Instructional Team Training: Delivering Live, Internet Courses To Teachers and Paraprofessionals in Utah, Idaho and Pennsylvania

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Abstract

Shortages of fully qualified special education teachers have been present in rural, suburban and urban America since the formal inception of special education. Public schools have mitigated special education teacher shortages by hiring paraprofessionals. Though hiring of paraprofessionals has been common practice, it is becoming more difficult to recruit and retain paraprofessionals once hired due to factors related to, or exacerbated by, the lack of pre-service training that teachers receive to effectively supervise paraprofessionals. In response to this training need, a project developed, implemented, and evaluated two live internet-based real-time video and audio courses delivered to teachers and paraprofessionals in Rexburg, ID, Turbotville, PA, and Brigham City, UT. Teachers and paraprofessionals were presented with skills needed to build and maintain effective instructional teams. This article describes the need for the courses, format used for delivery, and course evaluation data.

Shortages of fully qualified special education teachers have been present in rural, suburban and urban America since the formal inception of special education (Boe, Cook, Bobbit, & Terhanian, 1998). These shortages have been particularly severe in rural communities, where 100% of special education personnel reportedly "turn over" every three years (Helge & Marrs, 1982; Hicks, 1994). Shortages of teachers in rural communities arise from problems with recruitment and retention endemic to rural areas. Specific recruitment and retention challenges include: social and cultural isolation; poor pay and salary differentials; limited mobility within the system; lack of personal privacy; rigid, lock-step salary schedules and financial practices; higher-paying private sector business and industries; strict teacher certification standards and tests; lack of reciprocal certification from state to state; diversity-related issues; and high rates of teacher turnover (Ludlow, 1998; Miller & Sidebottom, 1985).

In many cases schools have mitigated special education teacher shortages by hiring paraprofessionals. Under the supervision of a certified teacher, well trained paraprofessionals may accomplish some of the tasks that special education teachers would perform if they were available (NCES, 1995 & 2000; OSEPRS, 2000; Recruiting New Teachers, 1997). Over the last 20 years the number of paraprofessionals hired to work in special education settings has increased substantially (French & Pickett, 1997). Unfortunately, there is little evidence to suggest that once hired, paraprofessionals are adequately trained and/or supervised (French 1998; Hilton & Gerlach, 1997; Jones & Bender, 1993;

Passaro, Pickett, Latham & HongoBo, 1994).

Though hiring of paraprofessionals has been common practice, it is becoming more difficult to recruit and retain them. Factors associated with this problem include lack of job orientation and job-specific training, poorly defined job descriptions, low wages, limited opportunities for advancement, insufficient administrative support, and a perceived lack of respect (French & Cabell, 1993; French & Chopra, 1999; Giangreco, Edelman & Broer, 2001; Hadadian & Yssel, 1998; Morehouse & Albright, 1991; Passaro et al., 1994). These problems may be related to, or exacerbated by, the lack of pre-service training that teachers receive preparing them to effectively supervise paraprofessionals. A national survey (Lindemann & Beegle, 1988) indicated that only 28% of preservice special education programs trained teachers to supervise paraprofessionals. More recently, Drecktrah (2000) conducted a statewide survey of Wisconsin teachers and found only 10% indicated receiving instruction in paraprofessional supervision. At a preservice level, teachers have few functional opportunities to practice supervision skills (Vasa, Steckelberg, & Pickett 2003). Skilled supervision and the myriad of other variables affecting recruitment and retention appear to be well within the scope of influence of preservice and inservice training programs and school district administrations.

Though well intentioned, passage of the 2001 No Child Left Behind Act (NCLB) may further hinder paraprofessional recruitment and negatively affect public schools' retention of paraprofessionals. Beginning January of 2001, the NCLB act required

that persons applying for positions in Title I programs be identified as "highly qualified" by meeting one of the following three criteria: (a) possess an associate's degree, (b) complete two years of college training accumulating in a minimum of 48 credit hours, or (c) pass a "rigorous" state or local test. Paraprofessionals hired before 2001 must meet one of the three requirements by January of 2006 to resume employment. At this time, NCLB requirements do not affect special education paraprofessionals unless they work in a "school wide" Title I program. However, many believe that language in the reauthorization of IDEA will match the language in the NCLB act in reference to paraprofessionals. If this prediction comes to fruition there will be an immediate reduction in the pool of paraprofessionals available for hire.

Given NCLB, use of paraprofessionals to mitigate special education shortages in urban, suburban and especially rural areas will probably be impacted further. In the face of this new challenge, public schools, state departments of education and institutions of higher education need to respond proactively to retain *existing* paraprofessionals by assisting them in meeting one of the NCLB criteria. Simultaneously, an army of *future* paraprofessionals need to be recruited and prepared, thus forming a pool of "highly qualified" personnel available for hire as positions open.

Districts can meet the NCLB mandate independently or in collaboration with institutes of higher education in one of three ways. First programs can be developed to prepare paraprofessionals to successfully pass rigorous state and local tests. Second, districts can access programs that offer training culminating in associate degree programs focusing on the specific needs of paraprofessionals. Third, paraprofessionals can take sufficient courses to accumulate a minimum of 48 credits.

For rural schools, a number of obstacles limit access to paraprofessional training programs. Obstacles include access to (a) skilled trainers with knowledge pertinent to paraprofessionals, (b) access to college and university training programs, (c) awareness and access to quality paraprofessional training curricula focused on paraprofessionals' roles and responsibilities, and (d) extensive travel that may be needed to pool enough paraprofessionals to form a class.

Considering these obstacles, some have advocated the use of technology-mediated

instruction (Schnorr, 1999) and distance education models, (Howard, Ault, Knowlton & Swall, 1992) to enhance the quality and accessibility of training programs. Literature describes the use of technology to overcome pre-service and in-service training obstacles (Binner/Falconer & Lignugaris/Kraft, 2002; Hobbs, Day, & Russo, 2002; Pindiprolu, Peck/Peterson, Rule, & Lignugaris/Kraft, 2003). Distant delivery of instruction has been used in special education teacher training (Ludlow, 1995; Spooner, Spooner, Algozzine, & Jordan, 1998) and paraprofessional training (Vasa, et al., 2003). The use of technology is one approach that has been recommended (Ludlow, 1998; Squires 1996) and appears to be a viable approach for addressing the problems and issues associated with providing effective and efficient paraprofessional training in rural areas (Ludlow, 2001).

This article describes Project Impact*NET, a federally funded distance education training program. By delivering instruction over a live audio/video teleconferencing system, Project Impact*NET staff have successfully overcome some of the training obstacles endemic to rural school districts, including access to skilled trainers, college/university training, and quality curriculum. During the 2002-03 academic year, paraprofessionals and their supervising teachers in Rexburg, ID, Brigham City, UT, and Turbotville, PA participated in two courses titled Building and Maintaining Effective Classroom Teams. The primary objective of these courses was to increase teachers' and paraprofessionals' effectiveness as members of instructional teams. A description of the courses, curriculum, delivery system and course outcomes is provided.

Project Description

The primary goal of project personnel was to evaluate a live, two-way video and audio system for training teachers and paraprofessionals across the U.S. Project personnel sought to deliver training that enhanced skills for paraprofessionals and their supervising teachers. Beginning fall 2002, courses were delivered to school district based instructional sites in Rexburg, Idaho, Turbotville, Pennsylvania, and Brigham City, Utah. Instructional sites differed in population, number of participants, total students served and geographic location. Each of the sites represented small communities with populations under 21,000 (i.e., Rexburg, ID: 20,000, Brigham City, UT: 16,000, Turbotville, PA: 1,000). Total

school populations served by school district sites differed substantially (Rexburg, ID: 4,120; Brigham City, UT: 10,606, Turbottville, PA: 1,980), while the total number of teachers and paraprofessional participating were similar averaging 11 paraprofessional participants and 6 teacher participants per site.

In total, 51 participants from the three sites participated in two semesters of instructional team training. Participants included 33 paraprofessionals and 18 teachers.

Selection of Instructional Sites

Initially, project staff identified instructional sites by gathering information from experts in paraprofessional development. Site selection criteria were:

(1) District sites had to be located in the Mountain, Central or Eastern Time zones. Scheduling difficulties excluded additional time zones.

(2) Districts were required to employ 40 or more paraprofessionals, so that a sufficient pool of participants would be available for two semesters.

(3) District sites were required to either possess or be willing to purchase the necessary hardware and software.

(4) District officials were required to sign a letter of agreement enumerating the responsibilities that they would attend to related to the project. These responsibilities included: (a) recruitment of 20 participants for each course, (b) identification of a site coordinator and technician, (c) reservation and maintenance of a classroom space, (d) support of participants as they completed course requirements, (e) maintenance of ongoing communications among coordinators, technicians, and project staff, and (f) facilitation of course evaluation.

Instructional Delivery System

The instructional delivery system involved a live Internet-based, two-way audio/video system. This system allowed participants at the three sites to receive training simultaneously and to see and hear the instructor and classmates at other sites. iVisit (2003) software was integral to the delivery system.

Hardware needed to deliver Project Impact*NET instruction included a computer connected to a reasonably fast Internet connection (T-1 line), audio mixer, microphones, microphone stands and cables, high-end digital camera, internet

server and a teleprompter. Cost of broadcast equipment was approximately \$8,000. Integral to the support and maintenance of the delivery system were project instructional designers and technical coordinators present at each site. To receive the instructional broadcast, each site also required a computer, T-1 connection, audio mixer, microphone and associated stands and cables. Costs for audio equipment were approximately \$200.00. Instructional sites did not require a high-end digital camera; web cameras priced under \$100.00 worked well. Because an entire class would find it difficult to view the session on a computer screen, reception sites needed an LCD projector. The LCD projector projected the image onto a wall so all participants were able to view the broadcast with ease. LCD projectors cost \$1,500 - \$2,000.

Course Description, Curriculum and Organization

Project Impact*NET delivered a two-semester sequence of classes to paraprofessionals and their supervising teachers. Each course was composed of three, three-hour sessions. Participants received 18 hours of instruction. The curriculum used for each course was *Colleagues in the Classroom* (CINC) (Morgan, Gee, Merrill, Gerity & Brenchley, 1998). The CINC curriculum was developed and evaluated in a previous grant from the U.S. Department of Education.

The primary objective of CINC was to provide teachers with the knowledge and skills to supervise their paraprofessionals and to assist teachers and paraprofessionals to form and strengthen their instructional team. Units in the curriculum included: (a) establishing the teacher in the leadership role; (b) clarifying roles and responsibilities; (b) strengthening interpersonal communication; (d) responding proactively to management problems; (e) strengthening teacher and paraprofessional performance in the classroom and (f) evaluating staff performance. The CINC curriculum included a text and video materials depicting authentic educational situations. Each video clip presented a problem that required participants to apply skills or knowledge obtained from class readings or lecture. For example, one video clip showed a teacher rushing to attend a meeting delegating a large number of poorly defined and unorganized tasks to a paraprofessional. At the end of the video clip, without addressing or resolving the paraprofessional's questions, the teacher quickly

leaves the room. In another video clip, a father enters a classroom and asks a paraprofessional for specific educational information concerning his son. The paraprofessional tells the parent that the teacher is in a meeting and that he will need to talk to her when she returns. Following these and other video clips, unresolved issues and questions are presented to viewers. Across sites participants discuss ways to address problems.

Each course included a pre- and post-test and a curriculum-based assessment of participants' achievement. At the end of each CINC unit, participants were encouraged to complete the corresponding progress check, which consisted of a self-administered quiz. The progress check was followed by a weekly quiz consisting of a subset of progress check questions. In addition, participants were required to complete application exercises using the knowledge and skills taught. For example, participants completed a self assessment questionnaire. This application exercise required teachers and paraprofessionals to review a list of typical responsibilities or tasks in a classroom setting. Then, in a column next to the task the teacher or paraprofessional noted whether the task should be completed by a paraprofessional or by a teacher. Participants also completed a "situational analysis" application exercise. In this exercise teachers and paraprofessionals were presented with situations that arise in a school or classroom setting. For example, a student enters the classroom with bruises on his arms and cigarette burn marks on his hands and arms. After analyzing the situation, teachers and paraprofessionals describe how they would want each other to respond if the situation ever occurred. If discrepancies in expectations arose then the teacher and a paraprofessional worked to resolve them. Other application exercises required participants to establish team and classroom goals, development of an observation system, use of the observation system and finally, use the system to provide each other with formative evaluation feedback.

Each course was graded on a pass/fail basis. Participants who successfully completed a course were provided with a certificate of completion, and a detailed list of objectives that they met in the course. Participants were able to sign up for university credit if they desired. Teachers received one graduate credit and paraprofessionals received one undergraduate credit from Utah State University. Participants received a \$120.00 stipend from the project. The

stipend covered the cost of their text, departmental distance education fee and university credit. One district paid for their participants' texts, leaving more stipend money for personal use.

For each weekly session, the participants, instructor and site coordinators completed a series of tasks in advance of the next class session. Participants were expected to complete the assigned reading from the text, respond to the progress quizzes and complete assigned application exercises. The instructor prepared the session lecture, agenda, discussion items, application exercises, PowerPoint slides, and selected video segments. The instructor provided the instructional design team with a list of materials to post on the project website. In preparation for each session, site coordinators reviewed assigned readings and downloaded session-related information (e.g., session lesson plan, worksheets, handouts of Powerpoint slides) from the project web site. Site facilitators prepared to teach each session in the event that the delivery system malfunctioned. In addition, site coordinators graded weekly quizzes and assignments from the previous session.

Early in the formation of the project a six-member advisory board was formed. Three of the board members were higher education faculty; one of which was a recognized leader in distance education and another was recognized as a leader in paraprofessional training. The fourth member of the board was past president of the National Resource Center for Paraprofessionals and was regarded as one of the most influential paraprofessional advocates in the United States. The fifth member was a parent to a child with disabilities and had extensive background as a resource librarian for disabilities issues. The final member of the board was a paraprofessional who had 15 years of work experience and had delivered training to paraprofessionals in Utah and is a member of the Utah State Paraprofessional Consortium committee. The role of the advisory board member was to evaluate videotapes of individual class sessions and provide feedback to project personnel to improve course delivery, content and technology.

Evaluation Questions

The primary questions directing project personnel's evaluation of courses were: (a) given a formal course evaluation at the end of the academic year, how do distance students' responses compare to the responses of students on campus who receive

traditional face to face instruction? (b) Given a formal session evaluation form, how do advisory board members evaluate the quality of the courses? (c) When given a curriculum-based multiple-choice pre-test and post-test, how will students' performance change from pre- to post-testing? (d) When required to write a short paper in response to scenarios, do participants integrate information central to the course?

Participant Course Evaluations

The course was taught both fall and spring to different groups of participants. In the final session of each course, participants who signed up for class credit were required by university policy to complete a Utah State University (USU) course evaluation. The evaluation consisted of 22 questions classified into three primary evaluation areas, including, "general course evaluation," "information about the course," and "information about instruction." Twenty of the 22 questions required students to evaluate the course using a numeric, qualitative scale

(6=excellent, 5=very good, 4=good, 3=fair, 2=poor, 1=very poor and NA=not applicable). The remaining two questions required a narrative response. Table 1 lists mean response scores for the 20 evaluation questions from spring semester. Mean scores for the USU College of Education and the Department of Special Education and Rehabilitation (DSER) are also provided. The spring semester scores reflect changes already made based on fall course evaluations.

The average "overall quality of course" score at USU was ($M = 4.9$, $SD = 1.0$); the College of Education was ($M = 5.2$, $SD = .09$); and DSER was ($M = 4.8$, $SD = 1.0$). The "overall quality of course" score for the 51 participants who took the spring semester "team building" course was ($M = 5.0$, $SD = .74$). The average "instructor effectiveness" score at USU was ($M = 5.0$, $SD = 1.1$); the College of Education was ($M = 5.2$, $SD = 1.0$), and DSER was ($M = 4.9$, $SD = 1.0$). The "instructor effectiveness" score for the 51 participants in the spring semester "team building" course was ($M = 5.2$, $SD = .70$).

Table 1

Participant Course Evaluation Data: Spring Semester

Question	Team course participants mean score	College of Education mean score	Department of Special Education mean score
Clarity of course objectives	5.1	5.2	4.9
Relevance of assignments	5.2	5.3	5.0
Relevance of material	5.3	5.3	5.1
Appropriateness of workload	5.2	5.2	4.8
Relevance of exams	5.2	5.2	4.9
Fairness of grading procedures	5.4	5.3	5.0
Clarity of responsibilities	5.3	5.3	4.9
Helpfulness of texts/readings	5.3	5.1	4.7
Course organization	5.3	5.2	4.8
Helpfulness of explanations	5.4	5.3	5.0
Use of examples	5.2	5.4	5.2
Use of class time	5.1	5.3	4.9
Enthusiasm for the subject	5.5	5.6	5.4
Helpfulness in resolving questions	5.4	5.4	5.1
Prepared for class	5.6	5.5	5.3
Opportunity to ask questions	5.4	5.5	5.3
Opportunity to comment & express opinion	5.4	5.5	5.3
Availability of extra help	5.3	5.3	4.9

Advisory Board Member Course Evaluations

Using a structured evaluation form, advisory board members observed a single session videotape per semester and provided feedback to the instructor. The form was constructed of 16 items requiring the board member to rate the quality of the overall course, instruction, curriculum, examples used, use of classroom time and a number of other identified areas. Table 2 lists the areas evaluated and the mean response across advisory board members for fall and spring semesters. In total, the instructor received six separate sets of feedback over multiple sessions from board members.

Pre-/Post-test Exams

In the first session and in the final session of each course, participants responded to a curriculum-based assessment composed of multiple-choice test questions. In the spring assessment, the average pre-test score for the 33 paraprofessionals was 76%, with scores ranging from 40% to 90%. Paraprofessionals' average post-test score was 86%, with scores ranging from 70% to 90%. The average

pre-test score for the 18 teachers was 77%, with scores ranging from 50% to 90%. Teachers' average post-test score was 86%, with scores ranging from 70% to 100%. All teachers and paraprofessionals passed the spring course.

Response to Scenarios

For fall and spring semesters, participants were required to independently write a two-page paper in response to a scenario. The objectives of these assignments were to assess participants' disposition and knowledge of critical course information and to assess their skill in synthesizing the information. The response scenarios for each semester and several representative statements from participants' short papers are provided. Additional miscellaneous comments are also provided.

Fall Scenario

Ms. Hubbard, the Director of Special Education stops you in the hall one day and says; "I am hearing from teachers and para-professionals around that district that you are an effective supervisor of paraprofessionals and that you know how to establish an effective instructional team.

Table 2
Board Advisor Course Evaluation Data:

Question	Team course mean score: fall semester	Team course mean score: spring semester
Overall Course Quality	5.0	6.0
Instructors Effectiveness	5.0	6.0
Clarity of Objectives	5.8	5.8
Clarity of Examples	4.2	5.3
Clarity of Video Clips	5.8	5.4
Relevance of Video Clips	5.8	5.6
Relevance of Class Exercises	4.2	5.3
Course Organization	5.0	6.0
Use of Class Time	4.7	5.8
Instructors Preparation	5.8	6.0
Opportunity to express opinion	5.4	5.5
Audio/Video Clarity	4.0	5.2
Clarity of Video Streaming	4.5	5.4
Clarity of Audio	4.8	5.5
Synch / Audio & Video	4.7	5.4
Resolution of Technical Difficulties	4.6	5.0

Can you tell me what you do as an effective supervisor and what teachers and paraprofessionals can do to establish an effective instructional team?"

1. "An effective supervisor of paraprofessionals establishes an effective instructional team by (a) engaging them as active participants in setting up programs; (b) by understanding the skills and talents that each member brings to the team; (c) clarifying roles and responsibilities and (d) communicating effectively to prevent problems before they occur."

2. "Assertive communication is important because it allows both parties to express themselves without anyone being wrong. As paraprofessionals we need to realize that everyone's input is necessary if we are going to help all students reach their highest potential."

3. "Roles, responsibilities and behavior management procedures need to be clearly identified to avoid confusion and miscommunication."

4. "Establishing a supportive relationship should be a primary goal in the beginning steps of operating an instructional classroom. An effective supervisor will familiarize themselves with each paraprofessional's interests and skills. From this point on, tasks can be assigned based on the paraprofessional's knowledge, educational background and experience."

Spring Scenario

Ms. Bunker, a fellow teacher stops by your room after school and says; "Jamie Bell, my paraprofessional mentioned that you and your paraprofessionals are taking a class together and that you are learning how to evaluate each others' instructional performance. Your paraprofessional reports that her instructional skills have improved immensely due to your evaluation of her instruction. Do you have time to tell me what you have learned and how you are implementing what you have learned in your instructional team?"

1. "We have strengthened our classroom performance by establishing agreed-upon goals and objectives for both the teacher and paraprofessionals in the classroom."

2. "The class has taught us to provide positive feedback first and foremost and then provide corrective feedback. Corrective feedback helps improve the team members' skills."

3. "Formative evaluations have as their goal the improvement of instructional effectiveness. Contrary to common practice, a formative evaluation is a process of reciprocal feedback. A fair evaluation can only be

made in situations where expectations have been clearly defined."

4. "One of our team goals is to continually work to strengthen our performance in the classroom. There are three basic principles that we follow: (a) establish agreed-upon goals and clarify roles and responsibilities; (b) any instructional event that arises between instructors and students is an opportunity to strengthen instruction—A living laboratory; (c) Look for opportunities to strengthen each others skills—patrol for opportunities."

Miscellaneous Comments

(1) "Being able to participate in this class as a team has allowed us to immediately apply the things we've learned in a meaningful and relevant manner."

(2) "The techniques that we have learned were 'put to the test' recently when a conflict arose between team members that could have potentially destroyed not only a great working relationship, but a close friendship as well. Both team members actively listened and then restated and reflected the other person's point of view. Both members firmly believe that it was the skills learned in this class that helped them through the problem solving process."

(3) "Paraeducators need to feel that they are valued members of the teaching team. They are a valuable resource of skills, ideas, and experiences."

(4) "Teachers and paraprofessionals sometimes feel inadequate in their specific roles. However, by setting up expectations of performance and by offering ideas and plans, the team can assist its members to build confidence and follow professional standards."

System Applicability

Pressures applied by federal paraprofessional training mandates and an abbreviated timeline for implementation require state and local agencies to consider an array of training delivery options. The live Internet-based delivery system described in this article is just one of several options available to state and local agencies. Other options include traditional face to face training, asynchronous web-based training, and use of self-directed training materials. The following questions may assist state and local agencies to determine if an Internet-based delivery system will help them meet current training mandates. First, are skilled trainers with knowledge pertinent to paraprofessionals accessible geographically and monetarily? Second, are personnel aware of and able to access quality paraprofessional

training curricula focusing on roles and responsibilities? Third, geographically and monetarily, how accessible are college and university training programs to paraprofessionals? Fourth, does geographic dispersion of paraprofessionals restrict formation of cost effective class sizes? Fifth, do projected costs for training in more traditional formats substantially exceed the costs of establishing an Internet-based delivery system? Sixth, do traditional training costs exceed initial "setup costs" of establishing an Internet-based delivery system and projected costs of training delivery over the same amount of time? Negative responses to these questions suggest that state and local educational personnel may find a live Internet-based system useful in meeting current training mandates. Attention to these questions and to an agency's idiosyncratic needs will result in selection of an appropriate program.

Summary

Over two semesters Project Impact*Net successfully delivered two live Internet-based courses to 51 teachers and paraprofessionals at three sites across the U.S. Teachers and paraprofessionals developed important dispositions, obtained critical knowledge and developed some of the skills necessary to work effectively as instructional teams. All

participants successfully completed the courses and obtained substantially higher post-test scores compared to pre-test scores collected. Participants' responses to scenarios suggest participants found the courses valuable and developed important dispositions. In addition, participants developed important team building skills. Course evaluation data indicated that in most cases, participants rated the quality of the overall course and instructor effectiveness as high as or higher than students receiving face to face instruction across courses in the College of Education at USU. Advisory board evaluation data suggested that improvements in course delivery occurred between semesters.

Through project Impact*NET paraprofessionals and teachers in three school districts across the U.S. received training that may not have otherwise been available due to obstacles endemic to rural areas. Obstacles include ready access to a university, university instructors, university credit, and a team building curriculum. Finally, by participating, teachers made progress toward meeting the supervisory requirements of IDEA 1997 and paraprofessionals accrued job related skills and knowledge and university credit toward either an associates degree or the 47 credit minimum required by NCLB to be identified as highly qualified.

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