

Assistive Technology Training Online

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<http://at-training.com>



Proposal

The work of many in the field has lead us to recognize the potential of the Internet as a vehicle to provide this uniquely individualized training opportunity. The following is the argument we presented to successfully obtain funding for the project.

Mistrett, S.,G. & Gavin, W. (1998). *Assistive Technology Training Online Project*. Grant Application: U.S. D.O.E, Special Education - Research and Innovation to Improve Services and Results for Children with Disabilities- Model Demonstration Projects (CDFA 84.324M).

Our goal through this project is to develop a new, more efficient method of providing students, parents, teachers and therapists: 1) access to the ever expanding knowledge base on assistive technologies; and, 2) technical training on the *use* of assistive technologies (AT) in the classroom. Rather than using the more traditional approach of conducting workshops at local schools for a limited number of individuals, a series of "virtual workshops" will be constructed to deliver training over the internet using emerging theories of learning incorporating synchronous, as well as asynchronous, web-based instructional techniques. These virtual workshops will not only address a larger, broader audience of school personnel but will also be available to parents and children as well.

Assistive Technology Training Research

Need for Training Professionals and Parents on the Use of Assistive Technologies.

While recent literature advocates teacher preparation and on-going technical assistance (Lipsky & Gartner, 1996; Wolpert, 1996) to support the inclusion of students with

disabilities in general education classrooms, studies on the impact of AT on inclusion are sparse. Although the use of AT in classrooms is increasing (Male 1997), the lack of awareness and the lack of training continue to act as major barriers to professionals using AT (Izen & Brown, 1991; MacGregor & Pachuski, 1996; Thorkildsen, 1994). A national study on technology and special education by Macro International, Inc. and the Office of Special Education Programs (CEC Today, 1997) reports a need for training teachers in the effective use of technology. The study found a lack of training and technical assistance both in operation and in integrating the technology into the curriculum, a lack of computer access due to compatibility of old and new technologies, and a lack of access to appropriate and specialized software for severely disabled students. With more children with disabilities entering inclusive educational settings, general education personnel look to special education and related services personnel for alternate means of access and learning.

Information must be made available on the use of AT applications for students. In a survey of special education teachers on classroom AT use, Derer, Polsgrove and Rieth (1996) found that although 80% of the respondents had received some sort of training, 51% of the group reported that few of their training needs were being met. This represents a substantial proportion of professionals who lack adequate skills to use AT in the classroom.

AT Training Formats

How training is presented impacts its effectiveness. A single format cannot provide the information and skills necessary to use AT; multiple leveled training has been found to be more effective in providing a broader range of material and skill acquisition (Dere et. al, 1996; Hammel & Smith, 1993). AT training issues mirror those of general technology training. To implement AT, one must first be comfortable with standard computer input and output methods, before recognizing the need for adaptations. AT represents a highly specialized form of adaptation; requiring the acquisition of specialized skills to enable a student to realize the benefits of AT in the context of the classroom (McGregor & Pachuski, 1996).

Several studies (Todis, 1996; Derer et. al, 1996; McGregor & Pachuski, 1996) of effective AT trainings have identified with the following components as critical:

- Flexible Scheduling** Teachers, parents, service providers, specialists and para-professionals often complain “that it’s hard to get everyone in the same room at the same time” for AT training. Daily tasks of actually preparing adapted materials for students often fall to the classroom or student aide. However, it is exactly this para-professional who often does not attend workshops as they are often held “after hours”. Training must be designed which provides opportunities for all of the student’s IEP team members to review workshop information at convenient times.
- Frequency** Persons who attend traditional workshops for training do not feel that the “one shot” approach of presenting information is adequate; they report not being comfortable with implementing the device/strategy after only brief and limited training sessions. Training efforts must incorporate a means to frequently access all information presented in the workshop such that the trainee can confirm their notes and ferret out additional details of the presentation as their grasp of the knowledge base increases.
- Practice on Trained Skills** As trainees explored the device or software (the subject of training) after attending workshops, they report a need for a review of demonstrations and directions. Good training practices should ensure a means for continuous follow-up support, review and guidance of the specific skill acquisition introduced in the workshops, preferably in a manner as close to the original training as possible. While opportunities for hands-on practice and ongoing repetition were noted as effective follow-up activities, some trainees state that they are reluctant to ask specialists to continually review procedures for using AT.

Guided Practice
Extending to New Problems

Trainees indicate that after their technical skills are better developed, they need ongoing support to implement new tools and strategies; to actually interact with the new devices or software. Trainees indicated a desire for opportunities to use the AT on their own with support available if needed; time to correct mistakes and explore AT features.

Synthesized Information

Trainees state that support to apply the technology skills to actual classroom activities is rarely offered in traditional workshops. The majority of workshop participants did not feel skilled enough to implement technology into their daily instructive or adaptive strategies. Training should provide actual case studies to practice AT skills as well as opportunities to discuss potential solutions with others.

A Training Solution

The most pervasive form of training and education in our country has been the site-based, instructor led model. It remains an effective method for teaching, learning and interacting for discussions, collaborating and fielding questions. However, it also requires that trainee and instructors be in the same physical location, with the instructor determining the focus of the education, how it will be presented (sequence and time) and the type of expected trainee response. This design restricts the flexibility of what and how information is offered, is expensive as it includes a limited number of individuals in a single location and is confined in its ability to customize the instruction.

To address the widespread training needs for AT information, traditional training methods must be re-designed to meet the needs of a large number of individual learners, having different levels of experience and competence. To be most effective, AT training must:

- be able to be individually designed,
- offer AT topics most pertinent to the user's immediate needs

- be able to respond to the different learning styles of each trainee and, at the same time,
- be flexible and supportive to each trainee.

Ideal training will offer information on three levels of: awareness, technical skill building with guided practice and utilization of the information to actual student case studies. Lastly, AT training should be individualized yet promote team learning and collaboration within IEP.

To meet these challenges, we propose the use of a new and innovative training vehicle: the provision of virtual workshops presented over the Internet. The Assistive Technology Training ONLINE Project will 1) use the multi-media instructional strategies inherent within Internet-based instruction to 2) extend the access of proven training materials to a broader audience of parents, teachers, administrators, and related service personnel in order to 3) create an even better training model for the dissemination of a knowledge base on assistive technology.

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