
Title	Reframing technology for assessment and learning as a form of signature pedagogy
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Reframing Technology for Assessment and Learning as a Form of Signature Pedagogy



By *Tay Hui Yong*

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For two centuries, our classrooms have looked largely the same, with students seated behind neat rows of desks listening to the teacher expounding in the front. The exception was during the school lock-downs because of the COVID-19 pandemic when our pedagogy seemed to change with students sitting in front of an electronic device. But now that the schools have reopened, we seem to have gone back again to the days of B.C. (Before COVID-19).

So how should we go about rethinking our pedagogy? Shulman suggests that we analyse our pedagogy by examining our habits: Habits of mind (what the teacher considers as knowledge), habits of the hand (the teacher's acts of teaching) and habits of the heart (the teacher's beliefs, values and dispositions). These habits constitute our signature pedagogy which "define how knowledge is analysed, criticised, accepted or discarded. They define the functions of expertise in a field, the locus of authority, and the privileges of rank and standing . . . these pedagogies even determine the architectural design of educational institutions, which in turn serves to perpetuate these approaches..

"(Shulman, 2005, p. 55). Another way of viewing this signature pedagogy is through examining them through various dimensions: the epistemic (habits of mind), the practical (habits of hand) and the moral (habits of the heart) (Esterhazy, De Lange, & Møystad, 2021).

Epistemic Dimension (Habits of the Mind)

Artificial intelligence (AI) is already being piloted in Singapore schools in the form of automated marking of essays. Such platforms benefit both teachers (by correcting mechanical errors) and students (by providing just-in-time feedback). Students with learning needs also benefit from the text-to-speech functionality included in the platform. While these are exciting developments, one should be attuned to the epistemological issue with the risk of removing the centrality of teacher judgement over students' work, and vesting that power

in the hands of programmers and their algorithms. Students should also not abdicate all judgement of their work to AI. Instead, they should be encouraged to exercise agency in reflecting whether the automated feedback is valid.

Practical Dimension (Habits of the Hand)

Currently, AI platforms may not be available to most teachers. Instead, some teachers use *Google Form* as a way of giving automated feedback to students as shown in Figure 1. below

While *Google Form* can offer timely personalised feedback, it may also perpetuate the wrong conception of feedback as information downloading. We now know that students' engagement with feedback is a complicated affair involving their affect (their emotions towards teachers' comments), behaviour (seen in their uptake of feedback), and

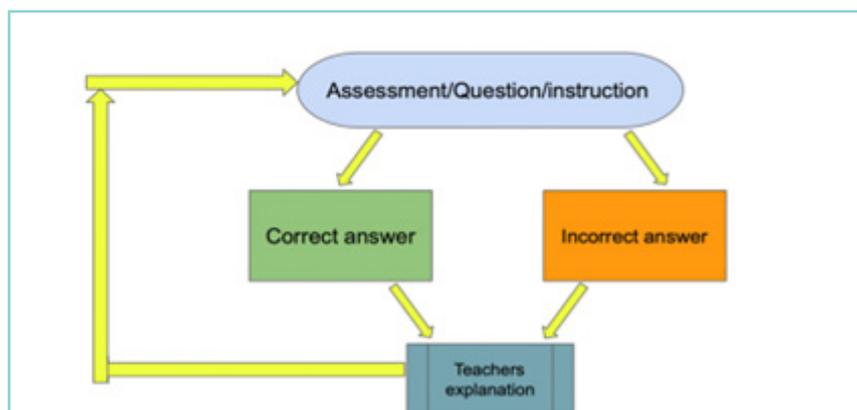


Figure 1. Google Form used in assessment (credits: Choo Shi Qian).

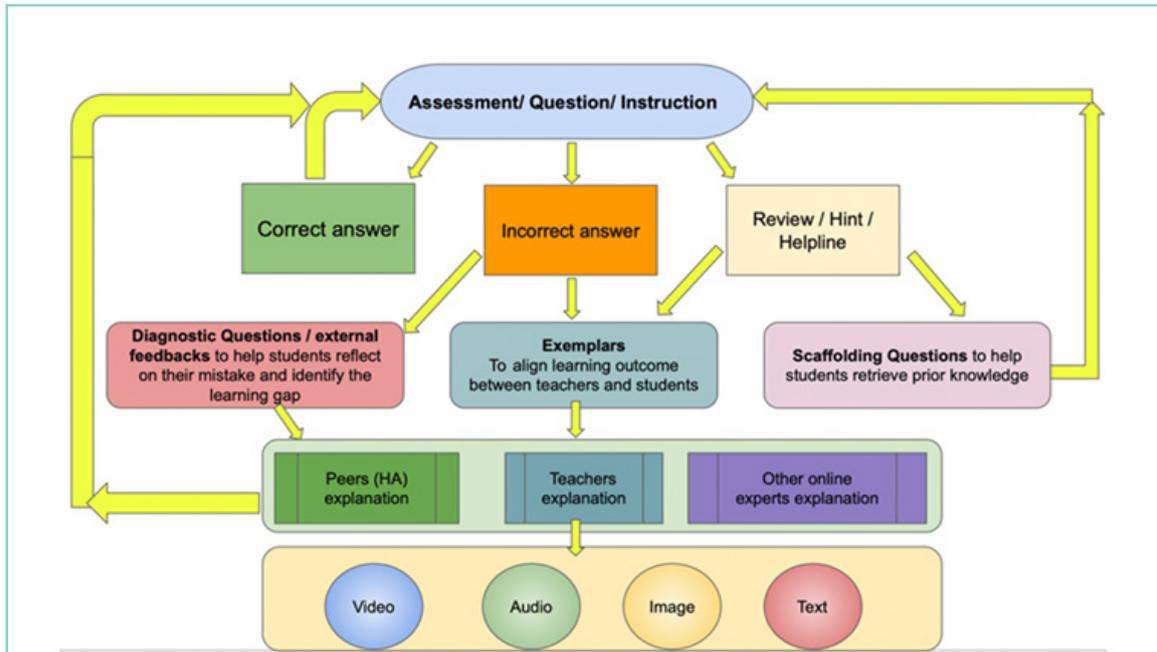


Figure 2. Google Form with branches for differentiated feedback (credits: Choo Shi Qian).

cognition (in terms of their processing, attention, recall and understanding of feedback) (Tay & Lam, 2022). An alternative that better meets the learners' needs is using the branching functionality in Google Form, where the teacher can build in the support for students who need exemplars and scaffolds while allowing the better performers to proceed at their own pace (see Figure 2). Such use of educational technology to support differentiation is nonetheless not common because it is deemed to take up too much time to set up. So while technology may have evolved, our habits have not: we still favour the more efficient (faster), rather than a more efficacious way, of doing things.

Moral (Habits of the Heart)

So far, we have assumed (perhaps wrongly) that there are no equity issues involved in the use of technology. Even if all our learners have equal access to these technological tools and platforms, there are other moral issues. For example,

during the school closure, many teachers posted extensively text-heavy instructions and required students to type their responses online. Such practices caused much stress among the students with dyslexia (Tay & Siti Asjamiah, 2021). Our signature pedagogy must involve a habit of watching out for the more vulnerable among our learners.

Conclusion

These are but three examples of the current use of technology in assessment. Regardless of how technology evolves, our imperative should be to design pedagogy to be epistemically, practically and morally relevant to the student and the future of society.

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