



## CAE's Point of View: Embedded Assessments

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Due to the COVID-19 outbreak, most educational institutions have moved to a remote model of teaching, learning, and assessing for the Spring 2020 semester. At this point, the number of institutions that will remain remote through Fall 2020 is unknown. What is the role of assessment in education in the post-COVID-19 world?

### Embedded Assessments

For educational institutions, returning to business as usual may not be feasible in the foreseeable future. Educational leaders have recently identified a need for innovation if institutions of higher education are to survive (Mazur & Kerrey, 2020). Experts on learning agree that now is the time to revisit the fundamental notions of learning and assessment through the establishment of a *blended learning* model (Jones & Sharma, 2020). This change would use traditional methodologies of teaching and assessment while incorporating digital content and delivery methods into the classroom.

I have been an adjunct faculty member, teaching statistics courses for social science majors since 2002. This past semester began the same way as every other semester, with weekly in-class meetings and a lab session. In the beginning of March, the institution implemented remote classes and sent all students, except those who could not leave, home for the rest of the semester. I, like many other faculty around the world, had to suddenly become an online/remote instructor.

Fortunately, because of my work at CAE, I was equipped with a model that transitioned well from the in-person experience to the online classroom. Because I was no longer physically in the classroom with students, it was more difficult for me to evaluate my students' level of understanding and engagement with the material. I was using Zoom to meet with my students during our regularly scheduled time, but it was more challenging. The biggest challenge engaging my students in the course material, particularly during what was supposed to be the hands-on lab sessions. This is a statistics class we are talking about, after all.

To improve my ability to evaluate my students, I embedded performance-based mini-assignments into the course and tied them to the final project. In addition to using the textbook examples and assignments, I created a series of performance tasks for the students. In past semesters, before COVID-19, I gave the students a large performance task in lieu of a sit-down, in-person final exam. This performance task consisted of a realistic scenario with real-world context (i.e., the student has the role of a research intern at an organization) with a set of appropriate research questions and a data set. One of the learning goals in the course is for students to effectively communicate results from a statistical analysis to an audience that is not necessarily skilled in statistics. They are asked to conduct a series of increasingly more complex analyses and produce a research report communicating their findings from the data analyses.

I found that providing mini-assignments tied to the final project helped with student engagement because the students knew that the mini-assignments were a part of their final project grade. I also felt that it was important

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to have more points of contact with students to provide feedback opportunities, which occurred entirely within Zoom. The final project still entailed a write-up, but some of the data analyses happened earlier in the course. By doing this, I was able to collect information on students' understanding of the material and keep them engaged in the course rather than simply lecturing over Zoom and going over their textbook-based homework assignments.

I admit that my on-the-fly performance-based mini-assignments need improvement because I was only one step ahead of each assignment as the semester progressed. I am going to refine the mini-assignments and use this model for all my classes, regardless of the method of class delivery.

More generally, when moving towards either a blended learning or entirely online teaching and learning environment, educators must remain focused on content but also must consider student engagement, motivation, and satisfaction with the course. I found that embedding a performance task into the course was an effective approach to supplement knowledge-based assignments, such as homework, throughout the semester. This approach also allowed me to collect information on my students' skills and understanding along the way rather than waiting until the end of the semester. The beauty of well-designed performance tasks is that they require students to actively engage with the content and use higher order skills such as analysis and problem solving and communication, which are essential 21<sup>st</sup> century skills.

Since 2002, CAE has been designing, developing, administering, scoring, and delivering student and institutional reports from performance-based assessments. Due to COVID-19, you may want to assess where your students are at the beginning of the semester to see whether there is a gap in learning compared to past semesters. We are working with our clients to design innovative solutions, including formative assessments, for individual classrooms as well as across the institution. CAE can also help faculty learn to develop their own performance-based activities and assessments for their classrooms. Please reach out to us with any questions you may have regarding embedding performance-based assessments into your classrooms.

## References

Jones, Kevin and Sharma, Ravi S., On Reimagining a Future for Online Learning in the Post-COVID Era (April 17, 2020). Kevin Jones & Ravi Sharma (2020). Reimagining A Future For Online Learning In The Post-COVID Era. First posted on medium.com.. Available at SSRN: <https://ssrn.com/abstract=3578310> or <http://dx.doi.org/10.2139/ssrn.3578310>

Mazur, E. & Kerrey, B. (2020, May 10). Higher ed's coronavirus opportunity. The Wall Street Journal, Retrieved from <https://www.wsj.com/articles/higher-eds-coronavirus-opportunity-11589139956>.