

## **Digital Portfolios: A Dozen Lessons in a Dozen Years**

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The initial work on digital portfolios began with a project at the Coalition of Essential Schools in 1993.\* The work began with a simple question: how could technology support exhibitions of student work? At the center of conversations around assessment, we have to keep to looking at two key purposes: allowing students to show that they are meeting high standards of achievement, yet having students show who they are as individual learners. During the last dozen years, technology has progressed at a rapid pace, and schools are facing many new challenges. Still, in our collective work across many different projects, we (the three authors) have learned a number of lessons that are consistent across learning environments and hold up over time. Here, we present a dozen lessons that are most resonant across all of our work.

**1** Schools need to address a set of "essential questions." From the first research on digital portfolios, we learned that schools have to consider a number of issues, including:

- Vision: What should a student know and be able to do?
- Purpose: Why are we collecting the student work?
- Audience: Who will be reading the portfolios?
- Assessment: What tasks should students perform? How will we know what's good?
- Technology: What systems will we need? How is it supported?
- Logistics: What resources do we need?
- Culture: How do we make the portfolios valued and valuable to a school?

There isn't one "right" answer to these questions; what is important is that the school engage in the conversation. To work out these questions, teachers need to work collaboratively, yet each teacher needs to contribute his or her own thoughts. If you are a teacher, you need to recognize that you can't do it alone; at the same time, there is much that you can do alone.

**2** Teachers must support the project. While support may come in varying degrees is fine but some support is necessary. A top down initiative gets the ball rolling; however, unless the stakeholders are involved in the design and have a say in the decision-making they will not feel as vested in the project. Like students, teachers can feel disenfranchised and not completely buy in to the project.

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\* See D. Niguidula, "Picturing Performance with Digital Portfolios," *Educational Leadership*, November 1997.

Leadership, however, can help build that support through consensus. Each portfolio endeavor requires someone to explain the purposes of the project as often as necessary.

**3** Portfolios are fundamentally for the students. A good portfolio sounds like the student, is created around his or her own learning goals, and shows growth over time in areas important to the student. Student and school goals are integrated as the student collects and reflects on progress over time.

The portfolio is for both formative and summative evaluation. With the contribution of each new sample, the student reviews the previous work and reflects on progress. This often leads to the student having insight into how he or she can improve. With new goals in mind, the student returns to learning, until the next portfolio entry. The portfolio is also a summative evaluation tool ; gauging how a student measures up against standards. For this, the best entries are rated against the criteria for standards.

As the demonstration of what students know and can do, portfolios include reflections by the students on how they did the work, what they think of the pieces in the portfolio, what they think they demonstrate and why they included the piece in the portfolio. These reflections provide the context for the work. They are also evidence that the student has in fact operationalized the assignment; understands the concepts or skills , and can articulate, the purpose of the assignment or learning activity that resulted in the artifact that appears in the portfolio.

**4** The portfolio has to fit into how students and teachers work. They must be integrated into instruction to be sustainable. If they are an add-on that teachers or students do not see as important to their learning, they become impatient with the time it takes to collect, select, reflect and present. Consider having students think or talk about what they know about a topic before you begin instruction. Capture these for the portfolio. Then as students learn, have them collect and reflect. At the end of the unit, have students review their initial understanding, reflect on what they have learning, and choose artifacts that reflect their learning.

Portfolios gain acceptance quickly when they track high value and high growth (e.g. primary reading). Think about what you can collect using video, audio and pictures that will show the heart of student growth. In pre-schools, jumping, skipping and drawing show dramatic change. In primary, reading and handwriting improve dramatically. In upper elementary, students get much

better at comprehension and retelling. In middle school students become narrators of their own stories, often reveling in autobiographies and using technology to capture where and how they live. In high school, students make great advancements in skill in areas such as sports and music, as well as writing and speaking. They often want to use the portfolio as evidence of proficiency for jobs or higher education. College portfolios often demonstrate competency against standards for entry into a profession.

**5** It's not about the technology. A portfolio doesn't have to be digital but pictures and video change the whole experience. Students love creating the video. They can often talk about what and how they are learning much better than they can write it, so recording their reflections creates a rich picture of their learning. Audiences love seeing the growth over time that video and pictures capture so well.

People often ask, "Do we need to have digital portfolios?" The answer is no, but you will probably want to. Schools that use portfolios intensively year after year find they have trouble managing the paper. Digital portfolios eliminates this problem. The problem of what to keep, what students take home and what gets stored from year to year is also eliminated. With digital portfolios, the digital copy is available to different people at different times, and copies can also be made.

To launch digital portfolios, you will need to have an infrastructure in place prior to support implementation. At the very least, you will need cameras, server or web storage, and ready computer access. You will want to develop routines for students to collect, select and reflect using the equipment and systems you have available.

**6** "Collect, select, reflect and present" is the process of portfolio development and use. Cycling through these activities makes the portfolio part of the learning process rather than a chore at the end.

Portfolios should include decision-making by students. A portfolio holds the byproducts of their learning so you want them to ask the question, "What shows what I know and can do?" This deepens their understanding of what constitutes evidence of learning. They soon realize, for example, that showing the difference between their initial understanding and a final performance of understanding is more powerful than showing only the final performance. Students contend that

they learned more when they had to make the decision of what work was appropriate to use as a demonstration of proficiency for a particular practice.

Reflection makes a portfolio different than a collection of work. When students reflect on what, and how they are learning, they add meaning to the work they have produced. They are demonstrating that they know “how they know” rather than just “what they know.” These reflections often become the most cherished part of the portfolio since they are such a personal representation of the “thinker” behind the work.

You don't need as much in the portfolio as you think you do. A few well-chosen pieces with reflections can show a lot of growth. You will probably always want to include examples of writing three or four times a year. If you are including video, speaking samples in September, January and May can show huge growth. Consider including different kinds of work; lab reports, expository writing, handwriting samples for primary, career aspirations for older students.

**7** All portfolio tools are not created equal. You need to find the tool that will work best in your setting. Some schools, such as High Tech High, ask students to build their own portfolios from scratch as part of the technology curriculum; other schools may find it more useful to use tools that are more “ready-built.”

In almost all cases, though, customization is critical. The technology needs to fit the way you do things in your school – not the other way around.

**8** Implementation takes time. Change does not happen overnight and the implementation of a portfolio project is no exception. Be prepared to nurture the initiative and be flexible to change.

It is important to recognize that any portfolio initiative is dynamic and not only should change but must change based on what you learned during implementation and as a result of reflection on the project. However, in order to have the necessary credibility and participant buy in there must be a solid infrastructure in place to support and facilitate project success.

**9** The portfolio has to stretch how students and teachers work. The portfolio system takes the assessment of student work and elevates its importance. A portfolio isn't about maintaining a reasonable average; it's about actual performance of standards. Therefore, students need to have opportunities to meet standards, and teachers need to respond to the work that students do. Like

a good coach, teachers should look at performances in the portfolio, and determine where more emphasis is needed to reach higher levels of achievement.

Portfolios shift instruction toward diagnostic, data-driven teaching and learning. While the data in a portfolio is qualitative rather than quantitative, portfolios can provide a balance to standardized testing. Schools often find it helpful to work with common rubrics so that there is a common language for discussing the work in the portfolios. On a larger scale, portfolio implementation can affect the program. For example, when a set of portfolios is reviewed by reading specialists, the group may recognize patterns where students need help – and can then establish the appropriate professional development to address that need. Various education decisions, from curriculum to how time is allocated, can and should be reevaluated based on information gained from the portfolios.

**10** Feedback is the most important aspect. Students agree that feedback/coaching is a necessary element of developing their portfolios, yet, in a discussion of portfolio systems, students in a number of settings felt the feedback was missing from their courses.

One strategy is to create a formal structure for feedback, such as one-on-one conversations, advisory periods, student-led conferences, panel presentations – even science fair type events where students put their portfolios on display. Students are more likely to put effort into a portfolio if they feel the school is taking the portfolio seriously.

**11** Portfolio development is DEFINITELY worth the work. The actual effort involved in assembling a portfolio is often minimal; students can create entries quickly, and schools can focus on projects, activities and assessments that are already in place. By taking a few minutes and adding work to the portfolio, students and teachers can start to create a more complete view of what the student has accomplished, and what the teacher can do to help the student get to the next level. Parents, students, teachers, and administrators can see growth over time and patterns of performance in new ways. In the end, the portfolios are about getting a "richer picture" of each of us – and of all of us.

**12** The audience matters. Unlike a typical assignment, students recognize that work in a portfolio can be viewed by more than just the teacher. Knowing that the portfolio can be shown to various audiences makes students more conscious of what they want to display, and in turn, students put more effort into the work they put in the portfolio.

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Because portfolios make student - and teacher - work more public, students will include projects that require more effort or creativity. Teachers then have to make the adjustment to provide students with the opportunities to generate that kind of work.

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These 12 lessons represent our collective experience and that of the thousands of students and teachers with whom we have collaborated over the last 12 years. We share them in the hope that you will find them to be touchstones in your implementation as we have. As we all continue in this work, we hope you will add to these 12 with what you learn along the way.

Let us know how you all doing and add your story at [www.techstory.org](http://www.techstory.org).