Distance learning can be a useful approach for preparing teachers who are mid-career changers or who are working on limited licenses, especially in rural areas. At Indiana University, the Collaborative Teacher Education Program uses multiple distance education technologies to provide special education teacher preparation in mild (high-incidence) disabilities at the certification and master's levels. One of the program's most used and most useful distance learning tools is web conferencing. The software program Sitescape Forum provides access to resources and several interactive environments: "forums" for whole-class asynchronous discussions of key concepts and issues, and "teams," in which groups of three or four students work on designated tasks, problem solve, and plan. Teams have synchronous chat capabilities. In the program's field work component, teams apply concepts and methods from a particular course to real classroom or schoolwide situations. In addition, each team project reflects state licensing standards for mild intervention and sub-topic areas covered in the course. Recent research related to the program has assessed the use of web conferencing to promote shared knowledge construction among student participants. The approach of integrating web conferencing with program and course components has proven a useful "survival tool" for rural special educators, overcoming barriers of geographic and professional isolation. (SV)
INTEGRATING WEB CONFERENCING AND FIELD WORK FOR PREPARING
RURAL SPECIAL EDUCATORS

Web-based conferencing and various distance education approaches are increasingly being used to offer teacher education coursework to mid-career changers and limited license teachers in special education. In many states, these new educators tend to be located in rural school community settings, often quite distant from a university setting and rather removed from other teachers in similar circumstances. A key to making their university coursework relevant to their day-to-day teaching experiences is to concentrate on a more integrated approach utilizing web-based conferencing connections to both the university instructors and their school-based course colleagues.

Distance learning can be an especially useful approach for preparing teachers who are mid-career changers or who are working on limited licenses, especially in rural geographic areas (Knapczyk, Chapman, Kelly, & Lu, 2002). An important factor in fostering professional outcomes in these prospective teachers is the interaction and collaboration that takes place on the concepts, activities and field experiences covered in their preparation (Kemper, 1995; Koehler & Baxter, 1997; Sands, Kozelski & French, 2000). Our research is showing that collaboration is a key element in distance learning where students often feel isolated because they do not have the same opportunities for peer interaction that are available in campus-based courses (e.g., Rodes, Knapczyk, Chapman & Chung, 2000). Integrating web conferencing activities and field work experiences with other program components offers a powerful approach for structuring collaborative activities.

An important challenge for teacher educators is learning how to integrate various program components (e.g., web conferencing tools, course presentations, assignments, field work) to effectively achieve professional outcomes and standards. In addition, the professional outcomes should be directly linked to national teacher standards in special education. The rest of this paper will provide a structure for the following: a) an overview of the Indiana University Collaborative Teacher Education Program (CTEP) and our distance education delivery system for special education preparation; b) a description of the web conferencing tools we utilize; c) an explanation of the course components of content/readings, activities/practice exercises, and field work applications and how web conferencing works to integrate these together in the program; and finally d) our research activities in this area of web conferencing integration in teacher preparation.

Collaborative Teacher Education Program (CTEP)

The Indiana University program for special education teacher preparation began an off-campus instructional component in 1987. Over the past 16 years, the Collaborative Teacher Education Program (CTEP) has been funded by various federal, state, and local grants. It has become a major part of the special educator preparation program for Indiana University, and thus is always a funded program at the university level, even if no grants are in place. The Collaborative Teacher Education Program currently works with in-service educators in both rural and urban communities throughout the state of Indiana. This program makes certification in mild (high incidence) disabilities accessible to limited license teachers and mid-career changers.

At present, CTEP is a joint program across five Indiana University campuses, spanning the entire geographic distance in Indiana, from the far northwest corner near Chicago, to the southern Indiana main campus in Bloomington and from near the Illinois border on the west to the Ohio border on the east. Over 125 students are enrolled in the certification only or master's degree program. Using multiple distance education technologies,
36 credit hours of coursework are offered in CTEP. The hallmarks of this distance education program are: a) it provides a performance-based structure within each course; b) it links all coursework to field applications; and c) it addresses several state and national teacher standards in each course.

**Web Conferencing Tools**

Although various distance education technologies are used in the delivery of courses within CTEP, web conferencing has become one of the most prevalent and most useful tools for both students and instructors in the program. All students must have internet access, and typically use home computers, classroom or school-based computers, or public access computers, such as a public library. Currently, the program uses Sitescape Forum for all web conferencing functions and activities related to coursework. Sitescape provides three basic environments for users: 1) Front Page -- where every registered user first logs in and has access to total group asynchronous chat rooms, resource lists, practice forums and helps/hints on use of the forum, and access to separate team environments; 2) Forums -- a total class environment where information may be presented and asynchronous class discussions are held addressing key concepts and issues; and 3) Teams -- a small group environment where groups of 3-4 students work on designated tasks, problem-solve and plan, and carry on synchronous chat capabilities. Instructors have access to all three environments and can monitor student use, work, questions, and comments, in addition to providing timely student or group feedback.

**Course Components**

We have conceptualized the web-based portions of each course as containing the following components: a) course content and readings; b) activities and practice exercises; and c) projects and field work applications. Each of these components will be explained, including the overall goal, the student roles taken, and what typically happens in student postings during this component.

The goal of the course content and readings section of using Sitescape is to facilitate student learning of the key concepts and methods through engagement in large group discussions of course material. The Sitescape Forum is structured for groups of 15-20 students who read the text and any additional posted content. Each week, students take on the role of one of the following: 1) a Starter (the person who summarizes readings and develops questions to which other participants in the group respond); 2) Participants (persons who answer the Starter’s questions, elaborate on issues/concerns, develop discussion threads, and give individual reflections to the material and other discussants); and 3) a Wrapper (the person who summarizes the whole group discussion and highlights key issues raised during the week’s discussion).

Each instructor oversees and facilitates the class discussion as needed. The number and type of postings and replies expected for each discussion are explicated in the directions. What typically happens in student postings follows a similar pattern throughout the length of a semester course. First, an instructor Starter model begins the first week of discussion where a quality summary of the reading material is provided, along with clarifications of concepts and questions for each participant to answer. As the weeks continue, students tend to provide their own models of quality Starter material, often direct their discussion toward personal interests and concerns within the topic realm, present many diverse perspectives and viewpoints, provide real life examples and problems from their own teaching – taking theory into practice issues, and openly share resources, such as websites, teacher guides, student materials, and in-service opportunities.

In the activities/practice exercises portion of web conferencing, the goal is to broaden student understanding of concepts and methods by providing, reviewing and analyzing exemplars. Sitescape teams of 3-5 students make individual postings that include examples of concepts and methods, teaching applications, copies of assignments, sample materials, and case study reviews. Each team member is expected to review and reply to teammates’ postings with suggestions or critiques. Often, individual posts will integrate teammates’ replies into a final product for the week.

Students on these small teams will engage in a wide variety of behaviors during the course of each week. Below is a listing of typical responses:
a. brainstorm teaching approaches;
b. collaborate on problem-solving related case studies;
c. share personal examples of methods;
d. present new ideas and expand on views of teammates;
e. offer suggestions and alternatives; and
f. provide a community of support and encouragement.

The final component of our web conferencing is the field work applications. The goal is for students to learn to use teaching practices that integrate and apply concepts and methods within each particular course into real life situations. This component also uses the small Sitescape teams of 3-5 members. Typical examples of projects that compose this field work component of our web-based conferencing include: 1) each student conducts a curriculum-based assessment on an individual student and uses the results to prepare an Individualized Education Plan (IEP); 2) student small groups develop a thematic unit that integrates content area teaching and that reflects an understanding of differentiated instruction and issues of diversity; and 3) each student designs an approach for integrating social skills instruction in school-wide programs and activities. All of these projects include team member feedback and critique as a part of the final product.

The instructors provide a structure for each project that includes a general description, specific clarification of components and a grading rubric. Each field-based project requires a clear integration of course concepts that are explicitly and directly tied to the real life classroom or school applications of exemplary practices. In addition, each project clearly reflects state licensing standards for mild intervention and the sub-topic areas included within each of the courses.

Students' typical postings within this component related to field work applications will model the following:

a. team planning of activities;
b. on-line chats that review or discuss projects;
c. plans and drafts of lessons or materials;
d. implementation strategies and results sharing;
e. explanations and reflections explanations; and
f. teammate reviews and critiques.

**Research Activities**

Earlier studies of our work in distance education technologies centered on the importance of student perceptions of collaborative work on-line with their colleagues and student peers (Rodes, Knapczyk, Chapman, & Chung, 2000). Our most recent investigations have been to assess the use of web conferencing in promoting knowledge construction among student participants. Currently, we are completing data analysis on a totally web-based course in mild disability intervention methods across the general education curriculum. Using phases of knowledge construction, we are determining if and in what on-line circumstances students:

a. share/compare information;
b. review/explore ideas;
c. negotiate/co-construct knowledge;
d. test and synthesize ideas; and
 e. reach agreement and discuss application of concepts.

Other research activities related to web conferencing that we are engaged in with our CTEP students includes evaluating features of on-line discussions, e.g., chats, instructor roles and determining what each facet adds to a course. We hope to delineate key qualities of each feature and how that enhances (or distracts) from student learning and colleague collaboration on-line. Finally, we are exploring alternative ways of delivering on-line...
courses and structuring learner-centered approaches to conferencing, e.g., large group vs. team-based conferencing vs. individual performance.

The approach of integrating web conferencing with program and course components has proven useful as "a survival tool" for our rural special educators, especially those mid-career changers or limited license teachers. When distance education is the main delivery system for continuing coursework, finding ways to actively collaborate with teaching peers in all aspects of the course is a positive connection for students. Web conferencing options are especially useful and "user friendly" with applied activities and field work as students who are geographically separated seek ways to connect with and learn from other special educators. We continue to study the positive aspects of various on-line structures and formats, while continually getting student feedback on preferences and actual level of knowledge construction, both individually and in groups. It is through this work that we can continue to offer our students technology options that meet their comfort and learning needs.

REFERENCES

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