

# 13

## What are some things to consider in implementing portfolio-based assessment?

Making changes to classroom routines is not always easy. Completely changing the process of collecting and assessing student work is downright hard. In the next story, Antonio tells how he experimented with the use of portfolios in his high school mathematics classes and what he learned from the experience. He shares his own very candid reflections on this process and considers changes he may make in the future.

### Things to look for

- self-assessment
- ownership of learning
- assessment *as* learning
- collecting evidence vs. collecting points

## EXPLORING THE USE OF PORTFOLIOS

### The Story of Antonio

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For the past sixteen years, I have been teaching mathematics in a linear system with classes ranging from grade eight to calculus. Throughout this period, I have noticed that many students demonstrate a fairly good understanding of concepts during class but then “fall apart” when asked to do the same on a test. Over the years, I have attributed this observation to a combination of test anxiety, poor preparation for the test, a limited ability to memorize material, and/or a limited understanding of the concepts which becomes much more apparent when “they have to put it all together” on a unit test.

Over the last five years or so, I have had some success in improving test results and student learning by providing a review package that clearly defines the expectations for each test and a retest opportunity for those students who demonstrate an improvement after a poor test. However, I would be hard pressed to say that things have significantly changed. I still have many students who frustrate me come test time. It is not uncommon for me to say “I saw you do this last week really well. What happened this week?” In some cases, I know the student put in a really good effort and it was not simply a lack of studying. It is these students that really made me start to question my assessment methods. I was battling with test results where I knew the student was not at the 80% level or higher, but my observations did not agree with the test scoring them at the 50% level or less.

Should I be giving quizzes more often? Should I be giving marks for homework? Although these are common practices, I did not find them very successful in the past. When I tried these strategies, I had lots of students copying each other’s work and many students very stressed out on a daily basis. I would hear: “There is going to be a quiz this week and I have to learn this now. Just tell me what to do so I can do it on the quiz.” Perhaps (and this is debatable) the students were a bit more on

task in class, but their enjoyment in doing math was minimal, and their willingness to think through a problem was replaced with a need to be efficient.

I had tried using portfolios many years ago but my first impression of them was not very good. It seemed like a lot of work on my part and an unwanted task by the students. So I have to admit, I was quite surprised at myself when I decided to try them again. My rationale for “flogging a dead horse” and returning to the “portfolio bandwagon” was simply, the need to give students a chance to demonstrate their learning on a regular basis and the wish to avoid giving small tests almost every time they came to class.

So my big idea this time around was to make the portfolio tasks optional. Each student would be given the opportunity to put something in the portfolio that would demonstrate their understanding. About once a week, I would tell the students to look at a few questions I had selected and if they wanted, they could take the next 10 or 15 minutes to work on one or more of them on their own and then hand them in. I would then put the work in their portfolio and at the end of the unit, I would only use these pieces of evidence if I thought they demonstrated understanding that I did not see in their test.

It seemed very reasonable to me. The option to submit evidence would be well received. After all, there would be some students who know what’s going on during class and would want a chance to show it while others would want more time to process the concepts. My only worry was, “How do I merge the test marks with the portfolio marks?” I didn’t have an answer, but was optimistic that when the time came, I would find a resolution.

I decided to start with my Math 8 and Applications of Math 11 classes because they seemed to contain many students that would most benefit from this form of assessment. For many of the students, their work habits were far from scholarly and their ability to memorize material seemed lacking. Portfolios to the rescue! Or so I believed.

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Both the students and myself did not adjust well to this new dawn in education. Despite my best efforts to assure the students that the portfolio was optional, many did not want to hand things in if it wasn't perfect. Instead of trying it, they preferred to keep practicing and wait for the test later on. Others didn't seem to grasp the idea that the portfolio evidence was supposed to put them in a good light. It was meant to say, "Hey teach, look at what I can do!" Instead, several just wrote down what appeared to be the prelude to a rough draft with the mindset that any poor attempt was better than nothing. "After all, there has to be a mark for handing in something with my name on it."

On my end, it was hard to break the routine of 16 years. Sometimes several classes would go by and I had not remembered to give opportunities for the portfolio. After about eight weeks, the portfolios were not overly helpful. The students who were doing the best in class generally handed in some good portfolio work but it didn't really tell me much more than their test result. The weaker students generally handed in some poor work for the portfolio and again, matched their test result. As for the remaining students, they generally didn't have much in their portfolio to analyze. This was very surprising to me. I thought it would be "the middle of the road" students who would be enthusiastic about the portfolio experience and ultimately benefit the most. As it turned out, I was able to avoid any headaches about merging the portfolio marks and the test marks. For the time being, it was a non-issue.

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It was time to go back to the drawing board. Why was this not working? The only thing I was really learning in the process was that my struggling students were indeed struggling, my high flyers were flying, and my students on the fence, were fence sitting. When discussing this with others, it became clear to me that I was seeing the benefit of the portfolio in the wrong light. Its greatest power was not to inform me, but to inform the students. I needed to use it as a vehicle that would help students with self-assessment.

So, it's "once more unto the breach dear friends." I have two strikes against me but I am confident that I'm ready for the next pitch and will finally have a hit with portfolios. I'm not expecting a home run right

away, but I think I will definitely be on base with this next attempt. Currently, I am still using portfolios to collect optional evidence, but what's new is that I now regularly have students self-assess their understanding of the learning objectives and their background skills as part of the portfolio, the hope being that students will be better equipped to direct their learning and be better prepared to demonstrate their understanding at the conclusion of the unit. To keep things simpler, I have decided to work with just the grade 8 class and, perhaps, be able to do a more consistent job with the portfolio on a week to week basis.

## Further Discussion

1. Antonio's students didn't actually mark the work they put in their portfolio, but what Antonio tried in his classroom is an example of student self-assessment nonetheless. How so?
2. Antonio's use of portfolios began when he noticed that not all students were able to show their understanding on summative assessments. How did Antonio expect portfolios to provide a solution to this problem?
3. Antonio noticed that weaker students often struggled with the portfolio process. How can teachers help students learn to self-assess and select meaningful evidence for student portfolios?
4. What similarities and differences do you notice between Antonio's and Jessica's implementation of portfolios in their classrooms?
5. Students are often focused on collecting points by handing in assignments/questions rather than on focusing on their learning. Antonio found that some students with this mindset did not generally collect evidence that demonstrated their learning, but simply handed in anything in the hopes of being awarded a few marks. How can teachers and students begin to change this culture in our classrooms?

6. Selecting evidence for the portfolio was a weekly occurrence. How did this strategy promote self-reflection and student engagement? How did it promote student learning?
7. How is Antonio's use of portfolios an example of assessment *as* learning? How might it be used as an assessment *of* learning?
8. Portfolios can help shift the focus from collecting points to collecting evidence of learning. How does this benefit students? How does this benefit the teacher?
9. In what ways is Antonio's use of portfolios helping students to self-assess and reflect on their learning?
10. How has Antonio's understanding of the purpose of portfolios changed over time? How has his students'?
11. Antonio's use of portfolios led him to want to make changes for his next implementation. What suggestions would you give Antonio to help him find more success next time?