A student from Rogers Adventist School in College Place, Washington, displays artwork that will be included in his portfolio.

Students take pride in completing quality work for inclusion in their portfolios.

Students hone their technical skills as they work on their digital portfolios.

A portfolio includes goals that students have set for themselves.

The Power of the P

BY SHELLEY BACON

"Begin with the end in mind" is a maxim from Steven Covey's book *Seven Habits of Highly Successful Teens*. Applications to education are obvious: If teachers begin with their goals in mind, their students' educational experience will improve.

The next logical step is to decide what the "ends" are. As Adventist educators, our highest end goal is for our students to live eternally. A close second would be for them to serve God and their fellow human beings while on Earth. Other end goals are spelled out in the *Journey to Excellence* prepared by the North American Division Office of Education, the theme of the 2006 teachers' convention.[1]

Society presses yet another "end" upon us as educators. We are expected to prepare our students for life in the 21st century. A December 17, 2006, *Time* article, "How to Bring Our Schools Out of the 20th Century," asserted that today's stu-

Digital portfolios can be stored on CDs for future reference or to share with parents and school groups.

What changes do we need to make to ensure that our students get the quality education that will prepare them for the 21st century and beyond?

dents need to know "more about the world," to learn to think "outside the box," to become "smarter about new sources of information," and more. Anyone who read this article and also has attended any of William Daggett's "Model Schools" seminars, which stress his new "three R's" (Rigor, Relevance, and Relationships) will recognize that the *Time* authors and Daggett were talking about the same thing.

What changes do we need to make to ensure that our students get the quality education that will pre-

Students from Rogers Adventist School made totem poles and then photographed them for inclusion in their portfolios.

ortfolio

pare them for the 21st century and beyond? Is there a tool that we can begin using NOW that will help our students acquire and demonstrate the knowledge, skills, and—most importantly—**applications** that they need to manage the rapidly changing world around them?

Portfolios, which can be created in a variety of formats, afford opportunity for student reflection, are useful for integration of content and ideas, documentation of continuing growth, showcasing of student work, and authentic assessment.

Different types of portfolios can be used to demonstrate a variety of goals. But first and foremost, portfolios should be used for student reflection, or "metacognition." According to Jon Mueller's online "Authentic Assessment Toolbox":

"[I]n the more thoughtful portfolio assignments, students are asked to reflect on their work, to engage in self-assessment and goal-setting. Those are two of the most authentic
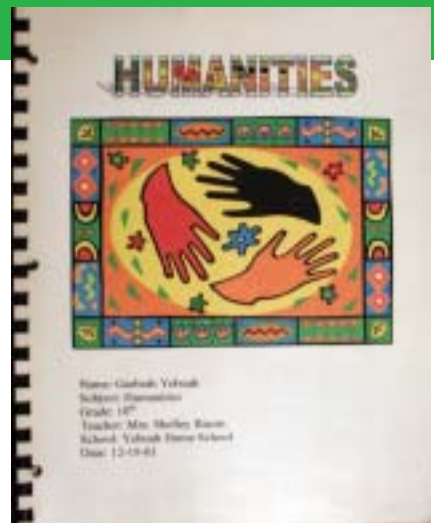

Printed cover of a hard-copy portfolio.

skills students need to develop to successfully manage in the real world. Research has found that students in classes that emphasize improvement, progress, effort and the process of learning rather than grades and normative performance are more likely to use a variety of learning strategies and have a more positive attitude toward learning. Yet in education we have short-changed the *process* of learning in favor of the *products* of learning. Students are not regularly asked to examine how they succeeded or failed or improved on a task or to set goals for future work; the final product and evaluation of it receives the bulk of the attention in many classrooms. Consequently, students are not developing the metacognitive skills that will enable them to reflect upon and make adjustments in their learning in school and beyond."[2]

As Mueller has pointed out, thoughtful portfolio assignments require student reflection and encourage the development of the life-skill of metacognition or "thinking about thinking."

Portfolios take time to create and assess; if the end result does not enable both the student and the teacher to recognize and assess growth, and the student to make strong connections to the "real world," they become little more than a nice collection of useless arti-
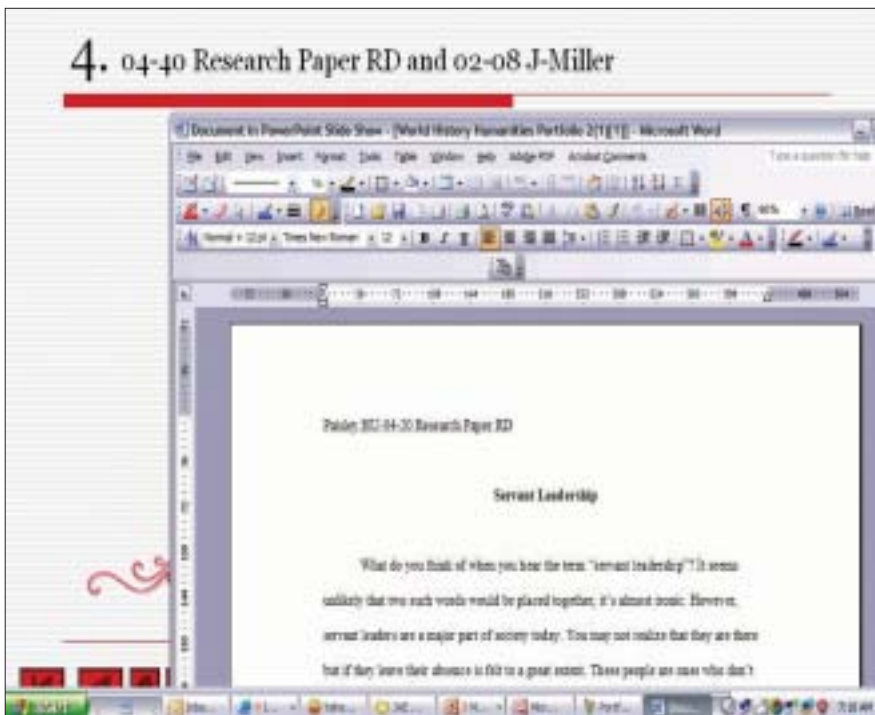
Digital portfolios can be created with Microsoft PowerPoint and embedded Word files.

facts. Meaningful portfolio assignments afford students the opportunity, through reflection, to find significance in the tasks that school requires of them and thereby enable them to make connections to what is important to them and to their future.

Types and Uses of Portfolios

Integration: Teachers can help students make strong connections between and within various disciplines through the use of **Integration**. Even though the *Journey to Excellence* preferred practice of "Integrated Curriculum" isn't always easy to implement, content integration can be fostered through the use of portfolios.

Integration of content relates to Bill Daggett's new three R's. The "Relevance" postulated by Daggett can be ensured through the inclusion of a reflective assignment, which should be part of every portfolio. It is important for students to understand—so far as possible—the *whys* of the learning that is required of them. When students are able to make connections between their assignments and "real life," they will see the relevance of what they are learning and will be much more likely to retain the knowledge and apply the information to new situations.

Even if you do not have an integrated curriculum, you can require an integrated portfolio that pushes your students to make significant connections between the content of various courses. Elementary teachers have an advantage in this area, as they usually teach multiple subjects and are aware of the content for each of them. Secondary teachers can ask the students how the content in their class has helped them learn and/or apply new skills in other classes.

Continuing Growth Documentation: Portfolios can also be used to document **continuing growth**, either longitudinally or yearly. A longitudinal portfolio would fit nicely with

Daggett's idea of "rigor," as it documents the student's depth of knowledge and understanding in a particular field. "Artifacts"—the items chosen to be included in a portfolio—should demonstrate growth in knowledge, skills, and/or understanding. These sorts of portfolios can be begun in 1st grade and added to yearly by each successive teacher. Samples of student work can be assembled either in a hard-copy format, or digitally, to show progress from year to year. An example of the usefulness of portfolios in this area would be for handwriting. Sample assignments could be included from the beginning and end of each year, showing improvements and changes in style.

The NAD's *Journey to Excellence* (J2E) goals can be used as a foundation for a "continuing growth" portfolio with a strong emphasis on reflection. Students can be asked to reflect on each of the 10 goals and make connections between what they do in school—the assignments, discussions, activities—to progress toward each of the goals. As students move from grade to grade and from elementary school to high school, their growth in all of the J2E goals can be documented through artifacts and continued reflection, ensuring that the "tasks" of school—the material to be read, the information to be mastered, and the assignments to be completed—are connected longitudinally, integrated, and related to real life.

"*Showcase*": Showcase portfolios work well for many disciplines, but are especially appropriate for subjects such as art. Students can include samples or scans of their work, and photos, if they are creating a digital portfolio. A showcase portfolio for writing, for instance, could include essays from an entire

> **Thoughtful portfolio assignments require student reflection and encourage the development of the life-skill of metacognition or "thinking about thinking."**

class or course, or samples of a particular type of writing, such as persuasive papers, creative stories, poetry, etc. Project-based learning[3] projects can document each step of a process and then highlight the final completed project and comment on its effect outside the classroom. Such "showcase" portfolios could easily motivate other students to engage in quality work!

Reflection: Reflection can and should be a part of ALL portfolios, but you might want to create a whole portfolio dedicated entirely to this process. The idea of encouraging "metacognition" can help fulfill Ellen White's admonition to "train the youth to be thinkers, and not mere reflectors of other men's thought,"[4] and teach them to "reason from cause to effect."[5] Relevance moves students from the acquisition of knowledge to the adaptation stage, where the knowledge becomes part of the child's life and forms the basis for further learning, questioning, reasoning, and problem-solving.

Teachers must urge students to ask and answer these questions: "WHY is this important?" "HOW will this knowledge affect my life?" and "WHERE can I use it in the future?" If students do not dig for answers to these questions, their studies will not be relevant to their everyday lives and therefore will not be retained. A portfolio focused on re-

> **For additional reading and resources**, please see the entire excellent article by Jon Mueller in his "Authentic Toolbox": http://jonathan.mueller.faculty.noctrl.edu/toolbox/portfolios.htm.

flection will help students make the strong connections required to retain knowledge that they can apply in the future.

Authentic Assessment: Portfolios can be an excellent **assessment tool**. A reflective portfolio is in itself a form of assessment; the teacher gets to see into the heart of his or her students, and learns what each one "took away" from the school work completed.

How can a portfolio be used for students to assess their work? If you simply have students compile their best work for their portfolio, or save both their initial attempts and their refined work at the end of the year, how does that form a part of the assessment process? It does document growth, which is an important thing. And it can be a showcase of sorts. But doesn't something need to be *added* that demonstrates mastery? If everything in the portfolio is already graded, how can it be an "authentic assessment" of student work?

In order for a portfolio to be truly a tool for assessment, it needs to include new information. The culminating assignment must challenge the student to make connections (as in the "reflective" and "integrated" portfolios). Can students tell how they have grown academically? Can they make connections between what they have *learned* and what they will *do* with that knowledge? Can they discuss the knowledge intelligently and write about it? Can they draw a picture of it? Can they teach it to someone else? What we as teachers "teach" is not nearly as important as what our students "take away" from our classes. A true assessment tool measures what they have "taken away." If they can use the knowledge they have acquired to help them do problem solving, you will truly have an "authentic assessment."

Format of Portfolios

Portfolios can be created in many different formats:

• Hard-Copy Collection of Artifacts and Reflections

Portfolios can be collected samples of student work that is placed in storage for later viewing and assessment. The collection can be put in a box, binder, folder, or some other physical space. Though this method may seem old fashioned in the digital age, it can still be very effective. A hard-copy portfolio can be showcased at Home and School events, or kept in the classroom to show interested parents and students what students do in your classroom. However, hard-copy portfolios do require significant storage space, either in your classroom or in the attics or basements of your students' houses. Therefore, you may want to use digital portfolios.

• Digital Collection of Artifacts and Reflections

Many tools can be used to create digital portfolios, including Microsoft PowerPoint. Adding the "kiosk" mode[6] allows viewers to browse through the portfolio using links, much as they would on a Web page, and affords the portfolio creator a chance to learn to use a new technological tool. Multimedia tools can be added to PPT files, which gives students the option of adding video, audio, and digital pictures to their presentation. They can read into the "sound recorder" of a computer[7] or take a video of themselves completing or presenting a project. For example, a student could read and record the same selection at the first of the year, the middle of the year, and the end of the year to demonstrate progress.

• Web-Based Collection of Artifacts and Reflections

Web-based portfolios allow teachers and students to make a permanent record of achievement and progress and are an excellent way to "showcase" student work and reflection. PowerPoint files can be uploaded to the Internet; Websites can be created with pictures, text, links to artifacts, videos of stu-

dents in action, etc. Blogs can even be added (with teacher monitoring) to encourage dialogue and further learning.[8]

This side of the kingdom, we will never reach the "end" of our educational goals. But we can employ tools that will help our students progress toward those goals. Portfolios are powerful tools that can help our students achieve important life goals and prepare them for the 21st century. Why not use this powerful tool in your classroom? ✑

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NOTES AND REFERENCES

1. You may read all 10 goals, as well as preferred practices referred to in this article, at http://www.journeytoexcellence.org/.

2. See http://jonathan.mueller.faculty. noctrl.edu/toolbox/portfolios.htm.

3. "I define *project* as 'an authentic performance-assessment task in which students must apply the knowledge and skills learned in class to solve a genuine problem outside the classroom'" (Eeva Reeder, http://www.edutopia.org/designing-worthwhile-pbl-projects-high-school-students-part-1).

4. Ellen G. White, *Education* (Mountain View, Calif.: Pacific Press Publ. Assn., 1903), p. 17.

5. _____, *Child Guidance* (Nashville, Tenn.: Southern Publ. Assn., 1954), p. 362.

6. Kiosk: In Microsoft PowerPoint, go to "Slide Show," and select "Set Up Show." Select "Browsed at kiosk," and then add "action buttons" to link each slide to other slides.

7. Choose Start > All Programs > Accessories > Entertainment > Sound Recorder.

8. Some examples of K-12 Web-based or "e-portfolios," as well as commercial resources for e-portfolios, can be found at http://electronicportfolios.com/ALI/samples.html#k12.