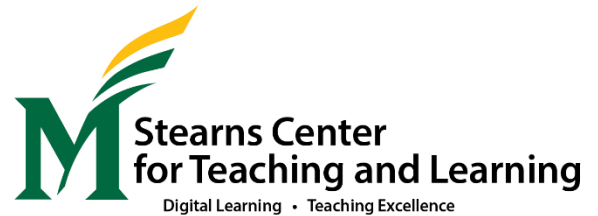


## *No Exams? Portfolios in STEM? But How Will They Learn?!*

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When the pandemic hit in spring 2020, I was forced, like many others, to quickly translate the engaging face-to-face courses I had spent years perfecting to an online environment. I learned very quickly that it would not be as easy as just doing what I had done face-to-face using Zoom.

I can still feel the stress of that moment, trying to change everything in the blink of an eye, but I appreciate how it forced me to rethink my pedagogy. Many faculty members were panicked over the thought of how they could effectively deliver exams online. I decided it was time to get creative and to be more flexible than ever before. I decided it was time to rethink how I was assessing students and ultimately, that led to my decision to eliminate exams.

To keep students accountable and to ensure they understand the content, I use low stakes formative assessments such as quizzes and discussion boards on a weekly basis. Students also have the opportunity to work together in groups during synchronous sessions on assignments.

For their summative assessments, I decided to use portfolios. This was a challenge because designing a portfolio for a STEM class, in particular, is difficult. Most of their portfolio entries give them the flexibility to choose topics within the course content that interest them as well as the flexibility to choose the format for presentation. For example, students have created research proposals, teaching modules, blogs, podcasts, websites, and YouTube shows. I even had a student create an entire song about forensic DNA to the tune of a song from *The Little Mermaid*. This has been a wonderful opportunity for students to learn the content in an authentic and meaningful way from a variety of perspectives. Through their portfolios, students also have the opportunity to revisit mistakes made on previous quizzes, learn more about what it means to be a science communicator and why that is important, and to also dig deep into some peer-reviewed literature of their choice through journal reviews.

It has been a process for me to reevaluate what it means for a student to learn and be successful in my courses. And although it has been a heavy lift to make this transition, I am incredibly proud of the end product. It is student-centered and culturally responsive. At the end of the semester, the students are asked to write a final assessment paper to do some self-reflection on themselves as learners as well as to reflect on the course and provide suggestions for improvement. After revisiting the course outcomes and their learning process, most students are surprised by how much they learned despite not having exams and to be honest, I have been equally surprised. I remember the first semester I implemented this new format and thinking to myself as they did their final presentations and as I read their final papers, "They learned! They really learned!" Best. Feeling. Ever.



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