutional culture of assessment. Ndoye and Parker (2010) provide important insights about the role of building bridges for communication with student organizations to foster a culture of assessment. Likewise, Fuller, Skidmore, Bustamante & Holzweiss’s (2016) work is helpful when attempting to define and create a culture of assessment unique to our institution and reminds us that we must be aware of and consider factors that may impede the development of assessment culture. Significantly, we must consider and accommodate a reality that there exists a great degree of judgment involved in setting standards and that assessment, in general, is inherently a value-laden activity. We can mitigate bias by examining and understanding the interplay between the social

constructions of equity, justice, decision-making, student achievement and monitoring procedures (Fuller et al., 2016). Our challenge is to determine what principles are most useful for our purposes and move towards customizing established principles to support critical examination and fine-tuning of our own assessment practices.

Developing teaching practice and course design

From a learning-centred perspective, assessment principles are important in assisting teachers to realign their assessment practices in order to be more responsive to the needs of their students (Nicol & Macfarlane-Dick, 2004). Tisani's (2008) examination of the underlying theoretical frameworks of educational assessment, although not considered principles of assessment, is useful in that it requires us to take a more critical approach to examining our own assessment practices to identify areas for growth. Brookhart (2004) illustrates how guiding principles of assessment will ultimately assist us to better organize assessment practice, identify effective practices, and allow us to effectively utilize information and empirical data to not only enhance students' educational experience but also to focus our individual and collective teaching goals and activities. Notably, Wiliam's (2011) discussion on assessment emphasizes the importance of acknowledging "that the use of assessment information to improve learning cannot be separated from the instructional system within which it is provided" (p. 4) and that a principles-guided examination of assessment practices is a compelling basis for strengthening the alignment of learning outcomes, learning activities and assessment strategies. Few experiences focus our attention on our plans for learning as sharply as when students are not successful on an assessment task.

The integration of strategies that foster students' ability to self-assess align with a clear understanding of the powerful influence self-assessment has on students' learning, and on their overall university learning experience (Boud & Falchikov, 2006). When we integrate opportunities for students to assess their own work, they will better understand what constitutes good work. The use of exemplars is one way to achieve this in addition to implementing meaningful student self-assessment techniques.

Assessment principles can also be used to actively inform course design process (James et al., 2002; Nicol & Macfarlane-Dick, 2004). Green and Andrade's (2010) work encourages instructors to reflect on the alignment between authentic learning experiences in or across disciplines, assessment and course outcomes in order to gain a deeper appreciation for the challenges surrounding assessment. Notably, they illuminate that instruction and equity in learning opportunities are better enabled through the development of assessment principles that promote collaborative dialogue and healthy discussion around assessment beliefs, and

highlighting the fact that assessment reform is a holistic endeavor involving multiple stakeholders.

Dickson and Trembl's (2013) examination on teaching, learning, and assessment processes serve as a starting point for comparing the impacts of pedagogical strategies. Notably, they highlight the fact that integrating assessment results with the impacts of teaching and learning can offer innovative developments in teaching strategies thereby enhancing students' learning. Moreover, the dissemination of the results of these practices contributes to a literature base that teachers and scholarship of teaching and learning (SoTL) practitioners rely on. For our purposes, their discussion on collaborative inquiry meant to integrate SoTL and assessment processes informs our understanding of how assessment is not an isolated endeavor exclusively shouldered by the teacher (Dickson & Trembl, 2013). Instead, we need to focus our efforts to provide an open platform for collaboration so faculty can better determine the areas where course-based and program-based assessment can be integrated and inform each other (Simmons, 2016; Kenny et al., 2016).

Developing skills for learning, work and life

Hunaiti et al. (2010) demonstrate how the implementation of research-based inquiry and assessing the learning associated with it can provide institutions with the means to improve student experience, develop academic skills and better prepare learners for future careers. More specifically, Richardson and Coates (2014) suggest that the study of cross-cultural assessment that spans national borders is only in its emergent stages with current initiatives "focusing greater attention on the educational function of higher institutions but have not included the provision data on the outcomes of teaching and learning" (p. 826). Their work is relevant to university education because "[i]n addition to meeting local demands, it is also vital that higher education institutions prepare students for careers and lives that are likely to involve them in a range of contexts, activities and communities. And increasingly, many of these will be global" (Richardson & Coates, 2014, p. 833).

Suggestions provided by Boud (2000) offer opportunities for us to reflect deeply on our current understandings around assessment in order to make space for different ways of thinking about assessment practice, in general. Boud argues that sustainable assessment is as much a way of thinking as it is a way of doing, recognizing that students do not learn in isolation from their past, present and future experiences. Boud (2000) challenges us to teach, and find sustainable ways of measuring the learning attached to these lessons, in ways that help students integrate their learning so that is available to them beyond the context of a course and throughout their lives.

Enhancing formative assessment

Nicol and Macfarlane-Dick (2004) argue that formative assessment can be a conduit for sharing educational objectives with students, measuring progress, and enabling “students to restructure their understanding” (para. 2) to increase skills and capabilities. Consequently, principles that guide effective feedback practices support students in becoming self-regulated learners and raises awareness about the important “role of feedback on learners’ motivational beliefs and self-esteem” (Nicol & Macfarlane-Dick, 2004, para. 3). From a more general perspective, Nicol and Milligan’s (2006) work on applying principles of good feedback is important because it highlights the powerful association between self-regulated learning and assessment, and the fact that student’s motivation to learn is constructed “on their appraisal of the teaching, learning and assessment context” (p. 8). Nicol (2009) provides an explicit demonstration of how principles of formative assessment are applied in authentic learning situations to increase retention rates and foster self-regulated learning in students. Moreover, the quality and frequency of feedback can often influence whether first-year students continue in their studies (or drop out) and can be an effective motivator in increasing students’ abilities to self-regulate their learning:

“a key component of academic motivation and success is that students perceive themselves as agents of their own learning ... formative assessment practices must help them develop the skills needed to monitor, judge, and manage their learning. The ability to monitor, critically assess and correct one’s own work is a key goal of HE [higher education] and lifelong learning” (Nicol, 2009, pp. 337-338).

Nicol (2010) demonstrates how underlying principles of assessment can transform formative assessment practices. Various research pathways are conceptualizing the role of students and teachers in feedback processes, thus, signaling a shift in assessment approaches and the principles and theories which underlie them. Significantly, students are seen as active agents in the assessment of their learning – as co-assessors in their work rather than as passive receivers of assessment results. Nicol (2010) further asserts, “For students to learn they must do something with transmitted information, analyse the messages, ask questions about it, discuss it with others, connect it with prior understanding and use this to change future actions” (p. 503). In other words, students’ actions with regards to feedback may be more important to the quality of their learning than the actual quality and content of teachers’ feedback comments.

Fostering academic integrity

An interesting and important finding reported by James et al. (2002) is their assertion that instances of plagiarism are minimized through carefully selected assessment tasks, transparency in assessment criteria, and avoiding ambiguous or unclear feedback. In addition to

the work of James et al. (2002), Nicol (2007) illuminates how formative assessment feedback reform, with a focus on learner self-regulation, can be a powerful and effective way of mitigating the factors that contribute to plagiarism and student failure. Nicol (2007) argues that plagiarism, in addition to a lack of clarity around assessment task expectations, is largely the result of lack of students' confidence in their ability to achieve a learning goal.

Integrating principles and practice

The relationship between principles and practice is reciprocal. Green and Andrade (2010) point out that insights gleaned from critical examinations of specific assessment strategies can yield guiding principles that serve to enhance student learning and create a model of assessment in university education that can be applied and modified across disciplines. Hunaiti and colleagues (2010) argue that although there have been many changes in teaching strategies and the theories that drive them, there has been little done to develop assessment approaches that would revolutionize students' learning experiences. Evidence-based principles of assessment can bridge this gap. Tam's (2014) review (developed out of an analysis of the scholarship on outcomes-based assessment and geared towards practitioners and assessment/curriculum designers in postsecondary education contexts) asserts that principles form the theoretical and empirical basis for assessment as a way to focus learning on a student-centred approach. The intellectual spaces between principles and practice are active places. Rowland (1999) would describe that space as hosting a three-way interaction among among the "personal" practice, the "public" principles, and a "shared" network of practice where ideas about principles and practice can be discussed and tested. This interaction is essential to improving both practice and the principles that guide it.

The Importance of the Principles of Assessment

Praslova (2010) emphasizes that a culture shift is taking place in postsecondary education, one that places an institutional-focus on sustainable efforts to enhance student learning. Given the impact of assessment practices on learning, the implementation of evidence-based principles of student assessment is a high-potential lever in improving the overall quality of student learning (Heinrichs et al., 2015). However, Luth (2010) contends that principles of assessment are relevant only insofar as they are clearly articulated, implemented, monitored, evaluated and entrenched at the institutional level. Moreover, each principle should elicit wider discussion that ultimately forms the basis for how best to move forward with relevant assessment processes and practices in the context of individual programs and courses.

According to Boud and Associates (2010), universities are challenged to integrate research evidence on the centrality of assessment as "one of the most significant influences on

students' experiences of higher education" (para. 3). Moreover, guiding principles of assessment are important from a conceptual standpoint because, according to Ndoye and Parker (2010), "Creating an effective assessment system at the school, college or institutional level requires the articulation of a shared conceptual understanding, a common definition of assessment, and the clear expression of assessment expectations and the use of results" (p. 29). The articulation of principles of assessment in postsecondary education responds to a growing generalized sophistication of assessment evidenced in diverse strategies (e.g. peer assessment, self-assessment, portfolios) that arise out of the shift from outcomes-focused education to a student-learning centred focus, and a need to sustain a shared vision of assessment (Ndoye & Parker, 2010). Such principles of assessment serve as guides for establishing assessment procedures, clarifying thinking, and promoting discussion about assessment practices that best support student learning (Stowell, 2004).

The call for a university-wide commitment to principles of assessment in no way diminishes the impact of the exemplary assessment practices of individual teachers. However, envisioning, implementing and managing change in assessment practice "must be woven into the fabric of our institutions, rather than reliance on individuals operating in isolation" (Williams et al., 2013, p. 50). While both the practice of individual academic staff and the articulation of institutional guidelines on assessment are necessary components of enhancing student learning, it is indeed the reciprocal "weaving" of principles and highly contextualized practices by individual teachers, programs of study and institutional policies that are necessary if change is to be successfully implemented (Simmons, 2016) and sustained (Kenny, Watson & Desmarais, 2016). Widespread shifts in assessment culture are buttressed by the combined efforts of networks of scholars working towards a common vision, and of leaders at all levels who work hard at "articulating a compelling vision; communicating the importance of making a shift; setting explicit guidelines for success; and providing appropriate financial, structural, strategic, and procedural resources" (Kenny, Watson & Desmarais, 2016, p. 88). To achieve this integration, principles of assessment must be considered and implemented by governing bodies, and reflected in administrative procedures and assessment practices throughout an institution. In other words, these principles should not sit on a shelf and gather dust. We must do something with them (Ndoye & Parker, 2010).

Clearly, existing scholarship on the topic of guiding principles of for the assessment of students' learning at the university level identifies compelling topics for both individual consideration, and collaborative dialogue. We have provided an overview of what these assessment principles are, why and to whom they are important, and how we could use them to improve student learning experiences. Significantly, we identified a notable shift in the

culture of university education in regards to evolving priorities in assessment practices - a culture shift that is now focused on supporting and improving student learning as opposed to simply measuring and evaluating performance. Additionally, we highlighted the prominence of assessment practices as a way to enhance students' learning and their university learning experiences. If, as an institution, we commit to making meaningful and effective assessment an intentional, well-articulated goal, we will derive a number of benefits. When common principles are entrenched in our planning documents and embedded in our institutional culture, program goals, curriculum, and the minds of policy leaders and teachers alike, then we can better ensure that our students perceive the assessment process as an opportunity for further learning, rather than one that focuses primarily on anxiety and stress. This guide is an invitation to further discussion about how individual teachers and programs can use clearly articulated assessment principles to inform the diverse practices that characterize the assessment of learning.

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