

# Documenting children's learning through multi-media projects

By Jennie Sumrell

Do overstuffed binders full of work samples, data collection and photos make you want to pull your hair out? Multi-media projects can be a dream come true in documenting children's learning individually or as a group. These projects can become a functional and usable computer program that can be accessed and enjoyed by students of all abilities and their families!

### Overview of performance assessment

For teachers working with students with disabilities, it is often difficult to show what they know or how they've progressed using traditional assessments. In many early childhood settings, performance assessment has become a popular way to share with families the accomplishments their child has made over a period of time by creating a portfolio. Portfolios are a friendly way to share with families the intellectual powers of how their child has made friends, participated in activities, attended, interacted, changed temperament, developed social and communication skills and made progress in ways that typical assessments leave out. These methods of assessment emphasize accomplishments that occur in natural settings, reflect the progress of the child within that environment, and help celebrate



*Wiley and his classmates reviewed the steps of making paint with this computer program.*

the accomplishments of children, regardless of their abilities.

A teacher records learning through observations and samples of work that demonstrate development of interests, initiative, creativity, developmental progress and growth. It can include work samples, artwork, or photographs of individual students or as a group. Documentation may include comments made by teachers or others, transcriptions or audio recordings of children's discussions, explanations of the intentions of the activity and even comments made by parents. Quality documentation fosters reflection, demonstrates respect and value for the child's work and ideas and encourages parent participation in the assessment processes. These

projects support a collaborative community of learners by sharing knowledge about children's learning, deepening teachers' awareness of each child's progress, and giving teachers the ability to create needed modifications and adjust teaching strategies.

Although performance assessment is a preferred form of assessment for many families and teachers of students with disabilities, traditional portfolios are not always accessible or usable by young children. Children often have a difficult time reflecting on their work or sharing comments about the activity with their family or classmates. Students rarely interact or use the portfolios in their classrooms because teachers don't want their

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*Include your students in helping design and make the project. Ross enjoys recording his voice to narrate the program.*

work to get destroyed or ruined. Teachers can become frustrated with collecting work samples, pictures and data throughout the year for an entire class. Families may also find portfolios difficult to preserve for years to come, due to the large space they take up and general wear and tear overtime.

### Use of multi-media projects

By moving to a more “digital” individualized portfolio or assisting the class in making their very own multi-media project, their work and learning can be documented and preserved while cutting down on some of the issues that traditional portfolios and documentation may present. Multi-media projects provide evidence of the child’s individual success and contribution to group projects and provide a visual and/or auditory depiction of skills. Using a variety of software and educational and assistive technologies can create an accessible way to document their learning, development and accomplishments. These forms of documentation give all children the opportunity to share a story or project by using universally designed software that can be accessed through a switch, touch screen monitor, alternate keyboard or traditional computer access methods. The development of these computer programs allows children of all abilities to be involved in creating the documentation, as well as providing an interactive product that encourages ongoing discussion and reflection in their classroom. Multi-media projects provide children engaging, relative and positive learning experiences, while fostering motivation to learn within the natural routines of the classroom.

### Preparation and available products

In order to make the process of documenting your students’ learning a success through use of multi-media projects, it is important to have some basic technologies and software to ensure the universal design and accessibility of the documentation

for students of all abilities. The following list of items will guide you in selecting the technologies that will be useful to you according to the needs in your students and help you get started with creating dynamic projects with your students. You don’t need all of these items to be successful and you will find that many of these technologies you may already have available or could be substituted by something more “low” tech, such as a paper and pencil for documenting comments made by students instead of a tape recorder. It is important to get familiar with any hardware and software you will use before you begin the process with your students. This way you can work out any kinks before introducing it to them and cut down on frustration.

**Computer** – Used in making the projects and giving students access to view and assist creating them.

**Digital camera** – Take photographs of work samples and/or students to create displays, books, e-mails and computer programs.

**Digital video or video camera** – Digital video clips can be added to computer programs, streamlined to Web sites or e-mailed to families. Traditional video cameras can be used to record and review on televisions.

**Scanner** – Important hardware to have in order to create digital pictures of work samples, artwork and photographs you wish to include.

**Audio tape recorders** – Tape recorders can assist the teaching staff in recording comments made by the students during the projects or discussions and can relieve teachers from having to take notes during these times. The tapes can later be reviewed to transcript student’s comments or teacher observations.

**CD media for storage** – Projects can be burned on CDs to be used in the classroom or distributed to families.

**Computer microphone** – Used in recording students’ and/or teachers’ comments about the project to give explanation and/or reflection.

- Cost: around \$10

**Touch Screen** – Gives access to students who lack the fine motor capabilities to use a traditional mouse by touching a screen that is mounted to the monitor.

- Product: Touch Window/Magic Touch

- Cost: \$179-\$365

- Distributors: Don Johnston <[www.donjohnston.com](http://www.donjohnston.com)>, Riverdeep <[www.riverdeep.net](http://www.riverdeep.net)>

\*HATCH computers come with built-in touch screen monitors and customized software packages <[www.HATCHstuff.com](http://www.HATCHstuff.com)>

- Cost: \$2,000 +

**IntelliKeys and Overlay Maker 3** – Programmable alternative keyboard for students who have difficulty using a standard keyboard.

- Cost: \$510

- Distributor: IntelliTools <[www.intellitools.com](http://www.intellitools.com)>

**Switch** – Provides students with physical disabilities access to use a variety of devices and toys, including the computer.

- Cost: \$40 +

- Distributors: Ablenet <[www.ablenetinc.com](http://www.ablenetinc.com)>, Tash <[www.tashinc.com](http://www.tashinc.com)>

**Switch Interface** – Provides students the capability to use the computer through switch access.

- Products: Switch Interface Pro 5.0/SwitchHopper

- Cost: \$89-\$99

- Distributors: RJ Cooper <[www.rjcooper.com](http://www.rjcooper.com)>, Don Johnston <[www.donjohnston.com](http://www.donjohnston.com)>

**IntelliTools software** – Universally designed authoring software for students and teachers to create and access multi-media projects. They also have free downloadable players on their Web site, so that families can run the programs created at school at home – without purchasing the software.

- Products: IntelliPics, IntelliPics Studio, Classroom Suite

- Cost: \$139-\$299

- Distributors: IntelliTools <[www.intellitools.com](http://www.intellitools.com)>

**Boardmaker/Addendums and Writing with Symbols software** – Graphic data base and word/picture processing program that contains picture communication symbols to enhance the language and learning process for students on all levels. Used in creating projects to assist students who need visual supports.

- Cost: \$389 Boardmaker \$199 Writing with Symbols

- Distributor: Mayer Johnson <[www.mayer.johnson.com](http://www.mayer.johnson.com)>

**Kid Pix software** – Art program that allows students and teachers to create creative pictures and slideshows using realistic art tools and powerful graphics.

- Cost: \$15-\$89.95

- Distributors: The Learning Company <[www.thelearningcompany.com](http://www.thelearningcompany.com)>, HATCH <[www.HATCHstuff.com](http://www.HATCHstuff.com)>

### **Kidspiration or Inspiration Software**

– Provides students and teachers a way to build graphic organizers by combining pictures, text and spoken words to represent thoughts and information to include in projects.

- Cost: \$69

- Distributors: Inspiration Software, Inc <[www.inspiration.com](http://www.inspiration.com)>

**My Own Bookshelf Software** – Creates books/projects for students to read and access through the computer on their own bookshelf.

- Cost: \$130

- Distributors: SoftTouch <[www.soft-touch.com](http://www.soft-touch.com)>

**Microsoft PowerPoint Software** – Can be used to create switch accessible multi-media projects by using the slideshow feature in PowerPoint.

- Cost: \$229

- Distributors: Microsoft <[www.microsoft.com](http://www.microsoft.com)>



*The teacher recorded, “Eva used her directions to tell her friend Grant what the next step was in making paint” on the program.*

### **Designing your multi-media project**

Creating your students’ individual “digital” portfolios can be lots of fun! By using authoring software, such as IntelliTools, PowerPoint, KidPix or My Own Bookshelf software, you and your student can keep a gradual record of their accomplishments by creating a slideshow type presentation that he or she will be able to share with their family and friends at the end of the year. You decide how in depth the project will be and what to include. You can work on this process gradually throughout the year, including the digitized photographs and work samples in the slideshow as they occur. Others prefer to save the digitized work samples in individual folders on a computer and create the slideshows all at one time towards the end of the year. As your students create work samples or artwork you wish to include, use a scanner to create a digitized picture of the work and save it to an individual folder created on your computer to keep each child’s work organized. By doing this, you will be able to send the cherished art and work samples home throughout the year, alleviating having to save and collect it in hard files or binders. Listed below are a few ideas to help you begin or to consider when creating a “digital” portfolio.

- Include a picture of the child and record them saying “Hi, my name is \_\_\_\_\_. This is a book all about me and my year at school!”



*Children of all abilities can access multi-media projects with their friends!*

- Include pictures of the child with friends and let him/her narrate what they are doing or what they learned. Including things such as sharing, helping others and other social aspects are important.

- Include work samples that show progress. Example: A work sample of the child writing his/her name at the beginning of the year compared to the end of the year. The child or teacher could narrate this slide by saying, “This is how I used to write my name

(first sample), and now look at what a great job I can do (second sample).”

- “I can” slides: Use work sample, picture or even clip art and have the student say the accomplishment. “I can name all the shapes! circle, square, triangle, rectangle...”

- For students who are nonverbal, the teacher or other students should help narrate the project, including statements such as, “Tom smiled as he dabbed the paint on the paper” or “When Suzie was asked to choose a

song to sing at circle time, she pointed at the picture of “The Wheels on the Bus.”

Group multi-media projects are excellent ways to document what your class has learned about a specific topic or unit. These projects can be made to use in your classroom and accessed by your students at the computer and can also be sent home to share with families! Project topics should be selected by the students or the teacher, but should be driven by the students’ interests. For example, students in a pre-k inclusive classroom loved to paint! They wanted to learn to make paint, so the teacher developed a project that revolved around that theme, which explored sequencing, color identification and reflection. The teacher should decide if the topic is appropriate, design a plan, identify curriculum objectives, set goals and plan for documentation going to be used to create the multi-media project. Teachers should find out what their students know about the topic, and they may find it helpful to create charts, visuals, lists, graphs or Webs with their class. Inspiration Software and Boardmaker can be useful pieces of software to assist with this process. During the project or activity, teachers or other adults in the classroom begin the documentation process. This can include recording and reflecting, photographing, tape recording, Webbing and journaling. You may find that your students can participate as well by taking their own photographs or videos. The documentation collected will later be used to help the class create the computer program. The more you allow the students to help with creating the project, the more excited they will be about sharing it with others! It is so exciting to hear the students scream with delight, when they see their picture on the computer screen or hear their own voice! Teachers may find it easiest to complete the initial setup (download photos or scan work samples and insert these files into pages to create a slideshow using the authoring software) of the project and then ask the students to narrate the project using the computer microphone. Students who have speech and language delays are often motivated to attempt to verbalize when creating these projects because of getting to hear their voice on the computer. Type in the text of what the child says to reinforce literacy. A project that documents a group or class activity or unit should include every student in the class in some way, whether they participate in cre-

ating the program by adding comments or narration of the process or by having their picture or work sample included. These programs are a joy for the class to be able to access in the classroom, reflect on the project and how they all participated. Some examples multi-media projects that are fun for a class to create are:

- Field trips – students narrate what they did, saw, and learned using pictures of the trip.

- Books – book pages are scanned in and the students narrate the story, or create your own book using pictures such a “My Friends at School” or “How Our Garden Grows” or “Weather”.

- Units using pictures and work samples as the students narrate what they did and learned.

- Songs or poems – each slide has a picture and each student sings a part of a song or poem on each slide.

By using a few technologies and authoring software, you can easily create exciting and useful multi-media projects for your students or classroom, while documenting their accomplishments and opening doors for them to share their successes with those around them.

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