ACCESSIBLE
INSTRUCTIONAL
MATERIALS

Proposal for a learning resource

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Accessible Instructional Materials
Teacher Resource

Proposal
Create a learning environment for teachers and administrators that will focus on the use of technology as an accommodation for students who struggle with reading literacy. According to the 2007 National Assessment of Educational Progress, 33% of 4th grade students and 26% of 8th grade students did not read at a basic level (National Center for Education Statistics, 2007). According to Proctor, et al, "classroom technology use has the potential to provide struggling readers and ELL's with access to crucial digital literacies while working to improve vocabulary and reading comprehension outcomes" (Proctor, Dalton & Grisham, 2007). Because technology is changing so rapidly, many teachers who work with the special needs population, many whom struggle with reading (Stahl, 2004), find it difficult to keep up with current trends and struggle to find real solutions that may help their students become better learners. This is particularly true in the area of print access. Many students struggle with print that is presented in the traditional manner (ie: textbooks and other printed material). New provisions in IDEA require that access to instructional materials to students with print disabilities be provided in a timely matter (U.S. Department of Education: http://idea.ed.gov/explore/view/p/root regs,preamble1,prepart1,B). The change in the law requires schools to address students’ access to print, and in the increasingly complicated world of alternate formats (ie: text available in a digital form), teachers today find it even more difficult to find solutions that work with different student learning styles. Research suggests that a variety of students who struggle with print could benefit by having access to technology that is capable of providing a scaffolded reading environment (Proctor, Dalton & Grisham, 2007). The proposal would be to create a learning environment/resource
which teachers could use to help them understand how to implement technology in a classroom in order to provide access to alternative print (ie, digital text) in as transparent a way as possible. The ultimate goal of this learning environment/resource will be to equip teachers to help students to become better readers with the use of digital text and reading support tools, regardless of their reading ability. Main areas of focus would include:

1. Research that demonstrates that individuals with different learning styles can benefit from having access to accessible instructional materials;
2. The laws and regulations relative to print access that impact public schools;
3. An introduction to the types of devices and software available (tools such as Kurzweil) that can be used by students who struggle with reading;
4. The ever increasing pool of repositories available that provide access to digital content, both copyrighted and non-copyrighted materials;
5. A primer on format considerations that educators will face when attempting to gain access to or create digital content.

The web portion of this learning environment should be constructed so that teachers can easily add content demonstrating how they have successfully incorporated technology into the classroom that has effectively helped students improve their reading ability.

**Rationale for development**

In today’s society, a myriad of resources and technology exist to assist students with learning disabilities. Oftentimes these resources go untapped because teachers lack the time, resources, or knowledge of how to effectively incorporate such technology into the curriculum. Adding to such difficulties are the limitations of resources available to teachers in the classroom. Teachers often participate in one-stop professional development experiences that address methods to incorporate technology in students learning, but the presentation is not effective to long-term implementation (Zhao, 2003). Furthermore, the classroom environment itself lends itself as an obstacle to teachers as many lack the
fundamental resources to incorporate, naturally, research proven effective technology into daily lessons. Many classrooms are only equipped with one computer, which is often reserved for the teachers. It is not feasible to depend on all students to have access to computer technology at home. Finally, teacher knowledge of appropriate technology and its potential to assisting with student learning varies.

**Needs Addressed**
This learning environment is intended to help teachers understand how to use alternative print to address student deficits, particularly related to reading. It will address the needs of both the teacher and the student by focusing on classroom techniques and strategies that can be used to help students become better readers. Teachers are often hindered by the aforementioned obstacles, and students are unable to take advantage of various teaching strategies that will assist them with reading and reading comprehension. The fundamental need that will be addressed with this learning environment is the need to help students increase their reading capabilities with the use of technology, all while attempting to keep the technology as transparent as possible. It will, therefore, be necessary for teachers to become familiar and comfortable with the technology available and also to be able to find and potentially manipulate digital instructional materials.

This learning environment will also address the needs of school administrators and decision makers and will enable them to make decisions and provide access to the widest array of digital materials in keeping with the NIMAS regulations (NIMAS, 2003).

**Characteristics of intended audience**
The teacher that this resource is intended to help is one that struggles to incorporate digital text in the classroom environment due to resource or knowledge constraints. Many
classrooms are equipped with one computer. Students may not come from homes that have computer technology. Teachers often lack effective professional development that allows them to incorporate new strategies and then evaluate or reflects on their effectiveness.

This would also include teachers who believe that providing access to digital text will have a positive effect on struggling readers. Teachers who work with the special education population would probably benefit the most, although any teacher who has students who struggle with reading could benefit. While not targeted to any specific age group, it would probably be most beneficial to middle and high school teachers whose students are reading to learn as opposed to learning to read.

In addition to teachers, administrators who are responsible for ensuring that their school district is complying with special education law would also be able to use this resource to more fully understand the implications to their respective districts.

**Theoretical principles guiding design of the project**

The major theoretical principle guiding the design of the project is the research–driven effectiveness of successful professional development seminars. The first is the need to have teachers “buy into” the program or resource. Teacher motivation should not be disregarded. Technology should also be integrated into classes that teachers actually teach (Zhao, 2003) instead of a hypothetical class or situation. If teachers already have a thorough knowledge of the curriculum, they can more easily brainstorm ways to incorporate digital text into the classroom and will have a better grasp on whether the incorporation is feasible. The professional development should also be intentional and ongoing (Guskey, 2000). Teachers should have the opportunity to reflect and revise the integration of digital
text into the classroom. Oftentimes, during professional development seminars or training, it is difficult to predict obstacles to the presented topic’s incorporation into an actual classroom setting. However, once the item at hand is actually used in to the class, room for questioning and problem-solving grows. Hence, the project should begin with clear objectives and with the participants’ characteristics in mind (Guskey, 2000). Educational leaders such as principals or superintendents often have different reasons for attending the same seminars as do teachers or those working directly with students. Creating a diverse method to address the needs of each member of the audience is a goal.

Plan for assessing effectiveness of the resource

To address the effectiveness of the resource, the intended goals of the theoretical principles will be assessed. A survey could be used to determine whether teachers left with clear objectives and ways to incorporate digital text into the classroom after using the resource. Interviewing such teachers will provide invaluable insight on the integration of digital text. Teachers’ change of attitude and/or beliefs will also assist in determining whether the targeted goal was met. A proposed question would be “Did teachers change the way information, literature, or text is presented in the classroom, and if so, what is the student response?” Therefore, student input is also vital.

An important yet hard to measure metric of the effectiveness of this resource would ultimately be a measurement of the increase in comprehension that each student achieves when using accessible text with a reading tool. This could be accomplished by conducting some form of formative and summative assessment and measuring the increase. Ralph W. Tyler states the real purpose of education is to “bring about significant changes in students” (Guskey, 2000, p. 124). If a positive relationship between the strategy implemented and student success do not exist, the strategy is useless. One way to measure student
achievement due to the integration of non-traditional reading instruction is through the use of pre-tests and post-tests. One approach to measure effectiveness would be to have a student take a reading comprehension assessment without using digital text and text-to-speech software, and likewise, take another reading comprehension assessment using the technology. In order to measure the improvement, an online survey tool (such as Survey Monkey) could be employed to provide some comparison of results. While certainly not a scientific measurement, it could be used by both the teacher and other interested parties to get a feel for whether the use of technology is helping students improve their reading skills.

Guskey mentions five levels of professional development evaluations: participant reaction, participant learning, organization support and change, participant use of new knowledge and skills, and student learning and outcome (Guskey, 2000, pp. 79-81). The participants’ use of new knowledge and skills along with student learning and outcome will provide the most focus for this resource or learning environment’s effectiveness. Information gathered will comprise of questionnaires, participant reflections, direct observations, and structured interviews to determine the participants’ use of new knowledge. School and student records, questionnaires, and participant portfolios will be analyzed to learn student learning outcomes. While this is not an official professional development experience, the informal gathering of information and assessments via online surveys and discussion can assist in determining the effectiveness of the proposed learning environment/resource.

**References**


