

# Using ePortfolios as Assistive Technology

Students often struggle to demonstrate content engagement and mastery and improved levels of organizational and presentation skills. For teachers, the struggle focuses on how to best offer feedback and opportunities to promote students' reflective practice. Both teachers and students profit from using electronic portfolios, **ePortfolios**, as a platform/workspace to house evidence of learning and progress towards academic goals. As a workspace, **ePortfolios** are great virtual places to process, store and categorize information and artifacts, and as a platform to demonstrate knowledge mastery. According to Paris & Ayres (1994), "the overarching purpose of portfolios is to create a sense of personal ownership over one's accomplishments, because ownership engenders feelings of pride, responsibility, and dedication."

## Purpose

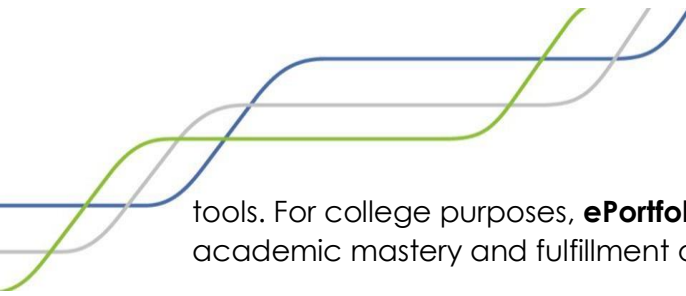
For students with disabilities, **ePortfolios** can serve many purposes. Used as an Assistive Technology (AT) tool, **ePortfolios** can showcase mastery of prescribed AT devices and software/apps, and serve as evidence of critical thinking skills and active participation. **ePortfolios** thus become "the central point of students' experience." (Rebbeck, 2008)

The purposes of the **ePortfolio** need to be clearly stated and should align content with AT goals and levels of mastery as evidence of personal growth.

Along with content specific goals, the development of an **ePortfolio** for students with disabilities should include:

1. An outline of AT skills mastery within a timeframe and how these skills should grow in relation to content acquisition
2. Checkpoints for students' reflection on mastery of AT devices and/or applications as they relate to content
3. Showcase of skills related to organization, presentation and mastery of virtual tools
4. Development of self-assessment skills

When used as an AT tool, **ePortfolios** also have a transitional purpose. The virtual storage of artifacts (audio, text, video, etc.) follows students in their post-secondary academic journey and/or their employment options. For employment purposes, **ePortfolios** showcase products and skills demonstrating mastery of work related skills, i.e. organization of materials, arrangement of items per category, use of software for use in the workplace such as Word, Excel and PowerPoint, and skill level in the use of Web 2.0



tools. For college purposes, **ePortfolios** function as letters of recommendation about academic mastery and fulfillment of AT related goals specified in students' IEP.

### Characteristics

For students with disabilities, the use of **ePortfolios** as an AT tool should take into consideration its *scalability and flexibility* (Project SHARE, 2013). A *scalable ePortfolio* is dynamic, non-linear, and reflect academic and personal engagement through the number and size of files (audio, text, videos, websites, etc.) A *flexible ePortfolio* houses products that can be used in many different ways, for a variety of audiences. Given its *scalability and flexibility* as an educational tool, **ePortfolios** must be developed in collaboration with all stakeholders: teacher, AT specialist, student, and parent.

### Benefits

Developing an **ePortfolio** provides students with a vast array of learning and organizational benefits. Learning benefits (Buttler, 2006) include:


1. Increased engagement through creation and authorship
2. Improved organizational and presentation skills
3. Progressive mastery of technology related skills (text, audio and video)
4. More opportunities for feedback and development of reflective practice

Because of its portability and mobility, **ePortfolios** open up space for students to display their inventiveness and creativity through inclusion of a variety of artifacts and materials. A video produced for an English class can also be used to showcase mastery of tech related skills, and increased level of comfort in using IEP prescribed AT device and/or apps. When students use **Wordle** to gauge classmate's professional interests, or to show coverage of local elections, the results can demonstrate students' grasp of math concepts and understanding of how best to match Web 2.0 tools with assignment objectives.

### Types of ePortfolios

As electronic evidence of learning and skill mastery, **ePortfolios** can be either *process oriented* or *product oriented*. *Process oriented* portfolios aim at documenting the learning process. Students are expected to include drafts, reflections on the learning process, as well as difficulties and obstacles encountered along the way. For students using prescribed AT devices and/or software and apps, the *process oriented ePortfolio* should align understanding of content with increased mastery of the technology.

For elementary students using prescribed AT devices and/or software/apps, a *process oriented ePortfolio* can document students' efforts towards mastering, and types of obstacles encountered in using the technology in connection with school assignments. The *process oriented ePortfolio* can do wonders to increase students' self-confidence.



*Product oriented ePortfolios* can be of great use to secondary students using IEP prescribed AT devices and/or software/apps. The goal of *product oriented ePortfolios* is to showcase improvements and accomplishments by displaying students' best work. Along with the selected product, students are expected to have a reflective piece explaining why each work was chosen as their "best work." Secondary students using prescribed AT devices are more mature and in a better position to evaluate the usefulness of the prescribed technology in connection with future plans—either post-secondary education or employment.

### Assessment Tools

With the Common Core mandate to show evidence of "student achievement" for all students, **ePortfolios** have emerged as an efficient tool to link requirements with assessment and program effectiveness. When used as an assessment tool (be it alternative, authentic, competency-based or standards-based), **ePortfolios** are storage space, workspace/process, or showcase/product (Barret, 2002). As an assessment tool, **ePortfolios** are either developmental, reflective, or representational.

1. **Developmental or Working ePortfolios:** Include samples of work that demonstrate mastery of content and types of material (digital audio, text and video files. Assessment will focus on the development of collection, students' reflections progress, weaknesses, and needs for developing mastery of content, and prescribed AT devices and/or software/apps. This working phase showcases progression in knowledge acquisition and content comprehension over a time period, increased level of comfort in the use of prescribed AT devices, and progress in learning new software and apps.
2. **Reflective ePortfolios:** Assessment focuses on students' engagement in reflective practice, connecting personal experiences with content delivered and use of prescribed AT, students' level of engagement in cross-curricular content mastery, and progress in the use of prescribed AT devices and self-assessment.
3. **Representational ePortfolios:** Showcase students' progress in mastering skills needed for the use of AT devices, software and/or apps. A representational ePortfolio is used to showcase students' work. Though it is intended to showcase samples of various work, the ePortfolio primarily showcases long term achievements. These ePortfolios can be used for job interviews, as letter of recommendation for college entrance, or as an end of the year capstone work.

### Tools for ePortfolios

In the development of an ePortfolio, students using IEP prescribed AT devices and software/apps will need to select digital tools for collecting and organization materials and artifacts, and platforms for processing and presenting files and projects (audio, text, video, etc.) and artifacts. The selected tools and platforms need to be able to synch with AT devices and merge with AT prescribed software/apps.

Generic, open source tools easily merged and used with AT devices are:

1. **GoogleDocs:** A free and portable open source platform providing access to:
  - a) Mainstream productivity tools (Excel, PowerPoint and Word)
  - b) Calendar for organization and tracking of assignment due dates
  - c) Translator for foreign language assignments or for gathering information with a diverse point-of-view
2. **GoogleDrive:** For portable and mobile storage and access of all types of files
3. **Adobe Acrobat:** For converting all and any files into a portable document
4. **Instagram and Pinterest:** Free web-based apps for collecting and categorizing pictures and videos
5. **Audacity and iMovie:** Multimedia authoring (audio and video)

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This project is supported by the U.S. Department of Education, Office of Special Education Programs (OSEP), Grant No. H327F080003. Opinions expressed herein are those of the authors and do not necessarily represent the position of the U.S. Department of Education.