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"Bringing Change That Leads To New Beginnings"

...Like Kokopelli who travels from village to village, changes winter to spring,
melts the snow and brings rain for a successful harvest...
the rural special education teacher journeys to remote sites, transforms failure to achievement,
removes barriers, and brings change that leads to new beginnings.

Albuquerque, New Mexico

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Motivation Towards Teaching Special Education

They say it takes a special person to become a teacher, but an even more unique person to become a Special Educator. In 2008, there were 3,476,200 general education teachers for preschool, kindergarten, elementary, middle, and secondary school compared to 473,000 Special Education teachers for the same range in grades (U.S. Bureau of Labor Statistics, 2009). Why is there such a large discrepancy in the numbers? How do we recruit individuals to become Special Education teachers and why should we? The reason why we need Special Educators is due to the large number of students receiving services. In the 2007-2008 school year, 13.4% of students enrolled in school received services in federally supported program (NCES, 2010). These are students in our education system that need a specially trained teacher to accommodate their learning needs. In regards to how do we recruit these individuals; that is the question that this research study hopes to explore. The purpose of this research study is to look at the different motivational factors that influence individuals' decision to become Special Education teachers, furthermore, how these factors influence Self-Efficacy in regards to teaching. "People acquire information to appraise self-efficacy from their actual performances, vicarious (observational) experiences, forms of persuasion, and physiological symptoms" (Schunk and Parajes, 2005). If the factors that attract individuals to teach can be identified, then there is a possibility for institutions to appeal to these motivations, and generate more interests in the education courses (Sinclair, Dowson, and McInerney, 2006). Also, understanding these motivations may determine more long term factors such as how long these individuals teach, remain in the teaching profession and even education as a profession (Sinclair, Dowson, and McInerney, 2006). Self-efficacy is significantly related to job satisfaction, and with the critical attrition in the field of Special Education, it is important to see how we can improve self-efficacy and what contributes to it (Viel-Ruma, Houchins, Jolivette, and Benson, 2010).

It is hypothesized that external motivational factors such as a family member with a disability, or a previous experience involving the population that falls into the Special Education category, will be primary motivating factor in choosing Special Education as a career, and be a greater predictor of self-efficacy. Self-efficacy is an important mediator of external influences, and can have direct impact on career choice (Schunk, Pintrich, & Meece, 2008).

Methods

Participants

15 students (14 women, 1 man) (*M* age=24-29) from a large, rural state university in Oklahoma participated in this study. All students were studying Special Education as their degree choice either for an undergraduate or graduate degree. Participants had the option to receive extra credit toward a course of their selection. Participants were recruited through convenience sampling either by an online researcher recruitment system called SONA or via email from current professors in the field of Special Education.

Materials and Procedures

The survey measurement used for this study was developed from two different research scales. Self-efficacy was measured using Tschannen-Moran and Woolfolk-Hoy's Efficacy Scale (2001). The motivation scale was adapted from the q-statements of Daniel and Ferrell's (1991) study that looked at the reasons why people aspire to be teachers. Participants completed the survey measure online through the program called survey monkey. The entire survey consisted of a 5 point Likert scale with 1 being "Strongly Disagree" and 5 being "Strongly Agree".

Participants also completed a brief demographic survey consisting of the typical gender, age, and ethnicity questions. There were also questions in regards the participants' personal high school setting and the setting that they would prefer to teach. These questions were added into the survey to see if there was a correlation between the two because of the environmental contexts on self-efficacy that was mentioned earlier.

Results

A series of multiple regression analyses were used to see which predictors are significant to self-efficacy. Correlation and regression analyses were used to answer the research question posed. Two of the Pearson bivariate correlation coefficients reached statistical significance, both of these coefficients being in the benefits category. Therefore it may be concluded that internal and external motivational benefits may be associated with career selection and higher self-efficacy. Internal motivational benefits was associated with higher self-efficacy (r=.77). About 59% of the variance in self-efficacy was due to the internal motivating benefits. An example of an internal motivating benefit would be that "teaching allows me to perform a valuable service of moral worth". External motivational benefits also accounted for 59% of the variance (r=.77).

Multiple regression analysis was used to determine that self-efficacy did vary as a function of internal and external motivational sources as benefits. Taken together, about 76% of the variability in self-efficacy is due to the predictors ($F_{4, 10}$=8.032; p=.004). Data is still being collected.

Discussion

Some of the limitation of this study was first, the number of participants. Multiple Regression as an analysis technique requires a large population. As evident by the participants section, the sample size is not large enough to support this statistical analysis as of yet. Second, the current demographic survey does not take into account previous experience as a teacher which can be a direct impact to self-efficacy. Overall, the survey being used is still in a development mode. This first use of the survey is a pilot study to check for errors and ways to adapt. The fact that the predictors were not significant alone, but created an overall significant equation stands to reason that the survey measure does need to be adjusted. More research and development will be done to test the full scope of what motivates people into the field of special education, and what makes them stay. Some of the factors that will be incorporated are previous experience with individuals with disabilities (volunteer or teaching), levels of empathy, and a more encompassing demographic survey in general.

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Magnet Schools – Creating Access to World of Quality Instruction Through Thematic Teaching

The goal of Magnet Schools, as defined by the Magnet Schools of America, is "to provide leadership for innovative instructional programs that promote equity, diversity, and academic excellence for all students in public school choice programs." Typically, magnet schools have been located in urban centers, primarily in inter-city locations. These magnet schools were originally designed to attract White students to attend predominately Black or Hispanic schools in an effort to create a more diverse student-body (Andre-Bechely, 2007; Smrekar, 2009; Griffin, Allen, & Kimura-Walsh, 2007). The program in the Clarksdale Municipal School District is distinct in that the Magnet School experience is being offered in a rural setting. Clarksdale is a small city located in the heart of the Mississippi Delta. Agriculture and the industries surrounding it, such as ginning, chemicals, and small industry dominate an otherwise depressed economy. Poverty is structural and pervasive. Black children primarily attend the public school system and White children attend the extensive network of private schools. Achievement on state mandated tests have been disappointing. Recent efforts are being made to utilize the influence of "The Blues" to attract tourists.

In August of 2009, the Clarksdale Municipal School District (CMSD) took a leap of faith, designating all our elementary schools as magnet schools, with unique themes embedded in each magnet. Although a lottery is conducted to prevent favoritism or inequitable placement of children, there are no restrictions, other than seating capacity, on where students may choose to attend school for a given year. Inclusion children have full choice, with special education teachers being assigned to schools based on the numbers of children choosing to attend a given theme. Busing options allow for the transportation of all our students to the school of their choice no matter where they live in the district. Parental choice is an important component of the magnet program and falls in line with the President's Commission on Excellence in Special Education (2002) which recommends a choice plan for students with special needs and allows federal funds to enable students with special needs to attend schools or access services in schools of the parents' choosing (Etscheidt, 2005). An example of how choice impacts students can be seen in the choices available, for example, students are able to attend the Visual and Performing Arts Magnet School regardless of their musical or artistic ability. No auditions or portfolios are required. This allows all students to have access to the Arts, which is particularly important to students with disabilities who are often excluded from this type of experience.

The use of magnet schools to increase student achievement and end racial isolation has a long history, stretching back to the early 1970's. Numerous studies have been conducted over this long history and several definitive books have been written in which solid research is examined to ascertain the efficacy of magnet schools for the above objectives. In addition to

these books, dedicated to the most current research studies from all over the country, U.S. News and World Report's Annual list of the top fifty high schools in the country contain a majority of magnet schools, with the top two this year being magnet schools. Whenever a list of high performing schools is compiled, magnet schools form the backbone of those schools.

The CMSD did not unilaterally decide to implement this approach. Rather, stakeholder input was sought in the form of surveys, meetings, focus groups, and conversations with teachers, parents, businesspeople, and other members of the community. Among other options, magnet schools were the overriding choice. Themes were decided through surveys completed by parents, students, teachers, and administrators. A year of intensive planning took place before the first magnet school was created in our district. Part of this desire for magnet schools was the desire by the community for an improvement in our public schools and an end to the de facto segregated system of education in our community in which Black children predominately attend public schools and White children tend to attend private schools. Indeed, this is a trend described in U.S. Department of Education's publication, *Creating Successful Magnet Schools Programs* (2004) where "minority students have become the majority across all public schools, and many urban districts have been losing increasing numbers of middle- and upper-class students of all races and ethnicities to private and parochial schools.."(p. 3). One of the major goals of magnet schools is the voluntary desegregation of public schools through the introduction of a challenging, enticing curriculum. Yet, with this goal notwithstanding, our goal, as is the goal described by Rod Paige, former U.S. Secretary of Education in the forward to the above publication, that our ultimate goal is increasing student achievement not only in reading and math, but that our schools develop "a way of doing business that allows them to continuously improve over the years." (p. V) By adopting themes and introducing rigor in our programs that are attractive to middle- and upper-income-level families, it is the intention of CMSD to stem the outward flow of higher socioeconomic families (*Creating Successful Magnet Schools Programs* (2004). By attracting all members of our community to our public schools, the entire system is strengthened and all children benefit from a comprehensive, challenging curriculum based on the state curricular frameworks and driven by school choice and thematic instruction. Within the context of overall improvement in achievement, a climate of inclusiveness and high expectations is set for children with special needs.

Successful magnet schools have a data driven system of accountability. In districts such as Montclair, in New Jersey, a cohort of students has been followed between the 4th and 8th grades. The gap in reading has narrowed to 6 percent. Achievement in Duval Schools, Florida, has risen, with 54% of schools earning a grade of B or better. Hamilton County Schools in Tennessee boast that magnet schools have helped turn around low-performing schools and enabled them to meet the requirements of the No Child Left Behind (NCLB) legislation. Hot Springs, Arkansas' magnet program has shown progress in closing the achievement gap. The gains over a two-year period in four of five comparisons indicated that minority students made greater gains over non-minority students. Significant gains were also shown in benchmark assessments in mathematics for the 6th and 8th grades. Magnet schools have been shown to be a major determinant in increasing reading and math achievement in students throughout the nation. (Creating Successful Magnet Schools Programs) The expectation of the Clarksdale Municipal School District is that raising achievement for all children includes raising achievement and expectations for our students with special needs.

The themes developed by the Clarksdale Municipal School District are a) Visual & Performing Arts Elementary Magnet School, b) Math & Science Elementary Magnet School, c) International Studies Elementary Magnet School, d) Aerospace & Environment Studies Elementary School, e) Health & Medical Sciences Elementary Magnet School, f) Language Immersion Elementary Magnet School. The magnet themes are continued at the middle school level with one middle school becoming the Academy of International Studies and Visual & Performing Arts and the other middle school encompassing the science themes as it emerges as The Math & Science Language Immersion Magnet Middle School. The high is in the process of beginning the transformation into Academies, beginning with the International Studies component to be instituted in the next school year.

With a view to enhancing the educational opportunities of students with disabilities, the hands-on, thematic based approach merges with brain research. Research supports the notion that students who are being creative and expressive have an easier time mastering complex ideas and concepts. (Bernstein and Alan, 2009). Arland Tolbert, band director at Hart County (GA) High School echoes this sentiment when he describes not only the number of honor graduates who have gone through his band program, but also the large number of students with special needs who have performed equally well in the band class (Bernstein and Alan, 2009). Equating the arts with high stakes testing, Tom Horne, State Superintendent of public instruction for Arizona notes, "If they're worried about their test scores and want a way to get them higher, they need to give kids more arts, not less" (Smith, 2009).

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Support for integrating the arts into education comes through research into test scores and achievement levels of students in various educational situations. According to Edutopia (Oct/Nov, 2008), "Active learning practices have a more significant impact on student performance than any other variable, including student background and prior achievement". What this means for students is that the active, engaged, project based learning will help our students learn to their full potential. Brain research tells us that brain development is enhanced through instruction in the arts and strong academic students are produced through this type of education. Test scores across the state and nation support this research. Research also tells us that experiences in visual arts, theater, music, and dance teach the children high levels of creative thinking and expression. They also stimulate creative performance, production, aesthetics, and a historical/cultural perspective. According to Sheila Govern, principal of Lyons Elementary School in Tucson, Arizona, the Opening Minds through the Arts program (OMA) is strengthens connections to the brain while at the same teaching students to appreciate music. OMA is not just teaching music, but rather, it is using music to integrate all the content the students are learning into a cohesive whole (Smith, 2009). Hands-on, creative learning is not confined to the Arts, however, but throughout the various magnet themes, such as Aerospace and Environmental Studies, or Health and Medical Sciences, students have the opportunity of learning through doing, using the concrete to learn abstract concepts. For students with special needs, this type of learning is particularly important.

Students in the Aerospace and Environmental Studies Magnet School take field trips to sites such as the Petrified Forest, NASA's Space Center, and the Tunica River Museum. They also study local and global environmental issues, and learn how they, the students, affect the

environment and how the environment affects them. A partnership with NASA has been reinforced through the use of video-conferencing which allows students to interact with astronauts and scientists at the NASA space center. One exciting project has been the collaboration with the local farmers' market, which has resulted in the creation of a neighborhood garden at the school. Farmers help the students till the ground, plant and harvest crops. Even the most challenged of students can actively participate and learn in this environment. Children are scientists, exploring the world around them with all their senses, examining bugs and insects, and even tasting soil. An active lab, where our scientists wear lab coats while conducting their experiments, reinforce the concept that our students are scientists. Live animals enhance the environmental part of the theme. Our teachers harness the natural curiosity of the children as they guide them to become active learners and learn to take responsibility for their own learning.

The themes inherent in the magnet program are not whimsical. Reading and writing skills, as well as science and math skills, are enhanced when problem-solving tasks are entered into within a social situation. Research has shown that social interaction during learning helps students to clarify ideas and understand new concepts (Barnes, 1976, Britton, 1990, Jensen, 1997, & Vygotsky, 1978). Students gain reading skills by strong vocabulary development learned in a relevant, interesting manner, reading material that is pertinent to a lesson, making connections between concepts, and finally, by writing extensively. For students with special needs, it is especially important to connect reading and vocabulary to interesting and exciting content. Within the Math and Science Magnet School program, students of all ability levels learn metacognitive skills (paying attention to how they think and learn) by such activities as keeping a science log and notebook, in which they write what they have learned, what questions they have, and make predictions. These metacognitive skills are believed to correspond closely with reading and writing skills, as well as math and science skills. NASA educators note that "the skills of observing, classifying, comparing, predicting, describing, inferring, communicating, interpreting data, organizing information, and drawing conclusions" are skills children use when they draw a picture, read, or write about what they have learned of a concept. These skills are essential for the process of reading and writing. Students participate in exciting math and science education projects such as studying animal habitats, planets, conservation, recycling, and learning how these relate to our immediate and global environment. A science lab offers in-depth studies of physical science, earth science, and life science, while the math lab utilizes a promethean board as well as low tech manipulatives to expand and remediate math instruction.

Eric Jensen, a leading researcher who pairs brain research with educational methods, tells us students have difficulty in generalizing classroom instruction into real life situations without instruction that uses real-world learning such as field trips, simulations, role-plays and activities that occur away from the classroom. These real-world activities help the student learn to make sense of the instruction received within the school and apply those skills to novel situations. Jensen tells us that our brains do not adapt to tasks perceived of as "useless". Teachers must constantly stress the relevance, value, and meaning of the skills they teach.

The Health and Medical Sciences Magnet School has the goal of instruction to produce citizens who are aware of their health and also understand the vital role health care professionals

play in improving the wellness of our society. Brain research supports the integration of activity and movement into the learning environment. Jensen, one of the world's leading trainers in the field of brain-based learning, refers to studies that show a link between exercise and increased cortical mass, basal ganglia, cerebellum, and the corpus callosum. These are key areas of the brain. He cites studies that show significant gains in attention and reading from stimulating activities involving movement. Dr. Jensen states that only does the biology show increased learning and academic performance associated with exercise and physical activity, but other gains have been noted as well, such as improved classroom behavior, improved social skills, and a better attitude towards school as well as a decrease in the likelihood of depression, all of vital importance to students with special needs of any kind.

The Language Immersion Magnet School program is supported by current brain research dealing with the acquisition of language, particularly bilingual language, by award-winning cognitive neuroscientist, Laura Ann Petitto and professor of psychology, Kevin Dunbar who strongly suggests that young children can easily manage and separate two language systems simultaneously as well as learn to read and write two separate languages at the same time. The Language Immersion Magnet School is in its second year of implementation. Initially, kindergarten and first grade students were given partial immersion in Spanish in math, science, and social studies. This year, second students are instructed in these courses in Spanish. Adjustments to the program have included the separating the classes into those who are immersed in Spanish and those who are taught primarily in English, but exposed to Spanish. Plans are underway to further increase the immersion of students by teaching all subjects in both languages, thus creating double opportunities for learning.

International Studies is the prerequisite for the International Baccalaureate School. It is a three year process to become fully certified. Usually, only select students are allowed to enroll in this type of school. However, in our district, it is our belief that all children can benefit from the inquiry type of learning encompassed in this program of study. Students are taught through Units of Inquiry, but within the Units of Inquiry, Primary Years Program (PYP) themes must be taught.

International Primary Education themes are as follows;
Who we are
Where we are in place and time
How we express ourselves
How the world works
How we organize ourselves
Sharing the planet

Within the realm of these themes, each grade plans units to encompass the PYP themes. These units make up the school's Program of Inquiry. Each grade level has the same six themes, but a different Program of Inquiry.

Within the taught curriculum, skills are taught using best classroom practices and are a direct reflection of the written curriculum. The taught curriculum is student oriented, using the inquiry method of teaching along with drill and practice. Textbooks are used as resources, but

do not drive instruction. Students are encouraged to discover connections and construct meaning about their world by drawing on prior knowledge, experiencing new ideas, reflecting on what they have learned and coming to a conclusion as to how this affects them and their world. The taught curriculum involves synthesis, analysis, and manipulation of knowledge using play with the kindergarten students and moving up the ladder to formal structured learning for the older students.

The focus of the majority of learning is transdisciplinary. In other words, reading, language arts, math, science, and social studies will be taught as units that are related to world discovery, the development of leadership skills, and independent and group projects related to real world problem-solving. Math will then be taught again as a stand-alone subject. The purpose of this type of learning is to educate the whole child by addressing the intellectual, social, emotional, and cultural needs of the students. The children in this program will become "global citizens". To further the goal of globalism, the students are taught a language, in this case, it is Spanish. Interestingly, our inclusion students are performing equally or better than the typically achieving students in acquiring Spanish, according to their principal, Jean Light. Although the program is rigorous, it is also conducive to the inclusion of students with special needs. Project based learning is particularly effective in allowing differentiation of instruction and allows students with special needs to fully participate in group and project based work.

A district of magnet schools in the rural Mississippi Delta may seem unusual, but this innovative system of education is designed to meet the needs of all our students. By focusing on real-life learning situations, engaging the children, ALL the children, in exciting, project-based, hands-on experiences, the senses are stimulated, children gain the confidence to pursue learning, and school becomes a place of excitement and pleasure, rather than a skill and drill place of tedium, boredom, and failure. In our magnet schools, all children can shine and be successful, each in his or her own way, in each school's own theme.

Resource Books

Magnet Schools; Legal and Practical Implications (1979), with contributions by John Glenn, Astronaut and Senator, George Edwards, chief Judge 6th Circuit Court of Appeals, Donald Waldrip, Founder of Magnet Schools of America, and Nolan Estess, Superintendent of Dallas Public Schools.

Magnet Schools; Recent Development and perspectives (1990). Dan Levine (author of Foundations in Education).

Magnet Schools Policies, Studies, and Evaluation (1993), Dan Levine, Nolan Estess, Donald Waldrip, Walter Marks .

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Remote Teacher E-Valuation in an Online Environment

Abstract

Most teacher licensure or certification programs require clinical practice under the supervision of an experienced educator prior to awarding a credential. The observation and assessment of teacher candidates, including those in an intern classification, occurs several times during the clinical practice period. This process can be both time consuming and costly with marginal results in pedagogical skill improvement being realized (Lee & Wu, 2006). This clinical practice requirement becomes even more complex with distance education and national teacher certification programs. To reduce the high cost of face-to-face observations and skill assessment, National University's southern California location is piloting a secure online system through the IRIS Connect program. This system links a remote live video and audio stream with observation as well as data collection tools that allow the capturing of pedagogical performance. This data can inform the teacher candidate assessment and remediation processes through a secure Internet site that is operating through the IRIS Connect Company. Central to this system is the IRIS Connect remote observation camera, which facilitates a remote 360-degree field of vision in the classroom. This camera has pan, tilt and zoom capabilities, and a variety of editing capabilities, all of which are controllable through an Internet connection. With the dashboard tools, an evaluator and teacher candidate can view and discuss the teaching performance including the practices that are in need of remediation. The system is also proving to be ideal for creating scenario based professional development materials for experienced teachers and other school personnel.

Introduction

National University (NU) is the State of California's largest provider of teacher education coursework and clinical practice that leads to credentialing. The observation and evaluation of the clinical practice of these teacher candidates is a part of the State of California credentialing program. This process can be both time consuming and costly with the results on improving the teaching practices of the candidates being marginal. NU is conducting a pilot project that utilizes an Internet-connected remote viewing, communication, and evaluation system that operates through a secure web site known as IRIS Connect. The use of "thereNow" (a U.S. company that provides the equipment, software, and IRIS Connect access) Internet Connected Equipment and their proprietary web site are central to the discussion of how this interactive program can improve the development of teacher credential candidates (see fig. 1).

The representative groups of teacher candidates who are participants in this project are interns at multiple school districts throughout the southern region of California. The interns' areas of concentration for their studies include general education, special education, and work with the deaf and hard of hearing populations in the public school system ranging from Kindergarten to the twelfth grade. In an effort to improve upon the clinical practice process, the use of Internet-based system is being undergoing a pilot test to determine if the technology expenditures are cost effective for improving the intern' teaching performance.

The impetus for conducting this project includes the recent economic downturn and the desire to improve the teacher practice development of the candidate. California has been one of the states suffering the impact of the economic recession, which includes the loss of funding for special programs (California Department of Education, 2010). The benefits of recording the pedagogical practices of interns teaching candidates for analysis, reflection, and the development of a video library are present in the literature (Beck, King, & Marshall, 2002; Dyke, Harding, & Liddon, 2008; Marsh, Mitchell, & Adamczyk, 2010). The following section provides a synoptic review of the literature that pertains to the use of remote observation and videotaping of those involved in the development of professional teaching practice.

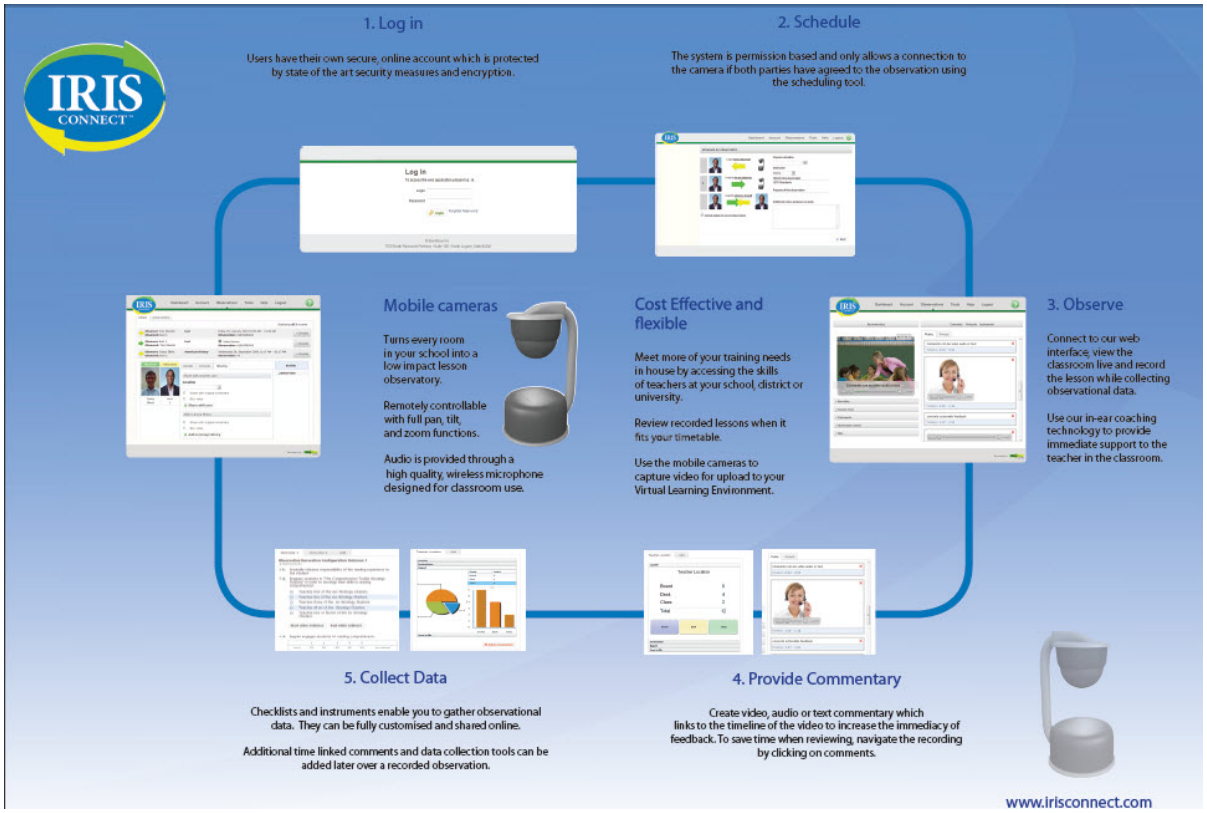

Figure 1: IRIS Connect system overview – sequence of usage

Best Practices for Remote Observation and Videotaping

Beck et al. (2002) suggest that the use of videotaping to develop cases has an "intuitive" component, which relates to the use of the recording of actual classroom interactions (p. 346). According to the authors, pre-service teachers are better able to make the cognitive transition

from theory to practice as real life situations create the opportunity to discover instructional problems. The recognition of diversity, the need to differentiate instruction, and the development of alternative pedagogical strategies are a part of the benefits of videotaping. In addition, the richness of the multimedia stream that includes visual and auditory elements creates an environment for interpreting the "events and contexts" in an authentic environment (p. 347). In summarizing their findings, the authors make the following statement in regards to the use of videotaping by pre-service teachers:

> These cognitive processing experiences may have extended and deepened videocase makers' understanding of teaching and learning, and consequently increased their ability to identify, interpret, and analyze manifestations of exemplary teaching during observation beyond that of the preservice teachers whose cognitive processing of observations was limited to their classroom experience. In turn, videocase makers' increased ability to read teaching–learning ideas in what they observed could have influenced their ability to identify, interpret, and analyze manifestations of exemplary teaching later in the video test situation (p. 358).

Comparable to face-to-face observations

Supporting the idea that the Internet system can efficiently reduce costs, Dyke et al. (2008), report that a "strong correlation in professional judgments of teaching performances by both online and in-class observers (p. 45). The dual observation camera system that the authors discuss utilizes a two-way visual and audio scheme. In this system, the teaching candidate and the observer can see and talk to each other over an Internet-anchored software application. The design of the pre-observation, observation, and post observation procedures was conducive to creating a collaborative environment, which was conducive to a strong teacher candidate performance. The findings of these researchers support the premise that online viewing of a teaching candidate is as reliable as the face-to-face observation of their teaching practices.

A major component of the remote teacher observation is to capture moments that will enhance the teaching practices of those entering the profession. Waxman, Tharp, and Hilberg, (2004) note that, "One of the most important purposes of systematic classroom observation is to improve student teacher's classroom instruction" (p. 90). The feedback that observers provide helps teacher candidates understand their own strengths and weaknesses and consequently enables them to improve their instructional methods and strategies drastically.

Face-to-face classroom observations of student teachers versus remote classroom observation of student teachers can be cost efficient for all involved, and the outcomes are beneficial (Beck et al, 2002; Dyke et al., 2008; Marsh et al., 2010; Waxman et al., 2004). When conducting face-to-face classroom observations, the supervising teacher or the university incurs expenses that range from mileage to travel time, and in some cases, overnight housing. In comparison, while using remote classroom observation, the supervising instructor does not experience any of those expenses. In fact, the supervising instructor can observe the student teacher from any location that Internet access is available and at any time that is appropriate.

Another benefit of using the remote observation is that the recording and archiving of the observation, which allows for reviewing at any time (see fig. 2). Having the availability to review the observation will provide a visual enhancement for the teaching candidate. Videos allow the teaching candidate to see their errors or areas that need improvement with the feedback

that the supervising instructor provides (McClean & White, 2007; Waxman et al., 2004). The pricing of the equipment and software associated with the use of remote classroom observation may be high; however, the return on the investment is worthwhile according to Waxman, et al. (2004).

Online discussions with peers

Lee and Wu (2006) describe a case study that includes a comprehensive use of an Internet-based computer mediated communication system involving the videotaping of instructional activities. In the first semester, the intern or student teacher candidate made videotapes of their microteaching sessions and met in small groups with their peers along with a mentoring faculty member to review their teaching practices. During the second semester, the inclusion of lesson plans, handouts, and self-evaluations were additions to the videotaping of teaching performances to add depth to the discussions. The utilization of an online discussion forum with all of the second semester student teaching materials was conducive to a thorough evaluation of the candidate's performances. The findings of the study point out that the ability for an intern or student teacher to "review their performances in an online environment is more convenient, leads to better self-evaluation, and improves learning through the collaborative interactions of peers" (p. 376-377). The authors suggest that future uses of the Internet-based system may incorporate the use of peer collaborations, which would align to this NU pilot project.

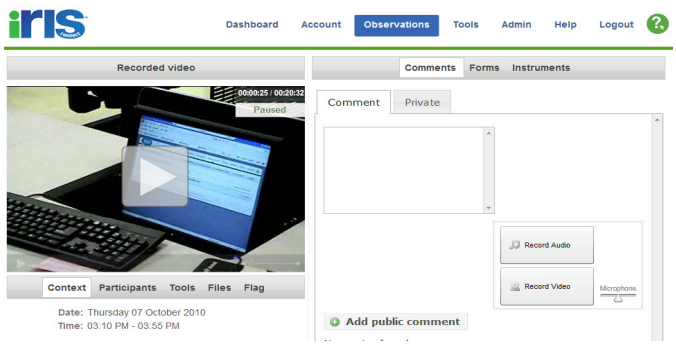

Figure 2: IRIS Connect observation window with panel for comments

Additional considerations

In addition to the remote observation and video recording of the intern or student teacher, other aspects for the use of the Internet-based system warrant consideration for future projects. Reflective practices (Rosaen, Lundeberg, Cooper, Fritzen, & Terpstra, 2008), small peer group collaboration (McClean & White, 2007), and cognitive coaching (Crasborn, Hennissen, Brouwer, Korthagen, & Bergen, 2008) are possibilities with system. This accumulation of benefits to the using of the system could have positive effects on the overall performance of the teacher candidate in the beginning of their educational career.

Reflective practices

Rosaen et al. (2008) present the findings of the case study that include the value of utilizing the videotaping of intern's teaching segments for reflective practice training. By utilizing small "chunks" and smaller "segments," the authors report that the interns were better

able to make specific observations on their pedagogical practices as compared to memory-based reflections (p. 349-354). The researchers report that the ability to move from general classroom management to specific pedagogical practices; center on the children's responses to instruction; and the capacity for the teacher candidates to connect to the evidence improves significantly by the use of videotaping (see fig. 3).

Small group collaboration

Teacher candidates that were a part of a pilot project utilizing joint reflection methods for reviewing videotapes of their instructional practices were successful in forming a strong professional identity (McClean & White, 2007). In this pilot study, the use of a collaborate team of teacher educators, in-service teachers, and student teachers was beneficial to the credential candidate. The conclusions of the study indicate that teaching candidates developed strong professional collaboration skills as well as the formation of individual and social identities were positive outcomes in this study. The authors summarize their findings in this statement:

> It is our belief that the reflections that we observed benefited the student teachers by increasing their confidence, enthusiasm, and professional training. The student teachers commented on how much they appreciated the opportunity to work over an extended time with a team of teaching professionals, and how beneficial that opportunity was for their professional training (p. 58).

Cognitive coaching

Crasborn et al. (2008) discuss the improvement of supervisors in promoting dialogue with their mentees as opposed to being didactic through the implementation of a specific training program. The video recording of the mentor-mentee discussions of the teaching candidates' performance provides an additional opportunity for analyzing the quality of the relationship. The author's report is specific to a supervisory training analysis, but the implications for the use of the Internet-based system are evident. Specifically, we believe that the analysis of the mentor-mentee relationships through the feedback provided in the IRIS Connect web site may lend itself to the improvement of training of university and school support personnel.

Professional Development

Lundeberg et al. (2008) present the findings of a case study in professional development that concludes that teaching professionals find it valuable to analyze videos of their practices as well as those of their peers. The researchers' discoveries include qualitative data that supports the construction of a video library that allows teachers to indentify new strategies and observe their changes in practices. The reflections, which were a part of the participants' procedures in this study, were reportedly analogous to 'having a mirror placed in my face" (p. 11). The teachers in this study also report that the use of videos allowed them to see the effects that their teaching methods have on their students. Collaboration within the group of participants also was beneficial to their professional development.

The participants note that there was an enhancing effect to the reflections when the colleagues were able to provide their input, which they refer to as being like a "double mirror" (Lundeberg et al., 2008, p. 13). A comment by one of the participants presents the consensus that the researchers report – "I enjoyed the comments and suggestions about how I would be able

to do things better" (p. 13). The researchers report that the teachers found the "positive, trusting climate" to be a critical feature of their learning community (p. 14). In addition to this aspect of the study's methodology, the participants gained valuable knowledge as to how the students in their classrooms interact.

The ability to view and analyze small group interactions presented the teachers with new information on the students. One participant reports, "It helped me to see a side of small group discussion that you don't normally see in day-to-day teaching" Lundeberg et al., 2008, p. 15). Lundeberg et al., report that one of the interesting findings of their study was that teachers that were focusing on student interfacing "recommend the use of video in professional development programs" (p. 30). The consensus of opinion that came from the surveys and focus groups interviews was that the collection and collaborative discussion of videotapes was beneficial to their professional development.

Current Study

A study of the effectiveness of the Internet-based system is underway by a team of educational professionals at NU. The focus of the research is to examine the usability of the equipment and system as well as the impact of technology on the teacher candidates' performance. The essence of the research questions is to determine whether the use of the IRIS remote observation system is a viable alternative to the traditional face-to-face classroom observation and assessment system. To accommodate the use of the system by NU and school site supervisors modifications to IRIS Connect web site have been made (see fig. 4). These enhancements to the remote observations will allow the supervisors the ability to record multiple sets of data while observing or reviewing the teacher candidates' performance. This will provide additional feedback to the intern that can be valuable for making corrections to their teaching practices. The essence of the research questions that will form this case study follow.

Technology related questions

The research questions that relate to technology focus on school site, user interfaces with the technology, and feedback qualities that determine the strengths or challenges that are a part of the system. The specific issues with the school site use of the technology and user interface strengths as well as challenges will provide qualitative data for analyzing the usability of the system in the public school system. In addition, the ability to provide quality feedback on teacher candidate performances forms the crux of the technology research questions.

Consumer related questions

The questions that relate to the primary stakeholders, which are the teacher candidates, NU supervisors, and site support providers focus on the effectiveness of using the IRIS Connect system. The observation and evaluation of the teacher candidates' clinical praxis is crucial in determining the viability of this use of technology. The gathering of qualitative data from each of the primary stakeholder groups will form the answer to these questions.

Preliminary findings

The specific collection of qualitative and quantitative data has not yet begun due to the short duration of the project's history. However, we can state that one of the biggest obstacles to

implementing this project is the concern for the identity protection of the Kindergarten through 12th (K-12) grade students in the various school districts. To date, we have sent letters to over 38 school district representatives with additional follow-up in the form other communication to more than 25 of those individuals. We have been successful in placing the remote observation system equipment in four different school districts and two more governing school bodies are in the second phase of discussions. One intern and the corresponding NU supervisor are actively using the system with several more expecting to be online within the next 30 days.

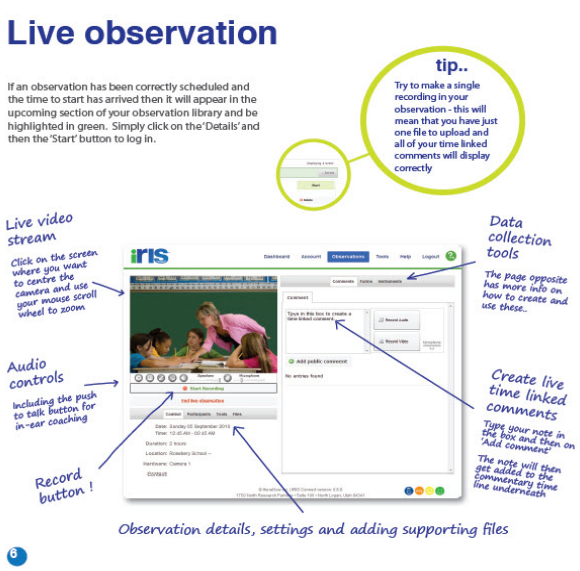

Figure 3: Multiple ways to convey evaluation details while viewing via the Internet

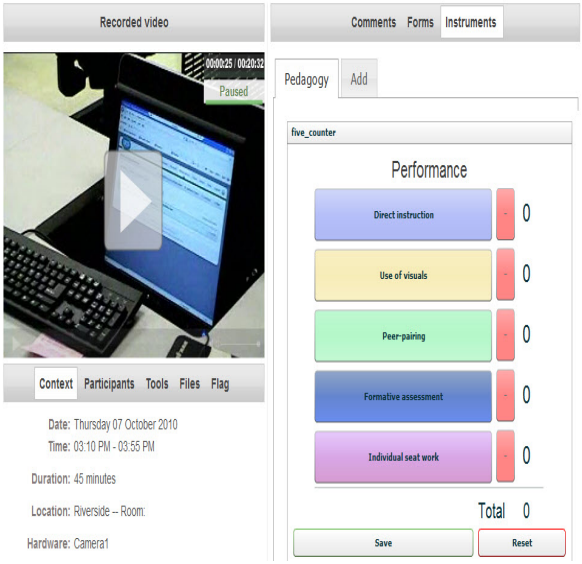

Figure 4: Modifications to enhance feedback by counting specific behaviors

Adaptations to enhance school site control

The concern for the protection of K-12 student privacy creates the need to adapt our project to include the exclusive use of the asynchronous features of the Internet-based equipment and software. This assures the school district representatives that their employee (the intern teacher candidate) will be the one that controls the videotaping and uploading of recordings to the IRIS Connect web site. This additional layer of protection for K-12 student identities is a necessary step for at least one of the two districts now in the next phase of discussion for being a part of this study.

Technology related findings

Although the survey and follow-up meetings with the study participants has not taken place, there is some feedback on the project coming through our work with the various school districts. The remote observation equipment requires the use of the host sites Internet. The requirements for the Internet use include the establishment of a static IP address that has public access for remote observations. The typical firewall configurations of today's school districts make this a challenging aspect to the use of the system. This challenge includes getting the proper administrative permissions, which can require multiple approvals from various levels of

governance. The use of the IRIS Connect web site requires the downloading of their software and a PC check that may necessitate the downloading of Adobe's Flash Player updates. Older personal computers may not have the capacity to support this software and the requirements for the best operation of the remote viewing system. Broadband connections that allow for high rates of downloading are a requirement for optimal use as well.

Conclusions

The use of an Internet-based system for viewing, communicating, and evaluating teacher candidate performance is an effective alternative to the traditional face-to-face observations as case studies have shown Beck et al., (2002), Dyke et al., (2008), and Lee & Wu (2006). The current project underway at NU has the potential to improve upon this institution's teacher training practices by allowing supervisors the ability to communicate synchronously and asynchronously through a secure web site. The ability for the supervisors to provide critical feedback to the interns that corresponds to specific video segments will allow the candidates to gain greater insight into their teaching performance (Dyke et al., (2008). In addition, the possibility to reduce costs associated with travel in terms of time and mileage is an advantage of using an Internet-based system.

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Customized Employment: Opening Doors in the Public Workforce

Abstract

If people with intellectual disabilities are to truly become self-determined, they have to be allowed to express choice throughout their daily life, including employment options. Current research shows there is a lack of choice being given, if any at all, to people with intellectual disabilities regarding employment. Typically, expectations for competitive employment tend to be low for this population, if considered at all (Citron, Brooks-Lane, Crandell, Brady, Cooper, & Revell, 2008). Customized employment and job carving practices have been in place through the Office of Disability Employment Policy within the US Department of Labor theoretically for the past nine years, but there seems to be a disconnect from theory to practice. Research further indicates gaps between current methodologies and actual practice taking place in the field in relation to self-determination and choice making (Guess, Benson, & Siegel-Causey, 2009). This paper aims to examine two aspects of customized employment. First, it will explore the current research on customized employment in relation to self-determination and competitive employment options for people with intellectual disabilities. Second, it will look at a model of customized employment used in a small rural setting for a 20 year old student with multiple impairments, including dual sensory, physical, and intellectual disabilities.

Customized Employment: Customized employment means individualizing the employment relationship between employees and employers in ways that meet the needs of both. It is based on an individualized determination of the strengths, needs, and interests of the person with a disability, and is also designed to meet the specific needs of the employer. It may include employment developed through job carving, self-employment, entrepreneurial initiatives, or other job devolvement or restructuring strategies that result in job responsibilities being customized and individually negotiated to fit the needs of individuals with a disability. Customized employment assumes the provision of reasonable accommodations and supports necessary for the individual to perform the functions of a job that is individually negotiated and developed (Federal Register Definition, 2002).

Current trend in the field of significant intellectual disabilities is for self-determination, in relation to choice making, to be seen as a decision-making process that is a generalized and integral part of each person's daily life. This includes employment options for the individual.

Historically, many people with intellectual disabilities have been denied the access to opportunities for decision-making necessary to experience in order to become self-determined in their own lives (Citron et al., 2008). For this population employment options have been no exception.

According to the National Organization on Disability's 2004 survey, 35 percent of all people with disabilities, ages 18 through 64, are employed either part or full time in comparison to 78 percent of people without disabilities. When looking at choice making and self-determination, in relation to employment opportunities for people with intellectual disabilities in comparison to people without disabilities, the disconnect widens even further (Citron et al., 2008).

In many rural areas, the standard employment practice for people with intellectual disabilities is to enter into a Community Training Center (CTC) upon exiting school at age 22. Most CTC's offer that person little in the way of job selection. Employees at CTC's are paid for piece work or a flat rate, which is considerably lower than minimum wage (Inge, 2006). Sometimes in rural areas CTC's are not available as an employment option. In these cases, often people with significant intellectual disabilities end up staying home, rather than entering the workforce. The very nature and model of the CTC does not lend itself well to choice making, expression of preference, or self-determination for people with intellectual disabilities, as it is not tailored to meet the needs, preferences, and skill set of the individual. CTC's have often been referred to as "warehouses" for people with intellectual disabilities (Wehman, Revell, & Brooke, 2003).

In some areas, supported employment is available through Vocational Rehabilitation Training. Supported employment better encompasses the decision-making process and preferences of the person with a disability. Supported employment looks to support the individual's right to explore his or her job preferences and then match the choice and skills set of an individual to an employment position within the community (Callahan, 2004). Then, through a combination of agencies, a Community Rehabilitation Provider (CRP) works with the person on the job site to train them for the position.

One of the largest problems with supported employment is that individuals being placed at job openings through supported employment are not being competitively compensated for the work they are employed to do (Wehmeyer, 2001). They often earn less than minimum wage and are given less hours and/or benefits than their co-workers. Supported employment is also driven by the local labor market instead of identifying and negotiating positions that best fit the skills set of the individual person seeking employment. It lacks the custom fit for the client.

Customized employment is designed through person centered planning and takes into consideration the skill set, preferences, and desires of the individual with an intellectual disability in regards to competitive employment options. Wehman, Revell, and Brook point out that customized employment encompasses the primary core values of supported employment, such as:

- *Presumption of employment*: Everyone, regardless of a disability, has the capability to perform and hold a job.

- *Competitive employment*: Employment occurs within the local labor market in community businesses.
- *Self-determination and control*: When people with disabilities choose and regulate their own employment supports and services, career satisfaction will result.
- *Commensurate wages and benefits*: People with disabilities should earn wages and benefits equal to that of co-workers performing the same or similar job.
- *Focus on capacity*: People with disabilities should be viewed in terms of their abilities, strengths, and interest rather than their disabilities.

Customized employment then takes these core values and embeds them into methodologies, including: job carving – creating a new job from a previous one encompassing some, but not all, aspects of the original job; job negotiation – creating a new job from parts of several existing jobs; job creation – creating a new job based on unmet workplace needs; job sharing – two or more people sharing the same job; self- employment, including the use of a microenterprise (Citron, 2008). These methodologies are individualized to fit the preferences and strengths of the person seeking employment.

To successfully implement a customized employment policy/program, all interested parties need to be at the table with each of their roles defined. Special consideration needs to be given to the following segments of the program: staff development, community partnerships, diversified funding, shifts in managerial approaches and supervision, and diversified funding sources (Citron, 2008).

Current research shows promising statistics for people employed through the customized employment model. Citron et al (2008) highlights one study done in the State of Georgia, called Project Exceed, which began with 198 people (105 female and 93 male) with intellectual disabilities, mental illness, and physical disabilities who were unemployed. Using the customized employment model, 141 one of those participants achieved employment outcomes. The average wage was $8.00 per hour. The lowest wage recorded was $5.15 per hour and the highest wage recorded was $40.00 per hour. Job selections for competitive employment included the following: car detailer, pet groomer, receptionist, teacher's assistant, data entry technician, bookstore employee, hair salon personnel, chef, embroiderer, and lab technician. For self-employment job selections, people chose: arcade, catering, pest extermination, flea market, sales, computer technology, motivational speaking, vending, cleaners, hair salon, jewelry, lawn care, home inspection.

Customized employment then seeks to up the ante by creating in-depth profiles for people with intellectual disabilities. Through the individual profile, skills sets and personal preferences are identified, work experience opportunities are provided, and, with the client's approval, potential jobs are carved out specifically for that individual. The end result is competitive pay for competitive work of the person's choice, in a community setting for the person with an intellectual disability. These are the very same ideals that people without disabilities seek out when looking for employment.

Procedure

Three years ago, a team at a public high school in a rural district of a western state began a pilot program with the state's technical assistance project for students who have impairments in both vision and hearing. The goal was to create a team of professionals (including teachers, paraprofessionals, and speech pathologists), with enhanced knowledge and skills for working with students with dual sensory impairments in this rural area of the state. The need for this type of team surfaced, due to limited resources and services in the rural public school district, for students with dual sensory impairment.

In our second year of training, we began to look at customized employment for a 19 year old young lady with multiple impairments (physical, cognitive, speech, and dual sensory impairments). During this second year, we worked on the discovery process, which is the foundation of customized employment (University of Rural Montana Institute, 2009). The discovery process entailed examining "who" our student truly was. Once the discovery data were gathered, we began to compile the digital profile. The profile is of vast significance, as it will be used in place of the traditional Vocational Rehabilitation (VR) application. Through the traditional VR functional assessment, students with such significant impairments as our student would be deemed unable to work. Using the digital portfolio, we were able to capture her abilities and highlight her skill sets, demonstrating that she can indeed work.

This year, our third year, we began our initiative with her customized planning meeting, in which we gathered our student, her family, our team, VR, the principal, the assistant superintendent for our school district, Rural Regional Center (RRC), and an additional external consultant. Due to our rural location, we used digital-media technology, SKYPE, to bring all parties to the table to discuss each participant's role and responsibility throughout the customized employment procedure.

By pulling a wide variety of agencies together, we were able to define roles, assign duties, secure needed funding, overcome barriers, such as transportation, and brainstorm possible job opportunities for our student. The next step is to examine our local business connections and contact those that are the best fit for our student. The end result is competitive employment for competitive pay for our student; truly bringing change and new beginnings to her life.

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Interactive Learning Activities for Special Education Students in Rural Settings

Introduction

Advances in technology have created an opportunity for special education students to participate in learning activities that utilize visual, hearing and kinesthetic learning styles modalities. These activities provide creative approaches to otherwise mundane repetition exercises needed for students with special learning needs to learn and assimilate new skills. The purpose of this review is to share websites that can be utilized by special education teachers.

Computers have not only provided increased access to learning opportunities, but also access to communication and information in general for people with disabilities. Access to learning opportunities and communication has provided students with disabilities increased opportunities for postsecondary education, leading to better employment opportunities. Therefore, special education students must learn computer skills in the classroom. These skills may then be generalized to other assistive technology devices that may be utilized in all areas of life.

The purpose of special education is to meet the unique learning needs of each individual student. The websites presented here support instruction for special education students by providing individual learning opportunities. Interactive computer games and activities are asynchronous, students enjoy them, and the instructional level can be adapted to meet each student's learning needs. The websites discussed are interactive in nature and address reading/language arts, math, social studies, and science instructional strategies for special education students at the secondary level.

Technology has increased access to learning activities as well as life activities for persons with special learning needs. Email, instant messaging, video chatting, and other communication technologies enable students with special learning needs in rural schools to participate in collaborative learning activities at a distance. Teachers must be prepared to provide learning experiences for students that utilize these technological advances in order to prepare them for the world in which they must live and function. The first step in this process is learning computer skills, and the websites presented allow special education students to learn computing skills

while participating in age appropriate academic skill development activities. Technology has and will provide a new beginning for many of our students who receive special education services.

Interactive Learning

Student motivation, especially in the high school student with learning difficulties, can be problematic. Presenting age appropriate material at desired instructional levels can sometimes be a daunting challenge. Computer games provide opportunities for student engagement in a non-threatening environment that can, if utilized correctly, improve student performance in academic skills. Brooke and Solomon (2001) describe play as a "situation in which there is no fear of failure because there is no goal, either internally or externally imposed" (p. 941). For students with learning difficulties this can be significant.

Interactive computer learning activities and games can provide the needed repetition that students with special learning needs require in order to learn new skills, and do so in a fun and engaging manner. Using activities and games as an instructional method encourages active learning and peer collaboration, while providing cognitive as well as affective learning opportunities (Ruben, 1999). "Games provide a way to reach and engage students who may have a variety of learning styles," (Kumar & Lightner, 2007, p. 54). Segers and Verhoeven (2005) studied the long-term effects of computer training of phonological awareness in kindergarten and found that an intervention utilizing computer games for just 15 minutes a day, once a week for 40 weeks, improved the students' phonological skills. The activities included discovery as well as skill development games.

Games have been found to be effective in teaching students with special learning needs. Brooke and Solomon (2001) examined students with learning disabilities as they visited an interactive science museum to determine if the students would demonstrate curiosity and creativity. They discovered that the interactive learning environment did increase student motivation and engagement. Gaudart (1999) examined the utilization of games for teaching English to speakers of other languages and concluded that using games to teach language not only provides opportunity for practice, but does so in a nonthreatening manner. Moore (2001) discussed the use of computer activities to address sensory deficits in children and found that, although this method might not be appropriate for every child with a learning impairment, it has the "potential to improve a variety of skills in almost everyone" (p. 140).

Shaffer (2007) examined how computer and video-based epistemic games can be used to prepare students for postsecondary careers and how this approach may be applied to students with disabilities. Shaffer reviewed studies using an epistemic game to allow general education students to play the role of journalist online. The results of these studies indicate that these students' self-perceptions changed in a variety of ways, increasing academic and social self-efficacy. Shaffer suggests the use of this type of role playing game be modified to be used as transition opportunities for students with disabilities. He puts forth the idea that providing students with disabilities the opportunity to explore different career paths in a safe, structured, non-threatening game-like situation gives these students realistic images of the postsecondary career options available to them.

The computer and the Internet provide opportunities for students in special education to practice academic skills repetitively, and at the same time to learn valuable computer skills that

will enable them to utilize the growing amount of assistive technology available to them as they enter postsecondary life, whether entering the job market or pursuing additional training or education. Computer games and activities will never take the place of the explicit and systematic instruction that the special education teacher provides students. However, they do offer additional resources to special education teachers as they seek to provide meaningful learning activities for students with disabilities.

Interactive Learning Websites

Special education teachers have access to interactive electronic sources that can be utilized immediately. There are many electronic resources ranging from games and activities to photos and videos. The sites chosen for review here have been chosen because of the adaptability of the content for individual learners. Sites include those utilized by current special education teachers as well as a search of the Internet. Many sites found were not included because the reading material was inappropriate, the content was not age appropriate, or the layout was not appealing. The purpose is to present several extremely useful websites that teachers can utilize immediately.

Two resources for math are AAA Math (http://www.aaamath.com) and The National Library of Virtual Manipulatives (http://nlvm.usu.edu/en/nav/vlibrary.html). AAA Math is a site that provides drill and practice in a format appropriate for students in special education. Games and activities are organized by topic as well as grade level so that students do not have to click on first grade to have access to the appropriate instructional level. Practice can be continued for as long as needed for the student to master the skill. Students may choose from among a list of topics, and then choose the level within each category. If the wrong answer is given, the program gives the problem with the correct answer. One of the authors, a current special education teacher, utilizes this site with her high school boys who are deaf and hard of hearing. The National Library of Virtual Manipulatives is a resource that provides the student the opportunity to examine math manipulatives online. It is categorized by grade from kindergarten through 12th grade, and includes basic math manipulatives such as bar graphs, fraction pieces, and base ten blocks, as well as activities involving money, patterns, and tangrams. This site was chosen because the skills are presented in various academic levels that allow for individualization of instruction.

Two resources for science are Cells Alive (http://www.cellsalive.com) and the Smithsonian National Zoological Park (http://nationalzoo.si.edu/) sites. Cells Alive was recommended by a current special education teacher. The site is colorful, providing pictures that are pleasing to the eye and that allow students to interact with the information. There are puzzles and crosswords available in a format geared toward high school students. The pictures and activities are such that students with disabilities should be able to navigate and glean information from the site without needing to read the material. The Smithsonian National Zoological Park site was included because of the graphic photos, videos, and webcam shots included on this site. This site is rich with information about a variety of animals from all parts of the world and the information is presented in a very useable manner. This is a site that every educator should have bookmarked.

National Geographic (http://www.nationalgeographic.com) and AAAWhere (http://www.aaawhere.com/geog-usa.htm) are two sources for social studies. The AAA Where

site is linked to the AAA Math site and provides maps and activities in the geography of the United States as well as the nations of the world. Students may choose to learn, practice, play, or explore. The National Geographic site provides information in history, animals, and cultures in a visual format and includes games as well. Students can gain much information from browsing individually. With the use of a projector, the teacher can add information orally as there is rich material available in written form as well as visually. This site is another one that every educator should have bookmarked.

Starfall (http://www.starfall.com) and Guide to Grammar and Writing (http://grammar.ccc.commnet.edu/grammar/quiz_list.htm) are two sites that can be utilized for reading and language arts. For example, Starfall is currently being used in a self-contained class to provide reading activities that may be used individually with a computer or as a class on a Smartboard. The site includes e-books and a variety of interactive activities. Information is presented in both auditory and written format. Guide to Grammar and Writing provides grammar lessons and quizzes. Although some of the quizzes may be too difficult for students in special education, many are appropriate. The quizzes can be completed individually or as a class using a Smartboard.

The sites reviewed here provide the special education teacher with a few sites that can be accessed immediately by students with special needs. The sites provide a range of skill levels that can be utilized with individual students. They also provide teachers with rich information that can be adapted to meet the needs of students with special learning disabilities.

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Coordinating Academic Standards and Functional Skills on IEPs and in Instruction for Students With Moderate and Severe Disabilities

Standards-based IEPs are here! Teachers of students with moderate and severe disabilities struggle with combining academic standards while addressing the functional and unique needs of these students. Standards-based IEPs are being enforced in ¾ of the states now, and writing them has been a change and a challenge for special education teachers. Typically, IEPs for these students have focused on independent living skills, functional academics, communication, and social skills, and while those areas will still be addressed, an academic focus is now expected.

IDEA amendments have required participation and progress in the general education setting and curriculum since 1997. No Child Left Behind legislation has complicated this situation, for teachers, schools, and the students with disabilities themselves. Research has shown that many special educators have little knowledge of the general education curriculum (Browder, Spooner, Ahlgrim-Delzell, Flowers, Algozzine, & Karvonen, 2004) and that a significantly small number of special education teachers have familiarity with the state academic standards (Browder, Flowers, Ahlgrim-Delzell, Karvonen, Spooner, & Algozzine, 2004). In a chapter called "General Curriculum Access," Browder, Ahlgrim-Delzell, Courtage-Little, and Snell (2006) explained that special education teachers need to select specific target skills with direct links to the academic content in order to write standards-based IEPs. MacQuarrie (2009) reported that traditionally, IEPs have been written to focus on deficit-driven instruction but that standards-based IEPs can now benefit students with disabilities throughout their educational years.

While this is a definite issue nationally, writing standards-based IEPs for students with moderate and severe disabilities in rural areas may prove to be especially difficult. Oftentimes in rural areas, the incidence of students with moderate to severe disabilities is very low, and rural schools may struggle with hiring teachers with specialty licenses or certificates, such as severe intellectual disabilities or autism spectrum disorders. These two situations may result in teachers not having the experience at addressing the standards. This session will offer recommendations on how to write standards-based IEPs for these students, and how to create lesson plans and activities to address those standards, at the ability levels of the students.

The following is a discussion and rationale for writing standards-based IEPs:

- for students with significant cognitive disabilities who participate in alternate assessments, in order for schools to demonstrate that state standards are aligned to the alternate assessments, instruction needed to become aligned as well.
- it is important to note that while alternate assessments include grade level academic standards, the performance levels are set according to the ability level of students with significant cognitive disabilities. Results of the alternate assessments should show progress, or lack thereof, toward grade level academic standards.
- the IEP fits into this by helping the student develop skills in order to "get closer" to their grade-level general education standards. Part of this is because there is significantly more than 1% of the school population who is designated as being able to take the alternate assessments, and schools are punished for that. If more and more students can develop the skills needed to participate more in general education curriculum and the regular state assessments, then the 1% can become more of a reality rather than an impossibility.
- at the very least, aligning instruction to the alternate standards will help these students do better on the alternate assessments themselves – and show progress.
- additionally, students with moderate and severe disabilities need instruction in reading, math, and writing, so those academic areas need special attention. Even though functional/communication/social/behavioral/motor skills are very important, the basic academics are, too. Even so, writing the traditional objectives in a meaningful and relevant way that addresses the general education curriculum and environment is important as well.

Reading, writing, and math are expected to have standards-based IEP goals and objectives while areas such as communication, daily living skills, social, and behavioral will most likely not be aligned with state standards. Those non-academic areas are considered to be non-standards-based areas for the IEP goals and objectives.

Steps to writing standards-based goals and objectives

1. Special education teachers should meet with general education teachers to determine what academic standards the school/departments plan on addressing in a given school year. Because the majority of special education teachers are not familiar with the state's academic content area standards, he or she should spend time finding and reviewing those first.
2. The special education teacher and IEP team should select standards that can be addressed for each student on an IEP. It is best to select reading, math, and writing academic standards where the student demonstrates some "emerging skills," and one that is similar to standards being taught to peers. It is best to think of standards that can build on from one to the next, with direct instruction possible.

3. Brainstorm activities that a teacher could do with the student to address the academic content standard, but at the student's own ability level. Next, it is important to identify the actual skill or observable behavior that you would expect the student to be able to do in order to successfully complete the identified lesson or activity.
4. That actual skill becomes the standards-based IEP objective for that academic content area. This translates to "participation in the general education curriculum."
5. You have already identified some lessons and activities that could be developed formally to address the skill (now an IEP objective). Next, creating a data collection chart so that anyone working with the student can easily collect data is created. Progress on this skill translates to "progress in the general education curriculum."
6. Working with the general education teacher to identify what he or she plans to do to teach the academic content standards, and showing the activities identified in #3 above, will allow for the student with moderate to severe disabilities to also "participate in the general education setting," as well. While most of the lessons and activities for these students will be conducted in the special education setting, working with the general education teacher to carry out the activities is one way to improve success in the inclusive setting.
7. The annual goal can still be written the same way (intent or purpose, area of skill or behavior, beginning and desired ending of performance, and being "directional" – student will increase….. or will decrease……).
8. The objective can be written in such a way as to be done in different settings or in different academic areas, even if its origin was a reading academic standard, for example.
9. It is also important to identify as many skills as possible when you write a lesson plan for any academic area. When you do that, you should be able to see how many different academic standards may be rooted in your lesson plan, and/or how many skills that a student needs to work on can be addressed in just one lesson plan or activity. Addressing different objectives and skills in one lesson helps a student across different areas --- making it easier to collect data on IEP objectives (many more opportunities are provided throughout the day!).

See the chart below for examples of the previously identified steps:

Academic content standard	**Essence of standard (what is it really saying?)**	**IEP objectives to align with standards**	**Activities and lesson plans to align with standards**	**"Other" skills included in this lesson or activity**
Math –	Length, size, weight, place	Will sort objects by	Put different colored bears in	Fine motor

Kindergarten *Compare and order objects according to location and measurable attributes*	value	color with 75% accuracy; Will match objects that are "next to," "smaller than," and "above" you.	labeled cups; Match large-sized numbers with small-sized ones; Find common objects by following directional cards (i.e., "the small ball next to the desk") With a classmate, move self into position according to height, color of hair, birthdates	Identifying colors Identifying numbers Reading Following directions Turn-taking
Math – 6th grade *Calculate perimeter, area, surface area and volume of two- and three-dimensional figures to solve real-world and mathematical problems*	Measuring, adding, multiplying, using formulas	Will measure objects and pictures of shapes in inch increments. Will correctly identify the number of cups needed to fill objects.	Measure the height, length, etc of objects in classroom. Use measuring cups and spoons to fill containers. Record data on charts.	Writing Identifying numbers, inches, feet, centimeters, etc. Fine motor Turn-taking Communication
Reading – 1st grade *Know and apply grade-level phonics and word analysis skills in decoding words.*	Sounding out words	Will select the correct letter when hearing a letter sound. Will make the correct letter sound when	Use assistive technology to select letters when hearing sounds on a computer software program.	Listening Letter identification Turn-taking Social skills

		seeing a letter.	With a partner, say the sound when partner shows letters on flashcards.	Speaking Use of assistive technology
Reading – 5th grade *Read with sufficient accuracy and fluency to support comprehension*	Read at a certain speed that allows for comprehension of reading passage	Will correctly identify 3 new sight words per week on Dolch (or Edmark) vocabulary list. Verbally or with pictures, explain key points of a reading passage.	Increase number of sight words (or letters) and accuracy. Use flashcards to identify words, letters at increasing speeds. Put pictures in order of the reading passage Take turns asking a peer questions. Clap steady beat when teacher reads.	Reading Speaking Coping skills Memory Use of assistive technology Fine motor
Social Studies – **4th grade** *Compare ways of life of Indian Nations from different regions of North America.*	Demonstrate understanding of how American Indians live(d) and work(ed) with how others in North America do (did)	Will sort pictures of American Indians according to dress, food, shelter. Will complete sentences using a word bank.	Use pictures of different American Indians and their cultures. Fill-in-the-blank to "take notes" on different aspects of culture, using word banks.	Writing Reading Roleplaying Social skills Fine motor Memory

			Roleplay children's games from different North American cultures.	

Practice activity during session:

Using the information and descriptions below, please identify the following information:

1. An activity a student at each of the 3 levels could do to address the reading academic standards below.

Presymbolic (or nonsymbolic) communication – student does not respond to words or picture symbols.

Early Symbolic communication – student uses some symbols, including pictures. Combination of approaches

Symbolic reading – students can read well enough to sound out new words, glean meaning from print.

Reading/Language Arts academic standards:

Grade 2 - Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Grade 5 - Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

2. The specific skill that the student can be expected to be able to do for the activit(ies) identified in step 1.
3. Write an objective for the student to complete that skill (including required components of conditions, specific skill or behavior, evaluative criteria, expected date of mastery, and identification of who will collect the data.

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Inclusion: Change That Begins With Leadership

Abstract

The purpose of this presentation is to inform teachers, parents, leaders and others about the importance of inclusion and leadership. The organizational leader is obligated to provide direction to those in the organization. Rural school leaders are those that influence how students are taught and enhanced in the organization. The results of this presentation may be used in rural schools, and others, to help improve how special needs children are educated. The theme of the conference this year is "Bringing Change That Leads To New Beginnings" and this presentation supports this theme to the fullest. The educational leader is in a position of shaping the organizational structure of the schools within the district and the beliefs of the school community as it relates to inclusion.

Inclusion: Change That Begins With Leadership

All organizations have an individual in the top leadership position. In schools most often that person is referred to as the school superintendent. In public schools this individual serves as the board's executive officer (Blumberg, 1985). As the organizational leader, the school superintendent is obligated to provide direction to the board and others as they determine goals and objectives for the district. Hanson (1991), indicated that "the organization's formal leader is in a unique position to set the tone in schools… because of his/her broad mandate to carry out the unit's mission" (p. 177-178). The school superintendent's role in change is very complex. Thousand and Villa (1990), stated that "the educational leader, then, is in a position of shaping the organizational structure of the schools within the district and the beliefs of the school community" (p. 7). Superintendents concerns and thoughts influence the way those in the organization may think, feel, and behave toward change. School superintendents are the key leaders in their school districts in regard to the schools programs and their concerns can facilitate or discourage the school's personnel in the planning and implementation of desired changes.

Today's school leaders are challenged with the task of educating all students regardless of specific or individual needs. As a result of this, school leaders must meet the challenge of including all students in the educational mainstream, thus, affecting the success of the implementing inclusion to its fullest. The nature of these concerns regarding inclusion will likely have an impact on the success of the districts effort to help each and every child reach their full potential.

Today an inclusive school is defined as a school that educates in the mainstream (Lusthuas and Forest, 1989). It also means providing all students served within the mainstream appropriate educational programs that are challenging yet geared to their capabilities and needs. Furthermore, it is necessary to provide support and assistance to the identified students and their teachers as needed for them to be successful (Stainback and Stainback, 1988). Additionally,

inclusive schools are a place where everyone belongs, is accepted and is supported by members of the school learning community in the course of having the students educational needs met.

Leadership in school environments today are confronted with many social, economic, and political changes resulting in various modifications regarding the manner in which special needs children are served. Among these modifications is the increased concern over serving children with special needs. Many factors will influence the degree of success in serving these children.

Bennis and Nanus (1985), suggest that leadership can be the pivotal force behind successful organizations. They continue by saying that leaders know what they want and how to get what they want. They are able to unleash the energy and effort to achieve the desired goals and outcomes related to full inclusion. Absent leadership, the implementation of the aforementioned efforts may lessen and the program falls by the wayside.

Thus, if the leader maintains support of the change or innovation the more likely the change or innovation is likely to succeed. So, where is the school leader when it comes to inclusion? Reviewing the efforts of one former study we find that the position of the leader depends on the leader's level of concern and effort in support of particular innovations. Hord (1990), Senior Research Associate with the Southwest Educational Development Laboratory, reports that "when educational leaders understand and acknowledge that the change process itself is a factor to be accommodated in their school improvement efforts, when they consider the requirements of the changes or innovations that are introduced and the needs of all individuals who will be implementing the innovations, and when they develop plans that take these factors into account, then they will be providing leadership that guides, manages, and supports change" (p. 4). Hord and Czerwinski (1991), state that school administrators (superintendents) "have been encouraged to move beyond their stabilizing posture and step boldly out to provide guidance and leadership for instructional change and improvement" (p. 1).

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Are We Still Struggling to Fill Special Education Teaching Positions in Rural Nevada? Anticipated Need for Special Education Teachers for 2011- 2013 in Rural Nevada

Abstract

Nevada has historically experienced a shortage of qualified special education teachers which was due in large part to the phenomenal population growth in the Las Vegas area. In fact, properly licensed special education teacher needs were not being met anywhere in Nevada and the state resorted to an alternative licensure programs to meet the need. This resulted in a number of special education teaching positions being occupied by teachers with limited licensure. Rural school districts, due in large part to the isolation factor, struggled even more that the urban/larger districts during this time to fill positions. Population growth has greatly slowed and there is a surplus of teachers, generally, in the state. Does this mean that the shortage of teachers is over? Rural school districts continue to struggle to find qualified teachers in the critical areas of math, science and special education even during this slowdown. A study was undertaken to project the needs for rural special education a in Nevada.

Introduction and Methods

Nevada has historically experienced a shortage of qualified special education teachers which was due in large part to the phenomenal population growth in the Las Vegas area. In fact, needs were not being met and the state resorted to a alternative licensure program to meet the need. This resulted in a significant number of special education teaching positions being occupied by teachers with limited licensure. Rural school districts, due in large part to the isolation factor, struggled even more that the urban/larger districts during this time to fill positions.

Determining what is rural and what is not is always problematic in Nevada due to the fact that some districts exhibit characteristics of both. Figures 1 and 2 provide a description and geographical representation of the state's school districts and provided guidance in this study of what was rural.

Figure 1. Nevada School Districts - Rural Status

Carson City - Not rural, located about 35 miles from Reno

Churchill - Not rural, located within 60 miles of Reno

Clark - Las Vegas, not rural, largest district in state and is one of the 10 largest in the country

Douglas - Not rural, located about 50 miles from Reno

Elko - Rural, but contains a relatively large city.

Esmeralda - Rural, the smallest school district in Nevada (about 70 students)

Eureka - Rural, about 250 students, more than 200 miles from Reno and Las Vegas

Humboldt - One of the largest of the rural districts, about 170 miles from Reno

Lander - Rural, about 220 miles from Reno

Lincoln - Rural, about 150 miles from Las Vegas

Lyon - Another large rural district, but in close proximity to Reno

Mineral - Rural, about 150 miles from Reno

Nye - A very large geographical district that has characteristics of both rural and urban (southern part is near Las Vegas, north is rural)

Pershing - Rural, about 90 miles from Reno

Storey - Rural and small, but very close proximity to Reno

Washoe - Reno, urban

White Pine - Rural, about 330 miles from Reno and 220 miles from Las Vegas

Figure 2. Nevada School Districts - Geographical Representation

Now that population growth in Nevada has slowed significantly the question is are rural school districts continuing to experience problems in hiring qualified teachers to fill special education positions?

The following research questions guided the process:

• Are the difficulties that rural school districts historically faced in hiring quality special education teachers continuing in spite of the drop in demand for teachers generally ?

• Is the need for special education teachers lessening in rural Nevada (due to RtoI, better screening and assessment, etc.)?

• What are the three leading causes of vacancies in special education teaching positions in the districts?

• How effective have the districts been in employing teachers who have the desired skills and dispositions?

• Is it anticipated that new special education teachers will require alternative licensure?

• How much turnover do you expect in the next two years?

The research design was a telephone interview with to superintendents, building level principals, and district human resources directors (when there was one) in several of the smaller school districts in Nevada (note: these were all rural districts). This was an investigator designed question protocol which was validated by a panel of special education teachers. These telephone interviews were conducted to provide a deeper level of understanding of the issues encountered by rural school districts in Nevada in employing quality teachers.

Data analysis consisted primarily of determining frequencies and percentages of those answering each option to each question and using recording important comments made by respondents.

Findings

The results are taken from a survey of rural school district administrators. This will include summations of answers to each of the following questions.

Research Question1. Are the problems that rural school districts faced in hiring quality special education teachers continuing in spite of the drop in demand for teachers generally?

Most respondents answered yes to this question. The yes answer tended to be qualified and "couched" with a caveat. Recruitment and hiring of high quality teachers continues to be an issue in the districts. The quality and quantity of applicants has increased over the past few years. There continues to be a "shortage" of applicants in hard to fill positions.

Research Question 2. Is the need for special education teachers lessening in rural Nevada (due to RtoI, better screening and assessment, etc.)?

No! Most respondents indicated that they have, to date not experienced any real reduction in the number of students with an IEP.

Research Question 3. What are the three leading causes of vacancies in special education teaching positions in the districts?

1. Moving to a more urban area; 2. family moving out of the area due to employment situation of spouse; and 3. dissatisfaction with current employment/environment. There were a few additional responses.

Research Question 4. How effective have districts been in employing teachers who have the desired skills and dispositions?

The ability to hiring special education teachers with preferred skills and dispositions has improved over the past three years. These applicants are the younger, newer teacher candidates.

Research Question 5. Is it anticipated that new special education teachers will require alternative licensure?

Most likely! A good source of teachers has been those willing to gain certification through the options program. Many have discovered that a willingness to gain licensure via the options programs is a good way to increase employment opportunities.

Research question 6. How much turnover do you expect in the next two years?

Little (due to the economy).

Most Nevada teachers are "staying put" until the impacts of the recession lessens.

Implications

While the findings of this study are not surprising given the economy in Nevada they do indicate a future concern. Teachers are not moving as frequently as they did during strong economic times. Will the situation experienced during pre-recession levels return as soon as the economy recovers. This concern was voiced during the interviews.

Need for Further Research

The key question that this report begs is what happens when the economy picks up? History informs us that when the districts in and around population centers are hiring large numbers of teachers hard to find teachers (special education, mathematics, etc.) are very difficult to attract teacher candidates to small rural districts. This is the question that must be asked when Nevada school districts are not cutting positions and return to expanding their teacher force.

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What Do They Need? The Results of a Study to Determine the Skills and Dispositions Needed by Special Education Professionals in Rural School Districts in Nevada

Abstract

After almost 35 years since the enactment of PL 94-192, we believe we know what school districts want and need when they hire special education professionals. In fact, some assume that rural school districts should be happy to have teachers who meet licensure requirements. To test that assumption, and in an effort to determine the "wants and needs" of rural districts, a study was completed that used in-depth inquiry to determine what the persons who are primarily responsible for hiring special education teachers are really seeking in reference to skills and dispositions. This presentation will focus on findings of this study.

Introduction & Methods

The landscape shift in public K-12 education that began with No Child Left Behind Act (NCLBA) in 2001 continues. Some believed that NCLBA would be short-lived but are finding that it is very popular with the public and is causing significant changes in the way teachers must teach so that students can/will learn. This is especially true with rural special education teachers.

While much has been reported about pre-service preparation for all teachers over the past seven years much there have been only a few studies reporting on the needed knowledge and dispositions that rural special education teachers need to be effective.

Determining what is rural and what is not is always problematic in Nevada due to the fact that some districts exhibit characteristics of both. Figures 1 and 2 provide a explanation and geographical representation of the state's school districts and provided guidance in this study of what was rural.

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Washoe - Reno, urban

White Pine - Rural, about 330 miles from Reno and 220 miles from Las Vegas

Figure 2. Nevada School Districts - Geographical Representation

In rural Nevada some schools have only one special education teacher per building which presents a challenge in that person being responsible for students with differing disabilities. Anecdotal information provided primarily by district and building level administrators have indicated that often the temperament and professional dispositions of the special education teachers is more important than content preparation to be successful in rural school settings. There has been no published research from Nevada which supports this point of view however. This drives a serious question. What are the perceived needs of rural Nevada school districts when employing special education teachers? The following research questions guided the process:

• Are rural districts recruiting/employing teachers with little regards beyond meeting licensure requirements?

• If not what skills and dispositions do districts seek when employing special education teachers?

• What are the specific instructional skills and professional disposition that districts' seek?

• How effective have the districts been in employing teachers who have the desired skills and dispositions?

• If hiring teachers with the desired skills and dispositions is not possible what kinds on professional development is used to assist these teachers once the commence employment?

The research design was a telephone interview with to superintendents, building level principals, and district special education directors (when there was one) in several of the smaller school districts in Nevada (note: these were all rural districts). This was an investigator designed question protocol which was validated by a panel of special education teachers. Those interviews were conducted to provide a deeper level of understanding of the issues encountered by rural school districts in Nevada in employing quality teachers.

Data analysis consisted primarily of determining frequencies and percentages of those answering each option to each question and using recording important comments made by respondents.

Findings

The findings were derived from a survey of all rural building administrators in Nevada. The data are presented by research question.

Research Question 1. Are rural districts recruiting/employing teachers with little regard beyond meeting licensure requirements?

The overwhelming response at all levels was no! Not a single respondent gave any indication that simply meeting licensure requirements was satisfactory when hiring any teacher and especially a teachers charged with the responsibility for students with an IEP.

A common response to the questions which probed this topic was that in spite of fallacies that small rural districts might only be concerned with meeting minimum licensure requirements they realized that the level and quality of education provided to students was absolutely critical to the child's future and that the very best qualified teachers had to be hired.

Research Question 2. If not, what skills and dispositions do districts seek when employing special education teachers?

There seemed to be almost total recognition that most small schools and districts could not expect to employ teachers who possessed those skills necessary to meet the needs of all

students with an IEP but they have devised a number of methods to meet the needs of students (usually through a collaborative efforts with other neighboring districts).

The overwhelming response to questions probing this topic was that they really focused on the dispositions of the individuals during the interview. "We need and seek teacher(s) who can related to other people." We look for a teacher who can recognize their limits and strengths and bring those to the students. A third common remark was that probing for the core values of the teachers during interview to ensure that they were very child centered was critical to hiring someone would prove successful.

The options licensing program gave districts additional flexibility in hiring on dispositions rather than training only. It was recognized that the teacher who received licensure via options was going to spend considerable time resources in attending mandated classes and training

Research Question 3. What are the specific instructional skills and professional disposition that districts' seek?

The responses to this question closely parallels the response to RQ 2. The districts would prefer to have a "generalist" who posses strong teaching skills and the dispositions to reported in RQ 2. When interviewing to fill positions most of the background checking and questioning is directed at the effectiveness of the candidates in teaching and their core values are student centered.

• How effective have the districts been in employing teachers who have the desired skills and dispositions?

Most respondents indicated that hiring special education teachers who possess at least some of the skills and dispositions has gotten somewhat easier over the past two to three years. The economic slowdown has result in a positive impact on the ability to attract better quality candidates to the rural districts.

• If hiring teachers with the desired skills and dispositions is not possible what kinds on professional development is used to assist these teachers once the commence employment?

Most respondents indicated that they monitored all new teacher hires and used district resources when appropriate and the second level of professional development was to utilize resources of the Regional Professional Development Centers.

In summary, several items should be noted. This information related only to those districts included in the survey, the current economic status of Nevada is likely the worst of all 50 states, and that verbal responses are always subject to interpretation biases.

Implications

There is a strong indication that the economic slowdown has resulted in rural school districts being able to attract and hire "better" quality teachers to work with students with an IEP. It appears that the alternative licensure program for special education teachers is a vital and important avenue for hiring strong teachers.

The issue of "are you getting more applicants for special education teaching positions?" was not a question addressed in this project it was addressed in a parallel students and the finding was that when special education teaching positions come open in several small districts there are more (and better) qualified applicants. This has to one of the few silver linings in the current economic situation.

Need for Further Research

The key question that this report begs is this a temporary situation and will change when the economy picks up? History informs us that when the districts in and around population centers are hiring large numbers of teachers hard to find teachers (special education, mathematics, etc.) are very difficult to attract to small rural districts. This is the question that must be asked when economic balance is reached in the state.

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Challenges of Response to Intervention at the Secondary Level

Abstract

This paper presents a summary of issues related to implementation of Response to Intervention (RtI) at the secondary level. The authors discuss the challenges unique to small rural high schools. Additionally, the paper presents various models complete with inherent strengths and weaknesses.

Background

The current political agenda has increased the pressures on school leaders geometrically. A significant part of this pressure is associated with providing an appropriate education of all students; specifically, addressing the needs of secondary students with individual educational programs (IEPs). Response-to-Intervention (RtI) has become a commonly accepted approach that has worked well for elementary levels. The intent of RtI is to provide high quality instruction and corresponding interventions aligned with students' needs at predictable and systematic points throughout the school year. Well-designed RtI systems provide structures that reduce the number of students who fail. Such systems provide for continuous monitoring of progress and corresponding adaptive instruction. Numerous approaches and systems are available for elementary application and RtI can effectively decrease achievement gaps. However, approaches and systems that work well at the elementary level are not generalizable to the secondary level.

There has been a lack of research conducted on the implementation of Response-to-Intervention in secondary schools (Duffy, 2007). Partly as a result, this lack of research has led to great variations of RtI implementation in secondary schools. Scruggs and Mastropieri (2005)

discussed some of the issues related to implementation of RtI at the secondary levels. Challenges are associated with school structure, teaching style, scheduling, and culture. Elementary and secondary schools are distinctly different from the elementary school; however, the bulk of the RtI research has occurred at the elementary level. Ehren and Deshler (2007) also identified challenges faced by secondary school leaders who hope to implement RtI. They concluded that educators could not just export elementary practices to secondary schools. At the fundamental level, the implementation of RtI in secondary schools is different from implementation at elementary schools.

Selected RtI Models

At the building level, RtI allows, indeed, unique implementation promotes. "What schools need is a model for providing early intervention, one that efficiently and flexibly delivers educational assistance to at-risk learners to close skill or performance gaps with peers. Response to Intervention is that model" (Wright, 2007, p. 2). RtI is not a prescribed model, but rather a permissive model that gives schools latitude to make decisions based on site and population relevant factors. The research has shown that RtI interventions produce greater gains in student achievement than commonly accepted individual approaches (e.g., university based interventions or specific program interventions) (Burns, Appleton, & Stehouwer, 2005). Batsche, et al. (2005) identified eight core principles for effective implementation of RtI:

1. We can effectively teach all children.
2. Intervene early
3. Use a multi-tiered model for service delivery.
4. Use a problem-solving method to make decisions within a multi-tier model
5. Use research based, scientifically validated interventions/instruction.
6. Monitor student progress to inform instruction.
7. Use data to made decisions.
8. Use assessments for screening, diagnostics, and progress monitoring.

Research indicates that at least three models can meet the above criteria within secondary schools: the problem solving method, the standard protocol treatment, and mixed approach. The following is a description of the structures and variations of each model. Included in the description is a discussion regarding the empirical research on each model, and the plausibility for secondary school implementation. Also included is a discussion of the strengths and weaknesses of identified selected RtI models, with reference to secondary implementation.

Problem Solving Model

One model of RtI implementation is called the problem-solving method. The Problem Solving Model (PSM) has its roots in the behavioral field (Fuchs, Mock, Morgan, & Young, 2003). The basis of the problem-solving model is the assumption that student characteristics (e.g., disability label, race, neighborhood, etc.) cannot dictate which intervention will work for an individual child. Instead, the proper intervention for each student must be determined on an individual

basis by gathering extensive data on the student. The PSM approach is generally a five-step process comprising of problem identification, problem analysis, goal setting, plan implementation, and problem evaluation. In the problem identification stage, educators gather and analyze data to determine the exact nature of the academic or behavioral concern. This data may include observations from different times in the day, or academic probes across a variety of teachers, subjects, and assessments (Fuchs et al., 2003).

During the problem analysis stage, the goal is to identify and validate the specific concerns or problems the student is having. With this information, the consultant (often a psychologist or counselor) and teachers must identify any other contributing factors (home life, history, relationships, etc.), set student goals, and develop a plan of intervention. During plan implementation, the consultant regularly monitors implementation of interventions, assesses the student's improvement, and offers corrective feedback. Finally, in the problem evaluation stage, the consultant and teachers evaluate the effectiveness of the intervention, and either continue or modify the goals and interventions.

For example, a teacher might identify a student who is struggling in his or her reading class. The consultant will administer several assessments to the student, observe the student in other settings, and meet with the family to get background data. The consultant and teacher might then determine that the student has difficulty with reading fluency. The team might then suggest an intervention of reading aloud for 20 minutes a day. They would then give the student goals, such as improve fluency by two words per week. The consultant would monitor the student's response to the read aloud intervention and give the teacher feedback. After approximately ten to twelve weeks the teacher and consultant would meet again to determine whether the intervention was successful or in need of adjustment.

Quantitative (Yocum & Staebler, 1996) and qualitative (Sheridan, Welch, & Orme, 1996) research studies indicated that there are significant increases in the accuracy of referrals for special education services after consultation and using problem-solving techniques. Further, the studies find that this model of problem solving can lead to frequent successes when dealing with student problems. The following diagram, from the Nebraska Department of Education website (2008), visually represents the cycle of the problem solving method with suggested questions at each of the steps of the cycle inserted for clarification:

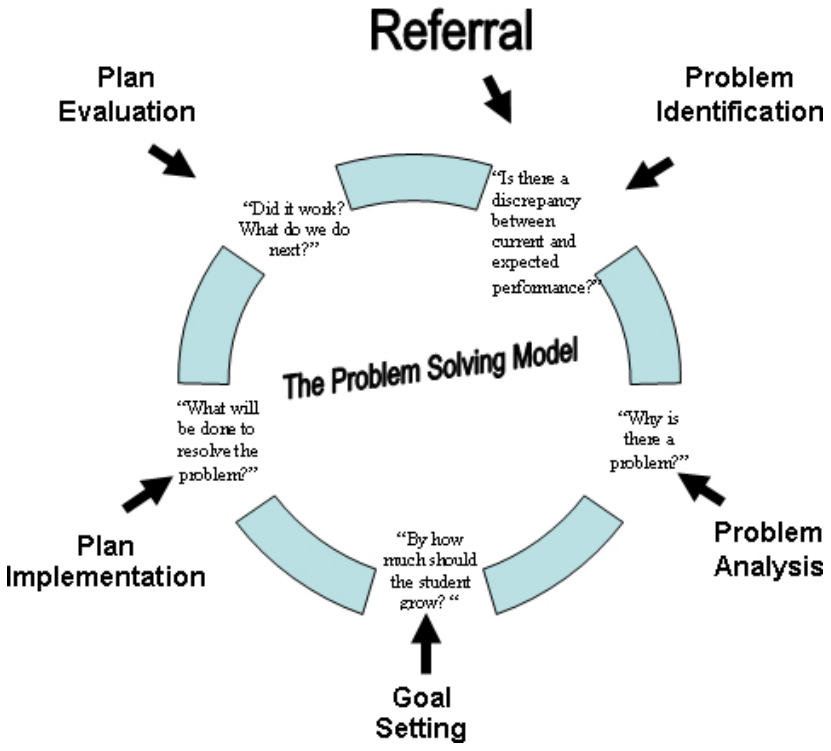

Figure 1. Using the problem-solving model to investigate students' learning difficulties

Standard Treatment Protocol

Some practitioners argue that the variability of characterization, skill, and knowledge of teachers and consultants affects the problem solving method and lacks sufficient quality control (Fuchs et al., 2003). One model that has a reduced level of variability is the Standard Treatment Protocol (STP), which requires use of the same empirically validated treatments for all children with similar problems in a given domain. In this model, after assessing a whole group (grade level, class, etc.), all students performing below average participate in a small group, intensive, research-based intervention. These interventions, unlike those prescribed in the problem-solving method, are the same for all struggling students. In contrast to the treatments in PSM, which an internal system determines, an external system prescribes treatments in STP. After an amount of time predetermined by the intervention team, a reassessment is given to the group and the students are grouped into one of three categories: (a) non-responsive to the intervention, (b) responsive but requiring more of the intervention, or (c) responsive and ready to move back into the general education curriculum. All non-responsive students receive a different intervention for a pre-determined amount of time and then participate in another assessment. The sorting process occurs again, sorting students in to one of the three aforementioned groups. Those in the non-responsive group multiple times would eventually qualify for the eligibility process for

special education services. The STP model is very structured, has significant "quality controls", and is less dependent on the characteristics of teachers or consultants.

Mixed Methods Model

The questions of scheduling the STP interventions and the questions of variability in the PSM have led some practitioners to develop a Mixed Methods Model (MMM) of implementation (Vaughn & Fuchs, 2003). This model can maintain a problem solving emphasis in tiers 1 and 2, with high dependency on the general education teachers. Tier 3 can include implementing standardized interventions, often chosen based on assessment results to meet the needs of particular types of learners. Other times, this model can maintain a standard treatment protocol for the first two tiers of intervention, such as a small-group reading program and an individualized fluency program. A team could then meet, discuss, and decide to use a problem solving method to meet the needs of a particular student and possible interventions.

Implementation

The National Association of State Directors of Special Education and the Council of Administrators of Special Education ([NASDE] & [CASE], 2007) co-authored *School Building Level Blueprint* to provide schools a framework for systems wide implementation of RtI. The *Blueprint* provided guidance to educational leaders in three primary areas: (a) Consensus Building, (b) Infrastructure Building, and (c) Implementation.

Consensus Building

Possibly, the most important area is to build consensus among stakeholders effectively; specifically, teacher participation and buy-in in the initial stages are critical. For example, the *Blueprint* encourages the development of a bottom-up approach with staff development, involvement, planning, and ongoing feedback. In a bottom up approach, staff members engage in the change process actively and meaningfully. Consistent with the model, leaders are encouraged to provide data continuously to staff, plan changes based on data, and to hold conversations to discuss *how* to implement effective improvements. The *Blueprint* emphasizes three objectives for the consensus building stage. The staff needs time and support. The stakeholders need access to and training on consensus building tools. Additionally, stakeholders need to understand the process, the importance of consensus building, and develop consensus.

During this phase, the leadership needs to ensure that both vertical and horizontal articulation occurs. All stakeholders need to have access to information, involvement, and feedback. For example, an ongoing review of the principles of RtI with reference to plans, data, and professional development needs to become an expected norm. For example, all stakeholders need to understand the rationale for adopting RtI practices based on the principle that all children can learn. School leaders will need to determine the site-level leadership team and a plan to

acquire needed resources. The process of consensus building is ongoing; it requires periodic checks for understanding, as well as the development of formal and informal feedback loops.

Often, implementation of RtI will require ongoing professional development, the activities of which require planning based on data and feedback. Before consensus occurs, additional work may be necessary. Herein is a significant challenge for building-level leadership; schools have very limited resources. Necessary activities may include specific professional development, small group meetings, or individual conversations. Small steps may be necessary including examples of research, samples of student outcome data, or development of a small pilot project.

The final action step in consensus building process is to develop and implement a plan to support the change initiative. Throughout the consensus building process the skill, knowledge, and understanding of the principal are paramount. The building principal must be a true instructional leader; building managers cannot accomplish the needed transition. Here again, the *Blueprint* provides suggestions, tools, and lists a number of resources to develop a systemic, ongoing communication plan with all stakeholders.

Infrastructure Building

A necessary condition for the development of an effective infrastructure is a highly effective RtI team. Ideally, the leadership of the team will not be the building principal. The team should include formal and informal leaders from within the school. The principal can establish a clear message that a new approach is necessary. Principals should reinforce experimentation, support staff ideas, promote data based decisions, and empower teachers. As Collins (2001) would suggest, with reference to an effective team, get the right people on the bus and then get the right people in the right seats. For example, the right people can articulate the importance of change, the method of change, and the measurement metrics of meaningful change. Here again, the *Blueprint* provides guidance for building leaders. The team will address key questions related to effective RtI programs such as:

- Is our core program sufficient?
- How will the needs identified in the core program be addressed?
- How will the sufficiency and effectiveness of the core program be monitored over time?
- How will the effectiveness of supplemental and intensive instruction be monitored?
- How will it be determined which students need to move to a different level of instruction?

The *Blueprint* provides guidance and procedures aligned to the development of infrastructure with the core principles of RtI.

Implementation

Implementation is the next step after consensus building and infrastructure development. After determining support, building capacity, and collecting data to answer key questions, actual implementation begins. At the secondary level, effective implementation must address the

following: appropriate master schedule; core, supplemental, and intensive academic needs; a time and place for intensive interventions; and systemically built-in supports. Specific attention must include scheduled dates for assessments, screening, diagnostic, and progress monitoring. All stakeholders must consider time and planning for movement of student from tier to tier. A key to successful implementation of RtI at the secondary level is fidelity of implementation of the core principles. Educators must be mindful of and resist against the barriers created by traditional class schedules, union contracts, district policies, and building level operating policies. Failure to address these areas appropriately can destroy the RtI plans.

Needs of the students must drive the implementation of effective RtI plans at the secondary level. The *Blueprint* provides suggestions and guidance for building level leaders. Teachers will need support and professional development related to assessment, data analysis, and appropriate instruction. Given the somewhat rigid structure of secondary schools, time and support for assessments, data analysis, and feedback become critical. The RtI team with support from the principal must monitor the implementation process. The ongoing process of data collection, analysis, feedback, and planned improvements must become an integral part of the RtI process. Here again, many schools need to develop and cultivate appropriate skills; however, such skill development must start with the principals. They must lead the change to a data based culture. Such a culture must include an expectation of prompt accurate feedback. All stakeholders must expect ongoing feedback based on data. Finally, the schools need to celebrate success. The *Blueprint* provides guidance in each of these areas that apply to all levels of education; however, the needs of secondary schools require planning the suggestions in order for alignment to occur.

Conclusion

The effective implementation of RtI at the secondary level requires out of the box thinking of the RtI team, the principal, and all stakeholders. The traditional model used to provide special education services has not and will not meet the needs of all students. The basic tenets of the RtI legislation enable many options. Tilly (1995) pointed out that no two successful reform efforts will look alike. Today educational leaders understand that local needs, student characteristics and available resources tend to drive effective change.

The *Blueprint* provides educational leaders, teachers, and all other stakeholders with a model for implementation of RtI within schools. The process at the secondary level will face additional challenges that are characteristic of schools at this level such as schedule rigidity and course requirements. The basic model proposed in the *Blueprint* includes consensus building, infrastructure development, and implementation with fidelity. Clearly, each building level plan will include unique components. Such plans will consider available resources, staff characteristics, and student needs. Within each step, the stakeholders will face the ongoing question: what will work best for their school?

In addition, prior to implementation, stakeholders and school personnel must consider the many differences between primary and secondary schools. Sugai and Flannery (2004) pointed out the organizational and structural differences, such as size and scheduling. While elementary schools often draw from a local neighborhood, middle and high schools draw from multiple feeder schools. They outlined the differences this creates:

> As a result, students do not know many of their peers, parent involvement decreases, class sizes increase, hallways and other campus common areas are more crowded, teachers have curriculum specializations (e.g., physics, English literature, American history), some campuses are 'open', and individualized attention for students from staff is decreased. The large school size also means larger staff sizes that reduce the number of meetings with all of the faculty, increase the need for departmental organizations (e.g., science and math, liberal arts, counseling and special education), and require more formalized organizational systems (e.g. faculty senates, department meetings). (Sugai & Flannery, 2004, p.4)

Sugai and Flannery (2004) pointed out these differences in secondary and primary schools to support variations in discipline approaches, but the differences also dictate variations in the academic approaches of RtI. The approaches of implementing any system clearly vary from an elementary classroom with 20-30 students taught by one to two teachers per day to a secondary classroom with 30-40 students taught by six to seven teachers per day. In addition, implementation approaches vary from a staff perspective; elementary staff members often meet in grade level meetings to discuss common students from a skill acquisition stance, while secondary staff members often meet in content level meetings to discuss standards acquisitions from a college preparatory stance. These differences are part of the reason that elementary RtI models implemented at secondary levels do not succeed. In summary, "What appears to be consistent at this point is that researchers and practitioners should be willing to commit to a process that will take longer to implement and assess than implementation at the primary level" (Sugai & Flannery, 2004, p. 13).

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Second Life For Special Educators: Using Virtual Reality In A Teacher Education Program

Abstract

Second Life is a virtual world where individuals can create avatars to represent themselves and engage in interactions and other experiences that can be utilized as a learning tool in education. Although simulations and role have a long history of use in education, virtual reality applications such as Second Life are only just beginning to be used for learning applications. This paper presents some uses of Second Life in two undergraduate courses in special education at West Virginia University to develop preservice teachers' skills for communication, interactions, and collaboration.

The paper will accomplish three (3) objectives:

1. to present an overview of Second Life and a rationale for its use in teacher education;
2. to describe learning activities designed for and conducted in Second Life with students in special education courses; and
3. to discuss the pros and cons of using Second Life in teacher education programs.

The procedures and outcomes described in this project may be useful for college and university faculty and/or state and local school personnel who are currently using or may be considering a virtual reality application such as Second Life with prospective or practicing teachers.

Introduction to Second Life

Second Life (SL) is an online virtual world created and owned by Linden Lab and made publicly available in 2003. Participants create and manipulate avatars that can interact with other avatars and objects in real time using gestures, text chat, and voice chat and explore a variety of environments created by the owner and other residents.

Any individual can join SL using a free client program called the Viewer downloaded to the browser and can be accessed by most computers with a reasonable amount of processing speed and memory and Internet access through cable or DSL line.

Participants can participate at no cost through a basic membership or can pay a small monthly fee for a premium membership that confers privileges that allow them to purchase or design objects, lease or own land, and control access. Once they have created an avatar (using real or fictional name) and logged into the virtual world, they can move around through multiple open environments and engage in a wide variety of activities on their own or by interacting with other avatars while reading text, listening to music, viewing artwork or videos, playing games, or engaging in sports or other recreational activities in real time.

Background of the WVU Second Life Project

The use of simulations, especially role playing, has a long history in education. Educational applications of simulations are based generally on the constructivist theory of active learning (Bruner, 1961; Piaget, 1952) and more specifically on Kolb's theory of experiential learning (Kolb, 1984), which posits that learning occurs through a cycle of experience, reflection, conceptualization and experimentation. One study of role playing in teacher education found that these activities increased interest, engagement, learning and retention (Poling & Hupp, 2009). Role play allows professionals in training to practice specific skills with support and feedback in safe environment as well as to develop a deeper understanding of the social, emotional and communicative contexts of situations they will encounter in real world settings (Clapper, 2010).

Virtual reality applications provide new opportunities for simulated learning experiences in education. Studies show that participants in online immersive environments like Second Life demonstrate both intensive engagement and emotional involvement in these interactive experiences (Boellstorff, 2008). Educators have begun to take advantage of these two features of virtual worlds to provide simulated learning experiences that increase engagement and provide a social context in which learners can acquire and practice skills (Steinkuehler, 2008). At least one study has shown that an immersive virtual environment can successfully develop collaborative problem solving skills when used for both asynchronous and synchronous distance education (Dickey, 2005). Online environments are especially appropriate for role plays that require communication, cooperation, and decision making (Russell & Shepherd, 2010).

Description of the Second Life Project

The West Virginia University (WVU) Department of Special Education began exploring educational applications of Second Life in Spring 2010, when Dr. Barbara Ludlow, the department chair took an introductory workshop offered through the university's membership in the Sloan-C Consortium, an organization of universities committed to integrating online learning into higher education. In Fall 2010, Dr. Ludlow asked Dr. Melissa Hartley to partner with her and media producer Michael Duff in creating some learning experiences to be offered in her undergraduate courses. The first earning experiences with students in Second Life were initiated in two courses offered during Spring 2011 and additional activities are being explored as Dr.

Hartley and Dr. Ludlow complete the intermediate and advanced workshops for Second Life offered by Sloan-C throughout the semester.

Student participants included 54 undergraduate students in the 5 Year Program with dual certification in Elementary Education and Multicategorical Special Education at WVU. Students were enrolled in either of two required courses:

SPED 364 Educational Programming for Students with Special Needs; or

SPED 463 Collaborative-Consultative Inclusion Strategies.

There were not any students enrolled in both courses simultaneously. As part of class participation, students were required to attend two class sessions in SL with each session lasting two hours in duration.

Preparation of Students to Participate in Second Life

Prior to the first meeting in SL, one (1) class session in each course was allotted for learning how to use SL. During this time students met with the Dr. Hartley in the college's computer lab and learned how to download SL onto their personal computers, create an avatar, change their avatar's appearance, use different views in SL, gesture with their avatar, communicate with others, run, jump, fly, and teleport to different locations.

Learning Activities in Second Life

For the first meeting in SL for each course, Dr. Hartley instructed al students to teleport their avatars to an open meeting area in SL to meet at a designated day and time. After the group was assembled, she gave students directions on how to engage in activities and modeled manipulation of avatars when needed. Dr. Ludlow joined the group to observe the interactions and offer interactions. Mr. Duff was also online to record the interactions and assist with troubleshooting; he also made a video recording of the session so the instructional team and students could observe the effects of the role playing activities at a later time.

The first activity required students to practice role-playing interpersonal problem solving skills using their avatars in SL. The instructor sent a role to each student individually through an instant messaging feature within SL. Students warmed up with a brief role-play involving difficult people. They were assigned the role of "The Big Negative, The Know-It-All, The Complainer, and The Pleaser" (El-Shamy, 2005, p.92). After roles were assigned, students were asked to mingle with their classmates and try to determine where to go for lunch (El-Shamy, 2005). Upon completion of the role play, the following questions were asked: "What types of difficult people were there?", "What happened as you discussed where to go for lunch?", "How did it feel to play the role you had?", "Why do people use difficult behaviors?", and "What did you learn from this activity?" (El-Shamy, 2005, p.93).

Following the warm-up activity, students were asked to form groups of three to engage in a more formal role playing exercise. Once students were gathered in groups of three, they decided who was going to be the referee or group leader and that individual typed "I am the group leader" into the chat area. The instructor sent each group leader a role playing scenario using the instant messaging tool.

The scenarios were designed by the instructor to reflect typical situations teachers encounter when working with colleagues or family members:

1. All of the special education teachers who do not have their own classrooms and work full-time in inclusion classrooms have their offices in a bungalow/portable/trailer. There are six special education teachers with desks in the bungalow. One teacher, Alana, is never in the inclusion classrooms she's assigned to support. She's always in the office working on her IEPs. She even leaves during the day to go shopping. The administration has been made aware of this and they don't do anything about it. You decide to talk to Alana about one of the students who is on your caseload but is supposed to be receiving support from Alana during Math. He's failing the class and hasn't been receiving any support because Alana doesn't go to the class.

2. Ted and Molly are assigned to co-teach together this year. Molly is a 1st year special education teacher and Ted has been teaching English for 10 years. Ted doesn't want Molly to lead any instruction because she's not the teacher of record and doesn't have a degree in English. He said that she may assist students as he's teaching. Molly doesn't want to be a glorified aid. She decides to talk to Ted after school. During the discussion, things begin to escalate and the conversation gets heated.

3. Terry, the Dean of Students, handles all misbehavior on the campus. One of the students on your caseload is a smart mouth to Terry and is always getting in trouble. The student has been suspended several times this year for things like refusing to work, talking back to a teacher, walking out of c lass, etc. Terry suspended the student today because he was sent to the office for chewing gum in class. Terry storms into your office screaming that the student needs to have an IEP meeting to reconsider placement.

4. One of the other special education teachers in your office often sleeps at her desk during her prep period and during the period she is supposed to be supporting the English class next door. She's a difficult person to approach and becomes very defensive and holds grudges. The students she is supposed to be supporting are needing help toward the end of the semester. They are coming over to the office to work and are being disruptive and rowdy. Tamara sleeps right through it. They are distracting your ability to concentrate on your work. You talk to her about it after school and it blows up in your face.

5. You share an office with Nancy and she is always on the phone during your shared prep period. She talks really loudly and it's distracting your work. You don't want to say

anything to her because you don't want to seem like a pain. One day you've had a really bad day and you just lose it.

6. Linette refuses to work with Alana because Alana doesn't complete her paperwork on time and she doesn't do her job. Linette ignores Alana. Then she started writing students passes to see if Alana was in the classroom she was supposed to be supporting. Alana never was. Linette starts talking about it with Tara. Tara becomes angry too and they both try getting everyone else in the department mad at Alana. They send a student with a pass everyday to see if Alana is in the classroom she is supposed to be in. They tell the vice principal every day.

7. Rachel and you have been assigned to co-teach this semester. Rachel is a first year math teacher. She's very eager to co-teach and is willing to try different strategies. Halfway through the semester Rachel's demeanor changes. She begins talking negatively about the students and treating them with disrespect. You try making positive comments when she makes negative ones but it doesn't seem to be improving.

8. A student's family arrives to school to enroll their child in school during the middle of the school year. This is very common at your school. The student has an IEP so the counseling office sends the family to you. As you are enrolling the student and examining their IEP you notice the student has emotional and behavioral disabilities and was suspended several times from their school during the fall due to fighting. The IEP states that the student should attend a comprehensive high school. You enroll the student. Late in the afternoon, one of the vice principals, Andy comes to your office. He starts asking you about the student and saying that this student needs to go to a special school and is not going to be enrolled on this campus. You explain about the IEP and Andy starts getting heated. He begins raising his voice.

9. You are a "cart teacher" and do not have your own classroom. You have a cart with all of your materials on it and take the cart from room to room all day. You go to meet with one of the teachers you coteach with during your prep to plan for the upcoming week. You left your lesson plan book in your office and need to go get it prior to beginning. Your coteacher, Peggy, has another meeting to attend to and flips out when you say you need to run to your office on the other side of campus real quick.

10. You coach a sport at your school after school. You recently collected money to order the students sneakers for the sport. When you placed the order you forgot to include Tatiana's. You notice this when the order comes in and immediately place the order for her shoes. Her mother calls you on your cell phone that evening. When you explain the mistake she says, "Oh so when you mess up, it's just a mistake, it's not a big deal, but if the girls mess up…" and then she proceeds to begin screaming at you. She calls and leaves threatening voice mails on your phone as well.

11. Your special education paraprofessional is disrupting your class. She undermines everything you say and rolls her eyes when you discipline students. You are on a field trip with the class and the paraprofessional throws her soda can on the ground instead of the trashcan. You ask her to pick up her soda can and she gets in your face.

After students received their roles they were prompted to relocate to another area in the virtual meeting room to choose roles and decide how to act out the scenario. Students were encouraged to use "mouse view" so that they could see the facial expressions of the other members' avatars in their group. The instructor asked students to meet back in the large conference area to share the outcomes of their role-playing activities.

Following the first session in SL, many students wrote reflections on their experience. Positive comments about the experience included, "I think the students and myself were more open and participated more in 2nd Life than we usually do in the classroom" and "It was really cool being able to have class online with the teacher there as an avatar. Even though it takes away from person-to-person contact, it is a great alternative." Students also expressed their skepticism and worry about its use, "I am not 100% sold on Second Life, I like face-to-face interaction better than computer interaction" and "People feel more comfortable talking but in that case they could feel overly comfortable and say something rude or hurtful to another classmate."

The teleporting of students and the instant messaging of assignments was time consuming and it was not engaging for students either, so changes will be made to future sessions. In place of teleporting students to different areas, the instructor will form a group and students will be invited to join the group and landmark the location so they can teleport themselves. The instructor will create assignment boxes with the role-play scenarios in them answer sheet and submit it to the professor's avatar via her profile in SL. There will also be a box that has a hand raising gesture for both asking and answering a question. These small changes to the design of the class should make the session run more smoothly and increase student learning and engagement. During the next session students will also engage in learning activities related to physical proximity, desirable and undesirable facial expressions, active listening and crisis confrontation. In addition to the activities, there will be a small portion of lecture delivered via using presentation slides on SL with note cards students can use to answer the reflective questions.

Lessons Learned and Future Directions for the WVU Second Life Project

The WVU Second Life Project has accomplished its initial goal of getting students to interact successfully and participate in learning activities in SL without encountering any problems. The instructional team was surprised by definitely pleased with how quickly and easily students learned to use SL competently and engage in the learning activities successfully. Students enjoyed the interactions and also saw potential applications to educational programs for students with disabilities when they become teachers. The instructor was satisfied with the outcomes of the roe playing exercises and has begun to design additional activities for the rest of the semester.

The pros of using Second Life in teacher education include:

*new Web 2.0 technologies like SL can be highly motivating to learners;

*access to the SL virtual world is available at no cost to instructors or students; and

*avatars can make it easier for students to play roles assigned to them.

The cons of using Second Life in teacher education include:

*some investment of time and effort is needed to learn to use SL;

*manipulating avatars can be cumbersome for those with limited keyboarding skills; and

*avatar movements are not yet fluent enough to portray emotions.

Future directions for the project include:

1. pilot testing the role playing activities with learners in *SPED 663 Collaborative-Consultative Inclusion Strategies*, the analog graduate level course in the online certification and degree programs in special education during March and April 2011;
2. upgrading avatars of instructional team members to premium so they have more privileges and greater access in SL:
3. leasing land with building privileges in SL to create a meeting place just for this program, then purchasing and/or building a conference center with appropriate furniture and tools for interactions, media displays, and collaborative work;
4. expanding access to SL to al instructors in all campus and online courses in special education at WVU.

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Additional Resources

Second Life: http://secondlife.com

Second Life Video Tutorials: http://wiki.secondlife.com/wiki/Video_Tutorials

Defining and Understanding Virtual Worlds for Learning: http://www.astd.org/LC/2007/0507_kapp.htm

Sloan-C Consortium for Online Learning: http://sloanconsortium.org

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Leadership in the Effective and Efficient Integration of the Gifted and Talented Program in Rural Schools

No classroom, no campus, and ultimately no district meet or exceed the desired level of student achievement unless all students meet that level of assessment (Tomlinson & Imbeau, 2010). This belief has been stated in many different ways: such as; all students can learn, the instruction must be varied to meet student needs, and the ideas embodied in the No Child Left Behind legislation. This legislation focuses most heavily on those identified as disabled, misfortunate, or disadvantaged. While children so identified require additional support, the most gifted children of our nation deserve similar support designed to meet their unique needs. Gifted children drop out of school at a rate higher than eight times that of the general population (Cloud, 2007). All campus or district leader in Texas are expected to establish a culture that addresses the varied needs and characteristics of ALL learners (TEA, 2009). This concept is expanded as a result of the Jacob Javits Gifted and Talented Act of 1988. In this legislation the gifted are defined as children and youth who demonstrate evidence of high performance capability in areas such as intellectual, creative, artistic, leadership or abilities in specific academic fields (De Leon, Calvo, and Medino, 2010). The school leader then must establish a culture of individualization that may be sustained in any setting and in spite of the looming reduction in funds for the education of our nation's children.

Differentiated Instruction

Tomlinson & Imbeau (2010) define individualization or differentiated instruction as a system that relies on altering curricular content, process, outcome, and emotional state of the student. The application of these processes is preceded by assessment of student status in regard to what they can do, what they want to do, and preferred learning modality. Everyone is different but the gifted student student's needs are not the same as those other populations. Within the gifted group, De Leon, et al., (2010) describe the difficulty of identifying gifted students in nonacademic areas especially in rural settings. They address the problems for those gifted students in cultural and linguistic areas. In rural areas, the intent of the school-community may hold these areas in high regard but the resources available are not sufficient to meet these students' needs. The process for identifying these students and the proposed solution is a differential educational process. Elhoweris, Mutua, Alsheikh, &Holloway (2005) found that the ethnicity of the student affected teachers' referral processes and the low representation of some cultural ethnicities is attributed to teacher bias. Reis & Ruban (2005) report that students with

two disabilities such as those who demonstrate gifted potential and are also learning disabled (LD) are doubly at-risk and seldom receive services for both issues. They report that gifted students with LD are provided services which are "flexible, comprehensive, focused on the development of students' gifts and talents, and based on authentic approaches to instruction" (p.157).

The approach described above relies on many elements related to the knowledge and skill of those who administer and provide services for children with both general and special needs. The element of student motivation based on appropriate instruction that is aligned with student needs and interests is apparent. Pink (2009) discusses motivation and proposes that three elements of motivation are critical. The first is autonomy that calls for freedom and permits self-direction; the second is mastery which emphasizes engagement and minimizes compliance.; the third is purpose which all seek. The leader who can collaborate with a team of educators to provide services for those who need them and inspire those who give and get the services will overcome monetary and geographical limitations to provide appropriate service for those accurately identified and provided differential instructional.

Conclusion

The delivery of services to the gifted must be part of an overall system that maximizes the probability effective program implementation. Further, the probable loss of revenue in the next few years will be most severe on rural settings and programs needed to enhance gifted instruction because fiduciary concerns hit most hard the smaller district which does not have luxury of "economy of scale". Thus, district and campus leaders will be doubly challenged. The solution lies in the application of collaborative differentiation of leadership and instruction that identifies and nurtures student interest and strengths which in turn promote student success and satisfaction. The need for collaborative leadership that establishes a sense of commitment whose outcome is synergized by those involved.

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Indian Education For All in Montana

Montana—vast, frontier, diverse.

Montana is the 4th largest state in area—147,042 square miles—but 41st in population—902,195, 2000 census. If overlaid on the eastern United States, Montana would stretch from the lower great lakes to northern Tennessee—north-south—and from Chicago IL to Washington DC—west-east. This vast, scarcely populated state is defined as "frontier" according to federal statistical definitions. Only Billings, the largest metropolitan area in the state with just over 100,000 inhabitants, meets the federal statistical definition of "rural". With visions of the "Old West" dancing in the heads of many Americans when they think Montana, the state does contain seven American Indian Reservations, sovereign dependent nations. On and off the Reservations live many different tribes—Blackfeet, Salish, Kootenai, Chippewa Cree, Assiniboine, Gros Ventre, Sioux, Northern Cheyenne, Crow and Little Shell. American Indians make up approximately one-sixth of the total state population. Educating all Montanans of any cultural heritage—European, Native American, African American or Latino—results in knowledge, understanding and an appreciation of the richness that cultural diversity brings.

Indian Education for All in Montana—a history of legislation

Indian Education for All has its beginnings in Montana's 1972 Constitutional Convention. Delegates from across Montana came together in Helena to rewrite the state constitution. Article X, Section 1(2) of the new constitution "recognizes the distinct and unique cultural heritage of the American Indians and is committed in its educational goals to preservation of their cultural heritage" (Juneau & Smoker Broaddus, 2006). This concept was so visionary that it has taken over 30 years to be fully implemented. Following the convention there occurred a series of well intentioned but unsuccessful attempts to implement the constitutional imperative.

- 1975—Educators convened to develop the Indian Culture Master Plan but confusion over application, lack of funding, failure to involve teacher organizations and lack of administrative support are cited as reasons for failure.
- 1984—The first school funding lawsuit in Montana ruled that the Indian education clause in the Montana Constitution must be addressed but the legislature failed to appropriate funding.
- 1990—Indian educators created a state plan resulting in some efforts in some state agencies but without funding, efforts failed.
- 1997—American Indian Heritage Day to be celebrated on the fourth Friday of September became law, a small step toward full implementation of the Constitutional mandate.

- 1999—The legislature passed the bill that would be known as Indian Education for All with three primary objectives: (1) Every Montana is to learn about American Indians (2) All school personnel should understand Indian tribes in order to relate to children and their parents (3) The Montana educational system should work with Montana tribes in developing educational goals and providing instruction regarding Montana Native Americans.
- 2003—The Montana Quality Education Coalition (MQEC) sued the state for an unconstitutional educational funding scheme with the Indian education provision as the strongest part of the lawsuit.
- 2005—The state legislature definition of a "quality education" included reference to the diverse cultural heritage of Montana Indians. Because of this inclusion the state appropriated over $7,000,000 toward IEfA. With this appropriation, the Montana Office of Public Instruction (OPI) established the Division of Indian Education in order to provide systematic and systemic guidance for Montana educators.

Indian Education for All is finally becoming a reality for educators and students from prekindergarten through the university experience. At every level of education, in every content area of study, IEfA is being incorporated. In order for this to occur, current Montana educators who were part of the misinformed generations, need guidance, technical assistance and education themselves. Their knowledge begins with the Seven Essential Understandings regarding Montana Indians.

The Seven Essential Understandings (DIE-OPI, 2008; Phi Delta Kappan, 2006)

Essential Understanding 1—There is great diversity among the 12 tribal Nations of Montana in their languages, cultures, histories and governments. Each Nation has a distinct and unique cultural heritage that contributes to modern Montana.

Essential Understanding 2—There is great diversity among individual American Indians as identity is developed, defined and redefined by entities, organizations and people. A continuum of Indian identity, unique to each individual, ranges from assimilated to traditional. There is no generic American Indian.

Essential Understanding 3—The ideologies of Native traditional beliefs and spirituality persist into modern day life as tribal cultures, traditions and languages are practiced by many American Indian people and are incorporated into how tribes govern and manage their affairs. Each tribe has its own oral histories, as valid as written histories, pre-dating the "discovery" of North America.

Essential Understanding 4—Reservations are lands reserved by the tribes for their use through treaties, statutes and executive orders. Reservations were not "given" to the tribes. The principle that land should be acquired from the Indians only through their consent with treaties involved three assumptions: (1) Both parties to treaties were sovereign powers (2) Indian tribes had some

form of transferable title to the land (3) Acquisition of Indian lands was solely a government matter not to be left to individual colonists.

Essential Understanding 5—Federal policies throughout American history have affected Indian people and still shape who they are today. Much of Indian history can be related through major federal policy periods (Juneau, 2001)

- Colonization 1492: Indian tribes had education systems in place prior to 1492. Specific roles were played by each member of the tribe. The transfer of knowledge from elders to the young including history, culture and religion was through oral tradition. The American education to which Indians have been subjected has been an effort in forced assimilation into the mainstream society, a failed effort.
- Treaty Period 1789-1871: The United States government entered into treaties with Indian Nations to establish boundaries between the US and the individual Indian Nation. The period came to an end as more and more people moved west coveting the land owned by Indians.
- Allotment Period 1887-1934: Between 1778 and 1871, Indian tribes lost the majority of their original territories between the Atlantic Ocean and the Mississippi River. Between 1887 and 1934 the US took more than 90 million acres. Today, Indian Tribes hold approximately two percent of land in the United States. During this period, the governmental policy was destruction of reservations and tribal relations. The end goal was settling individual Indians onto homesteads and incorporating them into national life with no respect for Indian Nations.
- Boarding School Period 1879: This period resulted from the Indian peoples' devolving from semi-independent sovereign status to governmental ward status. In the boarding schools, every effort was made to divest Indian children of their perceived "savage" and "uncivilized" cultures in order to vest them in the American mainstream culture.
- Tribal Reorganization Period 1934-1958: The Wheeler-Howard Act contained eight provisions: (1) No lands still in tribal ownership could be taken away (2) An annual appropriation would be made for purchase of lands (3) Lands not homesteaded could be returned to tribes (4) Conservation of timber, grass and other natural resources was to be practiced (5) A revolving credit fund would be available (6) Indian tribes were to adopt written forms of government (7) Post secondary education loans were to be available for Indians (8) The Secretary of the Interior was to establish standards for employment without regard to civil service laws. Indians meeting the non-civil service standards would be given hiring preference.
- Termination Period 1953-1988: Following World War II, the US Congress began using language suggesting termination of recognition of Indian Nations. It was stated that education should make each Indian child a better American. By 1954, there was significant resistance to the termination policy. By 1960, 61 tribes had been terminated, none in Montana. In 1968, President Lyndon Johnson called for an end to Concurrent Resolution 108.
- Self-determination Period 1975-present: In 1970, President Richard Nixon proposed a federal policy of self-determination for American Indians. Two immediate outcomes were the passage of PL 93-638 The Indian Self Determination and Education Act (1975) and PL 100-297 the Tribally Controlled Community College Act (1978). The three-legged stool for Indian Education includes (1) Making the American Indian visible within the state K-12 and

higher education systems (2) Redefining the federal government's role in American Indian education (3) Recognizing the tribal role in reconstructing American Indian education.

In response to this opportunity for re-definition, Montana has a well established system of tribal colleges with one on each of the seven reservations: (1) Salish Kootenai College in Pablo (2) Blackfeet Community College in Browning (3) Stone Child College on the Rocky Boy's Reservation (4) Fort Peck Community College in Poplar (5) Fort Belknap College in Harlem (6) Chief Dull Knife College in Lame Deer (7) Little Big Horn College in Crow Agency. In addition, the IEfA Act speaks to each of the three legs of the educational self-determination stool—(1) visibility of American Indians in schools (2) redefining the state role regarding American Indian education (3) making essential the role of each reservation and its Tribal representation in the education of all Montanans.

Essential Understanding 6—History is a story most often related through the subjective experience of the teller. With the inclusion of more and varied voices, histories are being rediscovered and revised. History told from an Indian perspective frequently conflicts with stories told by mainstream historians.

Essential Understanding 7—Under the American legal system, Indian tribes have sovereign powers, separate and independent from federal and state governments. The extent and breadth of tribal sovereignty is not the same for each tribe.

Implementation throughout the Montana Educational Framework—Pre-Kindergarten through University

Full implementation of Indian Education for All is not without its continuing challenges and growing pains. The immediate challenge has been continuing education and professional development of teachers in the 400-plus elementary/secondary school districts throughout the state. The Montana Office of Public Instruction aggressively hired experts for the Division of Indian Education. Primarily American Indians themselves, this division's new employees immediately began developing resources and continuing education for in-service teachers. The resulting books, on-line modules, CDs and on-site technical assistance have been quickly accessed by schools.

Moving a bit more slowly, as the bureaucracy of tertiary education tends to do, have been colleges of teacher education. Recognizing the gap in understanding, information and implementation at the teacher preparation level through accreditation reviews of programs, the state convened stakeholders with a variety of roles and backgrounds to fast forward efforts at the tertiary level. The initial outcome MSU Billings College of Education—has been agreement among faculty to engage in the on-line Level I training and to begin infusing IEfA information in their courses. Teacher education candidates must indicate how they are using IEfA in lesson planning during field experiences and capstone internships. With these requirements, novice

teachers completing the program will be significantly better prepared to fully incorporate the Seven Essential Understandings into their teaching repertoires.

Faculty in colleges other than the College of Education must pay attention to IEfA if they seek a Class 8 Montana Educator License. This license is required of tertiary faculty teaching dual credit courses to high school students. In applying, the faculty person must indicate with concrete exhibits how s/he incorporates IEfA into course syllabi, lectures, readings and assignments. With full implementation of IEfA, all educators—pre-school through graduate education— will understand their role in recognizing, building understanding, and fully accepting the importance of American Indians in the history, culture, and evolving sociology of this country we call the United States.

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Dispositions and SPED Teacher Candidates: Right For Rural?

Abstract

Given their dispositions, how can we plan organize and maintain environments of learning excellence for our rural teacher preparation candidates? By better understanding the nature of the individual who applies to university and intends to teach students with disabilities and other special needs, and to teach them in a rural or remote environment, we can perhaps provide greater support and ensure candidate success. Ultimately the beneficiaries are the children and youth taught in the educational setting by these individuals.

Not everyone plans to go into the profession of teaching. Even fewer individuals plan to teach children and youth with disabilities and other special needs. It is an exceptional individual, indeed, who teaches these special students in rural and remote environments, environments where they may work on an itinerant basis, under all geographic and climatic conditions (Cates & Smiley, 2000). Who are they? What are they like?

Teacher quality directly impacts student achievement (Rice, 2003). Teacher quality includes professional qualifications as well as personal characteristics. It has been suggested that these should be guided by normative principles arising from the school's responsibilities to its students (Goodlad, 1990). The teacher preparation experience including field work, professors, and course work, can affect the beliefs of the candidate regarding the moral dimensions of teaching (Yost, 1997), hence the importance of that experience.

Teachers are role models. But what do they model? Teacher preparation institutions need to address the candidates' dispositions and facilitate desired qualities during the preparation process. Addressing dispositions is a more frequent topic among teacher educators, who grapple with ways to understand and address candidate attributes in consistent ways (Harrison, Smithey, McAffee, & Weiner 2006).

As in everyday life, personal attributes are critical variables that impact what we do, including teaching. Teachers have a set, a readiness to respond to certain stimuli and not to other stimuli. The readiness to respond to stimuli is determined in part by inner filters. Inner filters can be viewed as "dispositions" formed by many factors in the individual's life (Serdyukov & Ferguson, 2011 in press).

It is yet to be determined which factors are important, in particular which factors specifically fit the candidate who intends to be a rural special education teacher. To identify relevant factors to focus on in a teacher preparation program and better address the issue of dispositions among candidates four categories are suggested to more precisely describe teacher internal filters which affect behaviors and performance, (a) professional, (b) attitudinal, (c) moral, and (d) character. In 2010 a preliminary study was conducted among candidates in an introductory teacher preparation course. Candidates were asked to select from descriptors in each of these four categories. The descriptors most frequently selected are shown in Table 1.

Table 1
Most Frequently Selected Descriptors for Four Categories

Professional	Attitudinal	Moral	Character
Knowledgeable	*Unbiased*	*Ethical*	*Respectful*
Collaborative	*Compassionate*	*Trustworthy*	*Hardworking*
Responsible	*Encouraging*	Has integrity	Considerate
Reflective	Understanding	Honest	Reliable
Effective	Tolerant	Principled	
prepared	Fair		
	Cooperative		
	Flexible		
(italics identify most selected attributes)			

Each of four categories (attribute areas) was labeled, Professional, Attitudinal, Moral and Character. Descriptors (variables) for each category were listed based on the professional opinion of the authors. Then, by investigating what these labels mean to teacher candidates, the descriptors most frequently selected by the candidates were identified. The identification of labels most frequently selected by candidates enables better understanding of two issues. First there is a better understanding of what the labels mean to the candidates. Second an initial comparison of what the labels mean to the candidates vs. what they mean to the teacher preparation faculty can be done. By noting the discrepancy between the two it is possible to identify variables that may need to be further developed within each candidate, possible future targets or program objectives.

While considerably more research needs to be done, the potential is interesting. If we are able to recognize what candidates may be thinking of when we discuss these attribute areas and compare what candidates are thinking of to what we may be thinking of, then we may be able to augment communication and understanding between faculty and candidates. More precise

communication can lead to instruction and other interventions within our programs to help candidates expand their concepts of the four attribute areas as well as help candidates expand their own dispositions within each attribute area.

In the future profiles of candidates from rural vs. suburban vs. urban can be compared to determine if they are alike or different. Similarly profiles of candidates pursuing certification in general education vs. special education can be compared. If profiles are different among the various subgroups of teacher candidates we can make modifications within our programs to provide the support needed to help the candidates broaden their profiles to have a more desirable variety of attributes.

By asking candidates to rate themselves on these attributes and then compare the ratings of candidates who pass vs. don't pass clinical practice we may be able to identify indicators of candidates who will need more and different support to be successful, and provide that support earlier. Earlier support can reduce the time for candidates to successfully complete their programs by reducing the need for remediation of failing candidates through preventative measures.

Finally by surveying rural special education teachers we can compare the profiles of candidates against the profiles of said teachers, to identify how closely and in what ways a given candidate compares to the rural teachers.

This was only preliminary study, too small to generalize from. Nonetheless the initial findings have been interesting and the potential hold our interest.

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Cross-Departmental Collaboration: Teacher Preparation Made More Efficient For General and Special Education

Abstract

Rural Special Education teachers serve a variety of disability identifications, in multiple instructional settings. Their rural General Education counterparts also serve students with varied needs, supported often by the special education teacher on an itinerant basis. How do the two teachers learn what the other needs in order to collaborate and share resources?

Two university departments cooperate with each other to address these and other issues when writing new teacher preparation programs. The results include stronger programs, a plan for completion of credentialing requirements leaving candidates positioned to more easily complete a second credential, and better courses developed by faculty who have lived the collaborative process they advocate.

Collaboration is an ongoing ever-evolving phenomenon, involving multiple administrative layers and complex faculty norms. While collaborative efforts were evident among faculty members focused on clinical practice, with the arrival of new Department Chairs in our Teacher Education and Special Education Departments they began to share ideas and join forces. Since General Education and Special Education professionals work in partnership in the field, they reasoned, why not begin the partner process during their teacher preparation programs? While the process, initially seemed so natural it was not without its challenges and bumps along the way. In the end, faculty members from both departments pooled their resources and efforts in rewriting their preparation programs.

Faculty met and joined forces for more than a year to prepare new general education and special education teacher preparation programs. Within these programs they created a core of courses providing a common experience. The outcome of the common experience is that candidates will be better prepared to work together and provide needed services for all students that they may serve. What these future teachers will bring to rural settings is a greater understanding of education overall and a greater readiness to address diverse classrooms. Candidates the two departments take six courses in common. Four of the six were co-authored with authors coming from the two departments. In addition, candidates preparing to be special education teachers take an additional six courses together – regardless of whether they are focusing on Mild/Moderate, Moderate/Severe or Deaf Hard-of-Hearing needs.

The School of Education is structured with Program Leads and Course Leads. Program Leads are faculty members within each department who have responsibilities for overseeing program content and quality factors. Course Leads have responsibilities for authoring and or overseeing individual courses so that courses are always current, are taught with rigor and fidelity, that course outcomes are ensured and work with full-time and adjunct faculty who teach the course.

Faculty agreed collaboration between the departments was a good idea, especially for those courses that candidates would take in common. Furthermore, they agreed the courses candidates would take in common should be co-authored, one faculty from each department…a heretofore unprecedented activity.

Each program addresses requisite state standards as well as specific learning outcomes for the program. Course learning outcomes carefully relate to program learning outcomes. Delivery of new material and learning activities (instruction), materials, assignments and grading rubrics, and clinical experiences were carefully designed to the learning outcomes.

Another aspect of the collaboration is that faculty writing the courses are thinking about and planning for differentiated instruction. It is one thing to teach the concept as a university professor; it is quite another thing to put it into practice. Faculty authors are bringing readings and resources from their particular areas of expertise and then incorporating them into the course. The different credential areas may break into specific groups in order to read articles particular to them or complete an activity, but candidates will come back together as a class to share their findings and results. Faculty predicts that our modeling of differentiated instruction will impact the preparation of our candidates as they are asked to practice it in their classrooms.

Finally, although those involved may not be able to measure this for awhile, faculty expects that candidates who studied together will work more collaboratively once at school sites. Teachers who study together may better understand the process of identification of students for special education services, work more closely on assessments and the IEP and help articulate the information to parents/guardians.

Faculty worked in partnership over the course of about a year, individually but also during especially scheduled faculty work days (days when faculty could come together in person and dedicated to work on the courses in question). These work days were serious efforts for a

faculty distributed at campuses over the entire state of California. Work days were attended by the department chairs and faculty authoring the various courses. They shared information, content as well as delivery ideas, and addressed state requirements for both general and special education.

In January of this year they met to review the planned courses, some of which were completed and others still in the design / creation stage. During the review process faculty pairs briefly presented the course they were authoring and received feedback from representatives of the various programs. Feedback was intended to ensure that important variables were appropriately addressed by the courses. In addition to state standards they considered diversity and language issues, technology, examples of students representative of the various programs, redundancy as well as pre-requisite knowledge, legal issues, and for online delivery, Section 508 requirements for accessible services and products, to name a few. Faculty returned to the respective campuses to revise.

As a result of this work, we are confident that our programs are strong, well designed, and comprehensive. Furthermore by having courses in common scheduling will be easier. Candidates who complete the six courses taken in common will be poised to pursue special education credentials (mild / moderate, moderate / severe or deaf / hard-of-hearing), general education credentials (multiple or single subjects), or both (dual credential programs).

The collaboration has been supported by a commitment to shared governance in the university and also by the Dean and Associate Dean both of whom value cross-departmental collaboration.

While we are a non-traditional university with campuses spread across the state, proximity has been important. Offices of the two department chairs and several program leads are located in the same geographical location. However the use of an online conferencing platform has enabled faculty to come together in the virtual realm too, through regularly scheduled monthly meetings, and ad hoc planning sessions.

The major obstacle, common to all of higher education, has been too few staff members and too much work. Still, faculty have risen to the occasion and stretched for the good of the programs, for the good of our students, and for the good of the children and youth they will serve.

In spite of the major obstacle faculty did undertake the work. The benefits likely outweigh the obstacles. Faculty concur that the courses built upon a collaborative ethic and the ideas generated from multiple points of view are better and stronger, and consider a broader range of ideas and issues related to the content. For example, faculty rewrote an existing educational psychology course so that the content focuses on models of instruction from each of the major psychological frameworks and provides examples of major concepts and applications not only from general education but also from special education such as mastery learning in a general education setting vs. a special education classroom. A second example is a new course specifically addressing equity and diversity, two variables essential to education for all and key to successful education in a widely diverse state such as California. While equity and diversity

typically focus on language differences, the involvement of the special education faculty extended this concept beyond the spoken language to American Sign Language – English.

The modeling of the faculty in planning and authoring these courses, and ultimately the programs, has filtered down into each course so the ethic of collaboration is infused throughout the various programs. In the end, we believe the five major programs affected by the planning process are better than they would have been separately. Perhaps this type of extensive collaboration is not possible at all universities for, as one faculty member notes, our collaboration has been supported by the goodness of the people involved and a caring for the university. It is as though we are all in the same life boat, the National University life boat…with staff from our credentials, admissions, scheduling, and registrar offices. "It takes a university to support our candidates."

And these candidates become the teachers who will provide the support to children and youth with disabilities and other special needs, hopefully better and in more ways, because of the improved preparation program they completed.

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Using Web-Cam Technology With Candidates in Rural Settings

Abstract

The presentation assists special educators to proceed from idea stage to implementation of webcam supervision. Participants will learn the pros and cons of remote supervision, obtain a step-by-step guide to hardware setup and conducting the observation, and overcome hurdles during initial implementation. We tailored these practices to our rural special education setting. We describe published studies of teacher supervision and how our methodology makes webcam supervision accessible to first-time users. We move educators from the sidelines to the actual playing field of using a technology that can transform the quality of instruction and learning.

The isolation and difficult travel that Collins and Schuster (2001) describe are some of the challenges to providing high quality teacher supervision in rural special education. With the emergence of accessible, affordable technology, the special education program began to investigate options that would provide supervisors and candidates with an effective means for reducing travel and supplementing on-site supervision. After a pilot study that involved the use of Skype™ and webcams, faculty began to investigate the benefits of using web-cam technology with candidates who were the most impacted by living and working in rural and isolated settings. On-site supervision observations were supplemented with one to two web-cam supervision observations. Keeping focused on providing a balance between accessibility and high quality supervision experiences, supervision requirements and expectations for well-prepared lesson plans were maintained.

Technology Format(s)

The choice of technology has been driven by our philosophy of a realistic, effective, accessible, and low-cost format. To this end, we simplified the technology to four essential components: a reasonably up-to-date computer, an internet connection, an effective web camera that includes a high-quality microphone, and software that will securely transmit audio and video images that are accessible to the supervisor. If a teacher has the computer and the Internet connection, the total monetary cost can be in the range of $39.99.

Computer

There are operating system requirements that need to be followed in order for the computer to pair with an external web camera. For the Blue Microphone Eyeball 2.0 (the webcam that we chose), the system requirements for the Mac are an OS 10.4.11 or higher. For a PC, the requirements are Windows XP/SP2, Vista, or Windows 7.

Internet Connection

According to Skype's website user guide, the recommended speed is 500 Kbps (Kilobits per second). However, the user guide also states that the minimum speed to transmit by Skype is 33.6 Kbps, which can be achieved with a dial-up modem. If using a dial-up modem, the user must be sure to close other applications that could otherwise slow down the performance.

In some cases, a Local Educational Agency (LEA) may have a firewall or blocking software, which limits access to the internet. The teacher may need to contact the information technology to gain access to Skype.

Webcam with Microphone

We selected the Blue Microphone Eyeball 2.0 HD Audio and Video Webcam due to its ease of installation, excellent audio capabilities, and low cost. The Eyeball works with both Mac and PC operating systems and requires no installation of software. It is also designed to attach to and work with both laptop and desktop computers. We place a premium on excellent sound quality in supervision, and this model serves us well. The price through an online retailer was $39.99 per webcam, which we purchased and loaned to our teachers for the duration of their supervision.

Rock et al. (2009) employed Bluetooth® technology to allow teacher candidates to send and receive audio transmissions through an earpiece. There are benefits to this hardware such as better sound reception when the teacher ranges farther from the computer, and the ability to receive immediate feedback from the supervisor without distracting the students. The main drawback is that the earphone has been the most likely place for technology glitches. Our decision was to make the use of the Bluetooth optional for those teachers who could make it work securely. We used the webcam microphone for the majority of teachers.

Software to Transmit the Webcam Output

We chose Skype because it is free, easy to use, and secure. Additionally, Rock et al. (2009) found that Skype was effective across numerous supervision settings.

To facilitate setting up Skype, the lead presenter wrote "The Technophobe's Coach for Setting Up a Web Cam and Skype" (Appendix A) which is available on our department website. This guide has instructions for both PC and Mac computers. Both supervisors and teachers have successfully completed the webcam and Skype set up by using this tool as their source of technical support. For further technical information about Skype, their website can be visited at http://www.skype.com/intl/en-us/home.

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Appendix A

The Technophobe's Coach for Setting Up a Web Cam and Skype ™

Steven P. Koch

California State University, Chico.

The author developed the "keeping it REAL" acronym to describe our program's goals in using technology; we sought to develop a format that was **R**ealistic, **E**ffective, **A**ccessible, and **L**ow cost. Those four principles under gird the process that has been developed.

Hooking up the web cam for the first time with a Mac (see below for PC directions).

These are instructions for the "Blue Eyeball 2.0" web cam. For other products, follow the directions that come with the camera.

1. Open the box and find the "Quick start guide." Follow the directions on page one of the guide to learn how to safely open up the camera from its closed-up position.
2. Take the camera and gently pull the base apart (called the "protective travel container"). The base is really two pieces, one black and one gray that slide apart.
3. Note the specs for the computer that are needed: Mac OS 10.4.11 or higher. On a Mac, you can check this by clicking on the Apple icon at the top left of your screen (up by where is has "File," "Edit," etc.). Click on "About this Mac." On the screen that opens, look at the numbers next to "Version." That will tell you what Operating System (OS) you have.
4. Follow directions # 1-4 on page 2 of the Quick Start Guide that came in the box. Step 3 of that Guide assures you that your computer will "automatically detect" the camera. Don't expect the computer to give you a message that says it was detected. Just move on to restarting the computer as directed in Step 4 of the Quick Start Guide.
5. Even though Step 5 of the guide says, "you are ready to use applications such as Skype," you won't be able to use Skype until you register with Skype, as described in the next section of the "coach" or protocol. However, do position the camera, as described in Step 5 of the guide, so that the camera will be ready to "capture the best image of you."
6. Just to be safe, click on the same Apple icon you used in step 3 above. Click on "System Preferences." Click on the "Sound" (a speaker) icon. For sound "Output," choose internal speakers or headphones, as appropriate. For sound "Input," choose "Blue Eyeball 2.0," (if you are using that web cam) or the internal microphone/web cam that comes with the computer or the web cam that you purchased.

Setting up Skype® on a Mac (see below for PC directions).

I suggest hooking up the web cam before setting up Skype. If you follow these steps, it should go pretty smoothly.

1. In a search engine (such as Google), type in "Skype."

2. When you get to the website, play the "Skype in 60 seconds" video for a helpful overview of the service.
3. At the top of the page is a menu bar. Find and click the "Get Skype" link.
4. Click the button that says "Get Skype for Mac."
5. Click the "Download Now" button. This download can take a few seconds to 15 minutes, depending on Internet speed.
6. Create an account by filling in the fields that are required. You will need to create a Skype name and a password. Skype will suggest variations on your choice, if your first choice is taken.
7. Read the terms of service, and click "I agree." Once the download begins, you may not know it is complete unless you minimize the Skype screen and see the "Downloads" box. Also, if you see the Skype icon described in step 9 below, you know that the download is complete.
8. You may get a screen that says, "Skype contains an application." Click "OK" or "Agree."
9. Drag the "Skype" icon on top of the "Applications" folder icon.
10. To use Skype for the first time, click on the Skype icon on your desktop, or find Skype in your "Applications" and click on it. If you click on the blue and white face at the bottom left of your screen, you will see "Applications."
11. Type in your Skype name and password.
12. When you get to your Skype page, it will only have your name near the top. You can add your supervisor as a contact by clicking on the + button on the bottom left of the page. "Add a Skype Contact" by typing in your supervisor's Skype name (Steve Koch's is **spkoch51**). Like email, the name has to be exact.
13. Click on "Skype" on the menu bar at the top of your screen and click on "Preferences." This is different than "System Preferences" that is described in Step 5 of the web cam set up (you did "System Preferences" by clicking on the Apple icon at the top left of your screen). You access "Preferences" by clicking on the word "Skype" on the menu bar at the top of your screen. Click the "Audio" icon (a gray speaker icon) and check:
    - Output: speakers
    - Audio input: Blue Eyeball 2.0 (unless you are using a different camera such as the built-in camera)
    - Ringing: speakers
14. While still in "Preferences," click the "Video" icon (a blue camera icon). If you do the following, you should be able to see yourself on the video screen above the check boxes. Check these boxes as described:
    - Camera: Blue Eyeball 2.0 (unless you are using a different camera)
    - Enable Skype video
    - When I am in a call: Start my video automatically
    - Automatically receive video from: anyone who I allow to call me
    - Show that I have video to: people in my contact list
15. Click "Skype test call." Follow the directions to be sure your audio is working properly. Click the green button with the phone icon to start a test call. Be sure your speakers are plugged in (if they are external to the computer), and check the speaker volume to be sure it is loud enough. Sometimes the "mute" button (a microphone icon with a slash across it) at the bottom of the screen needs to be "unmuted." *If you can't hear the playback of your voice recording, it means you need to double check the settings in steps 5 of web cam set*

up list, and steps 13 & 14 on the Skype set up list above. It sometimes works to close Skype completely and reopen it. It can sometimes help to restart the computer.

16. To call your supervisor at the scheduled time, click on your supervisor's name, and then click the green button with the phone icon. If your supervisor is available, he/she will click the "Answer call" button. Hopefully, you will be able to see and hear each other.
17. Conversely, when your supervisor calls you, click the "Answer call" button to receive the audio/video call.
18. Expect a few glitches in the setup process. I find that allowing adequate time to set up, being persistent, and knowing when to get help are the keys to getting things working.

Hooking up the web cam for the first time with a PC.

These are instructions for the "Blue Eyeball 2.0" web cam. For other products, follow the directions that come with the camera.

1. Open the box and find the "Quick start guide." Follow the directions on page one of the guide to learn how to safely open up the camera from its closed-up position.
2. Take the camera and gently pull the (called the "protective travel container") base apart. The base is really two pieces, one black and one gray that slide apart. page one of the guide has information on how to
3. Note the specs for the computer that are needed: Windows XP/SP2, Vista or Windows 7. When you turn on your computer, the screen, as it warms up, will tell you what version of Windows you have.
4. Follow directions # 1-4 on page 2 of the Quick Start Guide. Step 3 of that Guide assures you that your computer will "automatically detect" the camera. Don't expect the computer to give you a message that says it was detected. Just move on to restarting the computer as directed in Step 4 of the Quick Start Guide.
5. Even though Step 5 of the guide says, "you are ready to use applications such as Skype," you won't be able to use Skype until you register with Skype, as described in the next section of this "coach" or protocol. However, do position the camera, as described in Step 5 of the guide, so that the camera will be ready to "capture the best image of you."
6. Click on the "Start" button on the bottom left of your screen. Click on: Settings> Control Panel> Printers and hardware>Scanners and Cameras. Click on the "USB Video Device" icon and run the Set up Wizard.
7. Click on: Settings>Control Panel>Sounds and Audio Devices:
    - Sound recording: Default Device: Blue Eyeball 2.0 or the internal microphone/web cam that comes with the computer or the web cam that you purchased.
    - Click "OK"

Setting up Skype® on a PC

I suggest hooking up the web cam before setting up Skype. If you follow these steps, it should go pretty smoothly.

1. In a search engine (such as Internet Explorer or Google), type in "Skype."
2. When you get to the website, play the "Skype in 60 seconds" video for a helpful overview of the service.
3. At the top of the page is a menu bar. Find and click the "Get Skype" link. There may also be a green button that says "Get Skype." Either click will do.
4. Click the button that says "Get Skype for Windows."
5. Click the "Download Now" button. This download can take from a few seconds to 15 minutes, depending on Internet speed. Internet Explorer may block your download. If so, you will need to click on the yellowish bar with the message that says message was blocked. This will allow the download.
6. Create an account by filling in the fields that are required. You will need to create a Skype name and a password.
7. Read the terms of service, and click "I agree."
8. A dialog box will ask, "Do you want to run?" Click "Run."
9. A box will say "Thank you for installing Skype." Click "Start Skype."
10. You will get a box with a message that says: "Welcome to Skype." Type in your Skype name and password. You should see a message that says "Your video works!" Click "Try it."
11. When you get to your Skype page, it will only have your name near the top. You can add your supervisor as a contact by clicking on the green "New +" button on the middle of the page. Add a Skype Contact by typing in your supervisor's Skype name (Steve Koch's is **spkoch51**). Like email, the name has to be exact.
12. Click on "Tools" then "Options" on the Skype menu bar at the top of your screen. Click the "Audio Settings" button and check:
    - Microphone: Blue Eyeball 2.0 (or the name of the camera you have installed, or the internal microphone that comes with the computer).
13. While still in "Tools" then "Options" on the Skype menu bar, select "Video Settings." If you do the following, you should be able to see yourself on the video screen. Check these boxes as described:
    - Automatically receive video and screen sharing from: People in my Contact List only.
    - Show that I have video to: People in my Contact List only.
14. Click "Skype test call." Follow the directions to be sure your audio is working properly. Click the green button with the phone icon to start a test call. Be sure your speakers are plugged in (if they are external to the computer), and check the speaker volume. Sometimes the "mute" button (a microphone icon with a slash across it) at the bottom of the screen needs to be "unmuted." *If you can't hear your voice recording, it means you need to double check the settings in steps 6 of web cam set up list, and steps 12 & 13 on the Skype set up list above. It sometimes works to close Skype completely and reopen it. It can sometimes help to restart the computer.*
15. To use Skype for an actual Video Call, click on the Skype icon on your desktop.
16. To call your supervisor at the scheduled time, click on your supervisor's name, and then click the "Video Call" button. If your supervisor is available, he/she will click the "Answer call" button. Hopefully, you will be able to see and hear each other.

17. Conversely, when your supervisor calls you, click the "Answer Video call" button to receive the audio/video call. Do not click the "Answer Call" button or you will only transmit audio, but no video images.
18. Expect a few glitches in the setup process. I find that allowing adequate time to set up, being persistent, and knowing when to get help are the keys to getting things working.

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Teacher Perceptions of Their Readiness to Educate Children With Sensory Disabilities in Kisumu Local Education Authority-Kenya

Introduction

The integration of children with special needs in the regular education setting continues to be a focus in special education. In order for inclusion to be effective, it is generally agreed that the school personnel who will be most responsible for its success, should be receptive to the principles and demands of inclusion.

Students with disabilities have been increasingly receiving special education services in general education classrooms (McLesky & Henry, 1999; McLesky, Henry, & Hodges, 1999). Consequently, general and special education teachers are facing the challenge of providing services in general education classrooms that were historically provided in two different educational settings. Terms like integration, mainstreaming, and eventually, inclusion have been used to describe the educational movement.

Policy and Background

In Kenya as in other parts of the world, there are changes in the way children with disabilities are receiving their education. There is a movement towards educating students with disabilities in the regular education classrooms. General education teachers therefore face a new challenge in assuming new roles and responsibilities. One of the most important predictors of including students with disabilities successfully in the regular classroom is the attitude of general education teachers (Coates, 1989, Semmel, Abernathy, Butera, & Lesar, 1991). Chow and Winzer (1992) argue that in order for inclusion to be successful, regular education teachers need to develop positive attitudes towards students with disabilities.

In Kenya, people with disabilities make up 10% of the total population, approximately 3.5 million people (World Health Organization, 2006). Disabled persons, especially children, face a host of problems as a result of their special needs. Many children with special needs live in hostile, bleak environments, where their safety and security is compromised and their future jeopardized. Kenya's earliest efforts for organized care and provision of special needs education dates back to the late 1940's, with much involvement of the religious institutions. Since then, the management of most of these institutions has been taken over by the Ministry of Education. In 1986, the Kenya Institute of Special Education (KISE) was established to build the capacity of Special Needs Education (SNE) service providers through teacher training/teacher in-servicing and research.

The implementation of Free Primary Education (FPE) in 2003 led to an influx and inclusion of new categories of special needs children, which created a new demand on personnel

and resources (Republic of Kenya, Ministry of Education, 2005). The Sessional Paper No. 1 of 2005 underscored the importance of special needs education as a human capital development that empowers those most likely to be marginalized to participate in mainstream education sector. The United Nations Convention on the rights of persons with disability (UNCRPWD) 2006 further affirms the right to education in an inclusive setting for all children. The focus here is to enable children with special needs to enroll in schools of their choice with their localities. Educational opportunities for learners with special needs and disabilities are a major challenge to Kenya's education sector (Ministry of Education- The National Special Needs Education Policy Framework, 2009). The national education system has been characterized by inadequate systems and facilities that respond to the challenges faced by learners with special needs and disabilities.

Status of Special Needs Education in Kenya

Special needs education started in Kenya after 1945 and has since been offered mainly to four categories of children with disabilities namely, children with hearing impairments, mental handicaps, visual impairments and those with physical handicaps. Education for these children was offered in special schools until the 1970's when units and integrated programs were initiated. Special needs education has continued to expand and currently include 22 disability categories (National Special Needs Education Policy Framework, 2009). However, educational opportunities for learners with special needs and disabilities remain a major challenge to the education sector. The majority of learners with special needs and disabilities in Kenya do not access educational services (Ministry of Education, 2009). For instance, in 1999, there were only 22,000 learners with special needs and disabilities in Kenya enrolled in special schools, units and integrated programs, this number rose to 26,885 in 2003 and 45,000 in 2008 (Ministry of Education, 2009). For purposes of comparison, Texas has a little over 25 million people (U.S. Census Bureau, 2010) in an area of 268,820 square miles. Kenya has an estimated 39 million people in an area smaller than Texas, only 224,961 square miles (U.S. Department of State, 2010).

In 2008 there were 1341 special units and 114 public special schools in the country which include vocational and technical institutions that cater to learners with special needs and disabilities (Republic of Kenya, Ministry of Education, 2009). In view of the above, this situation calls for a re-appraisal of available approaches to expand special needs education so as to achieve an enrolment rate at par with that of other children. To attain this, Kenya needs to ensure the realization of inclusive education and simultaneously develop and implement guidelines that mainstream special needs education at all levels of the education system.

Findings from Inclusion Research

Importance of teacher attitude.

Over the past 30 years a great deal of research (Avramidis & Norwich,2002; Balboni & Pedrabissi, 2000; Cook, 2001; Shoho & Barker, 2001) has examined the inclusion of children with disabilities in regular education classrooms. Teachers' attitudes towards inclusion are an important component of inclusion because if teachers do not accept inclusion, then their commitments to ensuring it is implemented successfully may be compromised.

Role of professional knowledge (initial and further training).

Professional knowledge (initial and further training), material and human resources are found to enhance teachers' positive attitudes and their willingness to embrace and make inclusion work (Avramidis, Bayliss, & Burden, 2000; Loreman, Deppeler, & Harvey, 2005). It is when teachers are sufficiently equipped in knowledge and expertise and supported by other professionals that their confidence levels to work with all students in inclusive classrooms will improve. Research findings show the importance of professional development in the formation of positive attitudes towards inclusion.

Nature and severity of the disabling conditions.

Teachers' attitudes towards inclusion have been found to be strongly influenced by the nature and severity of the disabling conditions presented to them (Avramidis & Norwich, 2002). The analysis reveals positive attitudes towards the general concept of inclusion but variable views on the difficulty of accommodating different types of disabilities in mainstream classrooms. Teachers who had been actively involved in teaching pupils with special education needs hold significantly more positive attitudes than their counterparts with little or no such experience. The analysis also demonstrates the importance of substantive long term training in the formation of positive teacher attitudes towards inclusion.

Grass Roots Report from Kenya

1996-2000

Educational setting.

I worked as a high school teacher in a leading provincial girl's high school (rural boarding girls' school).

Characteristics of special needs students.

The school had some students with disabilities, mainly hearing impairment, low vision, emotional / behavioral issues, and intellectual disabilities.

Teacher perspectives.

Teachers who found themselves with such students in their classrooms felt that they were inadequately prepared to handle them. Some teachers made basic accommodations to the students by making special sitting arrangements for them in the classrooms. Teachers felt the problem of students with disabilities was placed on them by the school administration and their anger and frustration was always directed at the school administration.

2000-2002

Educational setting.

I worked as a Program Officer, Schools Improvement Program, Aga Khan Education Services, Kenya (AKES-KENYA). Duties included training teachers in a workshop setting, providing classroom based technical assistance and support to teachers as they attempted to integrate what they learned into their day to day teaching behaviors and providing instructional materials to support learning.

Characteristics of special needs students.

The majority of children with disabilities in some of these schools had intellectual disabilities, hearing, and visual impairments. Sometimes, transportation difficulties prevented children with physical impairments from reaching school. Extreme poverty in the rural areas made it very difficult for the parents to meet basic health needs like buying antibiotics to control ear infection.

Teacher perspectives.

I was in charge of 17 primary schools (Grades 1-8) in a rural setting. With overcrowded classrooms and lack of training, instructional materials and textbooks, many teachers found it very difficult to cope with the new challenges of increased enrolment in primary schools. The presence of students with disabilities in the classroom was sometimes perceived as making learning for others more difficult and resulting in more discipline cases.

With furniture in short supply, many pupils sit on the floor. There are hardly any teaching aids and many children lack pencils or exercise books. There is constant background noise. Given the huge number of students in each class, which can be as high as 150, teachers find it hard to give individual attention to students, although a few sit children with disabilities at the front and try to communicate with hearing impaired children with gestures. Teachers seem to take little interest in or responsibility for how many children follow or understand what they are saying.

Extreme poverty and basic health issues further complicate the provision of special needs education in the rural areas of Kenya. Identification of children with special needs is very difficult and slow because there is only one such center serving hundreds of schools in the district. In 1984, the government established the Education Assessment and Resource Centers (EARC's) in each of the 52 districts in Kenya. These centers were to ensure early identification, assessment and intervention and placement of learners with special needs and disabilities. These centers are poorly staffed and ill equipped to do the job. Parents have to wait for several months to be served after making requests for assessment. Many parents give up and drop out of the process because of the long waiting period. Some parents with children with disabilities are not even aware of the existence of such a facility.

2003-2004

Educational setting.

I worked as a high school teacher in a mixed high school (boys and girls day school) in the peri-urban low income area of Kisumu (The school has been designated as an inclusion secondary school).

Characteristics of special needs students.

Students with special needs further suffer from the effects of extreme poverty. Teachers experienced over enrollment of students in their classrooms. The common disability categories were learning disabilities, emotional/behavioral disorders, vision problems and hearing impairments.

Teacher perspectives.

The majority of the teachers were frustrated with the attitude of the parents of children with disabilities. Teachers felt the parents were not concerned; parents failed to come to school when teachers asked them to come for meetings to address the needs of their children and did not act on recommendations by teachers regarding the education of their children with special needs.

2010, May: Personal visit to some schools in the district.

Educational setting.

I made a visit to Kenya last year (2010, May) and visited some 10 primary schools in Kisumu. One of the schools visited had an integrated unit (a mainstream school with a small unit within the school to cater for the needs of students with special needs). I visited a special school for the blind. This school has a unit for deafblind students. I visited 4 primary schools which have been designated as "inclusive school". The last school visited was a special school for the deaf.

Process of informal data collection.

I had conversations/informal/open ended questions with the teachers of the schools visited.

Preliminary findings.

There was no indication that being a unit within a general education school as distinct from a separate special school leads to provision of more inclusive education. The units operated on their own from the rest of the school. The special education teachers working in the units were operating on their own. Schools and units concerned with sensory disabilities are more conventionally academic and vocational in their aims, while those working with children with physical and learning disabilities are more concerned with care and containment. There is a need to monitor school level implementation of the national policy objectives more rigorously. There

is the existence of a big gap between policy statements/objectives at the national level and the reality on the ground.

General education teacher's perspectives.

General education teachers cited their lack of training in special education as their greatest source of frustration. The teachers felt that without pre-service training in special education, they need some form of in-service training/ support. The general education teachers mentioned lack of administrative support as a drawback to inclusion. Teachers thought that they do not receive adequate support from the headteachers. They felt that there is less collaboration between the general education and special education teachers.

Special education teacher's perspectives.

They felt that they are overcoming their own ignorance, fears and prejudices around disability. They are more confident about identifying disabilities and developing coping strategies. They cited inadequate support from the headteachers and negative attitudes from parents with children with disabilities as the biggest threat to inclusion. The special education teachers also felt very strongly that the general education teachers were not positively disposed to deal with special needs students in the inclusive classrooms.

Current Study

From the contacts I made with the teachers/ schools and discussions regarding inclusion of children with disabilities I developed a keen interest on how the teachers view their positions as special education providers in their schools.

Purpose of the study.

The study will address how teachers' attitudes towards inclusion of children with disability are affected by the teachers' personal characteristics. Specific research questions are:

- What are teachers' feelings about the level of formal training to teach children with sensory disabilities in inclusive settings/feelings about the level/amount of in-service training/professional development?
- What are the teachers' beliefs about successful inclusion of students with sensory disabilities in the general education classrooms?
- What are the teachers' perceptions of administrative support as they practice inclusion?
- To what extent did previous active experience of inclusive education lead to more positive and/or negative attitude towards inclusion?
- To what extent did special education needs training (Diploma in special education, B.Ed. in Special education, M.Ed. in Special Education or simply in-service training) lead to more positive attitudes?

Conclusion and timelines.

The process of data collection will begin in the month of May, 2011.

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Comparative Analysis Of Special Education Teacher Preparation Programs In Rural Kenya and USA

Introduction

For the last two and a half decades, the training of teachers for special education in Kenya has been done at the Kenya Institute of Special Education (KISE), a middle level college that trains at the level of Diploma certificates/ Associate degrees. It was not until 1995 that the first university, Kenyatta University, opened its gates to enroll students to take special education at the undergraduate level. KISE has however remained the main training institution in the country for teachers of children with special needs (Republic of Kenya, 2005).

The training of teachers at KISE focuses on only introducing special education skills to the teacher trainees. One qualification for being admitted as a trainee is that one has to be a professionally trained and practicing teacher. The training for a diploma (equivalent of associate degree) takes two years for the full time residential trainees and three years for those who go through the distance learning program. There are also the short in-service program courses which offer three months of intensive tailored courses like sign language, orientation and mobility, functional assessment, and Braille and educational materials' production (Republic of Kenya, 2009).

The courses which lead to a diploma in special education focus on preparing one to be competent in adaptation of instructional strategies, functional assessment for educational placement, education materials production, and classroom teaching practice, which includes ten weeks in special and inclusive schools.

During the first half of the diploma program period, the trainees are taken through general course work of foundational courses of special education like introduction to special needs education, inclusive education, material production, and adaptation and assessment. During the second half of the program, the trainees have the option of choosing specific areas of interest for specialization. One can opt to specialize in teaching the visually impaired, the hearing impaired, the deaf/blind, the emotionally/ behaviorally difficult, those with learning disabilities, those with communication difficulties, those with autism spectrum disorders or those with

physical and health impairments. Apart from demonstrating their competence in the classroom through teaching practice, the candidates also sit for summative evaluation examinations from the Kenya National Examination Council. In addition, each individual must design and produce a functional assistive device or learning resource relevant to the area of specialization he or she is taking. On completion, those who have gone through the full time program are posted to special and inclusive schools closest to their rural homes, while those who went through the distance learning program are retained in the schools in which they had been serving.

Recruitment and retention of teachers in the rural schools

As already mentioned, KISE recruits teachers who are already trained and practicing in general education for further training in special education. Advertisements are sent out through the local education offices where officers are in touch with all the teachers who may be interested in special education. The education offices coordinate the local recruitment and forward the lists to KISE for admission. During recruitment at the local levels, the teachers are guided on what the training is about and are given the option of choosing an area of special education they may want to specialize in or pursue further. Most teachers pick particular areas because they have family members with disabilities, they have such children in their classes or just because of the adventure and potential for academic advancement. This decentralized process of recruitment ensures that on completion of the course, teachers will work in their respective areas. The assumption is not guaranteed, however, as individuals can always negotiate their postings upon completion.

KISE admits and advises the recruits on where and when to report for their training, depending on the program they have been recruited for. Those starting the full-time program report to KISE in Nairobi, while those entering the distance learning in-service program report to the nearest KISE satellite campus in their regions.

The shortage of trained teachers has generally been a big problem facing the education sector in developing countries. The situation is worse in rural areas and more so if such teachers need to have special education qualification. Most trained teachers would prefer to serve in urban schools where they will have more access to facilities and resources.

A typical case witnessed by one of the authors in June 2010 is of one school known as Plesian Primary School in the Eastern Baringo district of Kenya. The school had children from nursery school through grade eight with only three teachers, including the head teacher. This implies that in addition to his administrative duties, the head teacher had to take full load like any other teacher. The good news, however, is that one of the three teachers was taking the KISE distance learning program and would be able to serve the children with special needs. The sad, glaring truth is that at any one time, five classes had to be without a teacher and the students were expected to compete in national examinations with all the other schools at the same level so as to qualify for secondary school admission.

According to Bina (1981), local personnel who receive on the job training are most likely to remain in rural areas. KISE initiated the Distance Learning (DL) program with the main goal of having at least one teacher trained in special education in every primary school in the country by the year 2015.

The Training Modes

The Distance Learning (DL) Program

The DL program is organized in such a way that every administrative region of Kenya (eight provinces in total) has at least one satellite campus where serving teachers go to for training during school holidays. The school system in Kenya is based on trimesters with three months for every school term. Hence, there are three school holidays in a year of one month each. It is during the school holidays when the DL students report to the campuses for their face-to-face sessions.

In the regions, the institute has developed contact with the teacher preparation personnel in the local satellite campuses as well as the district functional assessment centre coordinators. These personnel become effective in identifying eligible candidates for recruitment and they also get involved in facilitation when the programs take off. This involvement of the local people is important as it enhances collaborative efforts, which are key in providing special education services.

The DL program has succeeded in creating awareness about special education in every corner of the country but this has not come without challenges. One main challenge is that the program is appealing to many teachers who are yearning for knowledge and progress. Hence there are over enrollments in all the satellite campuses. This scenario translates into overstretched facilities and resources. A typical DL class session has an average of 100 students and sometimes more, so facilitators resort to using mass production strategies. Resources are similarly overstretched. For instance, one Braille machine is shared among 20 students or more on average. Those who go through DL program may, therefore, come out not as competent as the program intended.

The Full Time Program

The number of students who go for the full time program is normally very low. Only 80 are recruited every year as the number is determined by the bed capacity and facilities at the main campus. Their recruitment is also spread across the country's regions but they have to move and reside in Nairobi, the capital city of Kenya and where KISE is located, for the two years of residential training. The full time students have a wider option of areas of special education to specialize in and they are the ones who can go into the low incidence disability areas like deafblindness which require intensive training and more practical sessions in real classroom situations. During the two years, the trainees get a variety of exposure to special schools in the form of sessions for practicum, attachment and final teaching practice.

Three Months In-Service Courses

These are courses which are tailored towards equipping practicing teachers with the different skills in special education. The courses are very intensive and focus on specific areas of special education like orientation and mobility, sign language, Braille, communication with the deafblind, functional assessment and the production of materials and devices for special education students. The main goal of this program is to equip the persons who are in constant

contact with children with disabilities with the management techniques required. The teachers for this category of training do not have to meet minimum standards of qualification like the teachers for diploma level. The tailor-made courses are also open to other professionals, like socials workers, health workers, teacher aids and other civil servants who may need more information on disabling conditions. Parents of children with disabilities can also take the courses.

Curriculum Focus

To qualify as a special education teacher, applicants must go through rigorous training that includes a three months practical teaching session which must be assessed and graded. Each candidate is supervised by the trainers from KISE several times and finally assessed and graded by staff from the Ministry of Education's Quality Assurance and Standards. The supervision and assessments are mainly to evaluate the teachers' performance in the classrooms. In addition to assessing how teachers deliver the content in class, they are also assessed on how they plan and execute lessons, how they make use of the environment in their adaptations, how they develop and implement class assessments and generally how they incorporate all the required demonstrated tasks in a culminating teaching experience. The candidates are required to develop and analyze their own practice by developing a final teaching practice file highlighting schemes of work, lesson plans, IEP development and implementation document, students' progress records and copies of assessed and graded lessons. This aspect compares to some extent with the Performance Assessment for California Teachers (PACT) which is based on a candidate's practicum experience and what the National Council for Accreditation of Teacher Education (NCATE) has in place to make mentored teaching the centre of teacher preparation. The PACT requires candidates to develop and analyze their own practice by producing a portfolio highlighting lesson plans, assessment, reflections and videotaped examples of instruction, while NCATE relates the practice with hospital based preparation of doctors. Hence, it has launched making teacher preparation more clinically based.

The curriculum for the diploma program is geared towards preparing teachers to teach learners with diverse needs. Hence, all the teachers must meet the requirements of a multidisciplinary course component of the program in the first half of the training period. The multidisciplinary component consists of theory and project work as well as school-based attachment which exposes the trainees to identification and working with individual learners who have special needs in education. Each candidate must identify, draw and implement an IEP for a student in either a language or mathematics, the nature of disability notwithstanding. This aspect compares to some extent with what happens in the United States of America where all teachers are prepared to teach diverse learners and must fulfill a multicultural education and human relations requirement consisting of course work and school based experiences focusing on diversity. In the US, all teacher candidates learn specific strategies for working with English language learners and students with special needs in education. The difference comes between Kenya and the US in the sense that in Kenya, teachers prepared for general education do not need to learn anything about special education. Those interested in special education have to get back to college after having at least five years experience in general teaching. This means that the bulk of teachers in Kenya are uninformed about special education. Currently, there is an alternative route where three public universities in Kenya offer direct admission into a Bachelor of Education in Special Education degree.

Teaching and Research

When teachers are used as researchers, the question of applying theory to practice does not arise as the teachers are only too glad to implement their own studies. When teachers are involved in research as part of their course, they will gather data about individual students and identify patterns of whole class learning as well as the different learning styles of individual students. All this is very good information for basing instructional strategies upon. Teacher trainees at KISE take research as a main component of their course and each student must conduct a study and write a special study paper based on their area of specialization. This definitely boosts their performance as it makes them understand their learners better.

The good intentions of KISE in using research to inform instruction is, however, challenged by the fact that KISE is a middle level college and is not recognized by the state as a research institute. Hence, it is not considered for major research grants alongside other institutions of higher learning. This may stand in the way of dissemination and implementation of such study findings at the policy making levels.

Laws and Education Policies

In Kenya, the laws and policies on which special needs education is provided fall under the Ministry of Education, Science and Technology. Currently, there is the National Special Needs Education policy framework, developed in 2009, which addresses some of the critical issues which determine the delivery of quality and relevant education to learners with special needs. The document details structures related to personnel preparation for special needs children. Successful implementation of this policy is expected to improve the quality and access to education provided to children with special needs.

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Learning Sign Language at a Distance

Introduction

In the past twenty years, university requirements for deaf education teachers have begun to place more emphasis on the development of sign language skills (Dolman, 2008). For students who do not have access to a deaf education program at a local college or university, this can be a significant barrier in becoming a licensed deaf education teacher. In regions that are geographically isolated, access to native deaf signers or sign language classes may create further difficulties in developing sign language skills that are highly valuable when teaching in a deaf education setting. Learning sign language requires exposure to the language and frequent opportunities to engage in conversations and opportunities to enhance and deepen linguistic and cultural experiences and understandings.

Students in the Deaf/Hard of Hearing Teacher Preparation Program at Texas Tech University were provided a unique opportunity to interact with each other, an instructor, and a one-on-one mentor to improve their signing skills through web conferencing technology, practicing sign language with others across the country. Geographic location was no longer a barrier.

Students who complete the Deaf/Hard of Hearing Teacher Preparation Program may work in a variety of settings, such as a residential school for the deaf, in a mainstream program, or as an itinerant teacher. Some settings will require advanced sign language skills, while others will not require any. However, having at least basic skills in sign language will open up job opportunities and allow teachers to be more flexible when job requirements change. Although there are many different sign systems (ASL, English sign systems, cued speech, morphemic sign, etc.), sign skills of some type are still considered an important characteristic in defining what constitutes a “master teacher of the deaf” (Scheetz & Martin, 2008). So even if students plan to work with oral deaf children, basic sign communication skills are still beneficial.

Students

Postgraduate students at Texas Tech University participated in an online Sign Language Lab as part of an internship requirement for the Deaf/Hard of Hearing Teacher Certification program. They lived in rural areas in states across the country, including Mississippi, New Mexico, Wyoming and Texas. A few students had some sign language skills, others only knew the manual alphabet, and some had no prior knowledge of sign language. The goal of the Sign Language Lab was to prepare students for the licensure test they would be required to take upon entering the field as deaf education teachers.

Method

In the first year of implementation, each student was provided with a web cam and met online in small groups with an instructor approximately once a week. Adobe Breeze videoconferencing software was used for the small group sessions, which incorporated video, PowerPoint and chat features. During these sessions, the instructor presented information on topics such as vocabulary and sentence structure, and students were given an opportunity to ask questions and practice the new information. These sessions were recorded and made available online for students to review or to make up in the case of absences. Access to the videos required a password so only other students from the course could view them. Limiting access to the videos was done to help students feel less self-conscious about using their beginning sign skills during class.

In addition, each student met with a mentor approximately once a week. These meetings were one-on-one with mentors who were deaf native signers, carefully selected for their encouraging and supportive attitude toward helping nascent signers. These mentor sessions provided students with an opportunity to practice both their receptive and expressive signing skills with a fluent signer. The sessions were unstructured, allowing students to practice conversational skills, though they were encouraged to try to implement the skills and vocabulary introduce in n the group sessions. These sessions were held using a variety of methods, depending on what was preferred by the individual students and mentors. Some of the systems used included Viable, ooVoo, and Yahoo! Messenger.

Some logistical challenges appeared due to the fact that the specific sign system endorsed by individual school districts varied, and these future teachers needed to be able to use their district's preferred sign system. These sign systems ranged drastically from American Sign Language (ASL) to Signed Exact English (SEE) to Morphemic Sign. In an attempt to meet the diverse needs of students, the group classes focused on vocabulary and syntax that was similar between various sign systems. To give students more specific practice in their district's preferred sign system, students were assigned mentors fluent in that sign system.

Evaluation

Students came into the course with a variety of skills, from no knowledge of sign language to advanced signing skills in some areas. Each student was given a pre-test in order to determine their level of skill at the beginning of the course. Students were asked four questions:

1. "What is the name of the program you are studying at Texas Tech University?"
2. "What are your goals when you finish this program?"

3. "Which areas in sign language do you feel need the most improvement?"
4. "As a deaf educator, what interactions will you experience with a student's family?"

The question was first signed in ASL, and if the student did not understand, it was signed again in PSE. If they still did not understand, the question was typed into the chat window. The interviews were recorded for later coding.

Videos were reviewed by two certified sign language interpreters. Students were assessed in five areas: receptive skills, expressive skills, number of production errors, complexity of vocabulary, and production of the manual alphabet. While some students were advanced in specific areas, such as alphabet production, no one was advanced in all areas.

At the end of the course, students were given the same evaluation. It also was recorded and coded by the sign language interpreters. Regardless of the skill level students began at, all students improved their signing skills in at least one area by the end of the semester, with most students improving in all areas.

Students were also given a satisfaction survey, which not only assessed their satisfaction with the instruction, but with the ease of using the technology for the course. All students felt the lessons were well prepared and the majority felt the pace was appropriate. There was high satisfaction with the mentoring sessions. Students felt that the sessions were helpful and their mentors were professional and prepared. They all felt that they learned significantly from the mentoring sessions. Overall, students felt that their skills and confidence increased as a result of the Sign Language Lab. A common theme in student comments was that the lab should be offered at the beginning of the program and offered each semester to provide continuing development of skills. There were also requests for more one-on-one practice sessions, whether with a mentor or fellow student.

There was less satisfaction with the technology used, however. Students indicated dissatisfaction with the picture quality in Breeze, Viable, and ooVoo. Students found Breeze and Viable more difficult to use than ooVoo, and the speed of their own Internet service was also a problem. Comments reflected the difficulty students had with the software, such as inconsistent success accessing Breeze and problems creating an account in Viable. Other recommendations for improvement included more flexibility in class time, smaller groups for lesson sessions, and instructions on placing and using the webcam.

Challenges

Most of the problems that occurred during the initial implementation of the Sign Language Lab were related to technology, specifically with using Breeze. Breeze required the use of Flash. Flash 10 was the most current version at the time, but Breeze was not compatible with it and required students who had already upgraded to Flash 10 to uninstall it and downgrade to Flash 9. Also, some students were using older computers, had slow Internet connections, or were using computers at work which blocked video conferencing.

Students had fewer issues with the software used for the mentor sessions, such as Viable or ooVoo. However, these sessions involved only two people, the student and the mentor, while the group lab sessions could have up to 11 paticipants. As the number of individuals in a session

increases, the quality of the video tends to decrease, resulting in choppy or pixilated video, especially in situations with low bandwidth, slow Internet connections, or older computers.

In the second year of implementation, technical issues with the Sign Language Lab dramatically decreased. Breeze was replaced with ooVoo, which allowed a maximum of six users at one time. This kept the groups small and ooVoo's technical requirements were simpler. Also, students were informed at the beginning about the technical requirements of the course, such as a minimum Internet speed and recommended computer specifications, which prevented a number of problems that occurred during the first year.

Recommendations

The benefits of providing a way for students to learn and practice sign language at a distance are clear. But it is not without its road blocks, and the program at Texas Tech University continues to change and grow as lessons are learned each year. The following are suggestions based on these lessons:

- Choose a video conferencing system that can be used on either a Mac or Windows operating system. It should be easy and intuitive to use, with minimal installation of software or plug-ins. Keep the group lessons small, with no more than 4-6 participants.

- A high speed Internet connection is essential for students to have in order to participate in videoconferencing. A minimum of 512 kbps for both upload and download speed is required, although higher is better. If students have trouble with their video, they should close down any other software or browser windows that are open. Connecting to the Internet through a "wired" connection instead of wireless will also provide better results.

- Although a high-end webcam is not required, it should be a good quality camera. Cheaper cameras capture fewer frames per second, which can lead to choppy video. The camera should capture at least 30 frames per second, which is possible with most good consumer webcams. Students may need some practice getting used to their webcams. Especially important is experimenting to find a good location and distance from the camera. Environmental lighting should come from behind the camera (in front of the student) in order to prevent shadows and students should practice placing themselves so they are centered in the picture, visible from the waist up.

- The specifications of the computers that students use will also impact their experience. As a general rule of thumb, a laptop less than three years old or a desktop less than four years old is probably fine. Many students are tempted by inexpensive "netbooks", which can usually be found for less than $300. While they have their uses, netbooks have slower processors and less memory, so are not appropriate for videoconferencing.

Conclusion

The use of an online sign language lab at Texas Tech University successfully provided students with the opportunity to develop their signing skills and become more marketable as deaf education teachers. Perhaps more importantly, students who lived in geographically remote locations were able to be a part of an educational program that could have otherwise excluded

them due to the logistical issues of distance and travel expenses. Though the Sign Language Lab was not without its challenges, students unanimously agreed that it led to improved receptive and expressive signing skills. Technological barriers arose and were dealt with in ways appropriate for the student and the situation. This online language learning opportunity created a meaningful and beneficial experiences for Texas Tech University students and could easily be duplicated in other programs to address similar needs in teaching and learning sign language.

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