ACRES

American Council on Rural Special Education

ACRES 2007 Conference Proceedings

27th Annual National Conference

"The Changing Face of Rural"

Billings, Montana
March 14-17, 2007

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American Council on Rural Special Education

INTRODUCTION

This collection of papers marks the 27th year that the *American Council on Rural Special Education* (ACRES) has met for its annual national conference. The ACRES Conference is the only national conference devoted entirely to rural special education issues. Our ongoing goal has been to gather and share the most current knowledge, research, experiences, and skills related to rural special education. The *Proceedings* contains an excellent compilation of papers that will be valuable for educators, preservice educators, administrators, service providers, parents, and policy makers.

The authors of these *Proceedings* represent professionals from public and private schools; community, state and national agencies; colleges and universities; and private consulting agencies. We thank each for his or her contribution to rural special education.

We also wish to acknowledge the many individuals who reviewed the abstract proposals for this conference. A review panel of special education professionals with expertise in specific areas diligently reviewed the proposals and provided valuable feedback to assist presenters in improving the quality of their paper. Each abstract was reviewed by multiple professionals who contributed greatly in helping to maintain the high professional standards of the conference. We are pleased with the overall quality and diversity of the papers that have been submitted, and hope that you will find them informative and useful.

Britt Ferguson, Ph.D
Conference Program Chair

ACRES

American Council on Rural Special Education

A Diversified Teacher Workforce for Rural Kentucky

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A DIVERSIFIED TEACHER WORKFORCE FOR RURAL KENTUCKY

Project TRREE is a three-year, federally funded project conducted by the Kentucky Department of Education. The purpose of the project is to develop a systemic approach to increase the number of highly qualified special education teachers with a focus on recruitment of linguistically, culturally and ethnically diverse educators.

Taskforce members reviewed and discussed the latest in educational research. The webliography can be found on the Project TRREE website located at http://edtech.tph.wku.edu/~trree/. Participants then reorganized into groups of their choice to develop action plans for the three goal areas: recruitment, preparation and retention.

The action plans for all of the groups were designed by identifying the most promising ideas, the challenges and issues, and the emerging ideas for the goal area. The results of these small group discussions were shared in the large group and the ideas that emerged for each goal were prioritized.

Participants formed action groups to address the goal of greatest interest to them. Together, group members determined specific steps they could carry out to move work on this goal forward. The action groups are the following:

- Preparation
- Recruitment
- Retention

These action groups continued their work through Fall 2006 with the support of Project TRREE. The progress of the action groups is shared in an annual report and at conference sessions scheduled at AACTE, CEC, ACRES, NCREST, Kentucky Council on Post-secondary Education Diversity Conference, Bowles Center Conference on Diversity and Louisville Branch of the National Association for the Advancement of Colored People.

Project TRREE supported meetings in Bowling Green Independent Schools, Covington Schools, Hopkins County, Madison County and Warren County that assisted these districts in their efforts to diversify their teaching force. The Taskforce plans to continue these efforts and expand into other districts during the coming year.
Taskforce members from the following institutions have worked tirelessly for the benefit of this project.

• WESTERN KY UNIVERSITY	• SOMERSET COMMUNITY COLLEGE
• NORTHERN KY UNIVERSITY	• MADISON COUNTY
• EASTERN KY UNIVERSITY	• HOPKINS COUNTY

• KENTUCKY STATE UNIVERSITY	• JEFFERSON COUNTY
• MURRAY STATE UNIVERSITY	• WARREN COUNTY
• GEORGETOWN COLLEGE	• STATE ADVISORY PANEL
• PIKEVILLE COLLEGE	• KENTUCKY DEPARTMENT OF EDUCATION
• SPALDING UNIVERSITY	• EDUCATION PROFESSIONAL STANDARDS BOARD
• UNIVERSITY OF THE CUMBERLANDS	

A growing shortage of well-qualified teachers threatens the quality of education in schools throughout the Commonwealth. To ease this shortage, educators must eliminate out-of-field teaching, find ways to place more teachers in hard-to-staff schools and high-demand subjects, and increase the retention rates of well-qualified teachers. The federal Elementary and Secondary Education Act of 2001 – which establishes the Teacher and Principal Training and Recruiting Fund to increase the number and quality of principals, assistant principals and teachers in schools – underscores the importance of focusing on recruitment and retention.

The national data on teacher supply and demand indicate that the shortage of teachers is particularly acute in inner-city and isolated rural schools, in fast-growing regions of the country, and in the fields of mathematics, science, bilingual education and special education. Project TRREE and the Taskforce were charged with developing systematic strategies and identifying structures that facilitate the task of recruiting, preparing and retaining special education teachers in Kentucky.

The Taskforce Implementation Committee for **Recruitment** has completed the following tasks:

1. Created press release packet that includes letters, generic press release.
2. Secured Commissioner support for DVDs and PSAs.
3. Prepared Frequently Asked Questions.
4. Distributed DVDs.
5. Mailed follow up letter to co-op directors and local districts, reminding them to distribute videos, guidelines, and brochures.
6. Emailed potential IHE representatives and get commitment to ensure the video tape and brochures will be used for recruitment.
7. Sent contact names to WKU so they can mail videos and brochures.
8. Distributed videos, brochures and letters.
9. Developed list of transition to teaching grant contacts statewide.
10. Sent letters, brochures and videos to Work Force Development Centers to help target mid-career changes.

11. Mailed PSAs to TV stations, then follow-up to verify play dates.

12. Sent videos to high schools with greatest need for HQ special ed teachers for FEA clubs and career fairs.

13. Mailed Thank You letter to TV stations and others, for committing to play PSAs.

The Taskforce Implementation Committee for **Preparation** has begun the following tasks:

1. Promote 2 + 2, Transition to Teaching Program, and other programs to increase the number of special education teachers.

2. Complete a white paper review of established models for career pathways for paraprofessionals.

3. Complete test taking preparation programs for PRAXIS I, PRAXIS II.

4. Develop advertisements, brochures, etc. for test prep modules.

5. Develop a white paper reflecting best practice with alternative assessment admissions criteria to reflect life experiences.

The Taskforce Implementation Committee for **Retention** has completed the following tasks:

1. Gathered data from local districts:
   - Do they have a mentoring program AND/OR an organized system for supporting diversity in education (including program name, characteristics, and specific contact information).

2. Survey ALL educators with a special education certification.

3. Draft guidelines and recommendations for implementation in order to establish a differentiated mentoring induction program for special education teachers, incorporating guidelines for a support system regarding minority educators.

4. Develop Professional Development for school and district administrators that includes improving school climate related to special educator AND minority retention.

5. Deliver PD in partnership with teacher preparation programs for principals and educational administrators.

6. Promote the development and delivery of Professional Development for teachers in the following areas: inclusive settings, learning strategies, assistive technology, progress monitoring, moderate and severe needs, Read & Write Gold, peer interaction/cooperative groups, in conjunction with agencies and support groups within Kentucky.

Taskforce members will be completing the following tasks during this year:

1. Writing a white paper, Practices in Alternative Admissions: A Compilation of Research, review of established models for career pathways for paraprofessionals.

2. Developing online Test taking preparation programs for PRAXIS I, PRAXIS II.

3. Writing a white paper, Practices in Alternative Admissions: A Compilation of Research, review of established models for career pathways for paraprofessionals.

4. Developing online Test taking preparation programs for PRAXIS I, PRAXIS II.

5. Designing and printing advertisements, brochures, etc. for test prep modules.

6. Researching and writing a white paper reflecting best practice with alternative assessment admissions criteria to reflect life experiences.

7. Drafting guidelines and recommendations for implementation in order to establish a differentiated mentoring induction program for special education teachers, incorporating guidelines for a support system regarding minority educators.

8. Field testing Professional Development modules for school and district administrators that includes improving school climate related to special educator AND minority retention.

9. Delivering PD in partnership with teacher preparation programs for principals and educational administrators.

10. Developing and delivering of Professional Development for teachers in the following areas: inclusive settings, learning strategies, assistive technology, progress monitoring, moderate and severe needs, Read & Write Gold, peer interaction/cooperative groups, in conjunction with agencies and support groups within Kentucky.

11. Submitting draft guidelines and research to support two year mentoring programs for new teachers KYCEC, KY CASE, KDE, CPSE, KSBA, KEA, SAPEC, LSAC, etc. for support.

12. Expanding the districts served by recruitment and retention efforts.

13. Holding a Leadership Academy for middle school students targeted as a "grow your own" approach.

The Taskforce is committed to making sure that no child in Kentucky is left behind because poverty or that their classes are being taught by teachers who did not major in the subject they are teaching. Institutions of higher education and school districts across the Commonwealth work need to work together to prepare highly qualified teachers and to develop successful strategies that both support new teachers and to keep veteran teachers in place.

Teaching touches the lives of all children from a variety of backgrounds, including those from families that exhibit a wide range of cultural and linguistic diversity. Teaching also touches the lives of children with varying ability levels, including those with disabilities. It is the profession in which we have a chance to provide opportunities that might otherwise be lost.

Sometimes, we have the opportunity to change the course of future events for many children who come to school with significant disadvantages, such as poverty, parental and societal neglect, as well as intellectual, social and physical disabilities. It is a profession, however, that loses thousands of dedicated members each year, putting those most vulnerable children and youth at risk of failing to realize opportunities afforded to them through quality education. The Taskforce is committed to stopping this loss.

Yet, because of the complexity of the issues embedded in recruiting, preparing and retaining high quality teachers, many find addressing these essential issues to be a daunting task. The Taskforce is grateful to the vision of the Kentucky Department of Education that has decided to attack this problem. Project TRREE serves to assist in planning, implementing and evaluating a high quality teacher recruitment, preparation and retention initiative that will keep the best teachers in the hardest to staff disciplines and teaching in the most challenging classrooms.

While good teachers are needed in all settings, there are particular fields of teaching and geographic areas in which it is more difficult to recruit and keep qualified professionals. For more than 25 years, the American Association for Employment in Education (AAEE) has consistently reported that the areas of greatest need in education-related disciplines nationwide include teachers and related service personnel in special education, mathematics and science (AAEE, 2003). While there are other areas of need in particular geographic areas of the country, these three teaching disciplines are especially difficult to staff in urban and rural schools.

As a result, administrators face a chronic shortage of licensed special educators, in addition to math and science teachers, in an era of increasing accountability for **all** teachers to be highly qualified and for **all** students to make adequate yearly progress. Yet, never was the effectiveness of a special education, math or science teacher more important than in today's educational arena.

What an exciting time to be a special educator in Kentucky! The issues challenge our collective visions of teaching and leadership and what it takes to lead in today's world of special education. Project TRREE is appreciative of the time effort and contributions made to the effort by the Taskforce members and the support of the Kentucky Department of Education. Please do not hesitate to contact any of the members with comments or requests. We pledge to serve you with professionalism and integrity and support the most important work there is…educating Kentucky's children.

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A Study of Tucker Signing Strategies for Reading

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A **STUDY OF TUCKER SIGNING STRATEGIES FOR READING**

The area of emergent reading acquisition has been extensively researched (Adams, 1990; Blachman, 1994; Clay, 1991; Day & Day, 1984; Ehri et al., 2001; Shaywitz, 2003; Stanovich, 1986; Yopp, 1992). Phonological awareness ability, especially phonemic segmentation ability, has been significantly correlated to successful beginning reading acquisition (Adams, 1990; Shaywitz, 2003; Stanovich, 1986; Yopp, 1992). Emergent reading acquisition as supplemented through the use of a decoding strategy known as the Tucker Signing Strategies for Reading (TSSR) was the focus of this study. The effectiveness of the TSSR on students' ability to decode words in the prekindergarten, kindergarten, and first grades was studied.

The Tucker Signing Strategies for Reading (Tucker, 2001) was developed by Dr. Bethanie Tucker over a number of years. The strategy is an outgrowth of many experiences including the study of American Sign Language, observing young readers' struggle with the reading process, and searching for ways to monitor how the minds of children work. While teaching at Averett College in Danville, Virginia, Dr. Tucker field-tested the concept of using hand signs to build letter-sound associations.

The Tucker Signing Strategy is a supplemental strategy for decoding that can be used in conjunction with a conventional reading program. It uses a system of 44 hand signals that prompt associations between letters or word chunks and the sound they represent. The program includes a hand sign for each letter and some letter combinations that represent distinct speech sounds or phonemes. The Tucker hand signs are different from the signs used in American Sign Language. The Tucker signs are made with the left hand so that the letters appear accurate to the student making the signs. Many letter shapes appear backwards to the learner when signed with the right hand. Each hand sign is designed to resemble, to the greatest extent possible, the shape and the sound of the letter it represents. For example, the hand sign for the letter p is shaped like the letter p with the left hand and is held in front of the lips as the *p* sound is pronounced. The sign is meant to represent the printed letter and the associated speech sound.

Tucker Signing Strategies for Reading (Tucker, 2001) provides a 161-page manual that includes guidelines for teaching reading using the hand signs, a description and photograph of each hand sign, procedures for teaching the lesson, and extension and enrichment activities. Each lesson also includes story pages that feature each lesson's focus word(s) in the context of previously taught words and letters. Each student page is meant to be illustrated by the student and contributes to an ongoing story.

Previous Studies

Two previous studies using the Tucker Signing Strategy for Reading were conducted by Cole, Majd, and Gaither (2001) from Indiana University. The first study was a pilot study conducted during the 2001-2002 school year. Participants were 290 students ranging in age from 5 to 14 years, from schools in Indiana. The majority of the participants were first graders (36.2%), followed by students in the third grade (18.1%), fourth grade (14.8%), fifth grade (11.1%), second grade (9.2%), and kindergarten (7%). Female students made up 37% of the population, and male students made up 63% of the sample. One fourth (25%) of the students were classified as Learning Disabled, and another fourth (25%) were enrolled in Title programs—remedial reading programs funded by the federal government. More than one third of the students (35.5%) were not enrolled in any special programs. A *t* test analysis revealed a significant difference between the pretest mean of 41.43 and the posttest mean of 64.03 across all grade levels ($t = -17.22$ [1,289], $P < .01$). This indicates that students made reading progress from pretest to posttest.

A nationwide study using the design of control versus experimental group was begun by the same researchers in the fall of 2002 and concluded in September 2003. This study was designed with a control group and data from various classrooms across the nation. The participants included 197 students, 89 in the control group (students who did not receive instruction in the Tucker strategy) and 108 in the experimental group (students who received instruction in the Tucker strategy). The ages of the children in the control group ranged from 5 to 8 years, and close to 75% of the children were in first grade. The ages of the children in the experimental group were 5 to 13 years and in preschool through sixth grade. About 28% of the students were in the 7-year-old age range, and the largest grade level was third. Both genders were equally represented in both groups. The group composition differed by the number of students receiving special services. In the control group, the majority of students (56%) did not receive any special services. In the experimental group, the majority of students (41%) were enrolled in a Title One reading program, followed by 30% in special education, and 6.5% in other programs.

The pretest and posttest scores for each student were calculated by summing up the student's scores across the four reading lists that corresponded to the four grade levels—kindergarten, first, second, and third grade. The highest possible score was 176. The student's progress score is the difference between the student's posttest and pretest scores. The mean progress score for the control group (no Tucker instruction) was 5.30 points, as compared to 36.75 points for the experimental group.

There were limitations associated with the National study. Random assignment of groups was not possible. In some cases, individual students were selected for testing in a particular group, in other cases a whole classroom was selected for testing in a particular group. Also, the length of time for instruction in the strategy varied widely across the subjects. The content and length of treatment sessions need to be constant for all students in the experimental group to remove the length of session time as a variable. The control and treatment groups had very different compositions with respect to age. The pretest and posttest scores for all subjects need to be gathered in the same time period, and the timeframe of the testing as well as duration of the elapsed time between pretest and posttest must be consistent across all subjects.

Research Design

The following study was completed using a quasiexperimental design with a control group that did not receive the TSSR (intervention) and an experimental group that did receive the intervention strategy. The research study used a pretest-posttest design with change scores to answer the research hypotheses. Participants in three schools, both the control and experimental groups, were pretested using an appropriate instrument. Teachers for the experimental groups were expected to incorporate the Tucker Signing Strategies for Reading in the curriculum as a supplemental strategy. As a result of the training workshops, teachers were expected to demonstrate the proper application of the Tucker signs in the classroom. At the conclusion of the intervention study, all participants were retested to determine if there was any statistically significant change on word recognition. Teachers and staff were asked to complete a survey about the intervention and the Tucker Signing Strategies for Reading to assess their attitudes about the effectiveness of the strategy.

The focus for this study was two public elementary schools (K-6) and one parochial preschool. The three schools were in the same state in the Midwest and represented a predominantly rural population. They represented three different school districts. For the purposes of this study, one school is referred to as School A (parochial preschool with a control and experimental group), one school is referred to as School B (public school kindergarten with a control and experimental group), and one school is referred to as School C (public school preschool, kindergarten, and first grade with control and experimental groups). The schools were chosen because they shared similar profiles and had teachers trained in the strategy by the researcher.

The total enrollment for the 2004-2005 school year for School A was 42 students. Students fell in the following cultural breakdown: 93% White, 4% Black, 2% Hispanic, and 1% other. The mobility rate for the 2003-2004 school year was 1%. The attendance rate for the 2003-2004 school year was 100%. At School B the total enrollment for the 2004-2005 school year was 160 students. The cultural breakdown of the school was 100% White, 0% Black, 0% Hispanic, and 0% other. The mobility rate for the 2003-2004 school year was 7.3%. Results from the state standards test for third and sixth graders in the fall 2003 revealed that 91.1% of the students taking the test did meet minimum standards. The attendance rate for 2003-2004 was 96.1%.
The total enrollment at School C for the 2004-2005 school year was 268 students. The cultural breakdown of the school is 97.8% White, 0% Black, 0.7% Hispanic, and 0.7% other. The mobility rate for the 2003-2004 school year was 19.7%. Results from the state standards test for third and sixth graders in the fall 2003 revealed that 78.9% of the students taking the test did meet minimum standards. The attendance rate for 2003-2004 was 96.1%. There were a total of 145 students who participated in the study. There were 27 (19%) of the subjects from school A, 37 (26%) from School B, and 81 (56%) from School C.

Instrument and Measurement Procedures

Two measurement instruments used in this research study. The primary instrument was used to measure word recognition on both pretesting and post-testing with control and experimental students (School A, B, and C). The Tucker Research Study Word List which was developed at Indiana University, was used to measure students' decoding and word recognition skills.

The word recognition instrument measure was administered individually in a quiet, one-to-one setting within the student's classroom environment. Starting with the kindergarten list, each student was asked to identify individual words on the list. If the student missed six consecutive words, the testing was discontinued. If the student did not, testing continued with the next list, and so forth, until the end of the list which was at the third grade level. The highest number possible on the instrument was 176, with each list containing 44 words. An answer sheet was kept for each student. If the student correctly read the word, a "+" was recorded next to the word. If the student mispronounced the word, the mispronunciation was recorded next to the word, and if the student did not know the word, a "–" was recorded next to the word. One point was recorded for each correctly identified word. The word recognition instrument measure was administered by the researcher for the pre- and posttest measures.

A survey was also used as an instrument at the conclusion of the study. Teachers and staff who participated in the study had the opportunity to complete a survey developed by the researcher. The survey contained seven questions that were answered using a Likert scale of one to five where one indicates *strong disagreement* and five indicates *strong agreement*. A space for individual comments was also provided at the end of the survey to provide participants the opportunity to comment on the strategy, its effectiveness, and their attitudes towards the Tucker Signing Strategies for Reading.

Participants in all schools were given the pretest in October 2004, during the first semester of the school year. All of the test administration was given by the researcher. After the completion of the pretest assessments, students in Schools A, B, and C began the intervention strategy for a period of 6 weeks. At the end of the treatment period, posttesting was conducted by the researcher at all schools during the last part of November 2004.

Results

Table 1 provides descriptive statistics for all variables for the entire sample. The average (SD) pretest score was 4.1 (8.8) and the range was 0 to 43 (N = 145). The average (SD) posttest score 10.9 (21.8) and the range was 0 to 166 (n = 143). The average (SD) change in test score (post- minus pre-) was 6.8 (14.5) with a range from .00 to 123 (n = 143).

Table 1. Descriptive Statistics for Entire Sample

	N						
	Valid	Missing	Mean	Median	Std deviation	Min	Max
Pretest	145	0	4.12	1.00	8.838	0	43
Posttest	143	2	10.99	4.00	21.867	0	166
Change in test score (post- minus pre-)	143	2	6.85	3.00	14.559	.00	123

There was a statistically significant difference in students' pretest and posttest scores on word recognition based on the frequency of the instructional strategy. Table 2 displays the correlations between change in test score and the number of instructional sessions. The sessions were calculated in groups of 10; 1-10 sessions, 10-20 sessions, and 20-30 sessions. Test scores improved based on the frequency of the instructional strategy. Children who improved the most (change from pre-to post-) received more instructional sessions for a longer period of time than those who received fewer instructional sessions.

Table 2. Correlations Between Change in Test Score and Number of Instructional Sessions

Spearman's rho	Correlation coefficient	Change in test score (post- minus pre-)
Change in test score (post- minus pre-)	Correlation coefficient	1.000
	Sig (two-tailed)	.
	N	71
Numbersessions110	Correlation coefficient	-.268*
	Sig (two-tailed)	.024
	N	71
Numbersessions1020	Correlation coefficient	.046
	Sig (two-tailed)	.702
	N	71
Numbersessions2030	Correlation coefficient	.331**
	Sig (two-tailed)	.005
	N	71
Whole Group	Correlation coefficient	-.267*
	Sig (two-tailed)	.024
	N	71
Individual	Correlation coefficient	-.168
	Sig (two-tailed)	.161
	N	71

Note. * Correlation is significant at the 0.05 level (two-tailed). ** Correlation is significant at the 0.01 level (two-tailed).

Table 3 shows that there was not a statistically significant difference in any of the test scores between genders. The average (SD) pretest score was 4.6 (9.6) versus 3.6 (8.0) for females and males, respectively (P = 0.50). The average (SD) posttest score was 10.9 (17.0) versus 11.1 (26.1) for females and males, respectively (P = 0.97).

Table 3. Statistics for Test Scores by Gender

		N						
	Gender	Valid	Missing	Mean	Median	Std deviation	Min	Max
Pretest	F	74	0	4.61	1.00	9.63	0	43
	M	71	0	3.62	1.00	7.95	0	43
Posttest	F	73	1	10.92	4.00	17.04	0	71
	M	70	1	11.07	4.00	26.09	0	166
Change in test score (post-minus pre-)	F	73	1	6.26	3.00	8.82	.00	32
	M	70	1	7.47	3.00	18.82	.00	123

Table 4 shows that there was not a statistically significant difference in pre- or posttest scores between the control and experimental groups, but there was a difference in the amount of change from pre- to post- between the two groups. The average (SD) pretest score was 3.8 (7.2) versus 4.4 (10.2) for the control and experimental groups, respectively ($P = 0.052$). The average (SD) change (post minus pre) in test score was 3.6 (5.1) versus 10.1 (19.5) for the control and experimental groups, respectively ($P = 0.008$).

Table 4. Statistics for Pre-, Post-, and Change Test Scores for Group

		N						
	Group	Valid	Missing	Mean	Median	Std deviation	Min	Max
Pretest	Control	72	0	3.81	1.00	7.23	0	43
	Experimental	73	0	4.44	1.00	10.21	0	43
Posttest	Control	72	0	7.43	4.00	11.29	0	69
	Experimental	71	2	14.61	5.00	28.53	0	166
Change in test score (post-minus pre-)	Control	72	0	3.62	1.00	5.10	.00	26
	Experimental	71	2	10.12	3.00	19.54	.00	123

At the conclusion of the study, teachers and aides who participated were asked to complete and return a survey, Tucker Signing Strategies for Reading Survey Questions (see Appendix B). There were 11 potential respondents, and 100% ($N = 11$) returned surveys.

The survey instrument was used as a quantitative instrument to supplement the data collected by the quantitative study. The responses to questions 1-9 were compared by calculating the mean score for each question. Likert-type questions on the survey were scored on a 5-point scale, with individual ratings of five, *strongly agree*; four, *agree*; three, *neutral/don't know/not entirely sure*; two, *disagree*; one, *strongly disagree*; and zero, *NA* (not applicable).

There were 91% of the teachers who agreed that the strategy helps children learn to decode unfamiliar words and helps teachers develop student knowledge about print, including the production and recognition of letters. One hundred percent of the teachers agreed that the Tucker Signing Strategy provides practice with the sound structure of words. There were 91% of the teachers who agreed that the strategy has students practice blending individual sounds in phonetically regular words and reinforces letter-sound correspondence during writing activities. Eighty-two percent of the teachers agreed that the Tucker Signing Strategy models how to use basic word families to solve words. There were 64% of the teachers who felt that the strategy helps children during reading and writing activities.

Summary

This study proposed to answer research questions about the effect of the Tucker Signing Strategy for Reading on students' decoding skills. One assessment instrument was used to measure prekindergarten, kindergarten, and first-grade students' decoding skills. In this quasiexperimental design (control group versus experimental group), pretests and posttests were given for the assessment instrument. Change scores (post- minus pre-) were calculated to run analyses. The significance level was set at < 0.05. The change scores for the prekindergarten, kindergarten, and the first grade experimental group were found to be significant.

The study showed that the frequency of the instructional strategy affected posttest scores. Test scores improved based on the frequency of the instructional strategy. Children who improved the most (change from pre- to post-) received more instructional sessions for a longer period of time than those who received fewer instructional sessions.

There was no difference found on test scores (pre-, post-, and change from pre- to post-) between male and female students. This finding was consistent across all three grade levels for prekindergarten, kindergarten, and first-grade students.

When all of the grades were combined, the test scores (pre- to post-) of the male and female students in the experimental group showed a greater increase than the students in the control group.

In conclusion, the Tucker Signing Strategies for Reading did have a positive impact on students' decoding skills. The strategy also had a positive impact on students who received more instructional sessions that lasted a longer period of time. There was no significant difference found on test scores between male and female students. This is likely due to the fact that most classes place equal instructional focus on both genders. Ninety-one percent of the teachers agreed that the Tucker Signing Strategy is a technique worth using again and they would recommend the strategy to other professionals in their field.

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Being There:
Professional Development in Rural Schools

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BEING THERE: PROFESSIONAL DEVELOPMENT IN RURAL SCHOOLS

Introduction

The province of Alberta, Canada, has more than 1,000 schools located in towns and villages outside its larger cities. Virtually all of these schools are expected to compete with their urban counterparts in all aspects of their operations, particularly student achievement. Is that possible? Successive studies conducted over the last six years (see, for example, Adams & Townsend, 2006) have produced sound evidence that rural schools are capable of providing their students with the levels of educational services to which they are entitled. Working in school teams, using a model of collaborative inquiry, and adhering to rigorous standards of evidence-based practice, rural teachers can be every bit as successful as their urban colleagues if they have necessary resources, clear direction, and effective leadership. What follows is a brief summary of a project conducted with seven rural schools in one Southern Alberta school district.

Related Literature

Recent literature on school improvement and change in Canada (Earl & Lee, 1999; Leithwood, Leonard, & Sharratt, 2000) indicates that schools move forward when they are able to align many internal variables such as mission, vision, goals, values, culture, organizational structure, knowledge, and resources with external variables such as policy initiatives, funding, expertise, and expectations. Such schools are increasingly referred to as learning organizations (Senge, Cambron-McCabe, Lucas, Smith, Dutton, & Kleiner, 2000), learning communities (DuFour, DuFour, Eaker, & Karhanek, 2004), or communities of practice (Wenger, McDermott, & Snyder, 2002).

Action Research as a School Improvement Protocol

Productive models of professional development incorporate processes of inquiry and transformation (Mezirow, 1991). In Alberta, those processes have long been associated with action research (Calhoun, 1994; Schmuck, 1997). Two Alberta authors, Carson and Sumara (1992), suggest several reasons for a shift in education toward action research methodologies, the most compelling of which is that action research provides a bridge across the perceived gap in understandings between educational practitioners and research theorists.

Models of Action Research and Inquiry

Action research is characterized by spiraling activities of planning, acting, observing, and reflecting (Berg, 2001; Kemmis & McTaggart, 1988; Schmuck, 1997). The notion that the most unique and critical characteristic of action research is its *iterancy* can be contributed to one of its

earliest proponents, Kurt Lewin (1946), whose concept of *reconnaissance* appears in many other models of action research (see, for example, Elliott, 1991; McKernan, 1996).

Collaborative Inquiry

In the course of this project, the term action research was replaced by *collaborative inquiry* (Adams, 2006) to describe the process as it was experienced by many participants. Collaborative inquiry occurs when a group of individuals commits to exploring an answer to a compelling question through a cyclical process of experimentation, purposeful action, and public reflection. (Argyris, 1985; Bray, 2002; Diaz-Maggioli, 2004; Emihovich & Battaglia, 2000; Huffman & Kalnin, 2003; Jarvis, 1999; Sagor, 2000; Zeichner, 2003). All the experiences, skills, and knowledge of participants are seen as equally valuable, providing alternative filters through which to view the inquiry (Huffman & Kalnin, 2003; Jarvis, 1999; McTaggart, 2003). An atmosphere of safety and support encourages participants to risk sharing new ideas and engaging in collaborative discourse versus congenial discussion (Argyris, 1985; Huffman & Kalnin, 2003; Sagor, 2000). Collaborative inquiry is a strategy for teams of educators striving "to learn their way out of workplace difficulties" (Bray, 2002, p. 84). It focuses on relevant questions chosen by the participant-researchers (McTaggart, 2003; Zeichner, 2003). When they engage successfully in collaborative inquiry, practitioners can enjoy improved teaching practices, increased confidence, enhanced collaborative skills, and a greater sense of empowerment (Diaz-Maggioli, 2004; Jarvis, 1999; Zeichner, 2003).

Professional Development as Adult Learning

An expanding body of literature draws analogies between educators' professional development and the principles of adult learning. Both have voluntary and self-directed characteristics (Bray, 2002; Brookfield, 1986; Knowles, 1984; Lawler, 2003; Mezirow, 1991; Rogers, 2002; Zeichner, 2003); both promote collaboration (Butler et al, 2004; Diaz-Maggioli, 2004; Emihovich & Battaglia, 2000; Kasl & Yorks, 2002; Mezirow, 1991; Rogers, 2002); and both occur best in a respectful climate (Brookfield, 1986; Emihovich & Battaglia, 2000; Wlodkowski, 1999).

Schools as Communities of Learners

The impact of the learning community phenomenon throughout the education system has been profound. What started as a faint metaphor passed quickly through stages of fad and trend until it became, arguably, the most commonly applied descriptor of educational institutions across North America.

Current understandings of the term *learning community* may have their origins in the writings of Dewey (1938). As well, the term has some connection to Schön's (1973) description of *learning systems* which, he contends, are institutions capable of bringing about their own transformation, and it is closely related to Senge's (1990) concept of the *learning organization*. Noddings (1985) writes of classrooms and schools as *caring communities*, while Barth (1990, 2001) may be the first of many authors to use the phrase *a community of learners* in purposeful reference to schools engaged in learning that supports reform and innovation. Similarly, Sergiovanni (1994) refers to the development of *communities of practice* an effective way of improving schools.

Sergiovanni's references to communities of practice have a parallel in the theories of Etienne Wenger (see, for example, Wenger, McDermott, & Snyder, 2002), whose writing, in turn, is sometimes evocative of Dewey.

In the United States, the National Commission on Teaching (2003) pronounced that "Communities of learning…must become the building blocks that establish a new foundation for American schools" (p. 13). In Alberta, there is similarly not much room for doubt about the role of learning communities in the province's schools. The Alberta Learning Commission Report (2003) offers as Recommendation #13 that "All schools will function as Professional Learning Communities" (p. 52).

In concert with these political initiatives, Richard DuFour and his colleagues have done most to popularize the term *professional* learning community. It is quite apparent that the model of learning communities most commonly accepted in North American schools is that promoted by DuFour and Eaker (1998); DuFour, Eaker and DuFour (2002); DuFour, DuFour and Eaker (2003); and DuFour, Eaker, DuFour and Karhanek (2004).

Methodology

The following action research protocol (Townsend & Adams, 2002) was employed in this project.

- Define the focus or the problem. Ask the "right" questions (*e.g.* What is the next thing I have to know more about in my classroom or in my teaching?) Reflection begins.

- Collect information. Read the literature, consult with colleagues, talk to experts and others with experience. Reflection continues.

- Make sense of the information. What is relevant? What is do-able? What can be modified and adapted to suit particular circumstances? What must be done with conflicting information?

- Report and discuss. Preliminary conclusions and potential courses of action need to be shared.

- Plan action. A written plan should be one of the products of this stage.

- Take action. Put plans into effect. Reflection in and on action, alone and with colleagues, can make efforts more purposeful.

- Gather evidence. Document carefully. Regularly share reports of progress.

- Analyze and evaluate in a continuous way. Try to make sense of what's happening, and why. Refocus, as necessary. Persevere.

- Assess achievements. Use all available evidence to determine what has been accomplished, what may have gone wrong, and why.

- Publish results and conclusions. Share within and beyond your immediate group, beyond the institution.

- Celebrate. Not only when the project is finished, but whenever it is appropriate to do so. Take time to "relax" and consolidate learnings and gains.

- Future action. Choose the next question and begin the process again.

This study involved bi-methodological data collection and analysis (Greene, 2005). The sample comprised 52 educators in seven rural schools who volunteered to participate in response to an invitation from the district's central office administration. The study incorporated three learning experiences critical to project success. Internal meetings involving the principal and team teachers were held monthly at the school site. External teams meetings ---also monthly and also at the school site --- included the school-based team as well as one or two central office administrators, and one or two university researchers. District level meetings included all participants and, sometimes, the Superintendent.

Survey, interview, focus group, and observational data were generated by the university researchers, the central office external team members, and the school teams, to present a comprehensive answer to the research question:

In what ways and to what extent does an increased emphasis on collaborative inquiry-based professional development impact student learning?

Findings and Discussion

The findings of this study provide some graphic insights into the practical, educational, and personal dimensions of school improvement, particularly when the school improvement initiative is planned as part of a research project in which the uses of data and evidence play an important role.

As assessed by the external team members, and verified by school surveys, the development of schools as learning communities has proved to be a very complex process. Most school staffs began their involvement in this project believing they were already functioning as a learning community, and most finished their projects believing they still had a long way to go. The most effective teams were those able to manage conflict and never lose sight of their goals. Less successful teams were seen to exhibit characteristics of individualization, privatization, disengagement--- even isolation---as they wrestled with the challenge of responding appropriately to the evidence of what they were accomplishing, and why.

Ironically, some schools that progressed too quickly, or provided too much evidence of success, experienced strong negative reactions from other schools. On a few occasions, external team members were advised not to make public references to schools whose successes were

exemplary because such comments were offensive to educators in other schools, and caused discomfort for members of the successful teams.

Over the course of the study, student *achievement*, as measured by provincial achievement tests, increased in four of seven schools. In addition, participants' ratings of the effectiveness of this form of professional development in enhancing student *learning* remained very high for the duration of the project.

Six out of seven school teams showed increased skill in using evidence to verify the impact of changes in teaching practice on student motivation and student engagement, although a lingering concern for many teachers was their awareness of just how long it takes to incorporate new teaching methods effectively into classroom practice.

One unanticipated outcome of this project was the volume of new resources and learning materials created by school teams. Some of these artifacts---a comprehensive writing scale for K-6, a complete kit of pre-school teaching aids, thematic units, common assessments, and innovative uses of new technology, for example---have already been moved into broader distribution throughout the district, and a few have been adapted for commercial development.

The growth of shared leadership was a positive outcome of the study. It was revealed through teams' more effective uses of data, more teacher involvement in sharing new skills and knowledge with colleagues, more mentorship, more obvious improvements in assessment for learning, broader curriculum expertise, and more confidence in reporting to parents. The most successful projects were those in which the highest levels of shared leadership were attained.

Finally, the composition of the project teams that included school personnel, district office staff, and university researchers was seen by a large majority of participants as being important to project success. In only one school did relationships suffer extensively because of difficulties between the school staff and external team members. Regularity of contact and clarity of expectations were two related elements that contributed to project continuity. On the negative side, when visits by external team members were postponed for any reason, there was a greater likelihood that project tasks would also be deferred.

Conclusion

The findings of this study challenge educators to examine their taken-for-granted assumptions about such things as the readiness of school staffs to respond to educational innovation, the usefulness of research in driving school improvement, the speed with which school improvement can happen, the reality of connections between teacher professional development and student learning, and the power and authority of school leaders, and educators external to the school, to influence school improvement in a positive way. Using resources that were available to all schools in the district, this project contributed to improvements in teacher learning, student learning, capacity building, and the generation of new skills and knowledge across many different contexts.

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Brain Injury:
The Silent Epidemic

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BRAIN INJURY: THE SILENT EPIDEMIC

Abstract

The purpose of this text is to provide school teaching and administrative staff and parents with an overview of an epidemic currently manifesting itself across North America – Traumatic Brain Injury (TBI). When children or adolescents experience a brain inquiry the compromised neurophysiology of the injured brain often manifests itself, in school settings, as learning difficulties; that is, as issues identified as memory-related, cognition-related, and behavior-related. Thus, professional educators who wish pedagogic relationships with children suffering from TBI should have a working knowledge of the principles of brain neurophysiology and its relationship to the learning process.

The hardest thing to understand is why we can understand anything at all.
Albert Einstein

Sam's Story

Sam was eight years old when he was hit by a car. He broke a leg and he hit his head on the windshield, and the doctors diagnosed a traumatic brain injury. When Sam returned home from the hospital, he needed assistance in looking after himself. But now as he turns ten years of age, Sam feels goods. His leg is healed completely, and so Sam feels totally healed.

Abdullah's Story

"Thud!"
Abdullah remembers seeing the boards coming at him all too quickly as a result of a fierce hit from behind during his hockey game. He remembers hearing the whistle, and he remembers the coaches and referee gathering around him. But he doesn't remember playing the rest of the game.

Marcia's Story

"You can't catch me," screamed Josh.
"Yes, I can," shouted Marcia. And around the playground equipment she ran with Josh in her sights.
"Ouch. … My head hurts."
"It's O.K. Marcia. You hit your head on the playground equipment. You will have a little goose egg there for a while. Remind me to get you some ice when you come in from recess," said the supervising playground parent.

Common to each story is a belief that a child's brain is encased within a protective skull and that the brain itself, if injured, is youthfully resilient. Bones heal quickly and, therefore, the brain should heal quickly. But teachers and parents notice there are subtle changes in Marcia, Abdullah, and Sam. Each child requires more time to do things, and each child has some difficulty remembering. Often, each child can't find the words he or she needs and each seems frustrated by this occurrence. Also, basic reading and writing tasks seem to be harder to accomplish now.

Why?

Inside a child's skull, to a lesser or greater degree, the brain, as a result of a blow to the head, moved in its cerebral spinal fluid and actually bounced off the inside of the skull – perhaps, both the front and back of the skull. In this violent motion, nerve cells are stretched and they fire at the point of skull-brain contact releasing all their neurotransmitters at once. The effected brain area becomes overloaded by released calcium with floods in to surrounding brain cells, and dislocates those cells power-generating balance. This disruption, in turn, invites the constriction of even more brain blood vessels. As a result of this chain-reaction, brain cells can't absorb an essential fuel – glucose – and a brain cell crisis ensues. The result of this trauma is a brain brown or black out. The brain remains in crisis for days, weeks or longer depending on the severity of the head trauma.

In the United States, more than one million children receive brain injuries each year and more than thirty thousand of these children suffer lifelong disabilities as a result of the brain injury. (NINDS **National Institute of Neurological Disease and Stoke (NINDS) (2005) New York, N.Y.** 2005).

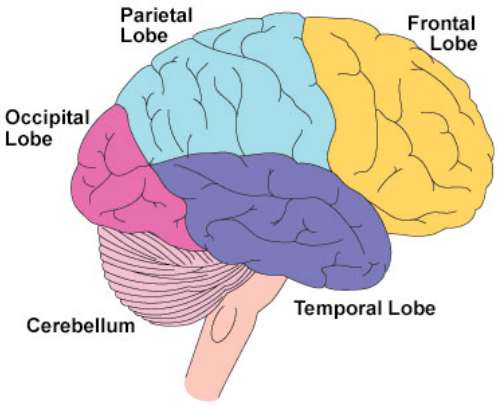
The numbers of TBIs has reached a crisis situation. Simply, across the past decade, with the growth and increased sophistication of medical technology and as a result significant effectiveness of recovery educational components – such as, rehabilitation consisting of physical therapy and special education cognitive rehabilitation – the brain-injured survivor is now more evident in the workplace, marketplace and the school.

So, what is a Traumatic Brain Injury (TBI)? A TBI is an injury to the brain caused by the brain being shaken violently in the skull. The term TBI does not apply to a person born with a brain injury, nor is it used to identify brain injuries that happen during childbirth. A traumatic brain injury occurs when the tissue of the brain is damaged or is unable to function properly. (Higenbottam, 1998). What follows is a definition of TBI from the 'Individuals with Disabilities Education Act (IDEA)' (Source: U.S. Department of Education). This is a United States federal law that guides how schools provide special education and related services to children and youth with disabilities, and the 'Individuals with Disabilities Education Act (IDEA)' defines TBI as:

> an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psycho-social behavior;

> physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma. [34 Code of Federal Regulations §300.7(c)(12)]

The four lobes – the Frontal Lobe, Temporal Lobe, Parietal Lobe, Occipital Lobe – are illustrated below.



Brain Injury Association of America (2005)

The Frontal Lobe is the area of the brain that makes us uniquely human. It is responsible for our ability to reason, make decisions, and perhaps most importantly is responsible for our distinctive personalities. The Temporal Lobe houses memory, hearing facilities, and it is where understanding language (receptive language) occurs, as well as where we organize and sequence sensory information. The Parietal Lobe is home to the sense of touch, as well as an ability to differentiation (identification) size, shape, and color, and this area houses spatial perception and visual perception. The Occipital Lobe is the location of vision processing. As well, the Cerebellum is our center for balance, and coordinates skilled motor activity (Source: Brain Injury Association of America, 2005).

Obviously, we can see what effect when a certain part of the brain makes violet contact with the skull. Let's say there is a blow to the front of the head that sends the brain bouncing off the Frontal lobe and the Occipital lobe and Cerebellum. That injured person may have vision problems (they may be seeing stars and dots, etc.), as well the person may have issues with balance, coordination and skilled motor activity (they may stagger and require assistance standing and walking).

All brain functions can be disrupted by brain trauma, and depending on the area effected, the person may exhibit excessive sleepiness, inattention, difficulty concentrating, impaired memory, faulty judgment, depression, irritability, emotional outbursts, disturbed sleep, diminished libido, difficulty switching between two tasks, and slowed thinking. The extent and the severity of cognitive neurological dysfunction can be measured with the aid of neuropsychological testing, but this is not an exact science and often the consequences of a brain injury don't fully appear until well after the event. Neuropsychologists use tests to attempt to localize the dysfunction and connect the difficulties to specific areas of the brain. For example, the Frontal Lobes play an essential role in drive, mood, personality, judgment, interpersonal behavior, attention, foresight,

and the inhibition of inappropriate behavior. The ability to plan properly and execute those plans is known as our 'executive function.' One recent study (Varney 1993) showed that 92% of brain-injured patients suffering anosmia (loss of smell – located in the Frontal Lobe) had ongoing problems with employment, even though their neuropsychological testing was relatively normal.

Now we turn attention to TBI and students in school settings. Simply, this kind of injury to the brain changes how the child emotes, acts and thinks, and how a student learns, or not, in school. In a school setting a child suffering from TBI exhibits changes in one or more areas, including:

- Physical disabilities – Children with TBI may have problems with coherent speaking, seeing, hearing and using their other senses. They may have headaches and feel continuously tired. They may have trouble with literacy skills such as writing or drawing. Their muscles may suddenly contract or tighten (this is called spasticity). They may also suffer from seizures. Their balance and walking may be affected. They may be partly or completely paralyzed on one side of the body or both sides.

- Difficulties with thinking – Children with brain injuries often experience a change in their ability to use the brain s. For example, children with TBI may have trouble with short-term memory (that is, being able to remember something from one minute to the next). Also, they may have trouble with their long-term memory (being able to remember information from a while ago). Children with TBI may have trouble concentrating and they are only able to focus their attention for a short time. They may think slowly. They may have trouble talking and listening to others. They may have difficulty with reading and writing, planning, understanding the order in which events happen (called sequencing), and judgment.

- Social, behavioral, or emotional problems – Children may exhibit difficulties in this area including sudden changes in mood, anxiety and they suffer from depression. Children with TBI may have trouble relating to other children or adults. They may be restless and may laugh or cry a great deal. They may not have much motivation or much control over their emotions.

Specially, if the TBI is:

- To the Frontal Lobe (forehead) there is a loss of simple movement of various body parts (Paralysis), an inability to plan a sequence of complex movements needed to complete multi-stepped tasks, such as making a sandwich (sequencing), a loss of spontaneity in interacting with others, a loss of flexibility in thinking, a persistence of a single thought (perseveration), an inability to focus on task (attending), mood changes (emotionally labile), changes in social behavior, changes in personality, difficulty with problem solving, and an inability to express language (Broca's Aphasia).

- To the Parietal Lobe (located near the back and top of the head) there is an inability to attend to more than one object-task at a time, an inability to name an object (Anomia), an inability to locate the words for writing (Agraphia), problems with reading (Alexia), difficulty with drawing objects, difficulty in distinguishing left from right, difficulty with doing mathematics (Dyscalculia), lack of awareness of certain body parts and/or surrounding space

(Apraxia) all of which that leads to difficulties in self-care, an inability to focus visual attention, and difficulties with eye and hand coordination.

- To the Occipital Lobes (most posterior, at the back of the head) there is a defect in vision (Visual Field Cuts), difficulty with locating objects in environment, difficulty with identifying colors (Color Agnosia), the production of hallucinations, visual illusions - inaccurately seeing objects, word blindness (inability to recognize words), difficulty in recognizing drawn objects, inability to recognize the movement of object (Movement Agnosia), and difficulties with reading and writing.

- To the Temporal Lobes (located at the side of head above ears) there is difficulty in recognizing faces (Prosopagnosia), difficulty in understanding spoken words (Wernicke's Aphasia), disturbance with selective attention to what we see and hear, difficulty with identification of, and verbalization about objects, short term memory loss, interference with long term memory, increased and decreased interest in sexual behavior, inability to categorize objects (Categorization), right lobe damage can cause persistent talking, and increased aggressive behavior.

- To the Brain Stem (deep within the brain) there is decreased vital capacity in breathing, issues with speech and swallowing food and water (Dysphagia), difficulty with organization / perception of the environment, problems with balance and movement, dizziness and nausea (Vertigo), and sleeping difficulties (Insomnia, sleep apnea).

- To the Cerebellum (base of the skull) there is a loss of the ability to coordinate fine movements, a loss of ability to walk, an inability to reach out and grab objects tremors, dizziness (Vertigo), slurred speech (Scanning Speech), and an inability to make rapid movements.

A child with TBI may not have all of the above difficulties. Brain injuries can range from mild to severe and so can the changes that result from the injury. This means that it is difficult to predict how an individual will recover from the injury. Early and ongoing assistance – medical and educational – makes a big difference in how a child recovers. It is important to know that, as the child grows and develops, parents and teachers may notice new problems. This is because, as students grow, they are expected to use their brains in new and different ways. The damage to the brain from the earlier injury can make it harder for the student to learn new skills that come with getting older.

Tips for Parents

- Learn about TBI. The more you know, the more you can help yourself and your child. See the list of resources and organizations at the end of this publication.

- Work with the medical team to understand your child's injury and treatment plan if a brain inquiry occurs. Don't be shy about asking questions. Tell the medical staff what you know or think. Make suggestions concerning the well-being of your child.

- Keep track of your child's treatment. A three-ring binder or a box can help you store this history. As your child recovers, you may meet with many doctors, nurses, and others. Write

down what they say. Put any paperwork they give you in the notebook or throw it in the box. You can't remember all this! Also, if you need to share any of this paperwork with someone else, make a copy. Don't give away your original.

- Talk to other parents whose children have TBI. There are parent groups all over Canada and the U.S. Parents can share practical advice and emotional support. Try to find or establish a locate parent group.

- If your child was in school before the injury, plan for his or her return to school. Get in touch with the school. Ask the principal about special education services. Have the medical team share information with the school.

- When your child returns to school, ask the school to test your child as soon as possible to identify his or her special education needs, if any. Meet with the school administration and staff and help develop an instructional plan for your child.

- Keep in touch with your child's teacher. Tell the teacher about how your child is doing at home. Ask how your child is doing in school.

Tips for Teachers

- Find out as much as you can about the child's injury and his or her present needs. Find out more about TBI. See the list of resources and organizations at the end of this publication.

- If needed, provide the student more time to finish schoolwork and tests.

- Give directions one step at a time. For tasks with many steps, it helps to give the student written directions.

- Show the student how to perform new tasks. Give examples to go with new ideas and concepts.

- Have consistent routines. This helps the student know what to expect. If the routine is going to change, let the student know ahead of time.

- Check to make sure that the student has actually learned the new skill. Give the student lots of opportunities to practice the new skill.

- Show the student how to use an assignment book and a daily schedule. This helps the student get organized.

- Realize that the student may get tired quickly. Let the student rest as needed.

- Reduce distractions.

- Keep in touch with the student's parents. Share information about how the student is doing at school.

- Be flexible about expectations. Be patient. Maximize the student's chances for success.

Our minds are part of nature, and by understanding the mechanism that creates personality, memory, and the learning process we become better teachers, parents, and citizens of the social fabric of society. Understanding what happens to a student as a result of injury allows us to not only help this young person reach their fullest potential, but perhaps open our own eyes into the mystery that is the human mind.

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York: Research and Training Center on Community Integration of Individuals with Traumatic Brain Injury. (Telephone: 888.241.5152. Web: www.mssm.edu/tbicentral/resources/publications/students_with_tbi.shtml

Organizations

Brain Injury Association of America (formerly the National Head Injury Foundation)
8201 Greensboro Drive, Suite 611
McLean, VA 22102
Telephone: 703.761.0750; 800.444.6443 (Family Helpline)
Email: FamilyHelpline@biausa.org
Web site: www.biausa.org

Emergency Medical Services for Children—National Resource Center
111 Michigan Avenue N.W.
Washington, DC 20010
Telephone: 202.884.4927
Email: information@emscnrc.com
Web: www.ems-c.org/

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American Council on Rural Special Education

Building Effective Online Education Programs for Rural Pre-service Teachers

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BUILDING EFFECTIVE ONLINE EDUCATION PROGRAMS FOR RURAL PRESERVICE TEACHERS

Introduction and Literature Review

Historically, preparing future public school teachers has included some combination of academic and methods courses taken from experienced professors in a classroom setting combined with field experiences in K-12 schools. Although teacher preparation programs have varied in content and procedures, the modes of delivery have remained remarkably unchanged since the first normal school was opened in 1839. A teacher preparation program meant attending a college or university for several years, regardless of the inconvenience of leaving home and community to temporarily relocate to the site of the university. Over the past decade, however, the emergence of viable technology to support online learning has created opportunities for people to take a wide variety of college courses without leaving home. The Sloan Consortium (Bourne, J., & Moore, J. C. Eds., 2003) indicates that during the 2002-2003 academic year, some 81% of all universities offered at least one online course or blended course (combining both face-to-face and online instruction), with 97% of public institutions offering such courses. In addition, this same study shows 49% of public institutions offering online degree programs where all or most of the coursework is completed online. Taking the next step to developing online teacher preparation programs, as opposed to offering a few online courses, presents challenges that university educators will need to address. Since developing an online teacher preparation program is so new, however, there are few models and little direction.

Developing effective and student-friendly online teacher education programs is particularly important to states with large rural populations that are challenged to produce a sufficient number of "highly qualified" teachers, according to the mandate of No Child Left Behind. Collins (1999) argues that low salaries combined with geographical, social, and professional isolation make it difficult for rural schools to attract and retain qualified teachers. Research on rural education indicates that pre-service teachers who already have ties to rural communities are more likely to want to teach in rural schools (Collins, 1999; Reeves, 2003). Ideally, then, colleges of education should encourage and/or recruit students from rural areas to become teachers. Many traditional-aged students, however, want to become teachers so that they can move away from their rural roots, applying for teaching positions in more populated areas than where they grew up. A more promising pool of potential teachers is adults who live in rural areas and whose lives are deeply connected to their communities. Their community ties, however, make it difficult for these adults to leave their families, jobs, and communities to attend a university that may be hundreds of miles from their homes. An online teacher preparation

program allows them to stay in their local communities while preparing to teach in their local schools.

Montana and Wyoming are two states with a large land mass and sparse population. In fact, the population density in most parts of these two states is fewer than five persons per square mile. That means that the problem of staffing rural schools with highly qualified teachers is particularly acute in states such as Montana and Wyoming. We have observed that a significant proportion of our traditional-aged students move to more populated states for student teaching and their entry into the profession. Those who do take teaching positions in rural communities often leave after a year or two. Although most reports on teaching positions list an oversupply of elementary teachers in the U.S., rural states in the West are having problems finding and retaining teachers. To address the need to prepare highly qualified teachers who want to teach in rural schools, we decided to take our teacher preparation program to prospective teachers living in rural Montana and Wyoming. Since our university had already developed a highly successful support structure for online courses, we proposed to offer this new program entirely online. Students would take a two-year sequenced series of online courses while working with mentor teachers each semester in their local schools.

Knowing how to develop and deliver online classes effectively is certainly important, but the challenges of online course delivery are multiplied when the aim is to offer a coherent program of study online rather than simply offering a selection of open-enrollment courses. To take teacher education preparation to prospective teachers who lack access to a teacher preparation program requires attention to the needs of students who may be isolated from others sharing their interests and/or who may have been out of school for some years and lack confidence in their ability to do well in their studies. Although there is abundant research and resources on best practices for online delivery (Ausburn, 2004; Pelz, 2004) the literature provides little research that can assist faculty members in teacher preparation programs to understand and address the many unique challenges that come from offering and administering a teacher preparation program online.

With that in mind, we developed an online teacher education program based on a cohort model, in which all students begin their programs together, take all classes together, attend at least one summer taking classes on campus, and student teach the same semester. Through this model, we hoped to develop a strong learning community to support student learning and promote a quality online teacher education program. Learners who develop meaningful relationships, knowledge, and practices through mutual engagement may be called a community of practice or, more simply, a learning community (Wenger, 1998). The process of ongoing negotiation of meaning in a learning community creates mutual accountability among participants. Learners achieve their identity in the community by the way they participate. They build a shared knowledge about problems, events, methodology, and other relevant concerns. Palloff and Pratt (2003) maintain that "collaboration forms the foundation of a learning community online – it brings students together to support the learning of each member of the group while promoting creativity and critical thinking" (xi). In addition, the teacher and the learners work collaboratively to achieve goals, learn new materials and develop new ideas.

It is through this collaborative process that online cohort learners may develop self-efficacy and self-regulation strategies. Learners make judgments about their likelihood to succeed based on

their beliefs about their abilities. (Bandura, 1997; Driscoll, 2005). Success and encouragement through the learning process further develop self-efficacy and continued motivation. As the learner experiences success, self-efficacy and self-regulation are maintained (Bandura, 1997). So it is with a cohort of online learners (Dell, 2007). Lapan (2002) maintains that self-regulated learners use their knowledge to guide them in the implementation of self-regulatory strategies, and metacognitive knowledge to know the conditions and contexts for when these strategies should be used. As they receive encouragement from the learning community and experience success with online learning, they become more self-regulated, and experience higher degrees of self-efficacy that then contributes to higher levels of motivation (Bandura, 1997).

As previously noted, many potential teachers in rural communities seek to learn online. This paper, based on a qualitative study of five online cohorts enrolled in an online teacher education program, will illuminate best practices for organizing and conducting an online education program that provides both access and quality leading to successful and qualified teachers. The research conducted for this study indicates that organizing programs into cohorts allows students to develop authentic learning communities, which in turn enhances learning, relationships, and confidence in their preparation to teach, as well as providing rural preservice teacher access to a teacher preparation program.

Method

- Subjects
  To gain a perspective of how members of cohorts formed learning communities, qualitative methods were used to determine their attitudes and habits. Five separate cohorts of online learners pursing degrees in elementary education were the focus of a longitudinal study. Two cohorts (N=29) consisted of graduate students pursuing initial licensure as elementary teachers. Three cohorts consisted of undergraduate students (n=22) also pursued elementary licensure combined with a concentration in special education. Each cohort began and ended their programs together, and acceptance and entrance into the teacher education was staggered by group, so that as one cohort was student teaching, another was beginning the program. The program required a cohort of students to begin the program in tandem, take all the same classes each semester, come to campus for summer study, and student teach and graduate together. At the time of the research, there were from three to four separate cohorts moving through the teacher education program, each at different points in the degree requirements.

- Procedure
  During the first round of surveys (fall, 2005), one cohort was student teaching, and two groups had completed three semesters (including one summer session each). During the next round of surveys (spring 2006) an additional cohort had completed student teaching, one was continuing, and two more new cohorts (one graduate and one undergraduate) were in their first semester of classes. Each cohort (consisting of 5 to 17 members) was surveyed twice regarding the perceived impact that learning online had on them, specifically in relation to the development of a learning community. Students in each cohort were asked questions such as: “Do you think a shared sense of community among cohort participants is an important factor in online learning?”; “Do you feel a part of a cohort learning community?”; “What pivotal events and/or interactions have contributed to bonding among group

members?"; and "Describe how being involved in an online cohort affects your learning?" (Dell and Hobbs, 2006a, Dell and Hobbs, 2006b). The intent of the study was to determine if the development of strong relationships in a learning community contributed to satisfaction and perceived level of preparation to be a teacher. In addition, cohort members who were preparing to student teach or were in student teaching were asked questions regarding their confidence and perceived preparation to teach. Each group was asked "How well prepared and confident to you feel to become a teacher as you finish this online cohort program?"; and "What aspects of the online cohort experience have contributed to your sense of confidence and preparation?"

Surveys were sent to each member via e-mail, and their responses were sent to an independent party through the campus server. All responses were anonymous and were only identified by the cohort in which they were enrolled.

Analysis

Both rounds of survey results were coded and categorized according to themes, both pre-established and emerging. The results from both rounds of surveys suggested the development of strong learning communities, as well as emerging confidence regarding personal relationships and levels of preparation, supporting the relationship between online learning and persistence. In addition, because the questions were open-ended in nature, an unexpected theme of self-regulated learning began to emerge in the first round and continued to emerge during the second round.

Results

The first two questions of the survey were directed at students' perceptions of the importance of an online learning community and whether they felt part of a learning community within their cohort. All but four out of 48 participants from all five cohorts surveyed said that a learning community was important; the comments regarding being a part of a learning community were varied. As the data were analyzed, themes emerged around the components of a successful learning community as described in the literature:

- Developing meaningful relationships
- Experiencing and practicing mutual accountability
- Developing shared knowledge and practices (Wenger, 1998)
- Supporting each other in learning
- Promoting creativity and critical thinking
- Collaborating to achieve goals, learn new materials and develop new ideas (Pallof & Pratt, 2003).

Developing Meaningful Relationships

Most members, across all cohorts, mentioned that it was important to be part of a cohesive group. Because the groups were cohesive, they felt more comfortable in responding to each other during threaded discussions in online classes. Members stated that they trusted the cohort members and they felt comfortable responding and sharing ideas, which contributed to their learning. Cohort members gave several reasons for the development of strong relationships and

group cohesion. For those members who had attended the required summer session on campus, that was the most prominent event that developed the sense of a learning community. Most members also described the importance of shared struggles with classes or personal difficulties. Because they were all in the same situation, they could help each other through difficult times. Several members in all cohorts stated that online learning was an isolated process, and that the group activities required in classes was quite helpful in maintaining motivation to learn and increasing cohesiveness among them. These activities included threaded discussions, group projects, and established social areas of classes, such as a student lounge where they could informally discuss with each other in an online class. All of these were listed as contributing to the group cohesion they believed was important for them as they studied online. The following quotes illustrate the group cohesion that developed:

- Bonding has occurred during group assignments that require daily communication between group members. For example, the music class required individual lesson plans centered around a common theme. A SPED class also required collaboration and daily meetings to develop and IEP.

- Recognizing that others value my opinion and have learned from me as I have learned from others. Having supporting and encouraging cohort members is vital to the success of each of us.

- My level of learning was deep. The online discussions (forced) were great to make me really express myself and speak out on issues I normally would have remained quiet about in a regular classroom.

- Some of the group projects along with the time we spent together last summer. I also think having an area to chat about questions we did not understand helped to see that others were having the same problems I was having. I think that having the students spend time together the first summer before we started classes and to help clear up any misunderstandings of what is expected of us would have been a better schedule.

<u>Experiencing and Practicing Mutual Accountability and Supporting each other in Learning</u>

The sense of accountability to the group was another theme that emerged in each of the cohorts. Most if not all of the online classes required of cohort members included threaded discussions and group assignments. Many members in all cohorts discussed a sense of being accountable to other cohort members to make statements that were substantive and would be worth reading. Many of them stated that they took more time to think about their responses before posting. Some members stated they researched ideas prior to responding so that the members would learn something, or somehow benefit from their comments. Comments included the idea that they were being held accountable by the other members of their cohort. The following quotes are examples of accountability and supporting each other in learning:

I'm usually prompted by the cohort discussion aspect to remain current in relating my own discussion entries. The discussions are essential but it takes me a long time to formulate my answers so I often "chew" on questions for awhile. I want to provide some "meat" for others to consider. I sense this is the intent of other members.

- We are a community, and I feel more comfortable in my community of cohort members. I am not afraid to say that I don't understand something, and that is important in learning. Also, I feel we are more apt to help each other and consider others ideas.

- Recognizing that others value my opinion and have learned from me as I have learned from others. Having supporting and encouraging cohort members is vital to the success of each of us

Developing Shared Knowledge and Practices

Cohort members in all groups discussed the importance of learning together, helping others learn, and being able to share knowledge across classes and semesters. Responses from each cohort included themes surrounding helping each other learn, or that they group helped them to gain more knowledge than they would have if they were learning alone. Most descried the shared knowledge they had acquired. They knew what the group as a whole knew, since they had all taken the same classes and done the same assignments. The following quotes are examples of the importance of shared knowledge:

- I think deeply prior to responding. I want to research to back up my opinions and also research when others bring up articles, web-sites, etc. backing theirs that differ from mine. I read the text more thoroughly retaining more information. The discussion allows me to feel I am important in the participation of the class on any given topic or course.

- Yes, I think the shared sense of community allows us to explore questions more in depth after being in several classes together.

- It allows for more in depth exploration of topics, letting us carry information from one subject to another as we progress through the learning process. It allows us to transition learning from subject to subject.

- I like the "cohort" part of it, because I know that the people I'm working with have been through the same background of classes as I have, and can then help me to recall, or guide me to review certain materials pertinent to what we are currently studying.

Promoting Creativity and Critical Thinking

Self-regulation and critical thinking were also themes that emerged among all cohorts. Responses from each group included reflections on deeper thinking, increased self-reflection and taking time to ponder prior to responding to a discussion thread. Many students, across cohorts, suggested that they maintained self-regulation strategies to improve their learning (Dell, 2007), which supports Pressley's (1995) assertion that self-regulated learning is mediated by social interaction, even though they are learning in isolation. The following quotes are examples of creative and critical thinking:

- Online learning is a difficult process, as it is mostly self-directed. Having a sense of community, and knowing that others are having the same ups and downs as you creates a support system that is valuable, especially when you are having downs!

- I have much better grades through the cohort than I had on campus. I am more responsible for my own learning. I have to read the chapter because the teacher isn't going to go over it class. I need to read it so I can participate in discussion. It is putting my education into my hands

Collaboration to Achieve Goals, Learn New Materials and Develop New Ideas

Another theme to emerge was the importance of sharing the same goals, motivation, content and experiences. Many members stated that the fact that they knew other members of their cohort had the same career goals contributed to the sense of the learning community. Because of this, they shared a sense of motivation to complete the classes and do well as professionals. The following quotes are examples of learning new materials and developing new ideas:

- Certain topics hit home more than others and receiving another person's point of view or opinion can open my eyes to alternative thinking, which is just increasing the education I am getting. I learn to be flexible in my thinking. I am finding biases I did not realize I had, and also find some of my points make others think and change their opinions on topics.

- The overall experience of having to write down all of my thoughts and expose them for all the world to see! This has made me more aware of my thoughts and also I have had time to really consider what others have said. So, the contemplative side of the whole process has been very beneficial. I have also appreciated the research that I know I can do on my own as much of this is done as an independent process.

Access to Education for Rural Preservice Teachers

The theme of access that also emerged through analysis of the responses is unique to the members who come from rural communities. Members across cohorts claimed that they could never have met their goals of becoming teachers if they had not been able to participate in an online program. The online program provided a means for them to meet their goals while maintaining their families, jobs and community memberships since they were not required to pull up those roots and relocate to the university. The following quotes are examples of the important of access for those in rural communities:

- The online cohort allows me to be a family member at home first while still completing my degree.

- Well, it certainly would have bee more difficult for me to go to school if I would have had to drive to Billings every day for classes. I was able to stay at home and do the work.

- This has given me a chance to get my Masters and follow a dream! If it was not for the online program I don't think I would be in school right now. There is not a university where I live and I was not willing to move away!

- It enables me to be able to obtain a degree that otherwise would be too difficult because of time and travel restraints

Feeling Prepared to Teach

Two additional questions were asked of cohort members who were either preparing to student teach, or were student teaching at the time of the survey. These questions were designed to ascertain the extent to which pre-service teachers felt prepared and confident to teach. In three cohorts surveyed where students were at this point in their programs, all members indicated that they felt confident and prepared to teach. Several expressed nervousness, but did not feel that it was because of the online learning format they had participated in. When asked what prepared them, most stated that their required field experience in a local school every semester had given them the opportunity to apply what they had learned in classes to an authentic setting. In addition, the required field experience prior to student teaching was the most important experience that led to their confidence levels. They were required to develop and teach at least five lessons under the mentorship of a classroom teacher.

Additionally, many students spoke to the quality of the professors or the relevance of the classes they had taken that led to the feelings of being prepared. Others spoke to the importance of the group and the way in which they helped each other learn.

- This program has been so great at making sure I get into the classroom for practical experience. Because of this I have gotten my foot in the door to the schools where I eventually want to teach and I think this is very important. I think no matter what an person will be nervous when they first begin teaching in their own classroom, but I believe by the time I complete my student teacher I will not only be ready, but I will want this as well.

- I feel very comfortable and confident in becoming a teacher. The online experience has offered me a wide variety of opportunities as well as demanded a lot from me

- I feel very confident because we did have the opportunity to spend a substantial amount of time in classrooms. I think this will give us online students a great advantage over those who spent most of their time in a lecture room. This program also had us take the initiative to take charge and the freedom of a hands-on program.

Conclusion

Online learning is part of our educational landscape. The nature of this study is qualitative. Further study must be conducted to increase our understanding of the effectiveness of online teacher preparation programs using a cohort model. Understanding the cognitive aspects of independent learning is imperative to providing opportunities for student success. Our research suggests that an online cohort model encourages and supports the development of learning communities where learners develop strong and cohesive groups leading to mutual accountability, shared knowledge and practice, increased critical thinking, and enhanced motivation to achieve shared goals. Cohort members studying to be teachers who have participated in the online cohorts have expressed that they feel prepared and confidence as they embark on the teaching profession. Since most of the pre-service teachers we surveyed are committed to living and teaching in their rural communities, the online cohort model offers a way for states with large rural populations to expand the pool of highly qualified elementary teachers who will want to stay in their rural communities.

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American Council on Rural Special Education

Candidates Establishing the Linkages Among Context, Assessment, and Instruction Using an Adapted Teacher Work Sample (TWS) in Rural Capstone Experiences

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CANDIDATES ESTABLISHING THE LINKAGES AMONG CONTEXT, ASSESSMENT, AND INSTRUCTION USING AN ADAPTED TEACHER WORK SAMPLE (TWS) IN RURAL CAPSTONE EXPERIENCES

Background

The age-old, traditional forms of planning and delivering classroom instruction were not only extremely rigid and formal, but, focused primarily on academics rather than on the learning necessary to develop the whole person. Thus, instructional delivery was too teacher-directed, an approach that obliterated the positive impact of teacher dispositions on the education of learners. With such heavy emphasis on teacher directed instruction, contextual factors and student characteristics were not given the important consideration that today we know they deserve (Friend, 2005: Wiggins & McTighe, 2001).

Over time, rural community populations have become more diversified, thus the learning strengths, needs, and concerns of the rural school population have dramatically changed. Various horizontal and vertical movements of ethnic populations have removed the homogeneity of neighborhoods. Strenuous economic demands on families have severely limited the supportive role that parents once played or often gave to teachers. In addition, the social arena of neighborhoods with low socio-economic status clearly called for a new approach to the satisfaction of students' social and learning needs. It was for these reasons that Grant Wiggins and Jay McTighe proposed their model, "Understanding by Design." According to this model, curriculum planners, publishers, and educators must first attend to the "Big Ideas," so that they design the learning process to be two fold, addressing learner strengths, needs, and concerns while bringing their performance to standard expectations of learner outcomes. Understanding by design is often referred to as, "Backward Planning," because the model requires teachers to plan assessment and instruction with the end in mind, and within this framework, student understandings are constructed (Wiggins & McTighe, 2001). Contextualization is an attempt to make instruction relevant to students' lives and communication patterns. Teachers must consider information about the learners' backgrounds, prerequisite skills, and the processes by which students input information and develop skills (Friedland, 2006; Schell & Douglas, 2007). Leslie Owen Wilson (2005) places emphasis on filters that will help the teacher decide on the content, process, and skills relevant to students achieving understandings and performing to expectation.

A persistent problem encountered by teacher candidates is the different layers or phases of understanding. For the Big Idea to be profitable and lasting, teacher candidates and teacher educators must realize that understanding involves complex and sophisticated linkages, insights

and abilities (Katherman, 2002). Considering that there are different areas of intelligence, there are different types of understanding. Moreover, knowledge and skills do not automatically translate to in-depth understanding (Burke, 1999).Understanding must be constructed, one individual learner at a time. A vehicle that can be used in assisting teacher candidates to work through this persistent problem is the TWS (Girod & Shalock, 2002).

The Teacher Work Sample (TWS) was piloted at Delaware State University (DSU) in the Spring of 2001, after faculty attendance at a National Workshop jointly sponsored by AACTE and NCATE. Participants represented the administrative leadership in their respective institutions' Teacher Education Programs. During this workshop, all participants were charged with the task of improving quantitative and qualitative assessments of our teacher candidates at exit level. At that time, the Renaissance Group's (2000) work in progress, the TWS, was highly acclaimed as a vehicle for both measuring the in-class performance of our teacher candidates, and as a format for demonstrating that our candidates were having a direct and positive impact on the learning of P-12 students in partner schools. The DSU Council of Professional Educators adopted, and later adapted, the TWS as a major capstone assessment piece in 2001 (see page 3 of this paper). We have been collecting data on various aspects of this assessment piece since Fall 2002 – Spring 2003. These results have been very useful in informing our professors across the unit of courses in the professional education curricula that need strengthened in the delivery of content and pedagogical knowledge and skills.

The rationale was four-fold, to: 1.) establish baseline data on candidates' use of the adapted TWS to improve P-12 student learning, (2.) determine what candidates knew and were able to demonstrate at exit level, (3.) create a data base for the PEU Assessment System, moreover,
(4.) provide on-going monitoring and mentoring of teacher candidates' progress, including self-monitoring and professional preparation.

Benefits of using the TWS in Capstone Experiences

In terms of overall benefits, the TWS focuses the candidates' attention on the dynamics and demands of the teaching and learning environment, emphasizes response to school policies and standards, requires understanding of the whole child, requires that instruction and assessment are linked to the bigger picture, requires tracking of learning gains in various ways, and ties application to knowledge of best practices from recent research literature to address identified student strengths and needs. The TWS serves the dual function of measuring student progress toward specified goals and standards, while, measuring the candidate's progress toward their own professional goals and standards (Pankratz, Roger 2003; The Rennaisance Group, 2001; Mussington & Friedland, 2004). Thus, the TWS provides an integrated framework for teacher candidates to systematically connect context, assessment, and instructional delivery through a collaborative, reflective process that demonstrates candidates' knowledge and skill levels have met the requirements of State and National professional teaching standards.

It is painstaking and rewarding for candidates to systematically collect data and evaluate their students' progress. The TWS requires them to develop their assessment system prior to designing their instructional activities. Their assessment and instruction must link back and take into consideration the contextual factors and individual student profiles that impact how they will

teach and assess their particular students. Candidates have to record assessment data by charting pre-assessment, formative assessment, and post-assessment results for whole class, small group, and individual students. For both assessment and instruction, they need to take into account those contextual and individual factors. At DSU, all teacher education must take Introduction to the Education of Children with Exceptional Needs in which course candidates are taught to identify Strengths, Needs, Interests, and Preferences (SNIP), as is required for students with disabilities served under IDEA (2004). This forms the basis for differentiated instruction and the provisions of varied adaptations and accommodations necessary to ensure that each student accesses the curriculum governed by content standards (Friedland, 2006).

Our Professional Education Unit is currently in its first year of transferring our Teacher Education Program major assessment pieces to TK20, which is the new electronic infrastructure to support our assessment system. The adapted TWS is the capstone assessment artifact. Candidates are now electronically submitting their TWS on TK20, and TWS evaluators, who are trained for inter-rater agreement, are rating and writing evaluator comments electronically.
The following tables represent the major components of the TWS and Performance Indicators, as adapted (with permission from The Renaissance Group) for scoring in the DSU – PEU Assessment System.

TEACHER WORK SAMPLE (TWS)
*Teaching Processes, TWS Standards and Indicators**

Contextual Factors
The teacher uses information about the learning-teaching context and student individual differences to set learning goals and plan instruction and assessment.

	PEU/ NCATE	DTS
Knowledge of community, school and classroom factors	2-3,8,9	1,3,5,10
Knowledge of characteristics of students	8	2,3
Knowledge of students' varied approaches to learning	1,6,8	2-4, 6-8, 11
Knowledge of students' skills and prior learning	1,6,8	8
Implications for instructional planning and assessment	1-3,6,8	6,8,11

Learning Goals
The teacher sets significant, challenging, varied and appropriate learning goals.

	PEU/ NCATE	DTS
Significance, Challenge and Variety	1-3, 6-8	1-4, 6-8, 11
Clarity	7-8	6,8
Appropriateness for students	1-2, 8-9	6,8
Alignment with national, state or local standards	3, 5-6	1-3, 6, 8

Assessment Plan

The teacher uses multiple assessment modes and approaches aligned with learning goals to assess student learning before, during and after instruction.

	PEU/ NCATE	DTS
Alignment with learning goals and instruction	1-3, 5, 8	1, 6, 8
Clarity of criteria and TWS standards for performance	3	1,6,8
Multiple modes and approaches	2,5-9	6, 8, 11
Technical soundness	7	6, 8, 11
Adaptations based on the individual needs of students	6-8	1-3, 6, 8

Design for Instruction

The teacher designs instruction for specific learning goals, student characteristics and needs, and learning contexts.

	PEU/ NCATE	DTS
Alignment with learning goals	1, 2, 5, 8	1, 6, 8
Accurate representation of content	1, 3	1
Lesson and unit structure	1, 3	1, 6
Use of a variety of instructions, activities, assignments and resources	1, 3, 7-8	1-3, 6, 8, 11
Use of contextual information and data to select appropriate and relevant activities, assignments and resources	1, 3, 7-8	1-3, 11
Use of technology	1, 7-8	3, 7, 11

Instructional Decision-Making

The teacher uses on-going analysis of student learning to make instruction decisions.

	PEU/ NCATE	DTS
Sound professional practice	2-3, 8-9	1-12
Adjustments based on analysis of student learning	2-3, 5-8	6-8, 11
Congruence between modifications and learning goals	1, 5-8	2-3, 6, 8

Analysis of Student Learning

The teacher uses assessment data to profile student learning and communicate information about student progress and achievement.

	PEU/ NCATE	DTS
Clarity and accuracy of presentation	2-3, 5-8	1-3, 6-8, 11
Alignment with learning goals	2-3, 5-8	1-3, 6-8, 11
Interpretation of data	3, 6-8	6, 8, 11
Provides evidence of impact on student learning	3-9	1-3, 6, 8, 11

Reflection and Self-Evaluation

The teacher reflects on his or her instruction and student learning in order to improve teaching practice.

	PEU/ NCATE	DTS
Interpretation of student learning	2, 5-6, 8-9	1-3, 6, 8, 11
Insights on effective instruction and assessment	2-6, 9	1-12
Implications for future teaching	2, 4-6, 9	1-12
Implications for professional development	2, 4-6, 9	1-12

The TWS assignment guidelines and scoring rubric are taken into classes and discussed with teacher education candidates in all curriculum and methods courses, in an effort to provide as much early exposure as possible. Some candidates in assessment classes have been given the opportunity to have input into coding the SPA standards into rubrics for the assessment system. For the past two semesters, the TWS Coordinator has been providing an orientation to TWS in Analysis of Student Teaching, a required, for-credit course taken in the semester prior to student teaching. Training sessions for TWS evaluators from across the curricula provide a forum for discussion of their rationale for assigning particular ratings and comments. Finally, the TWS Committee is responsible for overseeing the implementation and improvement of the entire TWS process.

There are six Student Teaching Seminars scheduled throughout the semester. Using these Seminars as a vehicle, the TWS Coordinator discusses with candidates as a whole group the expectations and pitfalls of each component of the TWS, what teacher performance is considered to be within target expectation, and what is acceptable. (We do not discuss unacceptable performance except in relation to candidates establishing assessment criteria for P-12 student progress toward goals, because that is an unacceptable or acceptable performance only item.) Supervisors visit each candidate in their respective setting between four and six times during their student teaching activities. These visits provide opportunity for one-to-one feedback regarding the candidate's implementation of the TWS. In this way, the TWS enhances and reinforces the capstone experience by providing a vehicle for input and feedback among candidate, supervisor, and cooperating teacher. Currently, this opportunity depends on the nature of the placement, dispositions of teachers and supervisors, and motivation of the candidate to raise questions and discuss the implementation of their particular TWS.

Methods of Uncovering Areas of Candidates' Difficulty in Implementing the TWS

The following are faculty methods of uncovering areas of candidates' difficulty in implementing the TWS in their assigned classrooms: 1.) Components are assigned in stepwise fashion throughout the semester to be submitted for review and feedback, (2.) Qualitative analysis of the reflections of rural candidates from the previous semester for indications of when they began to see the necessary linkages, up front, during analysis of student learning, upon reflection, or not at all, (3.) Threads of discussions among TWS evaluators are collected during rater training sessions, 4.) Supervisors consult with mentor teachers and ask relevant questions about the

candidate's and the teacher's perceptions regarding the TWS, and finally (5.) Actual ratings and evaluators' comments on the TWS Summary Sheet are reviewed.

Areas of Candidates' Difficulties are Identified as follows:

1. **Differentiating P-12 students' individual instructional strengths and needs**. Many students are designing lesson plans without indicating adaptations and accommodations for instruction which may be needed by individual students. Thus, it is difficult for them to bring student performance toward desired achievement levels. If the contextual factors identified in component 1.0 do not address the strengths and needs of individual students, then they do not seem to accrue much consideration when the candidate is planning methods of instruction. According to IDEA 2004, Assessment accommodations must be familiar to the student, ideally the same accommodations that are used in the classroom everyday to enable the student to access the curriculum (Friend, 2005; Vaughn, Bos, & Schumm, 2007).

2. **Establishing specific assessment criteria**. It has been difficult for our teacher candidates to work backwards from the desired understandings using appropriate assessment and instructional strategies to develop desired student performance outcomes.

3. **Designing activities that provide good indicators of P-12 student progress toward aligned goals**. Our curriculum reflects both the alignment of goals with P-12 content standards, and candidates' progress toward meeting State and National teaching standards. However, the mechanics of actually addressing these standards is still a work in progress.

Factors Contributing to Candidates' Difficulties

1. **Need for more focused coursework on Differentiated Instruction (Friend, 2005).** Some candidates are not recognizing the impact of individual P-12 student's strengths and needs for assessment and instructional delivery because they are still planning only for the whole class. Various course instructor dispositions toward the importance of differentiated instruction in regular classroom settings may be affecting this factor. More emphasis on authentic assessment, case-based and problem-based learning in courses is needed to help candidates to focus on details required for effective and efficient planning (Burke, 1999; Kain, 2003).

2. **Insufficient exposure to the theoretical constructs related to "Backward Planning."** Insufficient time given to systematic needs analysis both at the P-12 and Higher education level may be affecting this factor. As an approach, Backward Planning has been only recently adopted by the Delaware State Department of Education. Higher Education faculty members have attended an orientation and several workshops. As for our teacher educators, the constructs associated with Backward or Outcome-oriented Planning are just recently making their way into curriculum courses, although the Special Education majors get a good dose of it through Transition Education Planning.

3. **Not aligning objectives or benchmarks to performance expectations to meet standards in instructional planning.** These relevant questions arise, "How well do candidates know the expectations and realize individual teachers' and students' situational limitations?"

4. **Need for more timely feedback on TWS components**. It is anticipated that the electronic submission for feedback of each component before the final TWS is submitted for evaluation will assist but not totally eliminate this need. There is much to be said for one-to-one conversation and mentorship. Opportunity for candidates to meet with cooperating teachers and supervisors together in a formal discussion session regarding implementation of the TWS in their respective settings is critical to successful TWS implementation.

Resulting Programmatic Changes

1. **More immediate feedback to candidates through Student Teacher Seminars and through the implementation of TK20**. The TWS Coordinator addresses each component with the whole group of candidates in Student Teaching Seminar. Then, individual time is made to meet with any student who is experiencing difficulty or has questions regarding their implementation or write-up of the component. During these sessions, candidates are mentored to put the components into perspective and to focus on detail necessary to link the components. Developing the electronic infrastructure for unit assessment system will allow faculty to assessment major assignments on-line and give immediate feedback to students. The Clinical and Field Experience Director has also increased time for candidates to share their experiences during Student Teachers' Seminars.

2. **On-going review of curriculum, courses and instruction.** The DSU Education Department is in the process of reviewing the entire curriculum for areas of needed content change, reduction of course credit hours, preparation for Praxis Competency Exams, and for preparation in specific content areas to meet the NCLB 2001 and IDEA 2004 requirements for teacher candidates to become highly qualified.

What Do We Still Need to Accomplish?

1. Secure financial resources for maintaining the unit-wide assessment system.

2. Facilitate more in-depth involvement of partnership schools in the development and refinement of the unit assessment system, in particular the TWS.

3. Present the adapted TWS to faculty forum and other opportunities to share across curricula specialty areas.

4. Share TWS co-ordination experiences with other universities to learn how others are implementing capstone experiences, particularly those using the TWS.

5. Corroborate findings with those of other universities whose teacher education programs are using the TWS.

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Concept Mapping as a Research Tool to Evaluate Conceptual Change and Learning Gains

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CONCEPT MAPPING AS A RESEARCH TOOL TO EVALUATE CONCEPTUAL CHANGE AND LEARNING GAINS

It is widely recognized that learning is a process unique to each individual. For each person, learning occurs when their personal knowledge is organized and re-organized into a conceptual structure (Jonassan, Howland, & Marra, 2003). Similarly, understanding, as it relates to new information, is constructed from conceptual reorganization of personal theories of the world, of which concepts are the cognitive components (Jonassen, 2006). This structure not only includes the content, but also its organization and inter-relatedness.

One process to evaluate conceptual change in learners is the method of semantic networking or concept mapping. Significant interest in the instructional use of concept mapping procedures has developed since their use was documented by Novak and Gowin in 1984. In a recent meta-analysis review of research studies that incorporated the use of concept maps, Nesbit and Adesope (2006) estimate that more than 500 peer-reviewed articles, most published since 1997, have made substantial reference to the educational application of concept mapping procedures.

Concept mapping has been used in a variety of education, psychology, and organizational settings (Croasdell, Freeman, & Urbaczewski, 2003; Stoddart, Abrams, Gasper, & Canaday, 2000). Although it's most prevalent use has been as a learning aid (Hill, 2004) or instructional tool (Stoddart, Abrams, Gasper, & Canaday, 2000), the potential use of concepts maps as research tool for assessing student knowledge has been recognized (Van Zele, Lenaerts, & Wieme, 2004; Wallace & Mintzes, 1990).

Concept Maps

Concept maps (Novak & Gowin, 1984) provide a graphic representation of a person's structural knowledge or conceptual understanding of a particular topic. They can be used as a tool to visualize and measure the structure and organization of an individual's knowledge (Novak & Gowin, 1984; Ruiz-Primo & Shevaleson, 1996). The appearance of a concept map often looks like a spider web consisting of nodes that are connected by links to create diagrams that demonstrate conceptions of relationships among key ideas in a specific topic area (Croasdell, Freeman, & Urbaczewski, 2003). The nodes consist of words or ideas that represent information. The links between various nodes show how the concepts are conceptually and logically related within the concept map.

Concept maps are typically created through either a constrained or open-ended process. The constrained process requires the mapper to create their maps using a restricted list of terms supplied. The process may also restrict how the map may be drawn, and/or use a "fill-in-the-blank" approach. Contrarily, the open-ended process does not restrict how the map may be drawn and does not limit the mapper to a supplied list of terms, though a small number of prompt concepts may be provided.

Prominent Concept Map Scoring Approaches

Though numerous concept map scoring systems can be found in the literature, the scoring systems can be grouped into two general categories, quantitative or qualitative scoring methods. Quantitative scoring systems involve the counting of nodes or concepts, links, and levels according to a set of criteria and rules. Many quantitative scoring approaches are derivatives of a scoring system first proposed by Novak and Gowin (1984).

Qualitative scoring methods focus on assessing the content validity and accuracy of information presented in concept map. These methods may involve evaluating a concept map's content for how it is described and whether not desired terminology is included (Koury, 1994). Other qualitative scoring approaches include rating the quality of a concept map against an expert map (Lomask, Baron, Grieg & Harrison, 1992; Rye & Rubba, 2002) or interpreting the map based on analysis of the student map and subsequent interview (Van Zele, Lenaerts, & Wieme, 2004).

While the combination or mix of quantitative and qualitative analysis improves understanding of conceptual change in learners and helps to identify novice versus expert levels of conceptual structure, it fails to provide a qualitative measurement of change that can be used empirically. A system developed by Jones & Vesilind (1994) has been adapted and used by multiple researchers to measure conceptual change of learners (Alavi, Marakas, & Yoo, 2002; Jones, Rua, & Carter, 1998). An adaptation of this system was incorporated in the present study. Expert concept maps were developed to be used for assessing the correctness of content. Also created was a process for establishing inter-rater reliability between experts and concept map raters prior to qualitative scoring of the maps.

An overview of the process used to numerically score and qualitatively rate over 500 concept maps constructed by higher education students enrolled in teacher education courses utilizing multimedia case-based instruction follows. The maps were collected and scored as a repeated measure of conceptual change related to case-based learning. The instruction occurred in multiple locations nationwide with pre-service and in-service teachers, in both special and general undergraduate/graduate education classes (Fitzgerald et al, 2004-2007).

The purpose of the research was to determine the extent of expansion of participant semantic structure using pre- and post-measures of pertinent special education language contained in participant generated open-ended concept maps. We were particularly interested in determining how the quality of the content of the concept maps changed over time.

The Concept Map Scoring Process

Collection of Concept Maps

Participants were provided training on how to create a concept map. After the training, each participant created pre- multimedia case-based instruction concept maps during their initial class sessions. Multimedia case-based instruction was provided in multiple contexts nationwide in over 18 college classes among four institutions of higher education. Participants created post-concept maps after the case-based instruction was provided. Pre- and post-concept maps were created on ledger size paper using a standardized 45-minute length of time.

Narrative comparisons of concept maps

Student Comparison. After students completed the post-concept map, each was provided their pre-concept map. Students were instructed to review and compared their pre- and post-concept maps and write a reflective narrative response to the following two questions:

1. How has my concept of working with students who have emotional/behavioral disorders changed?

2. What has contributed to my changing views?

Researcher Comparison. Researchers compared ten pre-post concept maps from each college class in which the multimedia case-based instruction was provided. Five pre-post concept maps were randomly selected from students in the interview group and five were randomly selected from the remaining students in the class. Researchers then wrote a narrative describing the organization, growth in learning, and correctness of information in the students' pre- and post-concept maps. They also described differences or changes noted between each student's pre- and post-concept maps.

Quantitative Scoring of Maps. The change in breadth, depth, and inter-connectedness of semantic structure was analyzed by counting the number of nodes, levels from center, and links on each concept map. A factorial analysis of variance was conducted to examine conceptual change for students on a pre-to-post comparison of concept map nodes and links across the four-course implementation. Statistically significant pre-to-post gains were found for number of nodes with interaction effects with course type with nodes; and pre-to-post gains were found for

number of links with interaction effects with course type with links. Between-subjects analyses showed a mean increase on both nodes and links except for the undergraduate general education group.

Qualitative Scoring of Concept Maps. Skeptical about using only a quantitative method to analyze the concept maps, a qualitative scoring scale to determine expansion of semantic structures and quality of content of pre- and post-concept maps was developed by the authors. The qualitative scoring scale was used to determine rating scores for student maps based on comparison of student maps to expert maps.

The process used to develop the qualitative scoring scale consisted of several steps. First, we created expert concept maps for each of the three multimedia programs used to provide the multi-media case-based instruction. This required identifying and reaching consensus on the "big ideas" and "relevant terms" students were expected to have gained from use of the program(s). These were umbrella words and all reasonable synonyms were acceptable. Next, the five level rating scale was created to rate the quality of concept maps against the expert maps. The comparison of the student maps to the expert maps was based on actual programs used by the student. For example, if the student used multimedia case Programs 2 and 3, we would compare the created concept map to both expert maps created for multimedia case Programs 2 and 3, but not Program 1.

A sample of student maps was selected and used to test the feasibility and reliability of the quality rating scale created. During this phase the authors selected a sample of student concept maps to score. We discussed the maps scored with the widest discrepancies and revised the qualitative scoring scale based on the discussion. A reliable qualitative scoring scale resulted with a clarification in decision rules and the anchors on the scale for rating the concept maps. The five levels of the final version of qualitative rating scale are:

0 none: represents no development of concept;
1 minimal/little: represents a novice/beginning level of development of concept;
2 fair/moderate: represents an emerging level of development of concept;
3 a lot: represents a great deal of development of concept between novice and expert;
4 expert: represents an expert level of development of concept.

Finally, a team of two raters was selected to score the remaining concept maps. Rater 1 and rater 2 were trained on how to score the concept maps using the qualitative scoring scale developed by the authors. Inter-rater reliability was calculated between the two raters on three occasions. The overall inter-rater reliability score was 82%.

A factorial analysis of variance was conducted to examine the change in quality of the maps for students on a pre-to-post comparison of concept map quality scores across the four course implementation. All groups demonstrated growth as measured by the qualitative scores.

A comparison of the qualitative and quantitative results shows some interesting findings. First, quantitative analysis findings, for the most part, were consistent with qualitative analysis findings. Second, less can be more. One group's post-concept maps contained fewer nodes and

links than their pre-concept maps. However, the comparison of the group's pre and post qualitative scores demonstrated growth in the validity of content and accuracy of information presented in concept maps. The next phase in our data analysis efforts will be to use the student and researcher written narrative reports comparing the pre- and post-concept maps to triangulate the qualitative data.

Final Thoughts

Though it took us several trials to develop a feasible and reliable scoring scale, we recommend the use of a qualitative method, such as the one developed and used in our study, to differentiate quality and assess content validity of concept maps. Valuable information came from comparing the pre- and post-concept maps using the qualitative scoring scale. The process and steps used to develop a qualitative scoring scale resulted in the construction of a reliable concept map scoring research tool. While we recommend the process, we caution that even though the instructions for holistic scoring may seem simple, the actual development of the scoring scale, as well as the scoring task, can be cognitively complex.

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Do You See What I See?

The Impact of Nonverbal Receptive Ability on Behavioral Adjustment

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DO YOU SEE WHAT I SEE? THE IMPACT OF NONVERBAL RECEPTIVE ABILITY ON BEHAVIORAL ADJUSTMENT

The identification and successful intervention for students that exhibit challenging behaviors continues to rank as one of the highest priorities in kindergarten through twelfth grade education (Gresham, F., Land, K., & Lambros, K., 2000). While many advances in the field of assessment have improved the field's ability to identify students who are exhibiting behaviors of the type and severity that require special education services, the success rate of these interventions continues to be rather limited. One factor that is repeatedly cited as a contributing agent to the resistance to invention of these students is the '*inability to accurately read and respond to social clues*' (Kauffman, 2005). Much of the work in area of social clues use has centered on the nonverbal communication avenues that humans use to communicate messages (Nowicke & Duke, 1997).

This field-based research was designed to determine the impact these factors upon school adjustment. The purpose was:

- determine students' ability to identify a variety of nonverbal communication elements presented in a variety of modalities,

- determine differences in error patterns in the identification of nonverbal communication as a function of student factors.

If the '*inability to accurately read and respond to social clues*' is one of the central features in students who experience significant adjustment difficulty to school, then identifying which features of nonverbal communication are critical to school adjustment is an important goal for both schools and their students.

Method

Participants

The participants consisted of students in a Special education cooperative service area that conducted a periodic screening to identify students who are at risk for developing behavioral problems within the school environment. At the time of the study, the total combined enrollment of the three elementary school sites was 596 students.

Data were collected from 67 participants and utilized in this study. Each of these subjects was an elementary aged student in grades kindergarten through sixth grade. The mean age of the

participants was 111.64 months or approximately 9 years and 2 months old (SD = 21.14 months).

The first group of students consisted of 20 participants (13 male, 7 female, mean age 110.85 months) considered at high risk for developing traits that would lead to behavioral problems within the school environment.

The second group of 26 students (14 male, 12 female, mean age 111.92 months) was selected for exhibiting an average level for developing behavioral problems of risk factors within the school environment.

The third and final group of 25 students (12 male, 13 female, mean age 111.04 months) was identified as exhibiting a low level of risk factors for developing behavioral problems within the school environment.

Procedure

This research utilized students from three different elementary schools within one special education cooperative in a rural setting in a state in the Great Plains region. This agency conducts a screening of all elementary age students to assist in allocating resources and as an early identification procedure. The process consists of a variety of techniques and procedures that refine the level and type of behavioral concern.

The first stage of this procedure provides the classroom teacher with a description of two types of students, *i.e.* internalizers and externalizers (Walker, et. al, 1995). The classroom teacher was asked to categorize every member of the class as either an internalizer or an externalizer utilizing an operational definition of each type of student. They are then asked to rank order each list. This allowed a screening to be conducted on the most significant individuals of each behavioral type. In this established process, the classroom teacher was asked to complete an instrument that recorded the occurrence of critical events and a rating of the frequency of certain types of behaviors on the students ranked in the first three positions on either the internalizer or the externalizer ranking. These ratings are standardized and serve as a gate in the screening process (Walker & Severson, 1992).

The first group of students consisted of elementary age students who have been identified as being "*at risk*" of meeting the special education criteria for services as a student with behavioral disorders. This category consists of students that exhibit one or more of the following:

1. behavioral responses in school programs so different that they adversely affect educational performance.
2. pervasive moods of unhappiness.
3. inability to build or maintain satisfactory interpersonal relationships.
4. unreasonable fears or somatic complaints.

These factors must be exhibited at a rate that is extreme for the child's developmental level. These factors must have occurred over an extended period of time and in a variety of settings and must negatively impact the child's educational performance.

The "*at-risk"* student pool included all students that exceed the average level on the teacher rating forms by more than one standard deviation during the screening procedure (Teagarden, 2006). This process began with the students ranked in the first three positions of either list and progressed with only those students whom the teacher reported a significant level of difficulties on both the critical events list and the adaptive behavior index. The Critical Events Index is a list of 33 high intensity, low frequency behaviors that are correlated with behavior disorders (Walker & Severson, 1992). This index has been standardized for both internalizers and externalizers. Only those students whom the teacher reported a significant amount of critical events, remained in the subject pool of "*at risk"* students. The teachers completed the Combined Frequency Index on those students that were reported with a significant level of critical events. The Combined Frequency Index is a list of high frequency, low intensity behaviors that the teacher is asked to rate each student utilizing a Likert like scale from never to frequently. This Index was standardized for both internalizers and externalizers (Walker & Severson, 1992) and only those students whose scores were significant were retained as high-risk students for the purposes of this study.

The second group of students was selected by utilizing the rank ordering of the class roster and including those students ranked in positions 5 on either the internalizer or externalizer lists. This rank position was selected to represent an average ranking of the student on their respective list.

The final group of students was selected by looking at the rank ordering of the class roster and including those students ranked in final position on either the internalizer or externalizer lists. This rank position was selected to represent a low-risk ranking of the student on their respective list.

Once these groups of subjects were obtained, a one-on-one testing sessions using the DANVA 2 (Diagnostic Analysis of Nonverbal Accuracy 2nd edition) (Nowicke & Duke, 1997) were conducted. This multimedia computer based assessment is designed to evaluate a child's ability to:

1. discriminate among nonverbal cues.
2. identify the emotions presented in nonverbal communication.

These features were assessed by two sections of the DANVA 2; i.e., paralanguage and faces. In the *Paralanguage* portion the student was presented a neutral sentence with repetitions. Each of the repetitions of the neutral sentence presented one of the following emotions: happy, sad, angry and fearful. Their task was to identify the emotion. There were repetitions determined to be "high" intensity of a feeling as well as a "low" intensity for each feeling.

The *Faces* subtest presented a digital photo of a face on the computer screen and then asked the subject to identify the feeling displayed. Again the emotions: happy, sad, angry and fearful were presented. The intensity factor was also present within the pictures utilized during the assessment.

Results

The score tabulation was automatic for each subject as they completed the DANVA 2. The computer based assessment recorded the correct responses for each individual student and also

provided a summary of the amount and type of errors encountered by the students. The scores were maintained separately for each of the subtests: *Faces* subtest & *Paralanguage* subtest.

The Adult Faces subtest results produced significant results when comparing the high risk group to the low risk group.

Group	Faces Subtest Correct Responses
Low risk	19.04
Average risk	17.88
High risk	16.42

In addition to the fact that the "*at risk"* group of students tended to make more errors in identifying the affective component of a facial expression, the errors they made tended to different in type from the other two groups. The most common misattribute was the emotion happy. When the facial expression was exhibiting anger, sad, or fearful if the response was incorrect, the most likely misattribute of the low risk and average group was that of happy (38.2%). Nearly all of the errors or misattributes were made when the cue presented was of 'low' intensity by the low risk and average risk group. On the other hand, the "*at risk"* group made more errors. The role of emotional intensity plays much less of a role in the likelihood of producing an error. The tendency of this group of students was to misattribute either sad (41.7%) or fear (31.9%) to a picture cue when none was present.

The *Paralanguage* subtest also yielded significant results in the accuracy of students' ability to identify the emotional component of a sentence the semantically contains a neutral content. The results showed a significant difference between the low risk group and the high risk group.

Group	Paralanguage Subtest Correct Responses
Low risk	15.91
Average risk	14.56
High risk	12.84

This task overall proved to be more difficult than the *Faces* subtest and each of the group means for the *Paralanguage* subtest was significantly lower than the results of the *Faces* subtest.

When examining the types of misattributes made by the students it is noted that the role of intensity of the emotional component of the cue tends not to impact the likelihood of students to make an error in identifying the intended emotion of the auditory cue. This tendency is present across all groups of students. Another generalized trend noted was that happy (27.3% - 33.9%) and fearful (30.0% - 34.8%) cues were the most common misattribution by all groups. Students in the average risk and low risk group showed a strong tendency (41.0% & 43.9% of the misattributes, respectfully) to make an error by attributing a sad emotion component to a cue where none existed. The high risk group showed a tendency to distribute the misattributes equally between the negative emotions of sad, anger, and fearful.

Discussion

The challenges posed by students with behavioral challenges can lead to concern and frustration on the part of many educational professionals. The ability of students to determine the affective component of a teacher's interaction can set in motion a reciprocal pattern of interactions that may account for some of the social adjustment difficulties.

The results of this investigation show several interesting differences in the reactions of children that are seen to be at risk of behavioral maladjustment within the school environment. These students tend to make more errors when looking at the facial expressions of adults than students who are reported to have less adjustment difficulties. Students with behavioral concerns not only make more errors but they also report more negative emotions to these facial expression. The students in the "*at risk"* group also to make the same types of errors regardless of the intensity of the facial expression. It seems almost intuitive that low levels of emotion carry with them less obvious clues by which a person can judge another. For the students of the "*at risk group"* are just as likely to misinterpret a person feeling a "high" level of anger as one that displaying a "low" level of anger. These factors may in part explain the difficulties their teachers identified within the classroom and in their interactions with others. If a child attributes a negative or hostile intent to an adult, based upon faulty interpretation of the facial expression when in fact none was present, the reaction of the child may be negative. This reciprocal nature of social interaction may begin with a faulty interpretation of nonverbal affective language and end with rejection of the child by the teaching staff.

The paralanguage subtest proved to be a more difficult task for all groups of students. In this subtest the only clue to the emotional component was provided by the elements of the spoken word unrelated to the actual content of the message. Such things as intonation, breath, stress, and emphasis provided cue to the emotional state of the speaker. All students experienced increased difficulty with this task and the intensity of the emotion does not appear to be a tool they were able to utilize in interrupting the affect of the speaker. The only noticeable difference appeared to be a tendency of the average and low risk groups to attribute "sadness" to an auditory cue that contained no such emotion. The "*at risk"* group did not exhibit this tendency.

If this faulty interpretation of nonverbal components of human interaction is a produce of faulty learning or the absence appropriate models, then providing structured opportunities for learning, reinforcing, and applying these skills may be part of a method to lessen the risk factors for students in the school setting.

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Emotional Maturity In Rural Special Education

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EMOTIONAL MATURITY IN RURAL SPECIAL EDUCATION

Plato stated that all learning has an emotional base. However, from that time until approximately fifty years ago, it was thought that emotions impede learning. Abraham Maslow, in the 1950s, believed that people could enhance their emotional, physical, spiritual, and mental strengths. He developed the Hierarchy of Human Needs which range from basic needs of survival and security to social acceptance, self-esteem, and self-actualization. In the 1970s and 80s, research began on the relationship of emotions and intelligence. In the 1990s, the concept of emotional intelligence grew and continues to be an important aspect in educational research. Peter Salovey, John Mayer, and Daniel Goleman were noted researchers in emotional intelligence. The question is postulated as to whether emotional intelligence exists. The interest in emotional intelligence is apparent, as there are approximately one-half million pages on the World Wide Web which relate to aspects of emotional intelligence (Goleman, 1994; Mayer & Salovey, 1993).

Daniel Goleman (1994) indicated the best remedy for battling our emotional shortcomings is preventative medicine. There needs to be as much importance placed on teaching our children the essential skills of emotional intelligence as is placed on more traditional measures such as Intelligence Quotient (IQ) and grade point average (GPA). He further stated:

> …in navigating our lives, it is our fears and envies, our rages and depressions, our worries and anxieties that steer us day to day. Even the most academically brilliant among us are vulnerable to being undone by unruly emotions. The price we pay for emotional literacy is in failed marriages and troubled families, in stunted social and work lives, in deteriorating physical health and mental anguish and, as a society, in tragedies such as killings… (Goleman, 1994)

Emotional Maturity (EM) goes beyond emotional intelligence. Emotional intelligence is a necessary component of EM, but, in and of itself, is not complete. Emotional intelligence can be compared to water behind a dam. It has potential energy, but until it has movement, that energy is not realized. Emotional intelligence consists of knowledge and understanding, whereas EM is the appropriate application of that knowledge and understanding. EM is the quality of our response to a situation.

The definition of EM according to Hyatt, Hyatt &Hyatt (2006) is, "The understanding and acceptance of all of one's normal human feelings and emotions and the appropriate response to those emotions in all circumstances. The understanding of one's own paradigm and the

awareness that this may not be totally accurate or complete. The willingness to expand and enlarge one's paradigm with the acquisition of new information while recognizing and accepting differences in others as assets to be valued."

Some of the characteristics of EM, as identified by Hyatt et al, are:

- To act or not act as one chooses based on information, circumstances, understanding, and feelings unencumbered by any ulterior motive or outside influence
- The ability and willingness to separate the emotions, actions, and thoughts of others from their value as unique and special
- The ability and willingness to project into the future and view the big picture; make choices and decisions unencumbered by past experiences, present circumstances, or future fears and uncertainties; postpone personal pleasure and gratification when necessary and appropriate
- Willing and able to admit and accept responsibility for ones own actions, whether positive or negative
- The ability and willingness to give and receive love unconditionally
- The ability and willingness to receive criticism and negative input from others, analyze that information, and make changes when appropriate.
- The ability to recognize, accept, and let go of old outdated feelings and emotions associated with past experiences which have no present value
- The ability and willingness to adapt positively to changes of all types, whether personal, environmental, or societal and direct both positive and negative energy in productive ways which are beneficial to self and others
- The ability and willingness to accept others for whom and what they are, with equal value as human beings
- The ability and willingness to associate, interact, and treat others without prejudice
- The ability and willingness, when interacting with others, to do so with persuasion, long-suffering, kindness, gentleness, meekness, and concern for them
- The ability and willingness to choose to take time for others, subordinating one's own needs and wants for the good of others when appropriate
- Accepts and understands he/she is responsible for his/her thoughts and have the ability and willingness to take charge of implementing mental strategies which control and direct thoughts in a positive, appropriate direction for self and others resulting in positive, productive outcomes
- Continually monitoring his/her behavior, identifying the need for change, developing and implements strategies to facilitate change
- Is able and willing to stay optimistic and look for positive benefits when faced with negative life events.

EM must be developed; it does not occur automatically. Education, age, socio-economic status, or IQ does not ensure EM. It is not consistent. An individual may be emotionally mature in one aspect of life while, at the same time, emotionally immature in other aspects.

Kazimierz Dabrowski, a Polish psychiatrist, developed the theory of Positive Disintegration. This theory consisted of five levels: Primary Integration, Unilevel Disintegration, Spontaneous Multilevel Disintegration, Organized Multilevel Disintegration, and Secondary Integration. A person at the level of Primary Integration lacks the capacity for empathy and self-examination and someone or something is always to blame for anything that goes wrong. Individuals at

Unilevel Disintegration are influenced by their social groups and values of the mainstream. They exhibit flip-flop behaviors as they have no clear cut set of self-determined inner values. At Spontaneous Multilevel Disintegration, individuals have a hierarchal set of values and work to bring their behavior to a higher standard. Organized Multilevel Disintegration refers to individuals who have achieved a degree of obtaining their own ideals, accept responsibility, and exhibit empathy and understanding for others. Level five is Secondary Integration in which self-mastery and self-actualization have taken place. Integration of an individual's values into all aspects of behavior has transcended disintegration. Dabrowski's five levels of positive disintegration correspond to the levels of EM (Tillier, 1993).

EM is perhaps the most important characteristic an individual can possess to ensure success. This is particularly critical for our rural special education students as the rapid changes in the dynamics of rural society occur. Individuals are no longer isolated in the closed environment of rural life as existed in the past. Most rural special education students transition into their adult life in a fast moving, highly competitive global environment. In order to compete and be successful, they must have a high level of EM to enable them to accommodate changes, interact appropriately, and collaborate with people from varied backgrounds and cultures.

Researchers have concluded that people who manage their own feelings well and deal effectively with others are more likely to live content lives. Happy people are more apt to retain information and do so more effectively than dissatisfied people.

> Researchers tracking over 160 high performing individuals in a variety of industries revealed that emotional intelligence was two times as important in contributing to intellect and expertise alone. What you learned in school distinguishes superior performers in only a handful of hundred jobs for which we've done competence studies. It's the emotional intelligence that matter more for superior performance. Competency research in over 200 companies and organizations worldwide, about one-third of this difference is due to technical skill and cognitive ability, two-thirds is due to emotional competence. In top leadership positions, over four-fifths of the difference is due to emotional competence. (Institute for Health and Human Potential, 2006)
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> In jobs of medium complexity (sales clerks, mechanics), a top performer is 12 times more productive than those at the bottom and 85 percent more productive than an average performer. In the most complex jobs (insurance salespeople, account managers), a top performer is 127 percent more productive than an average performer Research by the Center for Creative Leadership has found that the primary causes of derailment in executives involve deficits in emotional competence. The three primary ones are difficulty in handling change, not being able to work well in a team, and poor interpersonal relations. For 515 senior executives analyzed by the search firm Egon Zehnder International, those who were primarily strong in emotional intelligence were more likely to succeed than those who were strongest in either relevant previous experience or IQ. In other words, emotional intelligence was a better predictor of success than either relevant previous experience or high IQ. More specifically, the executive was high in emotional intelligence in 74 percent of the successes and only in 24 percent of the

> failures. The study included executives in Latin America, Germany, and Japan, and the results were almost identical in all three cultures. (Cherniss, 1998)

The George Lucas Educational Foundation (GLEF) conducted research on the effectiveness and workplace benefits of social and emotional learning programs in schools with the following results:

> Academic achievement and student behavior improve in schools with good social and emotional learning programs. Emotional Intelligence is a key factor in workplace promotion and success. A compilation of studies called 'The Business Case for Emotional Intelligence' by Rutgers University researcher Cary Cherniss found repeated evidence that possession of such emotional competencies as cooperation, accurate self-assessment, optimism, and ability to handle stress led to greater productivity, job satisfaction or worker retention. Interpersonal skills such as being able to communicate well, teach others new skills, negotiate, and work well with people from diverse backgrounds were included as necessary qualities for success in the workplace. The report, 'What Work Requires of Schools: A SCANS Report for America 2000,' cites responsibility, self-esteem, sociability, self-management, and integrity as vital job skills. (Cherniss, 1998)

Hyatt et al. (2006) has identified four obstacles that interfere with the development of EM. They are referred to as trashcans, bricks, self-validation behaviors, and negative habit patterns. Trashcans and bricks have to do with baggage we carry with us from past experiences and the emotions associated with them, whether conscious or subconscious, that interfere with the ability to acquire and utilize new information, make nonbiased and unemotional interpretations of that information, and apply it appropriately in one's present life. Self-validation behaviors are self-perpetuated ways of thinking, feeling, and acting. Negative habit patterns, as a result of habits created over the years, stem from observation, experimentation and identification with groups.

The subconscious mind is the place our self-concept (e.g., our beliefs about ourselves, others, and our environment) is stored. The information stored is based on our interpretation of our experiences. Our interpretation is tinted by our trashcans, bricks, self-validation behaviors, and negative habit patterns. It becomes the mental script from which we operate. This mental script influences and dictates the way we think, feel, and act on a conscious level. Mental script equals behavior. Behavior consists of feelings, actions and thoughts. If behavior is to be changed, EM must be developed. In order for EM to develop, the mental script must be rewritten. The treatment of any problem is based on our explanation of the problem. The wrong explanation equals the wrong treatment. A faulty mental script equals the wrong explanation and, consequently, the wrong treatment. A faulty mental script equates to lack of EM, which affects all aspects of life.

Strategies are available which can help rural special education students develop EM. It is essential, in order for special education students to learn EM, that all those who work with special education students model EM. In order to do so, they must be emotionally mature. These individuals must explain and teach EM concepts such as, (a) modeling, (b) thought control, (c) thought cycle, (d) viewing the big picture, (e) being able to project consequences of decisions into the future, and (f) to utilize the act-as-if principle. The students must hear a steady stream of positive reminders and messages. Students need to be encouraged to recognize, understand, and accept their own emotions. In order for students to recognize, accept, and understand their own

emotions, they need assistance from an emotionally mature adult. Students must feel safe, knowing they can share their inner self (i.e., thoughts and feelings) without fear of criticism, ridicule, or negative repercussions. It is imperative that students accept responsibility for their behavior and understand the value of being emotionally mature in their personal lives.

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Meaningful Assessment of Rural Pre-Service Teachers: An Ongoing Process

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MEANINGFUL ASSESSMENT OF RURAL PRE-SERVICE TEACHERS: AN ONGOING PROCESS

Abstract: Since NCATE's shift in focus from inputs to outcomes in 2001, educators in NCATE accredited teacher preparation programs have been actively engaged in developing meaningful ways to demonstrate both student and unit outcomes. The purpose of this presentation is to discuss the process one College of Education has worked through to design, implement, and revise our assessment system.

The emphasis of this conference is on the significant changes that have taken place in rural education over the past several decades. One of the most significant changes is the shift from simply describing programs and resources to the current emphasis on robust accountability measures. The recent Spellings report on higher education (U.S. Dept. of Education, 2006) argues that there "is inadequate transparency and accountability for measuring institutional performance, which is more and more necessary to maintaining public trust in higher education" (p. 14). To address this lack, the Spellings commission recommends that high education "change from a system primarily based on reputation to one based on performance" (p. 21). The emphasis on transparency and accountability in the Spellings report encompasses all programs and colleges in higher education. For NCATE-accredited Colleges of Education, the emphasis on accountability outlined in policy statements from the federal government is nothing new. Since NCATE standards shifted focus from inputs to outcomes in 2001, faculty and administration in teacher preparation programs have been actively engaged in looking for meaningful ways to demonstrate both student and unit outcomes. The purpose of this presentation is to discuss the process one College of Education has worked through to design, implement, and revise an assessment system that will help us chart our students' progress as they develop the knowledge, skills, and dispositions necessary to be effective teachers. Learning how to meet the mandate for accountability in ways that actually benefit pre-service teachers, faculty, programs, and K-12 students in Colleges of Education that serve primarily rural populations depends upon sharing our collective knowledge and innovations. We anticipate that our discussion will provide opportunities for faculty members to collaborate in identifying new ways to generate data that will lead to useful programmatic review and, perhaps, to avoid some of the problems that we have experienced.

Developing Conceptual Frameworks

Our last NCATE review took place in April, 2002 which meant that we were one of the first universities to be evaluated under NCATE's newly revised standards. The year prior to the

review saw frenzied activity throughout the College of Education as we tried to come to consensus on establishing a conceptual framework that reflected our "shared vision" for preparing students in a variety of programs, including both undergraduate and graduate levels, for their work in P-12 schools. Mindful of the reality that many of our new teachers would teach in Montana and Wyoming, both sparsely populated states where the average population density is fewer than five persons per square mile, we needed a conceptual framework that could structure the experience for pre-service teachers who would teach in rural schools as well as those who would leave the rural West to teach in urban schools throughout the country. After much deliberation and compromise involving unit faculty, Arts and Sciences faculty, school district representatives, and candidates, we developed two conceptual frameworks: one was geared to undergraduate students seeking initial certification while the other was designed to meet the needs of Master's-level students who were already certified or were pursuing degrees that did not involve teaching.

Development of the conceptual frameworks incorporated standards from major professional groups, including INTASC and ISTE, state and university standards, and the mission of the institution and college. Both conceptual frameworks were built as four part grids. The Initial Conceptual Framework (ICF) identified four framework areas: Human Development and Learning, Social Responsibility, Content and Pedagogy, and Professionalism. The Advanced Conceptual Framework (ACF), in order to meet the more varied needs of Master's candidates in school counseling, special education, and other education specialties, identified the framework areas as: Research and Professional Inquiry, Human Development and Learning, Professional Knowledge Base, and Professional Studies. Each conceptual framework was then broken down into a number of subcategories with three levels of competence mastery. Here is an example of one subcategory of the ICF under Content and Pedagogy. Notice that the numbers in each cell key the competencies to INTASC standards:

	Level I: Emerging Competence	**Level II: Developing Competence**	**Level III: Basic Competence**
3.4 Assessment	a. Understand that a variety of assessment strategies can be adapted to meet needs of learners and curriculum models. (#8) b. Understand how technological tools can assist in assessing student learning. (#6)	a. Develop formal and informal assessment strategies that reflect student learning and the planned curriculum model. (#8) b. Develop technology-based assessment strategies. (#6)	a. Analyze and adapt a variety of assessment processes in professional practice. (#8) b. Apply technology to facilitate a variety of evaluation and assessment strategies. (#6)

Assessment by Portfolio

Since we had constructed the conceptual frameworks to reflect students' progress through our programs developmentally, we recognized the value to students of being able to see and reflect on the progress they were making and the new learning and skills that were helping them move from seeing themselves as students to beginning to think and act like teachers. Prior to the preparation for our 2002 NCATE visit, our students had collected examples of their work in schools along with a few assignments in portfolios that they submitted at graduation. Not surprisingly, the portfolios were generally put together just before they were due. Most students' portfolios could best be termed scrapbooks, including photos of their students in field experiences and student teaching, thank you notes from students, and many other pieces of memorabilia that had meaning to the students but did not provide a basis for evaluating the candidates' preparation to teach. We had not yet developed any systematic way to assess or evaluate these portfolios, but because this was something with which both faculty and students were already familiar, we decided that requiring a portfolio tied to the new conceptual frameworks might be the place to start in providing more robust data that would help us determine how well we were meeting the needs of our students as well as P-12 students and guide us in improving our programs.

Instead of a scrapbook, we would require students to develop a professional portfolio that they would start even before they were formally admitted to their teacher education programs and would be continued through the completion of student teaching. Faculty members were required to include the appropriate conceptual framework in all of their syllabi, with the areas of the conceptual framework highlighted that the courses they taught would address. To help students develop the habit of reflecting on their learning and teaching, we required that each artifact (which could be a class assignment, exam, project, lesson plan, field experience notes, or some other tangible way to document student learning) be accompanied by an Artifact Rationale Form where the student made a case for including the artifact as evidence of learning for one or more cells of the conceptual framework and identified what the student had learned pertinent to the subcategory from the artifact. Before including an artifact and rationale form in the student's portfolio, the student would submit both artifact and rationale form to the student's advisor, instructor, or supervisor, depending upon who was most appropriate, to read and evaluate the submission according to a scoring rubric that asked the evaluator to decide whether the artifact and rationale needed improvement, were satisfactory, or were excellent:

Scoring Rubric		
Needs Improvement (1)	**Quite Satisfactory (2)**	**Excellent (3)**
Artifact(s) and rationale do not provide evidence that the candidate has an understanding of this component of the conceptual framework.	Artifact(s) and rationale provide clear evidence that the candidate has an understanding of this component of the conceptual framework.	Artifact(s) and rationale provide clear, consistent and convincing evidence that the candidate has an understanding of this component of the conceptual framework.

Building a Database

Prior to the changes we made in preparation for our 2002 visit, we had required only a couple of indicators of student progress: we required a minimum 2.65 undergraduate GPA for admission to our teacher preparation program, successful completion and recommendations from a junior-level field placements and student teaching, and evidence that the student had met all general education, pre-professional core, content area, and methods requirements prior to graduation. We were able to keep track of our students' progress through their programs without a database or what we would now call an assessment system. If we were to use the new conceptual frameworks to communicate our expectations to students by requiring them to build portfolios, we would also need a more systematic way to track students' developing competencies.

Although the conceptual frameworks provided considerable transparency of our expectations for students' developing knowledge, skills, and dispositions, the frameworks themselves were very complex. The ICF contained a total of 74 cells; the ACF contained 51 cells. As we built these conceptual frameworks, we wanted them to be as complete as possible in identifying what we expected our students to know and be able to do when they completed their studies. We did not immediately anticipate the problems that this level of specificity and complexity would cause as we moved to the next stage of preparation for our assessment review.

Since we had no way to track the many pieces of data generated by each student's portfolio, our next step was to investigate options for a database. We were able to project this need and how we would use the data collected during our 2002 NCATE and state accreditation review. We were pleased and relieved that our assessment system, still in its infancy, was judged adequate and we were reaccredited through 2009. But we knew we still had a long way to go to build a database that would generate meaningful data.

Obviously the best way to create an assessment system would have been to hire a consultant or even to hire a faculty member who would be responsible for this undertaking. Our very limited resources, however, made either of these options impossible. We knew we would have to use our existing resources to put together a kind of do-it-yourself database. One faculty member took the lead, working in conjunction with campus Information Technology specialists and a graduate assistant working in the college. Although building the conceptual frameworks had involved many members of the college as well as other stakeholders, the database process was not given the same attention. We knew we wanted to record the scores students received on their artifacts, but we spent little time discussing how we planned to use these data or even what factors, beyond the individual artifact scores, we wanted to track. This process of building the database began in the 2002-2003 academic year but because of many problems encountered along the way, it was not fully functional until the beginning of the 2004-2005 academic year. Faculty members were introduced to the database in a presentation from IT. It was only at that point that faculty members learned that they would be responsible for entering into the database the scores from all of their advisees' portfolios. Most faculty members were mildly supportive of the idea of a database, but were not supportive of the time and energy involved in recording scores. Since most faculty members have between 25-50 advisees, this appeared to be a daunting task.

Students also found the new portfolio process daunting. Since a significant proportion of our students are transfer students, many had never even heard of the portfolio until they were juniors. Providing accurate and timely information on each step in the process was challenging. Some faculty members simply ignored the requirements for student portfolios, some developed individual rules for evaluating students' rationale forms that put more obstacles in students' paths. Assuring that all faculty members understood the process and would take the time to instruct their students and advisees was a never-ending process.

We had built the conceptual frameworks so that students would be able to see how content and pedagogical knowledge they were learning and the new skills they were developing fit together; the process of finding at least one artifact to fit each cell of the conceptual framework actually resulted in a more fragmented understanding of their preparation to become teachers. With the very best of intentions, we had created a huge, unwieldy process that placed additional burdens on faculty members and students yet created little relevant information that could be used to assess our programs or our students.

As we struggled to try to make the portfolio process and database work, we slowly came to the realization that despite the fact that we had seen an increase in faculty buy-in and student awareness, the way we were going about assessment was inherently flawed. Because we had selected a 3-point rubric for assessing students' artifacts and rationale statements, the resulting data were essentially flat. We could run reports from the system that identified the breakdown of scores in each subcategory of the conceptual frameworks for each academic year, but when we looked at these reports, they didn't really tell us anything. Almost no students received scores of 1 (meaning needs improvement) in any of the three developmental levels. Between 6% and 30% of the students received scores of 2 (meaning the student's artifact and rationale were "quite satisfactory"). The vast majority of students, then, received a score of 3 in all three levels, with the range between 78% and 95%. The only discernable pattern was that as students moved from Level 1 (which generally reflected work done at the freshmen and sophomore level) to Level 2 (which reflected work done at the junior and early senior level) to Level 3 (which was primarily the result of student teaching), the small proportion of students who received scores of 1 disappeared and the proportion of students receiving scores of 2 diminished. Although we might have taken pride in knowing that by the time students reached Level 3, nearly every student was receiving scores of 3 on their portfolio entries, we could not be sure that's what the data were telling us. The 3-point scale allowed too little variation to adequately discriminate among student outcomes. Many faculty members gave scores of 3 for all rationale statements submitted to them, regardless of the quality of the student work.

Perhaps even more problematic was the attempt to use one rubric to score essentially two different competencies. The rubric asked the scorer to assess the extent to which both the artifact(s) and rationale provided clear evidence that the candidate has an understanding of this component of the conceptual framework. We had not anticipated the great variability in how scorers would interpret this wording. As we talked in the college about the portfolio process, it became clear that some people were basing their evaluation solely on the quality of the reflection in the rationale form; some were scoring on the quality of the artifact itself; some were using the

single rubric score to evaluate both. We had serious problems with validity and reliability that rendered the data collected unreliable at best, useless at worst.

Rethinking/Revising Assessment

Throughout the 2004-2005 academic year, College of Education faculty members discussed the value of the current assessment system. In part because our resources are so limited, many people were unwilling to abandon the current database, but everyone understood that the data told us very little about either our students or our programs. We considered improving the rubric to a 5-point or 6-point scale, but to do so would have meant major changes in the database itself, more time and money invested, and more delay before it could be made operational with the new rubric. Although these discussions, both at the department and college level, didn't result in a clear sense of what kind of assessment system we wanted, many trial ideas were discussed, revamped, or dismissed.

At the beginning of the 2005-2006 academic year, we created four Standing Committees, loosely based on NCATE standards, that would meet monthly to provide systematic direction for the work of the college. One of these Standing Committees took on the responsibility to take all of the suggestions and discussions from college meetings the previous year and to draft a new assessment process. Of primary importance was involving students in authentic assessment that would allow them to demonstrate their development as professional educators, to understand the developmental structure of the Teacher Education Program, and to practice professional reflection/self-assessment. Equally important, we wanted a means for faculty members to scaffold student professional development and to identify curricular gaps and/or redundancies in our programs.

COE faculty still believes that the conceptual frameworks capture what we believe students need to know and be able to do as educators. The process that we are now working to develop still highlights the conceptual framework to communicate to students our expectations for the knowledge, skills, and dispositions they will develop as they work to become teachers. There are four parts to the new assessment system: key assignments, dispositions evaluations, an essay that asks students to reflect on their learning and preparation by applying what they have learned to practice, and students' ability to demonstrate their impact on student learning.

Key Assignments

Since the faculty has agreed that scoring the students' rationale forms provides little valid or useable data, we have eliminated this part of the process. Instead, faculty members identify key assignments that document each student's level of mastery in developing the competencies identified in the conceptual framework. Student grades on these key assignments in all courses in our programs will be tracked in a new database to be constructed this summer by COE faculty and staff. Because we know at the outset what information we need to track and how we plan to use these data, we are convinced we can put together a simple ACCESS database that will better meet our needs than the current database. We will be able to track the progress of an individual student throughout his/her program or disaggregate the data to look at trends in programs. As we put together this new database that will reflect what all faculty members have identified as the

key assignments that show student mastery of the knowledge, skills, and dispositions in our conceptual framework, we will also be able to determine what concepts or skills are inadequately addressed in coursework and/or field experiences. The kind of data we can anticipate from this new system promises vital information that can help us review and revise our programs.

Dispositions

A second piece of our new process focuses on dispositions. Although we have identified the importance of developing professional dispositions in our conceptual frameworks, we have not adequately provided guidance to our students to help them develop professional dispositions. The assessment forms used by mentor teachers and university supervisors during student teaching have identified dispositions such as the student's ability to take initiative, to communicate clearly, and to interact appropriately with faculty, staff, students, and parents. To help our students develop professional dispositions before they reach student teaching, we have also developed a Dispositions Observation Sheet for faculty to use in assessing students' dispositions while they are students. This sheet looks at classroom behaviors in three categories: Personal Professionalism (including such characteristics as participating regularly in class discussions/activities and taking responsibility for learning), Interpersonal Communication and Collaboration (including characteristics such as listening attentively and practicing problem-solving skills), and Personal and Professional Dispositions (including characteristics such as appropriate dress, honesty and integrity, and sensitivity toward others). At several benchmarks throughout students' programs, faculty members will assess the students' classroom dispositions, share this information with students, and where necessary, help students develop plans of improvement. A second way this form is used is to ask students to assess themselves, reflecting on the areas where they are strong as well as the areas where they need improvement. By making our expectations for dispositions clear to students and to emphasize the importance of developing professional dispositions throughout students' preparation to teach, we hope that students will recognize much earlier the need to develop good habits as students that will carry over into their teaching.

Reflective Essay

One of our primary dissatisfactions with the old portfolio process where students simply collected artifacts was that it did little to promote broad reflectivity. Because the conceptual frameworks identify themes that are carried throughout the students' programs of study, we want students to recognize how all of their coursework and field experiences come together in equipping them to positively impact the learning of the students with whom they work during student teaching. Although students will no longer be required to create a portfolio, we will continue to encourage students to collect the key assignments identified by all of their instructors as well as other work that helps them demonstrate their developing knowledge, skills, and dispositions. Some time during students' junior year, either during a field experience or at its conclusion, students will select a time from a variety of options when they will write an essay reflecting on how their course of study has prepared them to meet the expectations of new teachers as identified in the INTASC standards. There will be several different questions that will rotate. A group might be asked: *How have your course work and experiences as a pre-service teacher prepared you to address INTASC Principles 2, 3, and 5 (Framework 1: Human*

Development & Learning from the initial conceptual framework)? In your essay, you will want to draw upon knowledge and skills gained from assignments, exams, projects, field experiences, and anything else that provides evidence of your development as a pre-service teacher. Each student will also be asked: *Based on your response to the first question, where do you see your greatest strengths? What areas still need work as you prepare to student teach? Briefly discuss your plan for strengthening the areas where you do not feel fully prepared prior to the completion of student teaching.*

The essays will be graded, according to a 6-point rubric, by a revolving team of faculty members who have participated in training to assure interrater reliability. Students who do not meet the minimum benchmark score for their essay will need remediation before they can be placed for student teaching.

Impact on P-12 Student Learning

Although we have always had specific assignments that students would do while student teaching, NCATE's emphasis on Teacher Work Samples has changed the way we look at student teaching. During student teaching, pre-service teachers will collect data, lesson plans, pre- and post-tests, and examples of student work that demonstrate their impact on student learning. At the conclusion of student teaching, candidates will have an opportunity to present the results of their Student Learning Analysis in small groups of students and faculty members. A scoring rubric will provide feedback to students and a variety of pieces of data for our assessment of programs and student outcomes.

Conclusion

The current emphasis on accountability is based on the assumptions that College of Education should clearly communicate expectations to pre-service teachers, those expectations should reflect a shared vision from everyone who participates in the preparation of new teachers, and that colleges should engage in a process of continual evaluation of both students and programs based on reliable and relevant data. Supporting these assumptions, however, does not tell colleges how to generate, collect, and analyze data, how to store data over time, or what data will be most valuable in evaluating students and programs. As we look back over the past few years at our rather clumsy attempts to collect data and to create a database, we recognize that we did the best we could with limited resources and little direct experience with these kinds of tasks. We are confident that our next round in developing "transparency and accountability" will get us closer to a system of assessment that will be meaningful for all stakeholders and will assist us in improving our preparation for educators. We are also very much aware that there will be unexpected and unanticipated problems with our new assessment system, necessitating the ongoing evaluation of what we are trying to accomplish and what data will be most helpful in continuing to serve the needs of our pre-service teachers as well as P-12 populations.

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American Council on Rural Special Education

Montana Builds a HOUSSE . . . At Last!

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MONTANA BUILDS A HOUSSE—AT LAST!

In October 2006, after four years of debate with the U.S. Department of Education (DOE), Montana's Office of Public Instruction was able to reach an agreement on the implementation of the "Highly Qualified Teacher" requirements contained in the No Child Left Behind Act of 2001 (L. McCulloch in personal communication, October 17, 2006). Under this agreement, most teachers who hold a Montana certificate and endorsement in the area(s) in which they teach meet the Montana federally approved definition of "Highly Qualified Teacher." But there are exceptions to this rule, particularly for veteran special education teachers.

Under the agreement, a public elementary or secondary school special education teacher meets Montana's federally approved definition of a "Highly Qualified Teacher" if the teacher holds an active Montana license as a special education teacher. The general requirements apply to all special education teachers including teachers providing consultation and collaborative services, those teaching core academic subjects to state standards, and those teaching alternate achievement standards to students with significant cognitive disabilities. However, those special education teachers who teach core academic subjects *are not highly qualified* until they meet the content knowledge requirements that apply to other teachers of core academic subjects (OPI, 2006). Thus, experienced special education teachers are considered "highly qualified" by virtue of the special education endorsement on their license unless they are teaching core academic subjects like mathematics, language arts, or science exclusively to students with disabilities and without the assistance of a highly qualified teacher.

Montana debated with the federal Department of Education for four years because of concern for this very group of special education teachers in rural schools who would need to be certified in multiple subjects. Montana has over 429 school districts, many of them with only one small school. These small schools were born of geographic necessity. With 878,000 residents scattered over 147,046 square miles, the Big Sky state is wide enough to stretch from New York City to Detroit but has the population density of Australia—the fifth-least-dense nation on earth. Almost two-thirds of the state's public school districts are rural, enrolling about one third of all students. Schools with enrollments under 300 are the norm for 75 percent of Montana's elementary and secondary students (Boss, 2000).

Of particular concern in this context of small rural schools were special education teachers who not only teach multiple subjects, but who also serve multiple school levels. The extraordinarily high proportion of small rural schools in Montana often results in the same special education teacher serving students in both elementary and secondary schools.

For example, during the 2003-2004 school year, there were 273 elementary districts, 100 high school districts, and 56 K-12 districts in Montana (Runkel, 2005). Using personnel data from

October 2003 Annual Data Collection (2003-2004 school year), there were 55 elementary districts that reported at least one special education teacher who was also reported by a high school district (same teacher). There were 24 K-12 districts that reported at least one special education teacher in both an elementary school and a high school (same teacher).

In terms of percentages, 20.1 percent of elementary districts reported at least one special education teacher who was also reported by a high school district. In addition, 50 percent of high school districts reported at least one special education teacher who was also reported by an elementary district (Runkel, 2005). Forty-two percent of K-12 districts reported at least one special education teacher at an elementary school and high school (same teacher).

Of the districts noted above, there were 23 elementary districts that reported only one special education teacher and that same teacher was reported as the only special education teacher by a high school district. Twenty K-12 districts reported only one special education teacher who taught at both an elementary and high school (Runkel, 2005).

In terms of percentages, 8.4 percent of elementary districts reported only one special education teacher while the same teacher was reported by a high school district as the only special education teacher. Also, 20.9 percent of high school districts reported only one special education teacher when the same teacher was reported as the only teacher at an elementary district. Thirty-five percent of K-12 districts reported only one special education teacher in the district who taught at both an elementary and a high school (Runkel, 2005).

These data are an indication of the impact on Montana's schools of the highly qualified special education teacher provision of NCLB. Rural schools in Montana currently have difficulty hiring special education teachers at any level. If very small districts were required to hire separate, highly qualified special education teachers for elementary and secondary students, these districts would be faced with hiring many new personnel, thus exacerbating the already existing personnel shortage.

Montana's Office of Public Instruction's first response to the Department of Education concerning how Montana would define HQT was to claim that Montana teachers who hold a Montana license and are teaching in their endorsed subjects meet Montana's definition of a "highly qualified teacher." This broad claim was not accepted by the DOE, so State Superintendent Linda McCulloch argued that since Montana has always required that special education teachers first be certified as elementary or secondary teachers and then be certified with an additional endorsement for K-12 special education, Montana's special educators are highly qualified in content at either the elementary or secondary level. Ms. McCulloch proposed that:

> Special education teachers who teach multiple subjects and who are highly qualified in mathematics, language arts, science, or elementary education are considered highly qualified provided they demonstrate competence, not later than two years after the date of employment or three years after the date of employment if teaching in a school that qualifies under the Small, Rural School Achievement Program (SRS0, through a multi-subject HOUSSE in the other core academic subjects which the educator teaches (Runkel, 2005).

This proposal by the State Superintendent was the first in which she offered to develop a High Objective Uniform State Standard of Evaluation (HOUSSE) for multi-subject special education teachers which would assist them with becoming highly qualified in multiple core subjects. This concession by OPI was quickly accepted by the Department of Education and resulted in the acceptance of Montana's Revised Plan for Meeting the Highly Qualified Teacher Goal.

Because of the need to respond quickly to OPI's promise to develop a HOUSSE, the State Superintendent of Public Instruction turned to Montana's Higher Education Consortium to ask for help in designing a stream-lined HOUSSE plan that would meet the needs of place-bound teachers serving Montana's rural schools. The Higher Education Consortium (MHEC) is a subgroup of the State Comprehensive System of Personnel Development (CSPD). The members of the Montana Higher Education Consortium are special and general education faculty members from the public and private colleges and universities offering endorsements or degrees in special education.

OPI awarded MHEC a subgrant from the State Improvement Grant called Project STRIDE: Strengthening Teacher Retention, Instructional Design and Evaluation. In its subgrant MHEC was charged with designing a Highly Objective Uniform State Standard of Evaluation (HOUSSE) with the following characteristics:'

- Multiple pathways for special educators to become highly qualified to teach secondary replacement courses in English or mathematics;
- Easy and inexpensive to administer;
- Responsive to the needs of place-bound teachers desiring to become highly qualified;
- Not too costly for the teachers; and
- Adaptable to a wide range of needs in rural school districts.

OPI further required that the HOUSSE not be heavily or exclusively dependent on completion of university courses in content areas.

Montana's HOUSSE, one of the last to be developed, provides an example of requirements that can be met by rural, place-bound special education teachers who may not be in a position geographically or financially to achieve highly qualified status by the usual routes of university coursework or standardized testing. At a time when some critics (Tracy and Walsh, 2004) are recommending that HOUSSE requirements be eliminated entirely and be replaced with student improvement as a measure of teacher quality, the Montana HOUSSE may offer an acceptable compromise position.

Montana's HOUSSE is still in the approval phase, but it is slated to become available for use by Fall 2007. Responding to OPI's direction to the keep the HOUSSE simple and easy to administer, MHEC has recommended just seven components:

HOUSSE Component	Point Value
Praxis II: Subject Assessment Tests measure knowledge of specific subjects that K-12 educators teach, as well as general and subject-specific teaching skills and knowledge.	Passing score achieves 50 points
Content Major: 30 credit hours in mathematics, English or Science from an NCATE-accredited institution	Satisfactorily completed major (GPA 2.5 or better) earns 50 points
Co- Teaching: Teacher co-teaches for two semesters with a highly qualified teacher in a content area; teacher participates in planning and delivering instruction and in assessing students; teacher registers for a 3 credit internship through a unit of the Montana University system or a collaborating private institution. Teacher is supervised and evaluated by the highly qualified mentor teacher and a university supervisor.	50 points
15 Graduate Credits in Content Area Modules: University faculty members create content area modules, emphasizing the knowledge and skills in the content area required to teach at the secondary level. Teachers complete modules online to earn points toward highly qualified status.	25 points
Professional Development in Content Area Professional development activities must be specific to the content area; must require the teacher to participate outside the time set aside for professional development training.	10 points maximum (1 pt. per clock hour of training from OPI approved source)
Years of Successful School Experience in Content Area Must be certified by local district administration and supported by positive teaching evaluations.	30 points maximum (2 pts. per year)
Publications, Awards, Presentations in Content Area Publications must be in educational journals and must be specific to the content area. Awards must relate directly to the teacher's knowledge of content area Presentations must be in the content area and to audiences at educational conferences or in professional development settings.	10 points maximum (points must be approved by OPI)

The Montana HOUSSE contains some components that are similar or the same as those used in other states; such as Praxis II Test, university credits, credit for teaching experience in the content area, professional development and other professional activities. What is unique in this HOUSSE is the opportunity for teachers to earn points toward becoming highly qualified by co-teaching with a fellow teacher who is highly qualified in content area. The co-teaching must

occupy at least one class period per day and must continue for two semesters. The teacher who is earning points must be involved in preparing lessons, delivering material, assessing students, and reflecting on his/her practice. The highly qualified co-teacher serves as a mentor, providing coaching, content information, and resources in much the same way that a mentor teacher interacts with a student teacher.

The teacher who is seeking HQT points must sign up for a three-credit internship with an NCATE-accredited college or university collaborating with the Montana HOUSSE program. By signing up for this internship, the teacher will be paying a stipend for the mentor teacher ($250 per semester) and for the university credit. The teacher will be observed and evaluated by a University supervisor at the co-teaching site utilizing the conceptual framework and evaluation forms that are used with student teachers. The teacher will have to meet the standards set for student teaching in order to pass the course and receive the full 50 points awarded for this activity.

In order to create this co-teaching opportunity, the Higher Education Consortium had to gain agreements from The University of Montana, The University of Montana-Western, Montana State University-Bozeman, Montana State University-Billings, Carroll College, and the University of Great Falls to cooperate by offering the internships and providing on-site supervisors. Fortunately, there is a precedent for this type of activity that has been set by the OPI Special Education Endorsement Project and the OPI School Counseling Project, both of which have successfully operated in a similar manner for many years.

Local school districts will also have to agree to allow the collaborative environment required for co-teaching to occur. This may mean rearranging schedules and placing special education in a general education classroom instead of a resource program. However, the initial response from administrators has been positive. There is such a strong need for special educators to be able to serve students at multiple grade levels and in multiple subjects, that administrators in rural schools appear to be quite willing to make whatever arrangements may be necessary to make this model work.

The potential advantages for rural special educators of the co-teaching option for gaining highly qualified status are many. The co-teaching can occur in the teacher's own school environment, requiring no traveling to a distant university location for the teacher. The individual will receive supervision and support from a university supervisor as well as a highly qualified mentor teacher. The cost for this process is relatively modest when compared with paying for the 30 credit hours required in a content area major. The co-teaching option also models the benefits of special educators and content area teachers working together to provide instruction for typical students and students requiring special education.

But there may be disadvantages as well. The National Council on Teacher Quality has suggested in a report published in 2004 that the existing state HOUSSEs do not have rigorous enough standards to ensure that teachers are indeed highly qualified in content areas. In a report issued in 2004, NCTQ reviewed the HOUSSE standards for 20 randomly selected states and found results that were "decidedly mixed" (Tracy & Walsh, 2004). Though the grading system ranged from A to F, the average score was D+. Criticisms by NCTQ included irrelevancy (menus of

options were only tenuously connected to content knowledge), "business as usual" (relying on existing certification processes), excessive complexity, too many loopholes, and irrational awarding of points for trivial activities. NCTQ seemed to favor criteria that were measurable like standardized tests, university coursework, and raising student achievement.

The proposed Montana HOUSSE has the potential to meet the NCTQ standards since it includes a standardized test and content area course work meeting university standards. The new option of co-teaching is the one area that is as yet unproven. Using the NCTQ rubric, however, provides the opportunity to consider whether a HOUSSE has rigorous standards and meets the intent of the law to have all teachers become highly qualified in the content areas they teach.

NCTQ made it judgments on the basis of five principles (Tracy & Walsh, 2004):

1. Standards should be consistently rigorous and focus on providing clear and objective evidence of teachers' subject matter knowledge.

2. Standards should identify teachers weak in subject matter knowledge.

3. Standards should reflect an understanding of the law's intent and demonstrate a commitment on the part of the state to genuinely address the problems.

4. Standards should be presented in a manner that permits both teachers and the general public to easily understand what needs to be done to meet the highly qualified teacher provision.

5. Standards should be readily accessible to teachers and the general public.

Below is a rubric for evaluating the Montana HOUSSE on NCTQ standards:

National Council on Teacher Quality HOUSSE Standards

	Point Value	**Principle 1:** Clear, objective evidence of teachers' subject matter knowledge	**Principle 2:** Ability to identify teacher's weaknesses in subject matter knowledge	**Principle 3:** Commitment to the legal intent to ensure that teachers must know the subject matter they teach	**Principle 4:** Clarity of presentation that permit both teachers and the general public to understand the standards	**Principle 5:** Content readily accessible to teachers and the general public.
Praxis II: Subject Assessment tests measure knowledge of specific subjects that K-12 educators teach	Passing score achieves 50 points					

	Point Value	**Principle 1:** Clear, objective evidence of teachers' subject matter knowledge	**Principle 2:** Ability to identify teacher's weaknesses in subject matter knowledge	**Principle 3:** Commitment to the legal intent to ensure that teachers must know the subject matter they teach	**Principle 4:** Clarity of presentation that permit both teachers and the general public to understand the standards	**Principle 5:** Content readily accessible to teachers and the general public.
Content Major: 30 credit hours in mathematics, English or Science from an NCATE-accredited institution	Satisfactorily completed major (GPA 2.5 or better) earns 50 points					
Co-Teaching: Teacher co-teaches for two semesters with a highly qualified teacher in a content area	50 points					
15 Graduate Credits in Content Area Teacher completes modules in content area in online course directed by university faculty	25 points					
Professional Development in Content Area	10 points maximum (1 pt. per clock hour of training from OPI approved source)					
Years of Successful School Experience in Content Areas: Must be						

	Point Value	**Principle 1:** Clear, objective evidence of teachers' subject matter knowledge	**Principle 2:** Ability to identify teacher's weaknesses in subject matter knowledge	**Principle 3:** Commitment to the legal intent to ensure that teachers must know the subject matter they teach	**Principle 4:** Clarity of presentation that permit both teachers and the general public to understand the standards	**Principle 5:** Content readily accessible to teachers and the general public.
certified by local district administration and supported by positive teaching evaluations						
Publications, Awards, Presentations in Content Area: Must relate directly to content area	10 points maximum (points must be pre-approved by OPI)					

The requirements of NCLB and IDEA 2004 legislation both have had significant impact on how special education is delivered in rural schools. These pieces of legislation have been described as having been designed for urban rather than rural environments. Rural educators and administrators have complained to the Department of Education that features of these two federal laws need to be modified in order to fit more realistically into the rural environment. Montana has protested strongly the highly qualified teacher requirements in both laws, but has now come to a compromise position by accepting the need for a HOUSSE to allow special educators to become highly qualified in content areas. The new Montana HOUSSE is designed specifically to meet the needs of rural educators and has the potential to be both rigorous and useful. Once the HOUSSE is fully implemented, research will need to be conducted to see if Montana's HOUSSE does, in fact, meet both the needs of rural special educators and the rigorous requirements of NCLB and IDEA 2004.

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American Council on Rural Special Education

On the Road with Differentiated Instruction

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ON THE ROAD WITH DIFFERENTIATED INSTRUCTION

Utilizing Differentiated Instruction in the classroom can be compared to planning a journey. We get very excited thinking about where we want to go and what we want to see. It's easy to find brochures, maps, and other travel information that gives us an even better idea of our anticipated travels. We have in mind a fabulous experience. But, sadly, sometimes the journey never comes to fruition. The same is true with Differentiated Instruction. We see the value, feel the excitement, understand the vision and philosophy, but we get no further. Or we begin the journey but in a short while feel disappointed. Maybe our plans weren't well thought out, maybe we took on more than was manageable, or maybe those traveling with us kept confusing us with other ideas. Now it's time to renew that enthusiasm, resume the quest towards Differentiated Instruction and examine ways to overcome the frustrations.

Each year, learners come into the classroom with various emotional, educational, developmental and social backgrounds. Some learn quickly and others need time to process and ponder - but all needing to reach the same measured outcome by the end of the year. How then do we, the classroom teachers, meet all of these learners' needs and allow every learner to benefit from the journey?

The first step is to understand that Differentiated Instruction is a philosophy, not a teaching style or format or program. It is a well planned and carefully delivered approach. It is a way of thinking. It is understanding what motivates each individual learner in the classroom and then connecting that to the curriculum. It is asking yourself, "How can I make learning meaningful for each individual student in my classroom?"

To do this, the educator needs to know each student's interests, learning style, area(s) of intelligence, and readiness levels. Once these are understood, flexible grouping becomes not only a natural outcome, but an integral part of an efficient and effective action plan. With this also comes the understanding that the grouping of students may change at any time, especially because of readiness level, and that frequent assessments need to be made to insure that students' needs are being appropriately met. The grouping of students, then, is constantly evolving and dependent on the outcome of frequent assessments to ensure student's needs are being met.

Student's interests are the easiest to discover, especially at the upper grade levels. This can be done utilizing a journal or an inventory. Even asking simple questions such as, "What are you the best at in your family?" can give the teacher insight into a learner's interests. For students who balk at this type of assignment, asking them where they would be at this moment if they

didn't have to be in school might give the educator some understanding of his/her interest. Most students, given enough time, readily write about their interests. This information can also become useful in making students feel a sense of belonging when a teacher acknowledges or asks them about an interest of theirs in another setting or context.

The students' learning style is the next important component to identify. It may be auditory, visual, or kinesthetic. Students' learning styles become more evident in the upper grades but differences in learning styles can be observed even as early as third grade. Brain-based Learning with Class provides a learning style inventory as well as many activities that help explain to students how their brains work. It further provides excellent activities for kinesthetic learners whose learning preference seems to be the most difficult to meet in the classroom.

Visual and auditory modalities tend to be simplest to accommodate. Many educators confuse the kinesthetic modality with "hands-on" learning. However, learners who learn best through their kinesthetic modality remember information best based on the position of their body when they received the information. For example, using strategies that allow the students to hold objects or stand in various points in the room will help them remember the information they received while in that location or position.

Next, the educator should become familiar with the intelligence students favor according to Gardner's Multiple Intelligences. Susan Heacox (2002) provides a very thorough inventory in her book Differentiated Instruction in the Regular Classroom. There are also on-line web-sites for which a district can pay a small site license fee so that students can complete the inventories on-line and receive immediate feedback.

The last area that needs to be evaluated, and evaluated frequently, is the area of readiness. Sometimes pre-tests can be given to assess the learners' current level of understanding of a topic. At other times, having students describe or explain what they already know about the topic is sufficient. Yet at other times, using data from established programs can be beneficial in determining a student's level of understanding. However, it is critical that this area be carefully monitored and evaluated frequently to avoid "placing" students in groups based on ability for long durations of time rather than on their current understanding of a particular concept, topic, or unit.

All of these inventories provide the necessary information for the educator so that activities can be incorporated into lesson plans or units that meet the needs of all students from the struggling learner to the gifted learner. Flexible grouping becomes integral when deciding who will complete which assignment or project. This gives students the most ideal conditions for demonstrating their level of understanding. Depending on the teaching style of the educator, this may be accomplished through direct instruction, small groups, independent study, or other accomplished learning situations.

After becoming familiar with the four components of the learner, the next step in getting the DI classroom ready is to look at what can be differentiated. Carol Ann Tomlinson, in all her work, very effectively describes differentiating content, process, and product. Although the content has been established within the curriculum, the DI educator can differentiate it in several ways. One

way is to make the content either more or less complex depending on the readiness level of the learner. Furthermore, the topic used to teach the content can vary depending on the interest of the learner. Differentiating process takes into account learning preference. Some may prefer discussion while others prefer looking at a graphic organizer or flow-chart. Still others might create physical maps typifying the components of the topic. In all instances, the product presented for final assessment will vary from learner to learner depending on all facets of their interests, learning style, favored intelligence, and readiness level or current level of understanding.

The concept of providing choice is not new in each of the aforementioned situations. However, in the Differentiated Instruction classroom, it becomes more strategic and deliberate on the part of the educator as well as the learner. Students in the DI classroom understand from the very first day that their needs will be met based on their interests, readiness levels, favored intelligence, and learning style and they will become part of the decision-making process from the moment they fill out their first inventory.

Processing time may also need to be differentiated for the various learners. Time should not be differentiated if it creates irresponsibility. However, there are specific types of learners and situations where differentiating time should be considered. For the student who needs extra processing time, providing too little processing time can lead to anxiety and as anxiety increases, learning decreases. In other situations, if they are not allowed the extra processing time, the task, assignment, or project may not be a true reflection of what their true level of understanding is. Gifted students may also need time differentiated. One characteristic of giftedness is that they like to delve deep into a topic or project. If they are not allowed the time they need to thoroughly investigate a topic, they either do nothing, or again, turn in work that is not representative of what they know. In both instances, there is always the risk that the learner will feel defeated and eventually shut down completely.

What does the DI classroom look like then once the teacher has all of this information? Teaching vocabulary for various learning styles is a good example to use to illustrate differentiating instruction. In all content areas, understanding the vocabulary is essential in reaching an understanding of the concept. One strategy might be to have students make traditional flashcards using index cards with the word on one side and the definition on the back side. These can be whole-punched in the corner and a book ring can be used to keep them together. Another method could be to use an index card with the word on the left side and the definition on the right. Then the card can be cut using a zigzag or similar design to create a puzzle. The cut line could also be colored so that the visual learner equates not only the jagged edge, but also the color with the word and definition. Cornell notes or two column notes can also work well. Word webs and vocabulary matrices are also very effective in teaching vocabulary. I teach several of these strategies, then allow the students to choose the strategy that works best for them. At the same time, I continue to discuss their learning strength so they learn to choose appropriate strategies. Some students need more guidance than others in selecting the appropriate strategy and I use the inventories to help them choose.

Math requires differentiating process in a way that is often different from that of other subject areas. “Thinking out loud” is a simple but useful strategy that can help some struggling learners.

This means that a teacher talks about what they are doing as they solve a math problem at any time in the classroom. This could be while they are determining percentage grades, calculating time left to accomplish something, or any other math problem that needs to be solved in the classroom setting. Using real menus, newspapers, catalogues, or other items with numbers can make the math more meaningful and help the struggling learner see math in the real world. Games make math fun and sometimes make the apprehensive learner less afraid. Chunking can be critical in that there are often many abstract concepts that need to be understood in order to solve a seemingly "simple" problem. But until each concept is broken down, the struggling learner may never reach the desired objective.

Some students grasp the math concept, but struggle with copying the problem from the book to the paper or from the board or overhead to the paper. If the goal is to master the math concept, then eliminating the copying seems a logical step. Copying a math problem appropriately may become more important after the student has successfully demonstrated mastery of the concept. Acetate strips have long been used as place keepers in reading, so why not use the same strategy in math. Large sheets can be cut into appropriate sizes and shapes so that students can keep their place and copy without the frustration of losing the problem each time they look away. Linda Tilton's (2002) book, The Differentiated Instructor's Toolbox, provides excellent examples of how acetate strips can be used with the multiplication table not only to learn multiplication facts, but also in reducing fractions.

For some students, directions that are written out in sentences and in paragraph form become overwhelming whereas writing directions in short phrases and numbering them makes them more understandable. Also, only giving one or two steps at a time as opposed to a long list of directions may be more productive for some students.

If task completion is a struggle, using a timer regardless of what type, can help students work in small chunks of time and feel a sense of accomplishment sooner. Also, the flexible folder (Tilton, 2002) provides a very simple tool that allows the student to see only a manageable numbers of problems rather than looking an entire page which can be daunting.

A Due-do Board (Tilton, 2002) can be initiated for students at higher grade levels that need to learn the difference between when a project is due and what they need to do each evening in the meantime to complete the project on time. Although compacting is required to help meet the needs of gifted learners, it also has its benefits with the struggling learner. If an assignment is especially overwhelming, compacting, which is a strategy often used with gifted students, can provide sufficient evidence of the student's understanding.

A teacher's philosophy of assessment may need to change in the Differentiated Instruction classroom. When thinking of the word assessment and what it really means, educators needs to ask themselves if they want an average of what the learner has completed over the course of a unit of study including the pitfalls and the practice runs, or do they want only the level of understanding of the desired outcome to be measured. Too often, it seems we average in the practice runs and thus, don't paint a very true picture of where our students are in regard to understanding content. Grasping this concept as educators is difficult and educating parents and

students can also be challenging. However, once we've established a DI classroom, it is the philosophy of assessment that is the most logical.

Rubrics seem to provide the most accurate feedback while at the same time encompassing all the choices and options the students may be completing. Points can be awarded through a rubric or just levels of proficiency. Furthermore, the DI teacher needs to accept the idea that not every student may have the same point total at the end of the quarter. Instead, the point total will reflect the amount of work the student has been assigned. This allows gifted learners to be challenged appropriately without putting them in a situation where they chose not to take risks as opposed to taking a risk and maybe receiving a lower grade as a result. Some teachers set up two different columns in their grade book to accommodate for daily work plus enrichment, practice, or re-teaching assignments.

DI classroom management does not differ much from that of the traditional classroom. However, the DI teacher may find that just as they empower students in their learning they can also empower them in self-management. Some students need more stringent guidelines while others may be given more flexibility. For some students, being allowed to get out of their seats more frequently may be an appropriate accommodation. For others, very strict and defined expectations may need to be implemented so that time is not wasted and tasks are completed. Teaching with Love and Logic provides examples of how these can be presented not only to the whole class, but to individual students as well.

Collaboration with other specialists in the school will greatly enhance the DI classroom. To make the collaborating relationship effective, some personnel and housekeeping issues need to be discussed. First, common philosophies amongst those working with the same students will work to empower the teaching team. This will also allow the expertise of each teacher on the team to be utilized. All teachers involved in the DI classroom should share the philosophy that all students can succeed and be totally committed to that philosophy.

If possible, common planning time should be given to collaborating teachers so that they can better plan DI lessons to meet the individual student's needs. Also, specific tasks and roles can be defined to ensure success for the students and the teaching team.

Co-teaching can be done as part of the collaboration effort. There are several styles of co-teaching. One is supportive teaching in which one teacher teaches while the other differentiates for targeted learners or any other learners who may need it. Another style is parallel teaching where the class is divided using the flexible grouping matrix and each teacher teaches a small group based on either readiness, interest, or learning preference. A third style is the complementary approach in which the regular education teacher teaches while the specialist sits beside special needs students and provides accommodations or modifications. The last style is team teaching where one teacher teaches while the other displays the visual cues, writes on the board, or both teachers "juggle" the lesson back and forth in a planned, organized, fluent manner.

Collaboration does require flexibility. It also required active listening and being open to new ideas. In some instances, it may require a willingness to give up control so that the best possible environment can be created for all learners.

And so, on this journey, stops may need to be taken to review the road map, ask for directions, or to simply step back and re-evaluate the situation to ensure we have not made it too complex for ourselves and our students. Whether embarking on the journey or getting back on the road with Differentiated Instruction, the journey is worthwhile.

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American Council on Rural Special Education

Personality Traits of Rural Education Leaders

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PERSONALITY TRAITS OF RURAL EDUCATION LEADERS

Using a personality profile as a tool to provide a source of vocabulary for discussing personality traits is a way people gain valuable information and resources to help leaders lead and support staff build stronger relationships of trust and cooperation. As we all know each person's personality is different, just like our genetic make up is different. We should not try to change others, but merely understand others and help develop the strengths of others while reducing the weaknesses.

Our goal in using Personality Profiles is strengthen us as leaders and to:

- Discover our own personality traits and how we react based on those traits.
- Grow and mature within our style.
- Limit our personality weaknesses.
- Accept our own personality style.
- Learn to understand and accept other's personality styles.
- Learn to create environments in which people with different styles can flourish.

As theory personality traits have no absolute answer for leaders and must be taken as a guide rather then a law. Personality traits are not a complete explanation of behavior because there is evidence indicating that parts or all of the theory are false or remain unexplained.

Personality Traits are generally considered a psychology term. Yet even among psychologists, consensus has not been formed as to exactly how many traits there are and of what value they are to know.

Too many people claim they are a certain personality trait and then use it as an excuse for their behavior, particularly if it is poor behavior. This is part of a larger problem of society not taking responsibility for their own actions. The ethics of this is obvious as one form of moral decay after another has permeated all areas of life.

The theory behind the personality traits is that you are born a certain way and that will be your lot in life. If this is true then reality says that we either need to learn what trait we are or be doomed to depression because we didn't live up to our full potential.

Personality Definition: the combination of characteristics or qualities that form an individual's distinctive character.

For many years the most common personality traits was known as Sanguine, Choleric, Melancholy and Phlegmatic. Recently another trait has been added that kind of fills a void in the theory called Supine.

While it is important for a person to honestly evaluate individual strengths and weaknesses it is far more important to take responsibility for their actions. A person should never make excuses or allow a trait to become a crutch for not doing what is ethical and moral.

Again, traditional psychology falls apart due to the belief a person is born a certain way and cannot be expected to wholeheartedly change their ways. I am convinced that you are able to use your inborn tendencies to become an advantage for you and a gift to others. Your temperament can make you more relatable and allow you to share your perspectives that others may not have or consider unimportant.

I do think that the personality traits can be helpful if used as a medium to get people to think about whom they are and the way they interact with loved ones and society as a whole. For this reason here is a list of the different personality traits and their names.

Researchers and creative writers through history have had many different lists of personality traits. All are similar and some are listed below:

The DISC System
D - Dominance or Drive
I - Influence
S - Steadiness
C - Compliance

Merrill-Reid Styles
Expressive
Driving
Analytical
Amiable

Tim LaHaye and Florence Littauer in separate writings
Sanguine
Choleric
Melancholy
Phlegmatic

Gary Smalley/John Trent
Lion
Otter
Golden Retriever
Beaver

Gary Smalley reworked them again and renamed them
The Captain
The Social Director
The Steward
The Navigator

Choleric: A Choleric is focused on getting things done, but can run rough-shod over others. Cholerics are dominant, strong, decisive, stubborn and even arrogant. This is the commander-type.

Melancholy: A Melancholy is a planner, making sure things happen, although sometimes they can paralyze themselves with over-analysis, often a perfectionist and very particular. Their typical behavior involves thinking, assessing, making lists, evaluating the positives and negatives, and general analysis of facts. This is the mental-type.

Sanguine: A Sanguine gets along well with people and can get others excited about issues, but cannot always be relied upon to get things done. They love interacting with others, enjoy fun, socializing, chatting, telling stories. They have a tendency to over-promise and under-deliver. This is the soci*al-type.*

Phlegmatic: A Phlegmatic is neutral - they tend not to confront issues or people, but their indifference may cause frustration. They try not to make decisions, and generally go for the status quo. A phlegmatic person is calm, unemotional, indifferent, unexcitable and relaxed. Phlegmatics are generally self-content and kind and make themselves lazy and resistant to change.

Supine: Supines are identified by strengths, such as a desire to serve, liking people, and having a gentle spirit. Their weaknesses include expecting others to read their mind, harboring anger as hurt feelings, and feelings of powerlessness. They are generally open to receiving affection, but have trouble initiating.

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Problems Inhibiting the Adoption of Positive Behavior Supports Among Rural School Teachers

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PROBLEMS INHIBITING THE ADOPTION OF POSITIVE BEHAVIOR SUPPORTS AMONG RURAL SCHOOL TEACHERS

Introduction

Positive Behavior Supports and Interventions (PBS) have emerged as best and effective practices for managing challenging behavior. The 1997 amendments to the IDEA mandated the use of these evidence-based practices among schoolteachers by requiring their use in addressing behaviors which interfere with the learning of students with disabilities and with the learning of others (Quinn, Gable, Rutherford, Nelson, & Howell, 1998). Since then PBS have been permeating our school systems albeit slowly.

There are many plausible reasons why school systems have been slow in adopting these evidence-based practices. One explanation could be that schoolteachers are afraid of breaking with tradition and embracing a new culture. Another could be that schools lack systems for identification, adoption, and sustained use of these research validated practices (Muscott et al. 2004; Sugai et al. 1999).

Rural schools, in particular, face severe challenges in their attempt to meet legislative requirements requiring the use of PBS for children exhibiting challenging behaviors (Mitchem & Richards, 2003). However, because one fourth of U.S. children attend rural schools (Beeson & Strange, 2000), it is important to identify ways to foster successful adoption of evidence-based practices in order to promote positive educational outcomes among children with disabilities served in rural settings. In order to foster adoption of PBS in these school systems it is important to identify the factors that hinder the adoption of these evidence practices first. This study was designed to identify difficulties encountered by teachers, in a rural Midwestern school district, in their efforts to adopt PBS in their school systems.

Method

Participants

Twenty one teachers participated in the study. Nineteen of the participants were regular education teachers while two were special education teachers. The teachers averaged 14 years of teaching experience. Twelve of them had a master's degree, two had a bachelor's degree, and one had a high school certificate while eight did not provide information on their academic qualifications. All the teachers had received training through workshops conducted through a statewide federally funded initiative on positive behavior interventions and supports.

Procedures

A Likert type survey was sent out to 40 teachers who had participated in the PBS initiative. Only twenty one of the surveys were returned. The questionnaire had 24 items in a Likert-type format (1- to 7- point scale). The Likert scale represented the level of difficulty for each item with one indicating the least difficulty and seven indicating the most difficulty. The items were divided into four categories i.e. specific skills, techniques, shared values and other areas. Descriptive statistics were run to compute the mean difficulty for each category.

Results

According to the results the teachers indicated that they found 'other areas' to be most difficult (M = 4.9). Items listed under 'other areas' included the following: understanding technical terminology in PBS literature, large class sizes, time constrains, and availability of resources to teachers. The category that proved to be at the next level of difficulty was 'shared values' (M = 4.1). The 'shared values' items included collaborating with families, collaborating with other staffs, raising awareness of PBS in the school , and using the team based approach. 'Specific skills' proved to be quite difficult as well (M = 3.7). "Specific skills" included the use of graphs, data collection and interpretation, conducting FBAs, and formulating hypotheses regarding possible functions of problem behavior. Finally, 'techniques' were rated to present the least difficulty (M = 3.6). "Techniques' included the following: use of reinforcement procedures, curriculum modifications, modification of instructional antecedents, teaching of replacement behaviors, designing of behavior support plans, and implementing and evaluating behavior interventions. See Table 1 for these results.

Table 1: Mean item difficulty for different skills

Items	M
Specific skills	3.7
Techniques	3.6
Shared values	4.1
Other areas	4.9

Note. Item ratings ranged from 1 (least difficult) to 7 (most difficult)

Discussion

PBS interventions have emerged as best and effective practices used to address challenging behavior among children with disabilities. Unfortunately, these practices have not been widely adopted in most school systems regardless of the law mandating their use. Different reasons have been suggested why these evidence-based practices are taking long to permeate our school systems. One of those reasons could be the fact that school teachers find it difficult to adopt this relatively new technology. This study demonstrated that teachers face many challenges of varying levels of difficulty in attempts to use PBS strategies. It is essential to address these challenges in teacher preparation or staff development programs across the nation to ensure that PBS are utilized more in our schools.

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Rural Special Education Students in Post-Secondary Education:

Implications for School Counselors

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RURAL SPECIAL EDUCATION STUDENTS IN POSTSECONDARY EDUCATION: *IMPLICATIONS FOR SCHOOL COUNSELORS*

Background

In light of the current national focus of inclusion and education for all students due, in part, to the No Child Left Behind (2002) legislation, students enrolled in special education programs should be afforded the same opportunities for continued education beyond high school in order to enjoy the advantages of achieving postsecondary education. Postsecondary education has long been associated with upward mobility in the United States (Sewell and Houser, 1971) for its quality of life rewards in status and income. Because higher education is one of the most salient predictors of status attainment in America, educators, students, parents, policymakers, and the public are concerned with what factors contribute to postsecondary educational attainment (College Board, 1999).

Past research illustrates that students who come from high socioeconomic backgrounds, intact families, involved schools, and who are motivated to succeed are most likely to remain in postsecondary education through degree achievement (Pong, 1998; Powell & Downey, 1997). Fewer than 40% of potential postsecondary students in the United States meet any combination of those characteristics for success, so mediating the gap for the majority of students in America is a crucial task for America's secondary and postsecondary institutions of learning (Horn & Berger, 2004). While some states with many rural districts have developed comprehensive developmental guidance programs to alleviate educational problems, they still have fewer graduation rates and students enrolling in postsecondary education than districts with more affluent, suburban districts (Bergin & Miller, 1990). Unable to mobilize large-scale programs due to budget and staffing constraints, one of the advantages rural districts enjoy is the ability to engage the whole community in school education improvement projects (Bareis & Pries, 1987). Due to the smaller number of school counselors available to offer services in specific areas (e.g., drop out prevention, special education, specific issue counseling, teen pregnancy prevention), Rose-Gold, (1991)

recommends a "smorgasbord" approach to service delivery. In order to best serve the unique needs of each district, conducting a needs assessment for the guidance program enables each school within a district to tailor its counseling needs accordingly. In so doing efforts to increase retention at the secondary level and to promote success at the primary level can serve to address the deficiencies and build upon the strengths each school has to offer to serve the needs of each student (Carter, 1992).

Special education students face even more challenges than students in mainstream education due to barriers of access for high achieving students (Cross & Burney, 2005), inadequate alternative teaching methods, and accommodations at postsecondary institutions (Eckes & Ochoa, 2005). Special education students in rural settings face the same challenges as those in other, more populated, areas with the added challenge of scarce resources in rural districts (Rose-Gold, 1991) and lack of postsecondary educational opportunities near their homes. The present research aims to shed light upon national data about rural special education students in secondary schools. Special emphasis is placed upon the role of the school counselor and the implications for counselors to promote success for the population of rural special education students.

Method

The data were derived from the United States Education Longitudinal Study (hereafter referred to as ELS: 2002). ELS: 2002 is the fourth major longitudinal study sponsored by the National Center for Education Statistics (NCES), closely reflecting the research purposes and designs of its three predecessor studies (i.e., National Longitudinal Study-72, High School &Beyond, and National Education Longitudinal Study: 88). Considering the purpose of this study, ELS: 2002 is appropriate because it contains nationally stratified data to include a representative sample of United States' students by race, gender, SES, region, and particularity relevant for the present study, special education status. The ELS: 2002 drew information from parents, students, school administrators, teachers, and school records.

Cross-tabulation analyses of school urbanicity (the term ELS uses to define schools categorized as urban, suburban, or rural) were computed for educational expectation, seeing a counselor for college information, and gender for rural special education students. Cross-tabulation is an appropriate statistic for these analyses as they are nominal data points illustrated by percentage values.

Findings

We found that students in special education exhibited a lower educational expectation than mainstream students, and that while rural special education students have a lower educational expectation than suburban students, the did not differ in any significant way compared with urban students. Urban special education students, in fact, had the lowest expectation of postsecondary education. In terms of gender, male students were more likely to be in special education programs in all urbanicity categories, with rural male students representing 58% of special education students compared to 42% of females. Rural special education students did see school counselors for college entrance information, 48%, which is remarkable considering only 41% of rural students as a whole sought college entrance information from school counselors. These findings indicate

rural students are more similar to suburban students in terms of utilizing counselors. Urban students had the least counselor involvement. Rural special education students had the lowest educational expectation of all groups indicating one of a number of potential explanations such as a lack of exposure to postsecondary educational opportunities, barriers to access, lack of specialized curricula (college-prep) in high school, distance from college, economic, social, or familial constraints.

Implications

The findings suggest that school personnel can play a role in stemming the tide of dropout and promoting enrollment in postsecondary education. Because rural special education students are more likely to come into contact with school counselors due to their special education status, counselors can help students, along with parents and other school personnel, to develop a long-term educational and vocational plan. Though 67% of rural high schools offer at least some vocational programs (NCES, 2002), engaging rural special education students in planning for careers that require training at a two or four year college necessitates counselors to help students develop attainable goals. Some recommendations include thinking beyond limitations and exploring possibilities by matching students to careers by interest and skill counseling. Having college resources where students can find college information that accommodates special education needs helps students to think of postsecondary education as a possibility. Making the connection and following through makes the key difference. Counselors are in a unique position to connect rural special education students to postsecondary opportunities because of their involvement in placement, IEP, and re-evaluations.

Summary

Rural special education students face challenges in attaining postsecondary education due to constraints of location, availability of specialized programs, access to a college-prep curriculum, and economical considerations. Despite these challenges, rural special education students fare better than urban students due, in part, to community involvement in schools and smaller enrollments. School counselors need to be knowledgeable of special education issues as they are often the special education liaison between the schools, parents, and postsecondary opportunities. By focusing on the total educational experience of students from PK-postsecondary, counselors can help to create opportunities for rural special education students.

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Special Education and General Education Collaboration Through Bibliotherapeutic Interventions

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SPECIAL EDUCATION AND GENERAL EDUCATION COLLABORATION THROUGH BIBLIOTHERAPEUTIC INTERVENTIONS

Meeting the needs of students with disabilities, including those with emotional or behavior disorders (EBDs,) in rural areas can be challenging. One obvious challenge involves fewer numbers of students with special needs over a greater geographic area for teachers to serve. Often it is necessary for Special Education teachers to provide services to students at multiple school sites. Who helps the students when the special education teacher is not on site?

Empowering General Education Teachers

One suggestion to provide the best possible support to these rural students with disabilities is to empower the General Education teachers in whose classes they are taught. General Education Teachers can collaborate with Special Education Teachers to (a) plan for the individual needs of the students, and (b) to develop and learn practices and skills that will help them more effectively work with the students in the General Education setting. Through their collaborative endeavors the Special Education Teacher can provide new ideas and suggestions to the General Education Teacher, expanding the General Education Teacher's repertoire for working with their students with disabilities (capacity building.)

Bibliotherapeutic Interventions may be a useful set of practices with students who have EBDs. Students with EBDs are sometimes characterized by faulty thinking patterns -- irrationality and negative self-statements (Sutton-Simon & Goldfried, 1979.) Bibliotherapeutic Interventions, when used intentionally, can provide a context for addressing not only academic and social needs, but also the cognitive needs of students with faulty thinking patterns.

By working with the Special Education Teachers, the General Education Teacher(s) can learn interventions and skills that will empower them to work with Special Education students. More specifically, General Education and Special Education teachers can collaborate utilizing the regular curriculum and General Education setting to provide Bibliotherapeutic Interventions for students with EBDs while meeting the needs of the regular student body. Special Education teachers can address more student needs via the collaboration by empowering General Education teachers to work effectively with all students.

Teachers teach students. Each teacher has a responsibility for doing what is necessary to be effective with each of their students. The academic content for which they are responsible can be considered the vehicle for teaching students. Content area material can be taught to all students and be a means for addressing the individual needs of students with disabilities. This proceedings paper focuses specifically on how General Education Teachers, working in collaboration with Special Education Teachers and utilizing the regular curriculum, can address needs of students with EBDs. By utilizing the regular curriculum the General Education T is able to (a) teach what she is required to teach, (b) work in a milieu of comfort, and (c) view working with Special Education Ss as only a modification (small change) and not a major revamping of her effort.

Students with EBDs, in particular, can be very challenging in the classroom. Their disabilities are invisible. Their behaviors can be demanding and distracting. Emotional issues can cloud rational thinking and result in faulty thinking patterns. To be effective, teachers must have some tools for addressing the behaviors, emotions and also faulty thinking.

General Education Teachers may think they cannot meet the needs of students with EBDs unless they compromise their curriculum or take away from their General Education students. This is not necessarily true. Our suggestion is that if General Education Teachers and Special Education Teachers collaborate and use the regular curriculum they can meet some of the needs of EBD Students through Bibliotherapeutic Interventions. This idea is attractive as use of the regular curriculum is likely to reduce teacher resistance while promoting acquisition of the regular curriculum, expansion of comprehension skills, connecting the content to the students' lives (both General Education and Special Education students), and can ultimately provide a context for more individualized interventions.

Benefits of Bibliotherapy

In Bibliotherapy we use books to help people solve problems (Prater, Johnstun, Taylor-Dyches, & Johnstun, 2006.) The use of books to solve problems is not incidental but rather done through the guided reading of written materials towards the purpose of gaining understanding or solving problems (Riordan & Wilson, 1989.) Bibliotherapy employs identification, catharsis and insight (Tom McIntyre, www.BehaviorAdvisor.com.)

Bibliotherapy is rooted in applied psychology. It may date back to Anna Freud's use of books as part of play therapy with children. Its use has expanded over the last hundred years or so. Developmental uses of bibliotherapy includes "…helping healthy people in normal growth and development," while clinical uses "…involve psychotherapeutic methodologies used by skilled practitioners with populations in a specific treatment program for emotional or behavior problems," (Schlichter & Burke, 1994, p. 280.) Now bibliotherapy is used not only with children but also adults. Furthermore, it may be utilized by professions outside of psychology, such as education.

Regarding the effectiveness of Bibliotherapy, Schrank observed positive results related to attitude change and mental health but mixed results related to self-concept, fear reduction, and achievement (1982.) Other research findings suggested little if any objective evidence showing

gains in Special Education (Lenkowsky, 1987) While Riordan and Wilson (1989) noted increased interest despite mixed results of the research, and that effectiveness seems to increase with the experience of the bibliotherapist. Practitioners should be judicious in the use of Bibliotherapy as it cannot be used with all students or in all settings. It can help identify emotions and establish trust (Pardeck, 1994.)

Bibliotherapy is intended as part of personal therapy, and therefore should be used by trained therapists. However, we can borrow some of the practices and apply them responsibly in the educational setting. Hence, in this paper the practices described will be referred to as Bibliotherapeutic Interventions. These interventions rest on the premise that a Special Education Teacher and at least one General Education Teacher will collaborate in the efforts.

We have identified three different Bibliotherapeutic Interventions that are appropriate for teachers to use. The three interventions are identified as Direct, Indirect and Moral Dilemmas. Direct Bibliotherapeutic Interventions utilize selected literature, sometimes from the General Education curriculum, to directly address student issues which manifest themselves in the classroom. Indirect Bibliotherapeutic Interventions utilize General Education curriculum to introduce a context within which the teachers can address the special needs of students with EBDs when the Special Education teacher is not present. Follow-up can include the use of Life Space Interviews to process student cognition and emotions. Finally, Moral Dilemmas provide an opportunity for all students to learn about their own values, choices, and cause-effect relationships.

In each of these interventions the teachers utilize literature from and / or related to the students' regular curriculum. By utilizing the regular curriculum the teachers are able to teach the required academics as usual. However, the regular curriculum is expanded to address both students' social needs and cognitive needs. Lessons, therefore, are designed to have an academic objective, and also a social and/or cognitive objective, as needed.

Prater, Johnstun, Taylor-Dyches and Johnstun (2006) identify a useful 10-step process for implementing bibliotherapy for students at risk of school failure.

1. Develop rapport, trust, and confidence with the student.
2. Identify other school personnel who may assist.
3. Solicit support from the student's parents or guardians.
4. Define a specific problem the student is experiencing.
5. Create goals and activities to address the problem.
6. Research and select books appropriate for the situation.
7. Introduce the book to the student.
8. Incorporate reading activities.
9. Implement post-reading activities.
10. Evaluate the effects of bibliotherapy on the student.

A summary of research information from multiple sources (Frasier & McCannon, 1981; Pardeck & Pardeck, 1990; Schlichter & Burke, 1994; and Sridhar & Vaughn, 2000) suggests teachers need to plan carefully before, during and after the intervention.

Bibliotherapeutic Interventions

After examining the research on Bibliotherapy and considering best practices from Special Education we identify nine important factors that are likely to increase the success of Bibliotherapeutic Interventions in the classroom. They are presented below:

1. Planning and Use by an Interdisciplinary Team
2. Implementation in the General Education Setting
3. Literature Selections balanced to achieve state objectives and individual student needs.
4. Lessons implemented within the Context of Cooperative Learning
5. Reading (shared or individual)
   - ✓ Pre-reading: activities to develop motivation and interest in reading the material
   - ✓ During Reading: if shared reading, discuss what we are learning from our reading as we go (including mediating questions)
   - ✓ After Reading: closure, connections to own life (including Individual Reflection & Publishing)
6. Use of carefully planned Mediating Questions: comprehension & personal insight
7. Individual Reflection (written, art, or other)
8. Publishing of Reflection
9. Generalization of concepts learned to daily life: Life Space Interview or Coaching activity.

Teachers who co-plan can address each of these factors and create lesson plans that meet the social and cognitive needs of their students. The lesson plans should be designed so that students engage in reading and discussing various books or pieces of literature. Their study of the literature is extended by an application level activity intended to challenge their thinking and personalize the content of the reading.

For example, second grade students can read Wanted: Best Friend by A. M. Monson. As an extension the students write their own want ad for a best friend (development of writing skills and exposure to different genre.) The purpose is for each child to identify what he or she desires in a best friend. Additionally, each child will learn what others want in a best friend as students read aloud their want ads and post them throughout the classroom. The teacher facilitates a discussion of qualities in a best friend to heighten students' awareness of the qualities and to establish a context of importance for best-friend-behaviors in the classroom. This context of importance for best-friend-behaviors in the classroom may be as important as, if not more important than, the story itself. Now, within this important context, behaviors that are not best-friend-behaviors can be discussed in relation to the story, the class discussion, and the best-friend-behaviors identified by the students. This is the place where the faulty thinking patterns can be addressed with sensitivity.

Imagine that a student with an EBD is engaging in behaviors that are contrary to those identified as best-friend-behaviors. Teacher can discuss his actions, such as during a Life Space Interview. The new piece is that instead of focusing on the student, the teacher can focus on the best-friend-behaviors which were identified by the class -- including the student with EBDs. The focus of discussion creates distance from the sensitive issue off of the individual student and onto the issue (best-friend-behaviors) itself. Prater, Johnstun, Taylor-Dyches, & Johnstun (2006) have

noted that this distance is important component for students who might otherwise not be willing to address the issues. Now the student can safely examine how closely his understanding of best-friend-behaviors matches (or does not match) his own behavior as a friend.

Stories are interesting, can address any issue imaginable, and can easily be connected to the regular curriculum. General Education Teachers can learn to engage in Bibliotherapeutic Interventions as well as follow-up activities and Life Space Interviews. By collaborating with Special Education Teachers and processing their collaborative efforts over time, the General Education Teachers will develop and refine their skills. The collaboration will become proforma and the General Education Teachers can feel skilled and effective in the absence of the Special Education Teacher. Thus, they can provide needed support for the students with EBDs even when the Special Education Teacher is not present.

Future Efforts

Special Education Teachers with whom we work are currently exploring these interventions and are excited and pleased with their results. We are identifying books to use for each of the three intervention types, Direct, Indirect and Moral dilemmas, and compiling a basic bibliography. Additionally, we are examining the necessary lesson components which make the Bibliotherapeutic Interventions most effective.

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The Changing Face of Rural

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THE CHANGING FACE OF RURAL

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Title: *University-School District Professional Development Partnerships: A Rural Perspective*

Purpose

This presentation will define, describe, and share acquired learning about a professional development "onsite" university-school district partnership program aimed at delivering customized professional development courses in two mid-western rural school districts. Customized graduate courses are being delivered to two rural communities that offer a variety of graduate level learning options right at the school districts' doorstep. The customized options offered included the following: a Masters of Science degree in Curriculum and Instruction, the state's Board of Teaching reading licensure endorsement, courses aligned with add-on special education licensures, and other courses for those educators who simply wanted to update their teaching practices. Pending the results of these two partnerships, other rural school systems will be offered similar customized programs. In this context of delivering customized university courses to educators, the changing face of rural education will be intentionally linked to a state university where both parties will grow.

Background

For the last few years in this mid-west state, the state university system has identified the need to take university coursework to school districts. With the emphasis on designing, developing, and offering undergraduate and graduate courses online, there is still a need for face-to-face school district based university instruction. The idea of providing an onsite customized masters program and other graduate programs within a 100 mile radius of this liberal arts state university was created by three dynamic forces: the need defined by local school boards to provide research based teaching strategies to enhance the learning of the students, low state assessment scores for students, and the economics of a state university with a declining student population.

Two rural school districts were specifically interested in discussing the possibilities of university professional development services being offered for their teachers. The first district was interested due to the fact that the school superintendent provided adjunct services to the university and knew the Chair of the School of Teaching and Learning very well. In addition to

providing professional development instruction in the areas of research based teaching strategies, there was a very strong need in providing culturally relevant Native American information as well. The demographics of this district included a 70% enrollment of Native American K12 students as well as a 65% need for a free and reduced lunch program. These school based items when added to the community based insistence for including culturally relevant curriculum in the schools were the identified starting points for the customization process.

Program #1

Planning for the Masters of Science Degree in C & I was started in the Spring of 2006. Many issues from community and school wide perspectives were identified, addressed, and to some extent resolved. In August 2006, a combined cohort of twenty seven K12 educators from the initiating school district and surrounding rural school districts started a Masters of Science in Curriculum and Instruction on Wednesday evenings from 4:15 to 8 PM. The first two courses included ED 601: Psychological Foundations of Education and ED 632: Curriculum, Instruction, and Learning. There are a total of 14 graduate courses and a variety of electives that lead to a graduate action research based project. The masters' program will be completed in three school years.

Specific program issues identified were categorized by three specific perspectives: the school board/superintendent, the K12 teachers/university instructors, and the university administration/university program coordinator. At the recent AACTE Annual Conference held in New York City, this program was presented in order to share the work-in-progress as well as encourage participant idea contributions (Howell, C., Street, S., & Bradbury, B., 2007). Listed below are the top three concerns noted by each stakeholder:

School Board and District Superintendent	K12 Teachers and University Instructors	University Administration and University Program Coordinator
"How much will this cost & how will this affect the district's programs?"	"What's in this for me? How will this program. enhance students' learning?	"Can we afford and manage to do this with our current resources?"
1. quality of the masters' program (rigor, relevance, research-based)	1. frustration at being accused of racism or blamed for low achievement.	1. lack of experience with this school or w/ school based professional development in general.
2. cultural relevance	2. cost of masters' program.	2. driving/ transportation
3. political support from school board, parents, teacher union, community.	3. convenience given "my" teaching load and extra curricular responsibilities.	3. long distance between school/university and consistent communication.

The focus of the ED 632 course on curriculum, instruction, and learning centered on the Content Enhancement Routine Program (Lenz, B. K., Bulgren, J. A., and Hudson, P., 1990) initially

developed and researched at Kansas University. Specifically, the introduction and teaching of the Course Organizer was the centerpiece of this course. As the teachers developed an understanding of the elements of the course routine, how the elements fit together, and how they clarified the expectations for learning, some teachers began to invite the instructor into their classrooms to observe what they were doing in their teaching and how the students responded. This evolved into a coaching/mentoring opportunity that ten of the 27 teachers selected to participate. The rate of comprehending and applying what was being taught in the course by those teachers who opted for the mentoring, rapidly accelerated to the point that five of the ten high level teachers independently developed the unit and lesson organizers as well.

Program #2

In the second rural district, the request for customized professional development services was uniquely different from Program #1. The starting point for this program was the district's professional development committee. The university consultant, not an instructor because this district did not elect to have university courses taught onsite, met with the committee to determine needs and appropriate services/delivery models. The secondary program needs were focused on developing 7-12 students' abilities to acquire content knowledge from content course texts. The elementary school selected to work on the development of math skills given the recent results of the state assessment scores.

The implementation for providing services was awkward for a variety of reasons to include the following: individual members of the professional development committee reported that the district-university partnership was not a result of the committee's input but a mandate by the school superintendent. Secondly, most teachers were not clear as to what the intent was for the professional development services, especially at the secondary level.

In meeting with the respective school principals, it was decided that the consultant would provide an overview one hour workshop about the service options with a clear district level rationale. Results of the Secondary Workshop include the following:

The RAP Strategy: A Learning Strategy that Enhances (Content) Reading Comprehension

[Secondary Faculty Survey Results]: N = 45; Response Rate = 16 or 36%]

In today's workshop we identified, discussed, and described Content Enhancement interventions with specific attention given to the KU-CRL RAP strategy. Likewise, we spent an equal amount of time discussing the application of Effective Teaching Practices. Given this context, please respond to the following with your best answer.

1. Today's information was helpful because (circle any of the following that best describe you…and yes, you may circle more than one)…

    a. it validated what I am already doing and I can actually tell that my teaching is positively affecting my students' learning. **1**

b. it validated what I am already doing and I still need some support on how this can further enhance my students' learning. **6**

c. it clearly defined areas of teaching and content enhancement that I can use in my classroom immediately. **8**

d. it clearly defined areas of teaching and content enhancement and I would like some additional support in these areas. **3**

e. if the 60 minutes you attended didn't work for you, circle this response and **briefly** describe why. - **No Responses**

2. Given the support options below, I would like assistance at the following level (please circle one or more below):

   a. indiv. consultations in addressing the learning needs of "my" students **5**
   b. small group consultations (departments, programs, areas of focus) **9**
   c. demonstration lessons in classrooms highlighting research base strategies **8**
   d. co-teaching lesson opportunities **1**
   e. providing a course…or more within the school district to earn credits **1**
   f. provide a Master's Degree in C & I within the school dist. – **No Responses**
   g. other professional development services as identified and discussed **2**
   h. thanks, but no thanks – **No Responses**

3. Other…handwritten comments…verbatim: ["Great job – thank you, I heard some teachers wanting a mini lesson on "essential" questions – how to develop and use them, Thanks very informative, And we enjoyed you! Thank you!"]

Conclusion

Both rural school districts continue to be actively engaged in the district-university professional development partnership. Program #1 is deep into the second semester with two courses aligned with culturally relevant course texts, guest speakers from the community, and a sense of possibility for teachers and the community to be more aware of each others' perspectives. Program #2 is moving forward with 1 on 1 university consultant-teacher meetings and department level meetings. The elementary school has invited the university consultant to provide 30 minute "focused workshops" over lunch for interested teachers. The first workshop is scheduled for Wednesday, March 7 on the value of essential questions (Jacobs, 1997) and the implications for teacher friendly curriculum mapping.

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The Changing Face of Rural in the Nine Nations of North America

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THE CHANGING FACE OF RURAL IN THE NINE NATIONS OF NORTH AMERICA

In 1981, Joel Garreau published *The Nine Nations of North America* in which he described the North American Continent in terms of nine distinct sociologic/economic regions—Quebec, New England, The Foundry, Dixie, The Islands, Mexamerica, the Breadbasket, Ecotopia, and The Empty Quarter. Garreau's work has been the basis of at least two previous ACRES presentations—"The Changing Rural Context" (Panel), ACRES, Reno, NV, March, 2002 and "Rural Special Education in the *Nine Nations of North America*: A Policy Proposal for the American Council on Rural Special Education (Fishbaugh, Berkeley & Dempsey), ACRES, San Antonio, TX, March, 1997. Building upon this previous work, a monograph, *The Changing Face of Rural: A Basis for Rural Policy Development* has been in process for two years. Each chapter of the monograph will describe the current sociological and economic status of one of eight of the nine nations (Quebec has not been included), the impact on rural education, and the implications for rural educational policy development. As authors, our ultimate goal is to provide state and national policy makers with some knowledge of the past, an understanding of current reality, and a future vision as they struggle to balance urban, suburban, and rural educational needs with resources.

Each of the chapters, as with the regions, has its own personality. These differences result from regional differences as much as from the individual differences of authors. This proceedings manuscript provides a taste of these differences and an anticipation for full chapter development.

New England (Berkeley, T.R.). (roughly, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine) Still all or much of the external perceptions of New England is idyllic. There is little doubt that New England, its rural places, have changed just as have the rural places throughout America. Yet defining all that is good and all that could be better in rural New England are its people and its places. Rural New England spans the spectrum of rich to poor, educated to illiterate, talented and gifted to those with ordinary and necessary skills, the elderly and the young, places of remote beauty to places that are impoverished and close to abandoned sites where the mountains meet the sea, to pristine lakes and ponds to polluted rivers and streams---as the spectrum of the human and geographic condition can be described, there is New England.

What is New England past? What is New England now? Similar to the words atop the entrance to the National Archives, "The Past Is Prologue." With the exception of the disenfranchised, I expect, and native, White, long-lived New Englanders who "see" and "tell" at Town Meeting of the ills of the world and how newcomers are raising their property taxes, the chief form of revenue for most New England cities and towns, it is the Fall foliage, rocky coasts and lobsters, winter, black flies, moose, small private colleges, Harvard, Boston, maple syrup, L.L. Bean, colonial houses, the town common, etc. making-up the image many from far away have of the six New England states. True, this is part of who New Englanders happen to be; yet, there is much more to New England. There is poverty, urban blight, suburban riches and ills, country roads, and other rural pathways leading often to nowhere for its inhabitants. Increasingly, I expect, these changes have been two or three generations or so in the making.

Simply, though, there is a need to explain the place. Without New England as a place, its people cannot be put in context. For as in many other areas, people and place in New England are interconnected, woven as a tapestry of contrasting colors, hues, pastels, and stark differences. A place of stories---truth and fiction.

The Foundry (Ludlow, B.) (roughly, New York, West Virginia, Pennsylvania, Ohio, Michigan, Indiana)

Dixie (Collins, B.C.) (roughly, Maryland, North and South Carolina, Georgia, Northern Florida, Alabama, Louisiana, Arkansas, Mississippi, Tennessee, Kentucky) In recent years, Dixie has undergone an economic evolution in its labor force, degree of poverty, property values, tourism, and reliance on income from vices. For example, women have entered the work force when traditionally male-dominated industries have had massive lay-offs of employees, resulting in an increase in non-traditional students seeking to learn new trades. The disparity between the rich and the poor has grown more apparent, as seen in the aftermath of Hurricane Katrina. People of wealth have discovered Dixie as a retirement and second-home Mecca, causing an increase in property values to the extent that many native southerners have been forced to sell homesteads that have been in their families for generations in order to pay property taxes. At the same time, many small towns are dying as interstate highways bypass them. Local economies have been forced to turn to national chains for sustenance as small local businesses have closed. Many areas that have fought to attract tourism have had to trade quaintness and charm for souvenir shops and outlet malls. On top of these trends, the remoteness of many areas in Dixie has attracted an

income based on vices, both illegal and legal. Farms for marijuana and labs for methamphetamine are hidden throughout the regions, as gambling casinos draw players to Indian reservations. These economic trends have had an impact on rural education. Many of the states in Dixie are in the bottom 10 for the amount of money spent on education. As families have migrated for economic reasons, schools in rural districts have been forced to close and consolidate. Finding "highly qualified teachers" is often impossible, and moving students to higher performing schools is not an option.

Historical evolution in Dixie has found resistance to change. Many people still fight to keep the flag of the Confederacy on public display, many schools often fight battles to keep rebel mascots, and towns fight to keep Confederate heroes on display while resisting the addition of forums to honor African American heroes. Although the Civil Rights movement of the 1960s led to desegregation laws, schools continue to battle prejudice, as is evident in the over representation of African-American children in special education.

Social evolution in Dixie is evident in new immigration patterns, the influence of media on the culture, religious resistance to change, and an escalation in violence. The traditional population of Caucasians and African-Americans has expanded to include persons of Asian and Hispanic descent, creating a growing population for whom English is a second language. The impact of advertising in the media has created a demand for franchise products, causing national chains to replace local businesses, altering local culture. Court battles have been fueled by perceived threats to the Bible belt that runs through the region. These have involved gay rights and the right to display the Ten Commandments. Incidents involving violent random shootings have brought home the fact that Dixie is not immune to this national phenomenon. Social evolution has found schools unprepared to deal with issues related to diversity, changing mores, and school violence.

In summary, Dixie is losing much of its identity and there is strong resistance to this inevitable change. Rural school districts are dealing with national urban issues that they never anticipated would affect small southern towns and school districts. As schools struggle to respond to a myriad of cultural ills and challenges, they also struggle to meet the requirements thrust on them by No Child Left Behind. For example, the difficulty in attracting highly qualified teachers to impoverished regions has led to an increase in the use of distance education technologies to prepare local persons for employment in small, isolated school districts, particularly in the area of special education. In order to address the challenges that are evolving in Appalachian, educators need to be proactive in attacking problems in generating solutions. This includes fighting for laws that address local issues and in competing for federal funding to address social ills and bring equity to the region.

The Islands (Miller, K.) (Southern Florida, the Keys, US Caribbean Territories)

Mexamerica (Stowers, G. & Sebastian, J.) (roughly, Texas, Arizona, New Mexico, and Southern California) As Garreau (1981) predicted, Meximerica , situated in the southwestern portion of the United States, has become a dominate and highly influential region in the United States and the world. The southern border of Mexamerica runs approximately 2,000 miles from San Diego, California, in the United States and Tijuana, Baja California, in Mexico, on the west coast to Brownsville, Texas, and Matamoros, Tamaulipas, on the East Coast. The border follows US

interstate 8 over tall mountains with impressive boulders, through flat desert that irrigation has turned into the agriculture-rich Imperial Valley farmland of California. The eastern border of the region is anchored by the bustling city of Houston, often viewed as the "energy capital" of the world. Yet, in between these cities are wide open expanses of desert that are sparsely populated for mile after mile, on both sides of the border. The economic, social and cultural influence of this region extends far north of the US/Mexico border area into most of the other eight "nations".

The concept of a border brings to mind romance and challenge, the excitement of crossing a foreign border into another country or state or state of mind. The border is that line some people fear crossing, that others cross daily and still others want to cross but are not allowed. The southern border of Mexamerica has long been a place of controversy where illegal activity has included the smuggling of drugs and people. Most recently it has become the focus of the War on Terror.

Mexamerica, as its names suggests, is "binational, *as well as* bicultural and bilingual". The region has always been influenced by its neighbor to the south, more so in recent years as US economic policies (North American Free Trade Agreement—NAFTA) have been implemented. The cross-cultural influences, easily observed across the region in the language, food, customs, and economy, noted by Garreau in the early 1980s have only increased with the rapidly growing Spanish-speaking minority These cultural changes are played out across all of society in the region and beyond.

Case studies of two small towns one on each side of the border between Chihuahua, Mexico, and New Mexico, United States clearly delineate the broad changes experienced in this region since the early 1980's. The cases provide context to frame the discussion of the influences of Mexamerica on educational programming in the region. The two communities have come together to provide educational programs for their children. Issues that focus on economic, social, cultural and linguistic differences provide the basis for recommendations to policy makers dealing with the effects of Mexamerica nationwide.

The Breadbasket (Zacharakis, J., Devin, M., Miller, T.) (roughly, Illinois, Wisconsin, Minnesota, North and South Dakota, Kansas, Nebraska, Oklahoma) In the Breadbasket, the future health of rural schools is directly related to the sustainability of their rural communities. Measuring school success by the standard parameters of student test scores and achievement is meaningless in the overall scheme of defining what is a rural community.

The causal relationship between rural communities and their schools suggests that high quality education in and of itself does not strengthen a community's ability to sustain itself or grow. Rather, the argument can be made that the social construction of rural education depletes rural communities by preparing the best and brightest young minds to venture forth in search for greener pastures. The human capital model of education does not connect the outcome of student preparation to community viability.

Many rural experts argue that the future of rural communities is dependent upon their ability to nurture and expand local or indigenous entrepreneurship. The notion of entrepreneurial

communities begins with their school systems. Yet, even the traditional aspects of job shadowing, small business startups and creative problem solving only exasperate the mining of rural assets as young people who participate in these types of school activities recognize that the small town environment in which they are raised offers limited resources to their personal futures.

How might rural education be restructured to strengthen community and local development? One strategy is to develop new leadership that would enhance vertical linkages through the hiring of young teachers who are seeking their first appointment following college. For example, rural schools in Kansas might develop recruitment strategies to attract new teachers from outside of Kansas—candidates who might have graduated from college in Colorado, Illinois, Tennessee or even California. These new hires would not be constrained by established retirement portfolios, and would face fewer hurdles in meeting Kansas' teacher license requirements when compared to those of a school principal or superintendent. The goal of this strategy is to diversify the dominant culture and thinking in rural communities, to promote sustainability of schools, to increase population retention in rural areas and ultimately to rebuild a rural economy that will support the community.

Ectopia (Canty, J.) (roughly, Northern California, Oregon, Washington, Southwestern Coastal Alaska) There is a region in our country that extends from central California through the vast agricultural valleys, through the Sierra Nevada mountain range, extending north through gold rush country, the lush wine producing regions, through the fairly isolated northern California counties and into southern Oregon. Fruit producing areas of southern Oregon in the west evolve into the arid ranches of the eastern part of the state. North on the interstate highway corridor is the huge Portland metropolitan region and to the east is central Oregon with its resorts and quickly growing economy. Continuing north across the Columbia River is Washington State with coastal cranberry bogs, oyster beds, and fishing fleets anchored near what were once busy lumber trucks. Flying over Mt. St. Helens to central and eastern Washington, huge fruit groves, vast wheat fields, and the lentil producing capital of the world are visible. In the sprawling Seattle/Tacoma metropolitan area are the many coffee houses, bottle-necked traffic, the huge Boeing factories, and the Microsoft campus. The freeway north travels through tulip fields to Mt. Baker and the Canadian border. Move further north to the vast region we call Alaska, with its thriving cities, its rugged coastal areas stretching to the Arctic Ocean.

This is the region Joel Garreau named "Ectopia". The name came from a novel by Ernest Callenbach (1975), but originally from the Greek combination of the words "ecology" and "utopia." Garreau selected this as the best descriptor for the western United States; the concept of an "ecological utopia" serving as the over-arching organizer for this vast and varied region (Garreau, 1981, p. 251). In 1981 Garreau described the region as a dynamic area, closely connected to environmental issues, and amazingly complex in terms of differences among its fast-growing population. The changes that have occurred since 1981 are even more staggering than Garreau envisioned.

In the 25 years since Garreau's book, the region has experienced a major eruption of a volcano, the move out of the headquarters of one of the largest corporations, the mothballing of its nuclear reactors, a huge increase in population with its ensuing traffic congestion, continual changes in

neighborhoods as new immigrants have arrived and settled in, and an explosion in the housing market that caused prices to sky-rocket. The terms "Microsoft millionaires" and "dot coms" are new phrases in the vocabulary. Residents of the region are almost as likely to hear Spanish, Russian, Vietnamese, Chinese, and Japanese languages spoken as they are to hear English. Quality of life continues to be an important consideration for residents of Ectopia and the region is struggling with the competing priorities of growth and maintaining the status quo. Environmental activists have been in battle with the logging industry, with the fishing industry, and are now trying to have the system dams demolished that control the flow of the Columbia River and provide affordable hydropower for much of the region. "Save the Spotted Owls" and "Shoot the Seals" signs can be seen posted in the region as residents voice their opinions about whether protecting the environment is more important than protecting long-standing regional ways of earning a living. The First Nations of the region have built bustling casinos resulting in fiscal stability for the first time in many years for many tribes.

Amidst these changes, rural and small school districts in the region are struggling. They are struggling to meet the assessment demands of the No Child Left Behind Act. They are struggling to effectively meet the needs of students from an ever-increasing array of linguistic and cultural backgrounds. They are struggling to find Highly Qualified teachers. They are struggling to pass mill levies for school support when their local economies are spiraling downward. The number of students with disabilities continues to increase and small and rural school districts struggle to meet the needs of these students. Rural Ectopian schools struggle with chronic small school issues—teacher recruitment/retention, isolation, student service delivery, funding—while facing acute current issues—increasing diversity of their student populations with increasing demands for accountability from the public and to governmental mandates.

The Empty Quarter (Glomb, N., Forbush, D. & Fishbaugh, M.S.E.) (roughly, Nevada, Utah, Colorado, Wyoming, Idaho, Montana, Interior and Northern Coaltal Alaska) Montana exemplifies the Empty Quarter—vast open spaces, sparse population, mineral wealth, harsh climate summer and winter. If superimposed over the eastern US, Montana would stretch west to east from Chicago to Washington DC and south to north from mid Tennessee to the upper Great Lakes. Geographically, Montana has two distinct regions—the western prairie covering the eastern two thirds of the state and the Rocky Mountain front providing a spine through the western third.

Montana's economy has traditionally depended upon mining, cattle or sheep ranching, and logging. The economy has diversified to include petroleum refining, tourism, and a growing service industry. Eastern Montana is losing population as farms and ranches fail with changing federal agricultural policies and subsidies. Spring 2005, the Billings Gazette published a 14-part series on changes in eastern Montana—economy, education, medical services, land use. The series presented a dreary picture of loss in both economic and human resources. As opportunities for employment diminish, so does the population. The loss is exacerbated as schools close, making both repopulation of a community and population retention more difficult.

With over 80 one-room one-district schools still in operation, Montana has resisted the move toward consolidation. While remote locations and unpaved county roads provide a rationale for

these schools, the lack of a critical mass of students does not support an economy of scale. Add to the one-district schools, two-room schools that are part of a county or town district and the number of small, multi-grade per classroom schools rises to nearly 130. Growth in the number of Hutterite colonies in Montana has served to increase the numbers and maintain small rural schools in the state.

There are areas of growth. South central Montana from Billings through the Yellowstone and Gallatin Valleys and northwestern Montana along the Bitterroot Range and around Flathead Lake. Demographically, the growth is in adults mid forties through retirement in age. The impact on schools is again negative. The number of high school graduates is dropping because of decreasing student population, not because of decreasing graduation rates. This decrease impacts higher education in Montana, both public and private.

Economic growth could come with sales taxes that would capture tourist dollars for the state infrastructure. Coal bed methane development could revitalize the east as it has been a boon to Wyoming. But these avenues have not met with favorable response from a population with one of the lowest per-capita incomes in the nation and from ranchers who fear effects of mineral development on scarce water resources.

The Empty Quarter presents a continuing challenge to the provision of quality rural educational services.

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ACRES

American Council on Rural Special Education

Virtual Programs and Assessments in Graduate Special Education

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VIRTUAL PROGRAMS AND ASSESSMENT IN GRADUATE SPECIAL EDUCATION

Introduction

This action research presents data about an online Master of Arts in Education (MAE) in Learning and Behavior Disorders (LBD), P-12 at Western Kentucky University. During extensive program revisions, the program developed a collaborative assessment model while preparing more than 300 special education personnel for work in rural schools.

Exceptional Education (EXED) provides a strong field-based, multi-disciplinary, and competency-based program that integrates research-based curriculum and pedagogical knowledge with practical skills relevant to the targeted student population. The intent is to meet the demand for quality professional educators. A primary goal of this preparation program is to develop skills and enhance dispositions so that the candidate and their P-12 students can experience success in rural schools. The online MAE in EXED leads to P-12 LBD certification. The EXED program emphasizes culturally sensitive practices for effective teaching in high-poverty, demographically diverse rural schools. The MAE requires 30 semester hours, a comprehensive exam, a research tool, and a professional development portfolio. LBD certification requires a passing score on Praxis II administered by the Educational Testing Service (ETS).

The collaborative assessment model utilized by this program replaces outdated and inefficient structures and processes. This model focuses on preparing and sustaining quality professionals, while measuring and documenting both program and effectiveness of student learning through the use of technology, data driven decision making, collaborating with multiple partners, and coordinating these factors in alignment with Interstate New Teacher Assessment and Support Consortium (INTASC), National Council for Accreditation of Teacher Education (NCATE), Southern Association of Colleges and Schools (SACS), Association for Educational Council for Exceptional Children (CEC) and International Society for Technology in Education (ISTE) teacher standards. The ultimate goal focuses on the student's ability to affect K-12 learning. Online graduate course content and projects in this program include technology integration and assessment of student learning in curriculum applications as well as to enhance productivity and professional practices.

Theoretical Context

The assessment movement in higher education has evolved into a resignation of dealing with political accountability and economic implications while most of us still embrace the primary focus and significance of improving student learning. We have shifted from teaching-centered to learning-centered where higher education is producing learning rather than just providing instruction. (Angelo, 1999).

If we acknowledge that assessment drives student learning, it will likely remain at the center of the curriculum design process, and will be central to the student learning experience. (Ramsden, 1992; Biggs, 1999). Higher education instructors need a principled basis for designing new forms of assessment, closely aligned with instructional goals and standards while employing the interactive features of online technology. (APA, 1993). A constructivist learning environment is based on social interaction, communication, exchange of views, collaboration and support for learners to take more responsibility for the learning process through learner-centered tasks (McLoughlin and Oliver, 1998). The features of the student-centered curriculum and assessment include performance-based tasks that require students to create a product, engage in teamwork, and self and peer assessment (Laurillard (1996).

Reeves (2000) suggests three main strategies to integrate alternative assessment into online learning environments: cognitive assessment, performance assessment, and portfolio assessment. Further, he proposes five critical aspects of performance assessment. These are focused on complex learning; engagement in higher-order thinking and problem solving skills; stimulation of a wide range of active responses; involvement with challenging tasks that require multiple steps; and significant commitment of student time and effort. Simonson et al. (2000) claims that proponents of alternative, performance based assessment suggest that the content validity of authentic tasks is ensured because there is a link between the expected behavior and the ultimate goal of skill/learning transfer.

Higher education faculty need to develop a learning community culture. Four preconditions are critical to this collective culture. First, we need to develop shared trust by highlighting individual successes and helping faculty members feel respected, valued, safe, and in the company of worthy peers. Second, a faculty can share vision and goals by collectively identifying learning-related goals worth working toward and problems worth solving while considering the costs and benefits to faculty members and students. For example, a simple approach may be to ask faculty to list two or three assessment questions they would like to see answered in the coming year or things they would like to ensure that students learn well before graduating. Then, common goals are identified across the lists. When common goals are determined, they must clear, specific, linked to a timeframe, feasible, linked to standards, and, most importantly, significant to the field. Third, a shared language or concepts must be built. Before a faculty can collaborate productively, they establish common definitions for terms such as learning, community, improvement, productivity, and assessment. Fourth, shared guidelines
must be developed. In other words, build a list of research-based guidelines for using assessment to promote student learning and program improvement. Examples of guidelines include engaging actively in students' academic work, setting and maintaining realistic high expectations and goals, providing regular and specific feedback, and providing connections of research findings to authentic real-world applications of assessment projects. (Angelo, 1999)

Research Methods

The purpose of this descriptive, developmental research was to investigate the current status of the graduate EXED program to describe "what exists" with respect to three variables—student assessment, graduation rates, and collaboration.. The scope of this research was not only concerned with the existing status and interrelationships of the three variables but the course and

program revisions that took place over the last three years. One type of developmental research is "Model or System Development" which is the creative development of a model or system (paradigm) based on a thorough determination of the present situation or system and the goals sought. (Key, 1997) The development of a Collaborative Assessment Model is the primary outcome of this three-year research.

In this section program revisions will be described and then the collaboration between faculty will be explained. WKU faculty began their investigation, leading to program revisions that uniquely address how quality and capacity will be ensured through research-based pedagogy that incorporates the critical components of theory, demonstration, guided practice, and authentic application in school and community-based experiences. The research questions used by both programs during this reform process are as follows:

1. How do we prepare and sustain quality professionals?
2. How do we measure and document effectiveness of programs?
3. How do we effectively prepare students in the use of data in decision making?
4. How do we effectively prepare students in the use of technology in data management?

Exceptional Education

The EXED program faculty began their program review with alignment of courses with state and national standards—the KETS, NCATE, SACS, CEC, and ISTE. The next step involved the creation of a chart outlining all EXED course objectives, assignments, and field experiences. At times, faculty members were surprised at the results of this chart. Areas of duplication were discovered and negotiation for the appropriate placement of some assessments ensued. For example, case studies were required in several courses. Discussion revealed that one professor was only requiring this assessment because the instructor felt that students should know how to use a case study. Negotiation involved a discussion of the best placement of the assessment measure.

Critical performances are specific assessments which provide evidence about what teacher candidates must know and be able to do at different levels of growth and development toward one or more teaching standards. They are usually a culminating project of multiple parts which encompasses most content and accomplishments in the course. Multiple sources of input were utilized to outline critical performances for the overall program and individual courses. The critical performances are the result of contributions from the EXED Advisory Council concerning necessary and practical skills for teachers, faculty expertise, students, graduates, current research and university practices (professional portfolios and Teacher Work Samples). Once the members of the faculty identified critical performances, they worked on the specific requirements of each critical performance and scoring rubric.

Another major program revision included the EXED Comprehensive Exam. The old style for this exam was a Praxis-like multiple choice exam that had been created by the faculty. An item analysis was conducted to determine which courses were represented and which questions were most answered incorrectly by students. Not only did this analysis reveal many inconsistencies in the exam, but many of the standards and critical performances were not represented. A new essay-type of exam was created with a question from each course that was correlated to critical

performances and standards. Students answer three questions by selecting a question from a group of four. Additionally, a performance task was included.

The development of a graduate survey and database of graduates added an ongoing check and balance to the process of continual program assessment. Graduates provide input about their preparation to become a special education teacher and suggestions for improvement in the program. This graduate survey data, student performance on critical performances in courses, EXED Comprehensive Exam passing rate, and Praxis passing rates are analyzed each year and used to make adaptations to the program.

Faculty have developed a new program model, the MAE in LBD, P-12, that increases both the capacity and quality of teachers while helping graduate students from underrepresented populations to overcome barriers to participation in the LBD program. This new model has improved the capacity of the program by implementing strategies to serve students for whom the program is currently inaccessible, including students who are employed and unable to enroll in a full-time program, students who are not able to commute to campus, students who can not afford tuition, and students who have difficulty negotiating barriers to participation due to disability. Structural improvements to increase the responsiveness of the LBD faculty to the needs of these diverse students include the use of on-campus programs, interactive distance education technology and course delivery, and on-line web delivered courses. WKU continues to develop a comprehensive program that allows for maximum accessibility for students.

The quality of the MAE program has also been improved in several ways. The EXED faculty has implemented a number of strategies and activities to make the program more field-based, multi-disciplinary and competency-based. The specific revisions and enhancements include: (a) the use of cohort groups to facilitate the growth of peer support and collegiality; (b) more intense and extensive field-based activities and critical performances that focus on culturally competent teaching, including projects requiring multidisciplinary collaboration and practical projects with a direct impact on participants' schools and K-12 student achievement; (c) development and expansion of the Professional Development Networks, which included trainees' cooperating/mentoring teachers in the trainees' field placements, members of advisory councils, parents and advocacy groups, and departmental faculty; and (d) restructured internships and classroom experiences to assure that competent teachers are trained, who will continue to serve students and not leave the field in three to five years.

Collaboration

There are many unique features of this program that enhance collaboration. EXED graduate programs produce more graduates than any other graduate programs in the university. The mode of delivery for is primarily online. Program faculty develop their own content and are using high tech systems to create this content (Tegrity, streaming servers, original CD's, DVDs, Blackboard, etc.).

Collaboration is the key to this descriptive, developmental research. The authors have been discussing online assessment strategies for three years. Performance based assessment consists of a student's active generation of a response that is observable either directly or indirectly via a

permanent product. Performance based assessment must be clearly aligned with what has been taught; scoring criteria or rubrics must be shared prior to students working on the task; be clearly aligned with standards and objectives and give several models of acceptable performances; and encourage student self-assessment and reflection. (Elliott, 1995). An assessment is authentic when the nature of the task and context in which the assessment occurs is relevant and represents "real world" problems or issues. (Elliott, 1995).

Performance-based, authentic assessment strategies utilized include critical performances, teacher work samples, professional portfolios, case studies, annotated bibliographies, discussion boards, guided research, webquests, group critiques, interviews, surveys, oral presentations via videotape, online tutorials, and online exams.

Collaboration and discussion between faculty have illuminated the changing roles of both faculty and students. The primary responsibility of learning has shifted from the teacher to the student. The role of instructor for online courses has become one of intense preparation prior to the beginning of class. The instructor provides content, online lectures, structure, assignments and assessments linked to standards, sample projects, and schedules. When class begins, students must take responsibility for their own learning and, in fact, tailor learning for themselves by engaging their individual temperament, circumstances, needs, tastes, and ambition. Students have the potential to utilize every aspect of their lives—work, leisure, personal relationships, community activities, and course work—to enhance performance on the open-ended, authentic projects in each course in the program. The instructor provides support and guidance through constant communication (email, announcements, or phone), specific and timely feedback, and providing a social context for the class. Each course contains an open discussion board called the "Water Cooler" where students and the instructor can discuss any aspect of the course.

Faculty members have compiled several data collection and analysis tables. Alignment of courses with state and national standards was a major first step in program revision. Each course includes the standards alignment for that course in its syllabus. Tables representing alignment of the objectives, assessment strategies, field experiences, and critical performances for each course were constructed. These tables allowed the program faculty to review, compare, and contrast assessment strategies, data sources, and standards alignment more effectively.

All of the K-12 public schools participating with Western Kentucky University in this program spent time discussing the issues among their faculty and with public partners. Their continual input assists in program design, involvement, and program assessment. Numerous efforts are made to meet the needs of the students. Course and program sequences have been arranged so part time students can complete their programs in a timely manner. All courses are offered online. Tuition assistance is available through grant support, discounts for school district partners, and financial aid counseling. For students who have barriers to participation due to disability, accommodations are made through assistance from student support services and using multimedia experiences that are inclusionary.

Field experiences in the form of hands-on or field-based application projects are a part of most courses in the program. The primary clinical or practicum field experience is in EXED 590. For the EXED program this semester course follows the Kentucky Teacher Internship Program cycle

guidelines and requires site visits by practitioners, development of a professional growth plan (PGP), videotapes of teaching accompanied by lesson plans and interventions that demonstrate mastery of identified concepts on the PGP, and a teacher work sample.

Several assessment strategies provide students with experience in using data in decision making. The teacher work sample requires creating and teaching a unit of instruction. Students use assessment data to profile and analyze student learning and communicate information about student progress and achievement. The reflection and self-evaluation section requires students to analyze the relationship between his or her instruction and student learning in order to improve their own teaching practice. Case studies furnish students the opportunity to analyze authentic situations and provide solutions incorporating theory and practice. The action research project requires students to conduct research in their own classroom, library, and/or technology center, analyze the data, and write a journal-type article. (Oberg & McCutcheon, 1987). Field experiences afford students the opportunity to make decisions about interviews, on-site visits, collaboration, and field projects. The professional portfolio consists of student work that displays mastery of standards; a purposeful collection of student work that exhibits the student's efforts, and evidence of student reflection. (Bailey, 1998).

Use of technology to manage data is demonstrated by instructors and students. The authors use Tegrity or Camtasia to create demonstrations, teaching or lecture videos that are either available to students on a streaming server, on a CD or DVD distributed to students. The authors use BlackBoard to hold online discussions, build a learning community, and post grades.

Students use technology in three ways. One way is the use of technology to actually take the course—use of Internet to participate in the course site in BlackBoard, email, use course CDs, use software to create projects, etc. The second use of technology is learning to integrate technology in instruction and student learning. When technology integration is a focus, use of the technology and its integration is in the scoring rubric for the project. Third is the use of technology by students to manage data. Students learn how to create a spreadsheet to record pupil assessment data and create charts for the teacher work sample. Students learn how to create a database on instructional topics and create specific types of questions to stimulate higher order thinking skills.

Results & Conclusions

Since the EXED MAE began in June 2002, 405 students have been admitted and 155 have already graduated and are fully certified teachers. Four students dropped the program for various reasons. Of the 250 continuing, 75 are scheduled for graduation summer 2006, with the remaining anticipating graduation in 2007 or 2008. All students have passed the comprehensive exam and completed the Teacher Work Sample. The initial PRAXIS pass rate for the program is 94%. The remaining 6% pass when they retake the exam.

Multiple forms of performance-based, authentic assessment provide a more accurate picture of student achievement as well as significantly increase the quality of graduates in K-12 settings. Shared assessment strategies include professional development in schools, authentic assessments, action research projects, problem based learning, simulations, case studies, web

enhances instruction, electronic, standards-based professional portfolios, etc. Faculty and school practitioners have engaged with the Renaissance Project to employ the teacher work sample to showcase the effect teacher candidates have on K-12 student achievement.

The changing faculty and student roles in these models are discussed and documented. The instructor's role is one of intense preparation prior to commencement of a course and switches to more of a role of support and guidance once the class begins. The student is an active learner responsible for his or her own learning. Objectives, content, and assessment are aligned vertically with course objectives, content and assessment and horizontally with state, national, learned societies, and accreditation standards. The authors model effective technology integration techniques by developing slideshows with course content, teaching/demonstration videos, and creating course "text" CDs.

Critical benchmark measurements are presented in Table 1 documenting the performance and effectiveness of students in the program. Data is gathered at admission, during courses, during field experience, exit data, and follow-up. Programs meet NCATE, SACS, CEC, ISTE and KETS standards. Program delivery options in the EXED program include online, off campus, cohorts, and distance education.

Field experiences are necessary to provide the authentic context for the acquisition and demonstration of performance standards. Performance measurement includes instructor observation, videos of teaching, supervisor assessment, and student self-evaluation and reflection. Graduate surveys of new graduates and graduates after their first and third year of employment in the field are aligned with state teaching standards and dispositions. This provides valuable data about preparation for job success and suggestions for improvement. Program decisions are focused on increasing student achievement, not high stakes testing results.

Projects and assessments demonstrating the effective use of student data are shared for the program. Examples include action research projects, teacher work samples, case studies, and professional portfolios. Field experiences provide students the opportunity to make decisions about interviews, on-site visits, collaboration, and field projects. More importantly, students make everyday decisions in authentic teaching situations with real children. Online instruction is a valuable part of the program. Students must use technology to manage data in each course. Students must decide how to integrate technology in instruction. When technology integration is a focus in a course, the use of the technology and its integration are in the scoring rubric for the project. Students learn to use technology to manage data through spreadsheets, databases, and statistical applications.

The WKU Exceptional Education program is based on a common conceptual framework while the contextual experience of each student is slightly different. Emphasis on quality is a constant. Faculty have truly shifted from a teaching-centered to a learning-centered model as described by Angelo (1999). A learning community culture among faculty and students is developing as a result of this collaborative model. A shared trust is evidenced through the mutual respect and collective efforts in program revisions. Faculty have developed shared visions, goals, and language through a revised conceptual framework. The authors have developed shared guidelines

for promoting performance-based, authentic assessment to strengthen student learning and program improvement.

Professional education is a continuing process beginning with, not ending with, initial preparation. Strong content expertise is required of all teachers. You cannot teach what you do not know. Attainment of program objectives requires a specific learning sequence—the acquisition of knowledge, the development of skills, and controlled functional use of skills.

Implications for Practice and Recommendations for Further Research

This research goes to the very heart of professional education preparation in higher education today. Colleges and universities face increasing demands and many of the systems and structures currently in place will not meet future needs. This research focuses on enhancing present preparation options, developing additional options, collaborating with multiple partners, and coordinating all these in alignment with state and national standards, while focusing on the student's ability to affect K-12 learning.

The authors plan to continue a longitudinal study of graduate performance, revise graduate surveys to reflect how practice relates to state and national standards in their jobs, how well their graduate program prepared them for their jobs, and suggestions for improvement in the programs. The authors plan to gather this data from graduates immediately after graduation, one year later, three years later, and five years later. Such hard data will be invaluable in fine tuning and reporting effectiveness of the program.

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