Chapter 4
Improving Learning: Reconsidering Student Assessment Globally

Amit Kaushik

Abbreviations

ACER	Australian Council for Educational Research
AD	anno domini
CLA	citizen-led assessments
GPE	Global Partnership for Education
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
SDGs	Sustainable Development Goals
TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO Institute of Statistics

4.1 Introduction

Assessment of learning is as old as learning itself. It began with the very first teacher who imparted information, ideas, and wisdom to the next generation, and continues to this day, for as every teacher knows, keeping track of what students have learned is an essential part of the teaching–learning process. Without assessment—formal or informal, structured or unstructured—the learning process is only half complete.

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A. Kaushik (✉)
Australian Council for Educational Research, New Delhi, India
e-mail: amit.kaushik@acer.org

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For instance, in ancient India, students lived in the *ashram* (hermitage or monastery) with the *guru* and pursued *vidya* or knowledge. At the end of their *ashram* life, when the *guru* believed that students had imbibed all that he had to offer, students were expected to engage in a debate with other wise men. This debate was the final assessment and was often wide-ranging and comprehensive, with an emphasis on what students knew, testing the depth of their knowledge, and their ability to communicate what they had learned. Only when they were deemed to have displayed a mastery over their learning were the students admitted to the realm of the educated.

During the ancient Tang Dynasty (618–907 AD) and Song Dynasty (960–1279 AD) in what is now the People's Republic of China, reforms in the education system led to the creation of the world's first written examination system to select civil servants based on merit (Elman 2013). Most postcolonial countries in Africa and South Asia can trace their present-day learning assessment systems to these reforms, which were adopted in Europe in the eighteenth and nineteenth centuries. The Europeans used these at first to screen candidates for admission into the civil service, and then increasingly to identify "merit" in schools and universities. The emphasis that this form of assessment placed on candidates' abilities to remember arcane bits of language or philosophy to determine their suitability for a career as a civil servant was reflected in school and college assessments that assessed student performance largely on the basis of their ability to memorize.

The two approaches described above illustrate in many ways the debate that has been witnessed in recent years about the best approach to assessing student learning. What learning will assessment measure? What form should assessment take? Should the emphasis of assessment be on recall or competency? Should we undertake assessment *of* learning, assessment *for* learning, or assessment *as* learning? What should be assessed—breadth of knowledge or depth, application or recall? Who should do the assessment—the teacher or someone else? Or both?

Learning assessment has also acquired renewed salience at a time when educational institutions everywhere are adjusting to the disruption caused by the coronavirus disease 2019 (COVID-19) pandemic. How can we ensure that students continue to learn during these challenging times? What measures of assessment might work best when education systems themselves have been overwhelmed? And in keeping with the theme of this book, how can assessment help power learning in an age of disruption?

Education systems all over the world have grappled with similar questions for decades. Writing in the *Herald* in 1930, ACER's first Executive Officer, K. S. Cunningham, noted that "…since the establishment of mass education it has been assumed that it is necessary to instruct children in large groups, that is, to have them at the same stage in any given subject at any given time. The result has been the raising to a high level of perfection of the class lesson as the main, if not the sole, means of instruction" (Cunningham 1930, p. 27). Even at that time then, there was a recognition that not all students learn at the same pace, and that it is important to be able to establish their progress individually. Over the years, we have arrived at the view in ACER that the fundamental purpose of assessment is to determine where

a learner is in their individual path of learning at the time of assessment (Masters 2013), which helps to establish where students are in their unique learning journey and identify what they know and can do. When considered in this fashion, assessment can be of several different types, all of which help understand the progress made by learners in their varied and individual learning journeys.

4.2 Understanding Assessment

Let us begin by establishing a common understanding of assessment. As most teachers and practitioners know, learning assessments can be of several types, such as classroom-based formative assessments, end-of-term summative examinations, exit certification assessments, tertiary education entrance tests, diagnostic exercises in the form of large-scale assessments.

The word "assessment" itself comes from the Latin *assidere*, meaning "to sit beside". In its most literal form then, assessment implies being by the side of a learner, supporting them as they learn. Usually, one would expect to see this in the classroom, i.e., between the student and the teacher. The first form of assessment then, is one that is done *with* the student, not *to*, and is intended to support them: it is ongoing and formative in nature. The results of such assessment feed into the teaching–learning process, indicating both to the teacher and learner what a student knows and can do, as well as areas that need further work. The purpose of such assessment is clearly to improve learning.

Separately from ongoing assessment is assessment that takes place at periodic intervals to measure what a student has learned, most often against expected norms or standards—this is summative in nature. These assessments or examinations could be quarterly, midterm, or annual, and their purpose is to judge overall success in terms of student learning as measured by achievement of prescribed curricular standards. In general, such assessments carry high stakes for the student by their very nature, since failure to meet expected norms in such assessments usually carries consequences, such as for example, detention in the same grade. Periodic assessments of this nature also perform the role of certifying the achievement of key stages, as for instance, the matriculation examination, or the high school leaving examination.

Assessments that judge student learning can also be used for another purpose: gatekeeping. Entrance examinations are often used to identify candidates considered more hardworking or suitable for admission to higher courses of education or work opportunities. Again, such assessments are high stakes assessments for the students, since failure to meet the expected norm or cutoff can lead to loss of opportunity.

Aside from school-based measures, assessments may also be undertaken at national, regional, or international levels to provide a diagnostic evaluation of education systems to policy makers, planners, and other stakeholders. These assessments provide important information about the functioning of the system and help support evidence-based policy making to bring about improvements. Ideally, diagnostic assessments of this nature should be low stakes for participating students

as their outcomes do not usually impact individuals. Ironically however, these assessments can become high stakes for teachers and administrators if the outcomes are used to judge the latter on the success of their students or systems.

The first standardized international learning assessment can be traced to the 12-country comparative study undertaken in 1959 under the aegis of the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Education, Hamburg. Led by Arthur Foshay, this pilot study combined an empirical approach with comparative education methodology to understand school achievement in those countries (Foshay et al. 1962), and eventually led to the development of the periodic Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) now conducted by the International Association for the Evaluation of Educational Achievement. Today, TIMSS, PIRLS, and the Programme for International Student Assessment (PISA) of the Organisation for Economic Co-operation and Development are among the best-known international learning assessments.

Since 2000, over 90 countries have participated in PISA, which measures how well students can apply what they learn in school to real-life situations through an assessment of the abilities of 15-year-olds in reading, mathematics, and science. Undertaken every 3 years, PISA has become a high-profile assessment, with countries tailoring their education strategies to include measures that help improve their overall ranking. For participating countries, the outcome of PISA is an important indicator of system performance and the assessment has become a significant influence in national policy making (Breakspear 2012). The assessment has also led to policy reform in education, by providing countries an opportunity to justify such reform domestically based on international evidence (Grek 2009), thus demonstrating the impact of global actors on primary and secondary school education (Ninomiya and Urabe 2011). Most important, it has been suggested that there are significant economic gains for countries that can improve cognitive skills for their students (Hanushek and Woessmann 2010).

As an unintended consequence though, PISA and other international assessments have also become high stakes assessments for many participating countries anxious to demonstrate the progress they have made as they seek to improve their rankings in the educational sweepstakes. Some scholars have argued that the increased emphasis on PISA outcomes may well be leading to changes in curricula and pedagogy in participating countries whose impact will only be known several years later (Gorur 2016).

Finally, the last 2 decades have seen the rise of citizen-led assessments (CLA) organized by nongovernment organizations, which attempt to provide a dipstick view of the state of learning at a given point in time. Beginning with the Annual Status of Education Report first published by the NGO Pratham in 2005 in India (Pratham Resource Centre 2005), CLAs are now found in many countries including Kenya, Mexico, Pakistan, Tanzania, and Uganda. While the methodologies followed by early surveys varied, many CLAs today use methods and techniques that compare with global best practice and may in some cases be more reliable than available national surveys.

Additionally, CLAs have one significant advantage over other national and international assessments: the surveys are conducted in the homes of respondents, which results in the collection of learning data even for children who are out of school, and greater involvement of parents and the community. Given the still high number of children out of school, particularly in developing countries, it is appropriate that data from such surveys are also taken into account when monitoring progress globally (Schwantner et al. 2018).

Each of these types of assessment serves a unique purpose and takes a different form; nevertheless, they all fundamentally perform the function of providing information about learning at a given point in time to various stakeholders at different levels. Thus, while classroom assessments enable teachers to teach better, large-scale assessments support evidence-based policy making. Used appropriately, the data from each kind of assessment enables improved learning.

4.3 Global Variations

Globally, assessment capacities began to improve after the 1990s when 155 countries adopted the World Declaration on Education for All in Jomtien, Thailand, which shifted the focus of the discourse from inputs to outcomes, by declaring the need to focus on learning outcomes instead of only enrollment (Greaney and Kellaghan 2008). The adoption of the Sustainable Development Goals (SDGs) in 2015 has provided renewed importance to learning assessment, with SDG 4.1 stipulating that the target is to ensure by 2030 that "…all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes" (United Nations 2015). The emphasis on the achievement of specific learning outcomes stipulated in the SDGs carries with it the implicit need for quality assessment to monitor progress toward achieving the goal.

The challenge however, is that countries differ in terms of their levels of educational development and in how they design and use learning assessment. In South Asia for instance, which accounts for the highest number of out-of-school children in the world, technical and managerial capacity for assessment is nascent and institutional systems delicate, a situation that has been exacerbated by the COVID-19 pandemic. As a result, decisions about assessment are often made by those who may not always have technical knowledge or an understanding of its objectives or benefits, which can adversely affect the quality of the assessment undertaken. Very often, adequately trained human resources are not available or may not be able to give their full attention to assessment. In certain cases, merely undertaking the assessment may be viewed as the end objective in itself, rather than acting on the outcome of such assessment. Assessment in such countries still tends to be considered something that should be undertaken after teaching has been completed, rather than an integral part of the teaching–learning process that should be continuous and ongoing.

Most countries in South Asia have traditionally relied on their own national assessments to provide data on student learning, with limited participation in

international or regional surveys, although this may now be gradually changing. India participated in PISA in 2009 and will do so again in 2022. Bhutan participated in PISA for Development in 2018, while Pakistan and Sri Lanka are considering future participation in TIMSS or PIRLS.

Other regions of the world have made more progress, with countries developing relatively advanced institutional abilities, allowing them to move beyond their own borders to consider learning achievement at a regional level. The South East Asia Primary Learning Metrics is a regional survey that assesses outcomes of students in grade 5 in six Southeast Asian countries and provides inputs into education policy making in the concerned countries. In Latin America, the Regional Comparative and Explanatory Study[1] evaluates students in grades 3 and 6 in reading, writing, mathematics, and sciences across 18 countries in the region. In the Pacific, the Pacific Islands Literacy and Numeracy Assessment helps assess basic numeracy and literacy skills of children from 15 countries.

4.4 Learning to Learn

Most forms of assessment, whether in the classroom or through an international survey, privilege existing institutional structures of learning, namely the school and its stakeholders, since that is the way society has traditionally viewed learning (Elmore 2019). However, as educators have increasingly recognized, learning takes place in diverse settings, both inside and outside the school environment, and COVID-19 has emphatically reinforced this understanding. Today's workplace prizes the so-called 21st century skills of collaboration, creativity, communication, and critical thinking far more than a simple recall of facts and figures (World Economic Forum 2015). This means the nature of assessment also needs to undergo a change.

Recalling that assessment is a means to an end, i.e., improving learning, it seems fair to say that the future of assessment globally is linked to the future of learning. Developments over the last several years have made it clear that a significant number of countries is moving away from traditional, rote-based learning systems toward learning that encourages the development of 21st century or transversal skills (UNESCO 2014). Care et al. (2017) observed that public education systems in 113 countries across the world had defined education as being more than equipping students with academic or technical skills for work, although not many were necessarily clear about how those skills were to be integrated into national curricula. Not surprisingly, there is also tension between existing structures of education systems and the desire to develop these skills (Care et al. 2017).

While schools and curricula remain highly structured, the truth is that learning is a deeply individual experience and one that takes place in a variety of environments. Neuroscience tells us that the human brain continues to develop over one's life

[1]Laboratorio Latinoamericano de Evaluacion de la Calidad de la Educacion-Estudo Regional Comparativo e Explicativo.

span and that learning occurs in several ways in different natural, social, and institutional environments (Elmore 2019). It is not reasonable therefore, to assume that learners acquire all their skills, curricular and co-curricular, only within the school environment. Indeed, if the COVID-19 pandemic has conclusively demonstrated anything, it is that physical attendance in school is no longer a prerequisite for learning beyond say, the foundational learning stage or the first 3 years of primary school. In turn, this implies that students need to be prepared to learn, unlearn, and relearn as they progress through various stages of lifelong learning. That being so, assessment should enable "learning to learn" rather than merely testing recall of specific subjects or facts.

The biggest change this requires is for assessment to be viewed as an integral part of good pedagogy, rather than something that gets tacked on at the end of the teaching cycle. Recollecting the view of assessment as fundamentally the process of establishing and understanding where individual learners have reached in their learning at a given point in time (Masters 2013), we can consider learning itself in a different light. In a forward-thinking way, by establishing what a learner knows and can do, assessment informs next steps since it enables both the teacher and taught to identify and address areas that need additional support. This remains true whether the assessment is an international or national survey, or in the classroom: the purpose of assessment remains essentially to support making decisions that lead to an improvement of learning.

Equally importantly, this approach is underpinned by the fundamental belief that learning is a process occurring over many years and can potentially be lifelong (Masters 2013). In turn, this implies that every student can make progress given enough time and adequate opportunity. The Fig. 4.1 describes a virtuous assessment

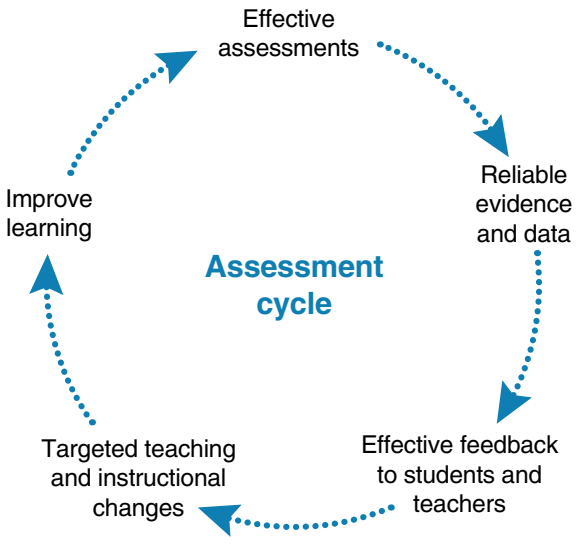

Fig. 4.1 The assessment cycle (*Every student can make progress given enough time and adequate opportunity*). *Source* Author's representation

cycle that is based on this approach. Regardless of the nature of assessment, when carried out correctly it should support improved learning.

Note that it is not the act of assessment itself that will lead to improved learning, but the actions that follow based on its outcomes, i.e., the steps that are taken subsequently to address the status of learning made visible by the assessment. All too often, one observes that in the case of many education systems, the assessment event becomes the end in itself with data from the exercise not being used to inform policy and corrective action. In one South Asian country for example, a national assessment of secondary schools was undertaken in 2017 but was never reported, and the development project supporting the assessment wound up before the reports could be released. In another, data from a national assessment of grades 3 and 5 remained unused for 2 years before funding was made available for its analysis and reporting. Using the data emerging from an assessment is critical to improving learning; merely undertaking an assessment is not the end goal. Additionally, such assessment data should ideally be used in conjunction with other available data about the student to arrive at the best judgment of their progress.

It is interesting to observe that this process remains true throughout an active learning life, whether the learner is in school, at the workplace, or elsewhere. Regardless of where learning takes place, an accurate appreciation of progress made over time and the current state of an individual's learning provides important clues to the next steps that need to be taken. Externally administered assessment may not always be required—an independent learner would be capable of self-assessment to arrive at a realistic understanding of their growth, identifying areas for further learning on that basis. Thus, assessment need not be viewed as something that must always be purely formal in nature. As the nature of learning changes throughout the learner's life, so must the form taken by assessment.

4.5 Future Possibilities

4.5.1 Increased Use of Technology

The COVID-19 pandemic has severely disrupted education systems worldwide and caused countries to find newer and innovative solutions for the delivery of learning to students. It has also forced a reappraisal of the way assessments are undertaken, both in school and outside. More than anything else, it has shown us that education systems need to be resilient and responsive to disruptive challenges, for surely COVID-19 will not be the last challenge they face. Increasingly, countries are switching to technology-based solutions to undertake assessments, even though access to such technology may not be easily available to all. The role of technology in learning assessment has been increasing over the last several years but the pandemic has demonstrated that it is only likely to assume more importance in the future. Given the ability of technology to create and manage increasingly high levels of complexity,

one would expect to see it being more widely used, leading among other things, to greater personalization of assessments, adaptive assessments that draw on a built-in knowledge base to provide learning support, and the use of artificial intelligence to take on some of the tasks that are presently performed manually. Increased use of technology—whether online or offline, for individual classroom-based assessments or large-scale ones—will also help provide increasingly reliable and valid data upon which to base decisions that help to improve learning. However, it would be even more important to remember that the process of designing assessments to provide data on which valid and reliable conclusions can be reached remains important—a badly designed assessment delivered using good technology would still be a badly designed assessment.

It is likely that many of the technology-based solutions adopted as a result of COVID-19 will remain with us as we navigate the pandemic over the next few years; this will impact the manner in which assessment is carried out too. Having said that, it is important to enter a caveat here: the availability of technology and technology-based solutions even in the so-called developed countries is not equitable, and it is certainly less so in developing ones. A recent study from India showed that although schools tried to deliver online learning during the pandemic, more than four-fifths of students in the government's central schools (arguably better provisioned and run than most state schools) had to use mobile phones to access to online resources, while only about 10% had access to laptops (National Council for Educational Research and Training 2020). Countries will therefore need to review the current availability and distribution of technological aids for learning and assessment, and prioritize faster adoption. From focusing on access to physical educational infrastructure, administrators and policy makers will now need to plan for virtual access by investing in devices, computers, and broadband capabilities. At the same time, we must continue to remind ourselves that technology is not a magic bullet that can solve all problems; therefore, realistic expectations about its impact should be based on the characteristics of individual education systems.

4.5.2 Strengthening and Reforming Learning Assessment

There is general agreement that the world has been facing a learning crisis for some time now. In a 2018 report, the World Bank noted that even after several years in school, millions of children cannot read, write, or do basic mathematics, referring to this as a learning crisis that is increasing social and economic gaps instead of helping to reduce them (World Bank 2018). In the interest of equitable learning (already interrupted by COVID-19, which is likely to cause further learning losses), the development of robust assessment systems has become even more important. While some form of learning assessment is usually in place in most countries, it will become critical for assessment reform to be undertaken in ways that allows some common agreement on basic elements.

The Global Partnership for Education (GPE) recently made the strengthening of learning assessment systems a strategic priority so as to bring about improved and more equitable learning outcomes (Global Partnership for Education 2016). As part of this initiative, GPE has worked with ACER to develop the Analysis of National Learning Assessment Systems tool kit to provide a resource for countries to systematically gather and analyze information about their national learning assessment systems to bring about reform and improvement (Australian Council for Educational Research 2019). One would expect to see similar tools being made available to countries seeking reorganization of learning assessment.

An important consideration for many countries at this time will be the development of appropriate capacities to implement reliable assessments, whether in the classroom or at scale, especially as they seek to accelerate economic and social development. In the short run, this is likely to be prioritized as governments seek to understand and address educational gaps between different segments of domestic society, leading to a strengthening of classroom and provincial or national assessments.

It has been argued that assessment reform is driven by four factors: (i) demand for better data for decision making, (ii) advances in our understanding of human learning, (iii) recognition of the need to develop assessments that prepare students for life in the twenty-first century, and (iv) improvements in technology (Masters 2013). To these, I would venture to add a fifth: an improved appreciation by policy makers and practitioners, particularly in developing countries, of the role assessment data plays in supporting sound educational policy, which causes a demand for better data in the first instance. Increasing capacity in education systems to generate and use assessment data for policy making will also lead to greater efforts to develop stronger learning assessment systems in more and more countries.

As the nature of teaching and learning changes, thanks in part to COVID-19 but also as a result of natural progress, one would also expect to see the nature of assessment change to reflect that reality. Instead of more conventional assessments with students sitting together in a hall and undertaking a pen and paper assessment or one on a computer, assessments of the future could be based on other criteria, such as evaluation of project work done by a student or a group of students to demonstrate their skills of creativity and collaboration. Indeed, in some schools and countries, this is already happening although in most cases the school leaving examinations remain unchanged.

4.5.3 Assessing 21st Century Skills

Given the emphasis on creation of modern knowledge societies, the world of work is becoming more complex and more dependent on the successful use of technology. This requires students to acquire a high degree of facility with skills that can be transferred easily from one role to the next, especially in a world where many of the roles that future generations might play are yet to be defined. As countries start to build such skills into their education systems, they will also need to consider the best way in

which to verify the attainment of these skills, yet this task is not a simple one inasmuch as these skills do not lend themselves to easy assessment. Additionally, assessments aimed at evaluating transversal skills are not easily adaptable to education systems that primarily use learning assessments for summative or certification purposes (Care et al. 2018), as is the case in much of South Asia and elsewhere.

Different regions of the world have taken multiple approaches to the issue of assessing transversal skills. For instance, in Europe, the Assessment of Transversal Skills 2020 project involves 17 partners from 11 European Union countries and explores new approaches to developing and assessing such skills (Cyprus Pedagogical Institute 2020). Australia, which began discussing "general capabilities" in the 1990s, tends to treat the assessment of such competencies as integral to the assessment of subject knowledge and skills (Weldon 2019). The Philippines has begun work on reviewing and integrating 21st century skills into curriculum, pedagogy, and assessment with the development of a Strategic Road Map (Scoular 2020). Across Asia, several countries have included transversal competencies in their educational frameworks, but many report operational-systemic challenges to implementing such assessments (Care and Luo 2016), with the actual availability of formal assessment tools being limited (Care et al. 2019). Clearly then, developing effective and meaningful assessments for such skills will acquire priority in the years to come.

4.5.4 Citizen-Led Assessments

One would also expect household- or community-based population surveys to become more prevalent, particularly in countries where assessment capacity is still being built. Whether undertaken by governments, development agencies, or nongovernment organizations, such surveys have the advantage of not being school-based and therefore more inclusive since they cover even children who may not be enrolled in school.

Citizen-led assessments, as they become increasingly more technically sophisticated and widespread, will also be an important source of information about student learning. The PAL Network, a south–south partnership of organizations leading CLAs across three continents, recently released the International Common Assessment of Numeracy or ICAN, an open-source and robust assessment tool in 11 languages that offers international comparability of results. The technical sophistication of ICAN and the equivalence of translations means that children across the concerned countries undertake a common assessment, so that their progress can be compared (Schwantner and Walker 2020). It is not unreasonable to expect that similar, equally robust assessment tools will continue to become available as we move forward.

4.6 Conclusions

Learning assessment plays a critical role in helping to improve learning under different conditions and in varying situations, as an integral part not just of the teaching–learning process, but also of the larger policy environment. While the objective of each type of assessment may differ, its fundamental purpose remains that of helping to determine progress made by each learner in their individual learning path so as to be able to guide and support further development (Masters 2013). Most importantly, *utilizing* the data emerging from an assessment is critical to its success. The effort of undertaking an assessment is lost when the results of that assessment are not acted upon, whether in the classroom or in policy making.

The disruption caused by COVID-19 is likely to hasten the already rapid deployment of technology-based solutions to assist learning assessment, but it will be important to ensure equitable access to such solutions. However, notwithstanding the technology used, the design of assessment systems, whether in the classroom or for the country, will continue to require care and proficiency to elicit useful data.

The emphasis on transversal competencies or 21st century skills witnessed in the last few years also means that new methods of assessment will need to be designed and deployed, with attendant capacity created at various levels of the education system. Although many countries have identified these skills as desirable and included them in their curricular and pedagogical frameworks, there is as yet limited availability of tools that can provide reliable information about such competencies.

The development of CLAs has introduced a new dimension into the traditional understanding of assessment and its role in learning, and has helped generate previously unavailable data by covering out-of-school children. As they become increasingly technically sophisticated, such assessments can provide significant insights into student learning, especially at a time when previously followed models of education have been disrupted, with students learning in a variety of diverse environments.

The challenge of developing suitable capacities for learning assessment is one that will need to be addressed, particularly in countries that are also simultaneously dealing with issues of access, equity, and retention in a situation of resource scarcity. As countries progress toward becoming knowledge societies, developing the technical and managerial skills required for various kinds of reliable assessments will assume greater importance. Some attempts have been made at reaching a consensus on the best way to undertake and use learning assessments globally, such as the Learning Metrics Task Force (UNESCO Institute for Statistics and Center for Universal Education Brookings Institution 2014) convened by the UNESCO Institute of Statistics, or the ongoing Global Alliance to Monitor Learning.[2] However, given the vastly varied capacities available across countries, it is unclear at this stage if such agreement can or even should be reached. What is clear though, is that this is an area that will continue to require support and development if we are to address the pre-existing learning crisis and the one thrust upon us by COVID-19.

[2] *Source* Global Alliance to Monitor Learning. http://gaml.uis.unesco.org/.

Even as international learning surveys have provided a picture of learning across countries, as assessment capacities develop, the priority in most countries remains understanding the relative status of domestic groups so that greater support may be provided to those being left behind, leading to an emphasis on classroom and national-level assessments. In the medium term, it seems quite likely that there will be more diversification rather than less, with an emphasis on strengthening regional or even national assessments, all the way down to the classroom level to empower teachers to improve learning. Whatever direction future developments take however, one is likely to witness greater emphasis on building capacities for more accurate learning assessment to provide support at different levels for improving learning.

In an ideal scenario, learning assessment should be the business of everyone—teachers, students, parents, and the larger community, in the quest for creating "learning societies". Reliable learning assessment can help develop a culture of learning that supports lifelong learning, well beyond the formal years of education. The COVID-19 pandemic has conclusively demonstrated that learning is not confined within the four walls of an educational institution, and that it is possible to continue to learn in a variety of situations and in challenging circumstances. Notwithstanding where learning takes place however, it remains important to have in place robust assessment systems that allow measurement and monitoring of progress made by learners individually and as a group. Developing these systems and the associated skills will remain critical to supporting and improving learning, particularly in an age of disruption.

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