

## Assessment that Enables Learning

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*Schools are awash with assessment data, but the data are mostly used for reporting, comparing, and competing, and this has driven a ‘teach to the test’ dynamic. The governing by numbers in the performativity culture of neoliberal education has rendered professional skills and judgements unreliable and disabled innovation in assessment. As assessment drives teaching and learning, this accountability discourse is impacting learning. The learner has been dislodged from the center of the learning relationship. This review interrogates literature that puts learners back in the center of that relationship and examines how educators can develop an assessment culture that enriches learning. The literature reviewed presents and discusses how emerging assessment approaches that use digital technologies, such as Common Ground Scholar, are challenging long-held conceptions of assessment. The literature reviewed is aspirational, recognizing the new tools inspired by digital learning may shake off the shackles of 20th century education and herald a new age transforming assessment.*

**Keywords:** *assessment, digital technologies, big data, assessment that enables learning, learning design and leadership, P-12 education, higher education*

The literature reviewed demonstrates that quality assessment and quality teaching and learning are intrinsically linked (Adie, Addison, & Lingard, 2021; Cope & Kalantzis, 2016; Kimber & Wyatt-Smith, 2014). For example, Adie, Addison and Lingard point to the experience of the applauded Singaporean education system that has codified this interrelationship between quality outcomes in assessment and teaching through a focus on short-term and long-term learning goals. Further to this, Popham (2014) argues assessment drives teaching and learning and a broader approach to assessment in schools that meets present and future needs of students, but this goal has been impeded by market-oriented expectations. There are, however, emerging realities uncovered by Boud and Soler (2016) that are challenging perceptions of assessment as a summative instrument designed for reporting. Specifically, Boud and Soler introduce the concept of sustainable assessment, taken up by Adie, Addison and Lingard (2021) in their case study at a high-performing, non-selective, independent girls’ school (12 to 17 year-old students) in Queensland, Australia, that recognizes assessment should meet present needs while preparing students for their future.

This review examines peer-reviewed literature focused on assessment as enabling for learning. It adds to the discussion by offering alternatives to prioritizing summative assessment where schools absorb policies of high test-based accountability, as revealed by the literature reviewed. The research reviewed positions the learner at the center of the learning relationship, meaning learning becomes the main concern of assessment. Connell (2013) argues most assessment in Australia is geared towards preparation for high stakes tests conducted at the endpoint of the learning period. She terms it the neoliberal cascade and details its destruction on healthy learning cultures. Wyatt-Smith, Klenowski, and Colbert (2014) also argue that assessment reform is needed, noting that in the current dynamic, “examinations function to constrain teaching and learning opportunities” (p. 3).

## Theoretical Framework

Both Cope and Kalantzis (2015) and Adie, Addison and Lingard (2021) view education and assessment as social constructions where meaning arises out of human interaction. Therefore, in this literature review, assessment is examined through the lens of sociocultural theory. Duchesne and McMaugh (2019) posit sociocultural theory acknowledges the complex interplay of social, cultural, economic, political, and historical contexts in assessment practices and the consequential embedded beliefs and expectations that derive from the sociocultural context. Boud and Soler (2016) contend that “the sociocultural context of teaching, learning and assessment can still conspire to thwart good intentions and apparently good design” (p. 410).

### UNESCO's Mission: "A Peaceful, Just and Sustainable World"

Wyatt-Smith, Lingard, and Heck (2019) contend that ordinarily, state-endorsed mandates pitch assessment as an accountability concern. They pursue the argument that competition between countries, systems, and schools has flourished under the dominance of neoliberalism, and in this dynamic, schools compete to produce and advertise the best learning outcomes for students in state and international tests, such as the Organisation for Economic Cooperation and Development (OECD) Program for International School Assessment (PISA).

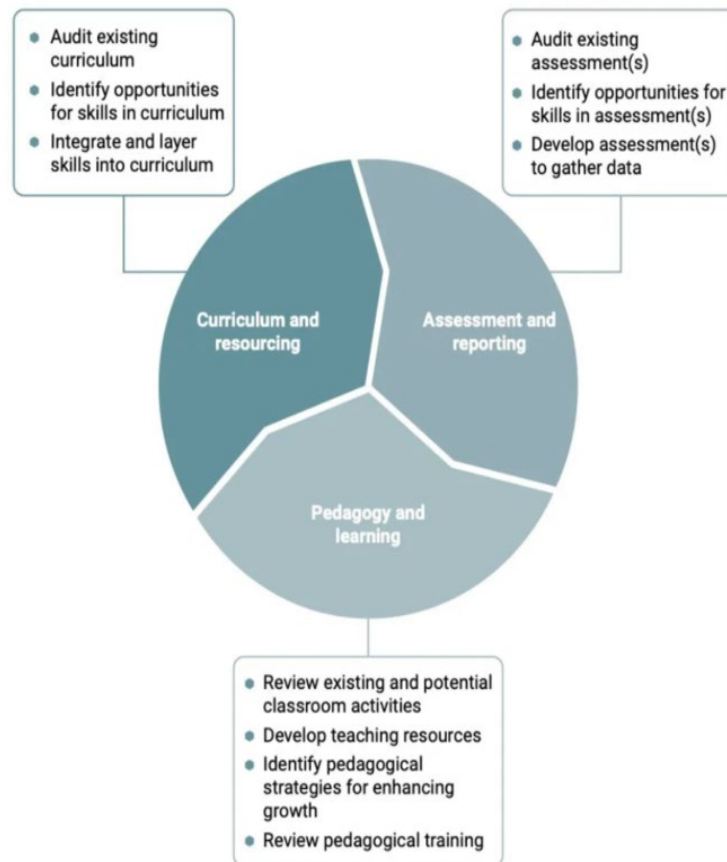
The United Nations Educational, Scientific and Cultural Organization (UNESCO) recognizes the need for a new social contract for education, through an alignment of assessment with pedagogies of cooperation and solidarity that is "meaningful for student growth and learning" (UNESCO, 2021, p. 61). This video clip entitled “Futures of education: Learning to become” from UNESCO (2019) (<https://www.youtube.com/watch?v=7865y7hbehY&t=1s>) explores this future-focused perspective of education to not only suit the immediate but also the future needs of students. Their message demonstrates that assessment for learning looks beyond the test.

Boud and Soler (2016) champion the concept of sustainable assessment that reflects this alignment of assessment with meaningful learning. For example, while they recognize academic success is important, the researchers argue for an equal standing for student well-being and skills for future learning. Similarly, Wyatt-Smith, Klenowski, and Colbert (2014) claim that in the learning encounter, the immediate and long-term needs of the learner to practice the necessary knowledge, skills and learning dispositions for the twenty-first century have been traded for performance agendas. Adie, Addison and Lingard (2021) state that as systems increase their reliance on large-scale, standardized examinations to assess learning, the learning relationship absorbs the accountability policy, and as a result, student learning is displaced by academic scores. Citing the foundational criteria for assessment of validity and reliability, Wyatt-Smith, Klenowski, and Colbert claim that state and national education systems have and continue to use large-scale testing regimes to rank learners among and between student populations. However, according to the OECD (2013), this has raised important questions about equitable, fair and just outcomes for students in schools. Broadfoot et al. (2014) posit that the unintended consequences of high-stakes tests, namely student disengagement and rising anxieties, raise serious social justice issues. Specifically, Adie, Addison and Lingard (2021) claim classroom teachers immersed in this experience are caught in the game of protecting students from the harmful effects of high-stakes, external examinations, meeting community expectations to deliver exemplary academic student outcomes, and adhering to their own moral code to promote and cultivate an inspiring learning environment.

Adie, Addison and Lingard (2021) position assessment in the trilogy of education: curriculum, pedagogy, and assessment. ACER (2021) demonstrates the relationship between these three integral areas of education, providing key insights supporting their alignment through audits and investigations (Figure 1). Wyatt-Smith, Klenowski, and Colbert (2014) argue the function of assessment in that interdependent

relationship with curriculum and pedagogy is also informed by the socio-cultural context that it serves. Similarly, Schein and Schein (2016) claim the organizational culture is in turn impacted by the macro-cultural context, specifically the assumptions about the nature of human relationships. The Learning Policy Institute and Turnaround for Children (2021) contend that in education this is demonstrated through the design principles embedded in an organization.

**Figure 1.** ACER's 21st Century Skills Alignment Model



ACER, 2021

Lingard, Wyatt-Smith and Heck (2021) state that the COVID-19 global pandemic, economic uncertainties, environmental instability, and ongoing racialized and geo-political violence have paralyzed equity agendas. UNESCO (2021) offers a way forward with a new social contract for education to reset this drive for equitable outcomes. "This starts with examination of the capabilities and knowledge that enable students to build a peaceful, just and sustainable world and maps backwards along the curricular pathways that help them develop those capacities" (p. 64). Within the remainder of this literature review, educational assessment cannot be considered without recognition of this broader purpose of education "to build a peaceful, just and sustainable world" (UNESCO, 2021, p. 64), as broader social agendas impact school cultures (Broadfoot et al. 2014).

Boud and Soler (2016) recognize that establishing the purpose of education to create a more peaceful, just and sustainable world, through the enabling learning power of assessment, relies on the concept of sustainable assessment. “(It) meets the needs of the present in terms of the demands of formative and summative assessment, but ... also prepares students to meet their own future learning needs” (p. 400). Adie, Addison and Lingard (2021) argue that assessments that enable learning sustain learning beyond school. Additionally, they suggest that a balance in the types of assessments will assist students in navigating high stakes external examinations.

### **Advancing the Field of Assessment for Learning**

When interrogating the literature reviewed associated with assessment that enables learning, four key themes emerged that can provide considerations for advancing the field of assessment for learning.

1. The influence of the accountability discourse.
2. Discussions on desired futures.
3. The changing purpose of education.
4. Digital disruption.

These themes recognize an interdependence between historical and traditional patterns of engagement in assessment structures, and the rapidly evolving and digitally disrupted learning environments of schools referred to in Adin, Addison and Lingard (2021), Earl and Timperley (2014), and Lingard, Wyatt-Smith and Heck (2021). Additionally, Boud and Soler (2016) stress that overseeing this *push-me-pull-you* dynamic sets the meta-policy of standardized test-based accountabilities. Lingard, Wyatt-Smith and Heck bring this dynamic into a contemporary understanding in the context of the global pandemic of COVID-19 and argue that this pattern of exchange seems to have been magnified. The authors posit that education has endured challenging circumstances as a result of COVID-19, and while most of the literature selected here pre-dates the global pandemic, the analysis of the themes and sub-themes is anchored in the lived experience of the mid- and post-pandemic time in schools.

#### **The Accountability Discourse: Disabling Innovation**

Smith et al. (2014) report that teaching is complex and intellectually challenging, and assessment is the visible interchange of teaching and learning, however, they claim assessment has failed to deliver on expectations of being an enabler for learning. Adie, Addison, and Lingard (2021) argue that most of the time it is used for reporting, also noted by Earl and Timperley (2014) and UNESCO (2021). Shephard (2000) posits the impost from high stakes standardized examinations, manufactured curriculum, and pedagogical designs that ‘teach to the test’ have killed creativity. Popham (2014) states “educational assessment has provided little, if any, benefit for students’ learning” (p. 183), while Earl and Timperley (2014) found through their examination of multiple case studies that assessment for learning is absent or superficial in most classrooms. Griffin et al. (2014) examined a variety of national and systemic high-stakes testing programs and found that Australia was more conservative than the United States in its approach to system-wide assessment. For example, Griffin et al., report that in Australia there is an expectation that 80 percent of students will reach or exceed minimum literacy and numeracy standards. Their analysis used a comparable assessment in the United States, the Maryland School Assessments Program, which used broader achievement bands and set a target of 45 percent of students to reach or exceed the set standards. They also state that in Australia accountability was focused on the school, more so than in the United States, and that as a result of the accountability focus from system-wide assessments, sustainable and persistent gains are not being achieved in Australian schools.

Broadfoot et al. (2014), based on their findings from a review of existing literature, claim assessment practice has disabled innovation. Similarly, Kimber and Wyatt-Smith (2014) state that assessment practices have been resistant to change because they matter so much from a sociocultural

perspective, where the pervasive influence of standardized testing looms over teaching and learning. Additionally, Adie, Addison, and Lingard (2021) posit change in assessment is fraught with risk given the tension between a pursuit for a broad-based liberal education and accountability for assessment.

### **Aspiring to Desired Futures**

Broadfoot et al. (2014) contend that a lack of change in assessment has inhibited formal educational environments from equipping future citizens for twenty-first century society skills. Regardless, Wyatt-Smith, Lingard, and Heck (2019) claim the existing literature associated with enabling assessment for learning in emerging learning environments is aspirational. Broadfoot et al. recognize education provision is becoming out of step with the needs of society and according to UNESCO (2021), inter-governmental and non-government organizations have called for a new social contract with education. The OECD (2013) recommends high performing education systems need to balance performativity goals reliant on large-scale testing regimes with a broader and socially just education. Adie, Addison, and Lingard (2021), Boud and Soler (2016), and Broadfoot et al. each argue that reducing the number and importance of summative assessments is necessary in order to develop self-regulated learners. Earl and Timperley (2014) also challenge conceptions of assessment and urge educators to shift their thinking away from assessment as a tool and move to embed a creative and informed approach that leads to enabling assessment for learning.

Broadfoot et al. (2014) opine that "... educational assessment practices of schools, colleges and universities have changed only marginally. Inertia and the stranglehold of tradition have played their part" (p. 374). Cope and Kalantzis (2015) point to work from those exploring the area of learning analytics (Pea, 2014), specifically that this area "foreshadows a shift in pedagogy and assessment, facilitating increasing personalization and individualization of learning" (Cope & Kalantzis, 2015, p. 354). Broadfoot et al. argue that in the Fourth Industrial Revolution, change may have been seeded due to the emergence of new tools and more intense social networks for learning. They also state the "stranglehold of tradition" (p. 374) may have loosened its grip constraining the education system in delivering novel skills associated with a future-focused discourse such as critical and creative thinking, collaboration and social and emotional learning.

### **The Educator's Creed: The Purpose of Education**

Earlier in this literature review, the purpose of education was framed through UNESCO's (2021) urging for education to create a peaceful, just, and sustainable world. The literature reviewed provides evidence to the disconnect between desired futures, expressed in UNESCO's report, and assessment for accountability. Specifically, in this shortfall, Boud and Soler (2016) acknowledge that education is increasingly becoming judged on what it produces beyond the immediate future and that the recalcitrant assessment practices harking back to a century old tradition of standardized high-stakes examinations are coming under scrutiny. Kimber and Wyatt-Smith (2014) not only referred to developing critical and creative capabilities to meet the needs of society, but Adie, Addison, and Lingard (2021) argue the future learning needs of individuals must be addressed. Specifically, Boud and Soler (p.401) explain:

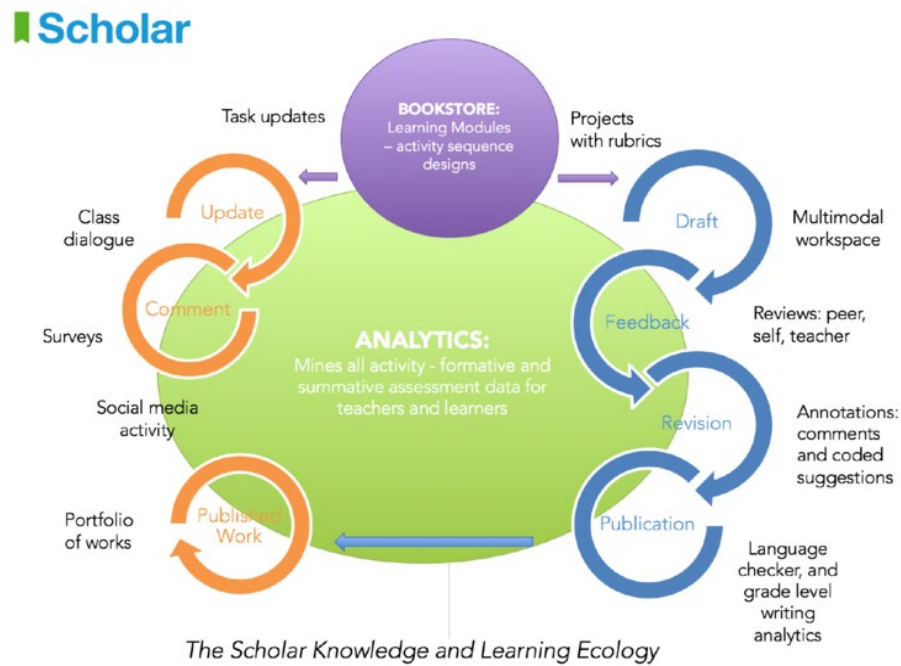
From this perspective, the consumption of educational resources is judged in terms of their effect in producing students who go on to become self-managing persons who, in association with others, can draw on whatever they need to continue learning effectively beyond the end of the course and be able to make judgements about their own learning outcomes.

Wyatt-Smith, Klenowski, and Colbert (2014) contend that learning is not sustainable if it continually relies on teachers' assessment. Furthermore, they state that test-based accountability systems extrinsically motivate students, decoupling individuals from their learning. Earl and Timperley (2014) suggest that in a desired future, these accountability systems cannot be allowed to extinguish or inhibit teachers' assessment for learning practices that engage students intrinsically in learning. Adie, Addison

and Lingard (2021) in their case study of an independent, high-achieving school moving to prioritize assessment that enables learning, highlight the advice given to students to empower them to become self-regulated learners, “Find the edge of your learning ... your growth spot” (p. 413).

Cope and Kalantzis (2015) recognize this priority and explore through the case study of Common Ground Scholar how technologies “offer us affordances, or a range of different modes of action” (p. 350). The iterative and distributed dialogue (Figure 2) embeds assessment into learning where the distinction between assessment for learning and summative assessment merges. Broadfoot et al. (2014) share a desire for a transformation of assessment practice that reflects new participatory and collaborative digital tools for learning and assessment. They cite potential gains for using digital tools, such as immediate feedback, inspiring self-regulated learning, support for collaborative learning, creating a more positive experience of assessment and an integration of formative and summative assessment.

**Figure 2.** *The Scholar Knowledge and Learning Ecology*



*Cope & Kalantzis, 2015, p. 365*

### Digital Disruption and Perturbance

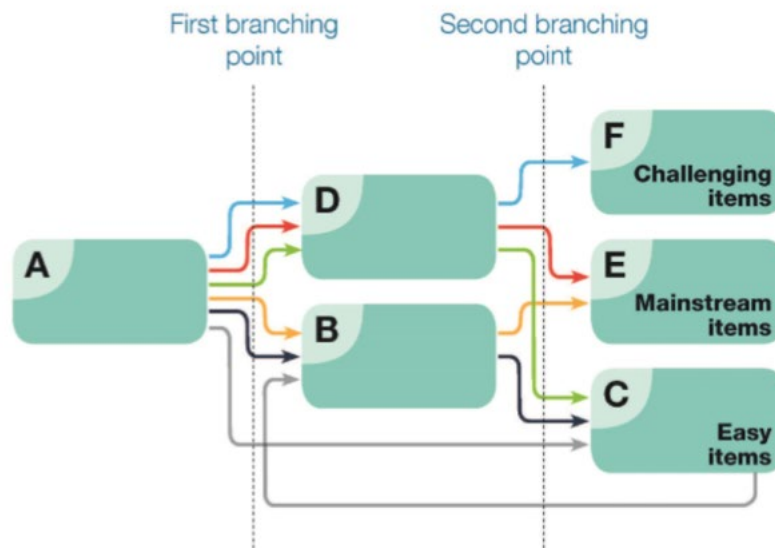
Wyatt-Smith, Lingard, and Heck (2019) investigated digital learning assessments that use adaptive technologies and utilize learning analytics to influence learning through assessment and have found that these have emerged as commonly used tools for teaching and learning. These tools have changed the role of teachers. Additionally, Broadfoot et al. (2014) claim these digital and analytics tools have also changed the role of learners. Ultimately, according to Shephard (2000), it has changed the culture of assessment in a learning environment. Cope & Kalantzis (2016) argue the tools’ influence is pervasive and can be seen equally as optimistically and controversially, and for this reason, they merit inquiry. In finding out about the emerging assessment approaches inspired by digital learning, Lingard, Wyatt-Smith and Heck (2021) argue that it is integral to consider the influence of big data in that evolving dynamic. Cope and Kalantzis (2016) provide a comprehensive framing of big data (cross-referenced by Wyatt-Smith, Lingard, & Heck, 2019):



1. The purposeful or incidental recording of activity and interactions in digitally-mediated, network-interconnected learning environments ...;
2. The varied types of data that are recordable and analyzable;
3. The accessibility and durability of these data, with potential to be (a) immediately available for formative assessment or adaptive instructional recalibration and (b) persistent for the purposes of developing learner profiles and longitudinal analyses; and
4. Data analytics, or syntheses and presentations based on the particular characteristics of these data for learner and teacher feedback, institutional accountability, educational software design, learning resource development, and educational research (p. 2).

In defining the term ‘digital learning assessments’, Lingard, Wyatt-Smith and Heck (2019) offer a synthesis of the literature. Their review of the literature reveals that digital learning assessments can act as a substitution for pen and paper scripts, but more recently, these assessments have evolved to incorporate Computer Adaptive Testing (CAT). The authors also explain that relying on a detailed item bank, an algorithm selects appropriate questions through ‘branching’ (Figure 3). Wyatt-Smith, Lingard, and Heck outline that beyond CATs, immersive assessments using Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR) and Extended Reality (XR) work toward a more personalized learning experience.

**Figure 3.** *Test Tailored Design with Branching*



Source: Australian Curriculum, Assessment, and Reporting Authority (ACARA) (2014). Reproduced with permission<sup>3</sup>.

Wyatt-Smith, Lingard & Heck, 2019, p. 5

Lingard, Wyatt-Smith and Heck (2021) recognize that the Fourth Industrial Revolution (World Economic Forum, 2015) and COVID-19 have accelerated change around our connectedness through digitized social networks. The short video clip entitled, “The Fourth Industrial Revolution” (World Economic Forum, 2015) (<https://www.youtube.com/watch?v=SCGV1tNBoeU>) highlights the key characteristics of the Fourth Industrial Revolution and its emergent behavior. Wyatt-Smith, Lingard, and Heck (2019) argue schools are deeply integrated in this relationship with emerging technologies and that new thinking around emerging technologies is contested. Cope and Kalantzis (2016) detail how the public discourse around big data swings from opinions of it being an exacerbating, to an ameliorating influence in contemporary society. In this debate, several authors, including ACER (2021), Broadfoot et al. (2014)

and Kimber and Wyatt-Smith (2014) acknowledge the affordances of digital technologies in enabling assessment for learning.

Cope and Kalantzis (2016) juxtapose emerging models with their traditional counterpart (Table 1). Cope and Kalantzis (2015) provide a focus on formative assessment, otherwise known as assessment for learning, and the repositioning of summative assessment in a “progress view”. The use of learning analytics that use data to improve learning at the place they were collected is moving assessment from an individual knowledge to a broader and more socially just focus. Cope and Kalantzis (2015) also extend their argument to suggest that artificial intelligence could develop in order to support an analysis of more complex attributes that reflect a more socially just education. This ideal also satisfies UNESCO’s (2021) aspirations.

**Table 1.** *Traditional Compared to Emerging Models of Assessment*

Traditional assessment model	Emerging assessment model
Assessment is <i>external</i> to learning processes; the challenge of “validity” or alignment of the test with what has been taught	Assessment is <i>embedded</i> in learning; “validity” no longer a challenge
Limited opportunities for assessment, <i>restricted data sets</i> (select and supply response assessments)	Data are big because there can be <i>many small data points</i> during the learning process (structured and unstructured data)
Conventional focus on <i>summative assessment</i>	Renewed focus on <i>formative assessment</i>
Summative assessment is an outcomes or <i>end view</i> of learning	Summative assessment is a progress view, using data that were at first formative to trace learning progressions; feedback is <i>recursive</i>
<i>Expert</i> or teacher assessors	<i>Crowdsourced</i> , moderated assessments from multiple perspectives, including peers and self
Focus on <i>individual memory</i> and deductions leading to correct or incorrect answers	Focus on knowledge representations and <i>artifacts</i> that acknowledge textual provenance and trace <i>peer collaborations</i>
Assessment of <i>fact and correct application</i>	Assessment of <i>complex epistemic performance</i> , disciplinary practice
Assessment experts as <i>report grades</i>	Learners and teachers as data analysts, with the support of <i>analytics dashboards and visualizations</i>

Cope & Kalantzis, 2016, p. 8

### Gaps in the Literature

Popham (2014) recognizes that assessment influences teaching and learning, however, Adie, Addison and Lingard (2021) posit broader social agendas affect assessment cultures. Specifically, Broadfoot et al. (2014) stress the need for change in assessment practices to “respond effectively to contemporary social, political, environmental, economic—even moral and spiritual—challenges” (p. 383). Kimber and Wyatt-Smith (2014) add that in the face of disruptive innovation, more needs to be understood around society’s social agenda and its priorities for schools to engage in a knowledge society. UNESCO (2021) have begun that dialogue, linking this back to meaningful learning through assessment that strives to meet students’ future needs. Cope and Kalantzis (2015) suggest that technology cannot make these changes. They propose that “the social agendas that produced the technologies will be the agents of change” (p. 354). Deeper research into what this transformation could look like in schools, and how these social agendas can be the agents of change will help equip students for the knowledge society.

Absent in the literature reviewed regarding this transformation dialogue, is student voice and expectations around intergenerational equity in delivering education for a desired future. Adie, Addison



and Lingard (2021) provide advice for students to move to the edges of their learning in order to grow, but further research on the implications of applying this advice is warranted. Boud and Soler (2016) provide the key factors of creating informed judgment from the point of view of the student, but these authors do not report how the students negotiated the change to assessment focusing on learning and its broader implications for their future. The literature reviewed in this area of assessment that enables learning is primarily one-sided from the perspective of educators. If, as Hattie's (2009) meta-analysis suggests, the greatest influence on student achievement is self-reported grades, then research of assessment that enables learning from the students' perspective is critical.

Broadfoot et al. (2014) and Earl and Timperley (2014) both posit that while contemporary cultures increasingly characterized by interactive technologies strengthen the integration of curriculum, pedagogy and assessment, changes in assessment mindsets are slow. Cope and Kalantzis (2015) also point out that while data mining and learning analytics can support accountability requirements, "formative assessment has been neglected in the face of the rise of standardized, summative assessments" (p. 363). While shifting mindsets around assessment to focus on learning was a common theme in the literature reviewed (Adie, Addison & Lingard, 2021; Boud & Soler, 2016; Kimber & Wyatt-Smith, 2014), researchers in this area often simplified the education environment across differing contexts. For example, Boud and Soler center their discussions around higher education, without broader recognition of the implications for schools. Although Wyatt-Smith, Lingard and Heck (2019) sense a growing centrality in education, Griffin et al. (2014) argue teachers in schools are more readily subject to accountability pressures. Therefore, the homogeneity in the research is not valid as teachers in schools are experiencing different and more compelling influences from accountability pressures on assessment cultures. While the gap in the literature focusing on schools was partly addressed by Adie, Addison and Lingard, and Cope and Kalantzis (2016), more work in this area is needed. Griffin et al. also make reference to vertical and horizontal levels of accountability imposed on teachers, and how this effects assessment mindsets, but more specific research around the critical factors needed to move to a culture of assessment that focuses on learning, would provide a useful agenda for future research.

## Conclusion

A recurrent theme evident in the literature reviewed is that schools are awash with assessment data (Ball, 2016), but the data are mostly used to report, compare, and compete (Adie, Addison, & Lingard, 2021; Cope & Kalantzis, 2016; Lingard, Wyatt-Smith, & Heck, 2021). Wyatt-Smith, Klenowski, and Colbert (2014) argue that assessment practices have stagnated based on a century old model of testing at the end of the learning segment to rank and normalize the distribution of marks. Even so, Cope and Kalantzis suggest "big data and education data sciences may in time offer learners, teachers, and researchers new windows into the dynamics and outcomes of learning, finely grained in their detail, varied in their sources and forms" (p. 13). However, the competitive discourse initiated through neoliberalism reminds teachers that while they "have to capture data but are also captured through data" (Wyatt-Smith, Lingard, & Heck, 2019, p. 4), they are the fulcrum in leveraging educational outcomes.

Cope and Kalantzis (2016) profess that in the current environment "everyone becomes to some extent a data analyst" (p. 8). Cognizant of this, Wyatt-Smith, Lingard and Heck (2019) claim that disruptive innovations through digital learning assessments and big data have locked teachers in a battle for their professional identity. Earl and Timperley (2014) recommend confronting "teachers' conceptions and misconceptions about assessment" (p. 334) and this will support conceptual change and strengthen teachers' professional standing and identity. The/COVID-19 global pandemic has tested teachers' engagement with new technologies and the accompanying generational gaps in experience and preparedness have appeared (Lingard, Wyatt-Smith, & Heck, 2021).

In setting out to explore the literature that discussed the emerging reality of assessment that enables learning, four themes were significant: accountability demands, desired futures, the changing purpose of education and digital disruptions. As revealed by the literature reviewed, it is obvious that digital learning assessments and big data are here. Their use has become ubiquitous in schools, with COVID-19 accelerating that take-up of new technologies. The growing centrality and integration of schools in globalized education markets, stemming from the competitive dialectic promoted by neoliberalism, has also contributed to the rise in the use of digital learning assessments. This emerging digital disruption is a contested area in assessment. Broadfoot et al. (2014) explain that without restraint and thought, it can contribute to the de-professionalization of teaching, but with direction and planning, it has the seeds of evolutionary changes that spring from social networks.

The literature reviewed is aspirational. While Wyatt-Smith, Klenowski and Colbert (2014) acknowledge the slow and reluctant change in assessment practices, the broader literature under review clearly recognizes there needs to be a greater integration of assessment that enables learning and that these changes in assessment approaches can ultimately change curriculum and pedagogy. Next generation assessment designs, such as Common Ground Scholar (Cope & Kalantzis, 2015), are challenging long-held conceptions of assessment. Through the emergent phenomenon of technological changes inspired by social networks, new assessment approaches are reframing the role of educators. Back in 2016, Cope and Kalantzis reminded us that there is a transformation coming. And more recently in 2021, Lingard, Wyatt-Smith and Heck suggest that it holds the promise of transcendence from the regulatory impost of high stakes standardized testing regimes, but it will require visionary leadership and societal acquiescence, without compromising teachers' professionalism. Without this vision, UNESCO (2021) remind us that education may fail in its purpose to create a peaceful, just and sustainable world, and that is a bitter price to pay for the struggle.

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