

Change assessments are what we might call “cognitive”. Such assessments evaluate what a student knows after a course of learning (where “knows” can mean information or skills or both). I argue that such assessments are not appropriate (valid or ethical) unless the following conditions are met:

1. Persistence past Failure, and “Grit”:

Only assess students who have already learned to persist past failure and challenges and who have “grit” in the sense of “perseverance and passion for long-term goals”, two key “non-cognitive skills”. Otherwise, we will not be able to tell whether failure is caused by problems with knowledge or problems with dispositions.

2. Entry-Level Capacities

Only assess students who either had the requisite entry-level capacities (skills, dispositions, experiences, and resources) for learning the domain in which they are now being assessed when they started the learning or who developed them as part of the learning. Otherwise, we will not be able to tell whether failure is caused primarily by problems with (taught) knowledge/skills or by the fact that some students were never ready and well prepared for the learning we are assessing in the first place.

3. Affective Filter:

Only assess students whose affective filter is not high for the learning being assessed or the assessment itself. Otherwise, we will not be able to tell whether failure is caused by problems with knowledge or by problems with emotion/affect.

4. The Big Picture:

Only assess students who understand where what they are learning fits into a larger set of meaningful activities, practices, values, and identities in life and in the world. Otherwise, we cannot tell whether failure was caused by problems with knowledge or by problems with motivation. We know that people are more motivated and learn better when they understand the meaning, value, and context of what they are learning. With humans, context is “king” and meaningfulness stems from context.

5. Situational Meaning:

Only assess students who are able to associate the words of academic language in an assessment with images, actions, experiences, goals, and practices, not just with other words, definitions, or texts. Otherwise, we will not be able to tell whether failure is caused by problems with knowledge or by a failure of opportunity to have gone beyond definitions and word-to-word relations to word-to-world relations, the latter of which are crucial for deep understanding and the ability to apply one's knowledge.

6. Trajectories and Development:

Assess and report in terms of trajectories (various stages) towards mastery (and in given domain there may well be different trajectories towards mastery). Also, assess and report in terms of growth (development) across time. If we don't do this, we risk making judgements that are not valid across time and do not really mean what we think they mean at the time we make them. Much development is U-shaped and so, without a trajectory-and-development approach, we can be in danger of failing people at the bottom of the U, which is a good sign, not a bad one, for development.

7. Multiple Variables:

Assess and report in terms of multiple variables and their interactions. Deep learning is a complex developmental phenomenon; important domains are complex. So, "drop out of the sky", one-off, decontextualized, single-score assessments often tell us very little and can be dangerous grounds on which to draw inferences.

8. Big Data:

Use copious cognitive, affective, social, and interactive data for assessment and reporting (but not just from digital exhaust). In the age of Big Data, it is irresponsible not to base our judgments on the best data we can get, especially when copious data can help us to assess in developmental, personalized, highly comparative (comparing across large numbers of people and contexts), and multi-variant ways.

9. Feedback:

Assessment should always answer the question—for students, teachers, families, administrators, or policy makers—"Where to go next"? Assessment needs to be integrally tied to actional feedback about what to do next, both in the short term (next step in a course of learning) and the long term (next step in development and life).

10. What Students Actually Get:

Assess what actual resources for the future—in terms of tools, skills, dispositions, and capacities—students are getting from teaching, learning, and assessment (and clarify what they are good for now and in the future). Otherwise, we are wasting students' time.

11. Doing, Knowing, and Becoming:

Assess and teach Doing (skills), Knowing (information), and Becoming (identity, dispositions, and values) as they are integrated with and support each other (Snook, Nohria, & Khurana 2012; Thomas & Brown 2011). For example: What does it mean to DO physics, to KNOW physics, and to BE a physicist, and how are these related? Since these three are integrally related and deeply support each other, it makes little sense to teach or assess them in isolation.

12. Personalization:

Teach and assess in ways that are customized to learners' interests, aspirations, values, and developmental paths, but without limiting students' abilities to collaborate, to face challenges, or to learn in new ways.

13. Collaboration:

Teach and assess collaboration in the sense of collective intelligence. In collective intelligence people can network with good tools and other people with diverse skills, knowledge, and backgrounds to solve hard problems that a single individual or domain of expertise cannot solve (Nielsen 2012).

14. 21st Century Skills:

Persistence past failure, grit, and collaboration (collective intelligence) are 21st Century skills. There are others, such as resilience in the face of change; the ability to participate, make, and produce; the ability to innovate; to empathize; and the ability to appreciate, benefit from, and work with people with diverse experiences and backgrounds. Teach and assess these and other such skills, since traditional school-based skills are increasingly meaningless in today's world for students' futures in the absence of 21st Century skills.

15. Deliberate Learners:

All teaching and assessment should ultimately be in the service of producing deliberate learners, that is, learners who can manage their own self-teaching, practice, and learning and who can teach others. Any assessment that does not acknowledge and facilitate growth and understanding towards becoming a deliberate learner is standing in the way of human progress.

16. Produce and Not Just Consume:

Teach and assess so that students, in any domain they are learning or being assessed in, can produce and not just consume. The “Maker Movement” is a crucial and a highly valued-added part of many domains where digital technologies are used in today’s world. Producing is crucial for traditional literacy (writing is the Maker Movement part of literacy) and for civic participation, as well.

17. Integrate:

Teaching, learning, and assessment should be part of one integrated whole. Good assessments teach and inform teachers and teaching; good teaching constantly assesses; and the best learning is so closely tied to assessment that it is often hard to tell the two apart.

18. Depth and Passion:

Good teaching and assessment should help students sample interests and find passions. Students should be helped to find those domains where they can go deep and develop real expertise with which they can contribute something special to others and society.

19. Civic Participation:

If teaching, learning, and assessment do not, regardless of the domain being learned, help students to become active and critical participants in their society and to become people who feel they count and people who feel that what they do matters, then there will not be a good society in which people can teach and learn.

20. Values:

If teaching, learning, and assessment do not, regardless of the domain being learned, help students become good moral human beings leading meaningful lives then there is little point to any of it.

21. Time:

Assessments that assume that because students have spent the same amount of time at a learning task they had equal opportunity to learn or an equal chance to do well on an assessment are invalid and immoral. Different students started in different places in respect to many different variables. Time is a poor measure of learning, especially in a digital Big Information world where we can personalize learning to students’ place in a trajectory towards mastery, their own development, and their previous experiences.

It is clear what would happen if we truly honored these conditions: We would assess a lot less students a lot less often. In turn, we would more often assess teaching, the resources students receive, and what different students bring to learning in terms of background, experiences, and local context. These latter assessments would set the validity boundaries for what I called “cognitive assessments” above. Then, when we engaged in cognitive assessments, especially consequential or high stakes assessments, we would know enough about where different students stood to make valid, moral, and practically helpful judgments.

The conditions above virtually require that we develop deep portraits or profiles of each student’s history, development, experiences, resources, achievements, interests, passions, skills, strengths, and weaknesses. They demand that we treat each student as a complex being filled with a great many changing variable that are sensitive to development and context –variables determined by experiences in the world as they interact with a unique individual whose identity is never captured or exhausted by a single label. We need to know WHO we are assessing.