

Web-Based Teacher Preparation Programs and Elementary Education: Will Principals Hire These Teachers?

John A. Huss

Northern Kentucky University

ABSTRACT

This study investigated attitudes of elementary principals toward the desirability of pre-service teacher preparation programs conducted online. Random cluster sampling was utilized to select participants from a population list of schools/districts in Indiana, Kentucky, and Ohio. After districts were determined, elementary principals in the chosen districts were provided a questionnaire designed to gauge their acceptance of undergraduate online teacher preparation programs. The return rate for the survey was 67%. Principals expressed apprehension that the “social” aspects of teaching and the measurement of teacher dispositions may be compromised in an online program. They also expressed concerns about ethical issues surrounding the use of web courses for this particular purpose. If principals are to ultimately acknowledge the legitimacy of online teacher preparation programs, degree-granting institutions must address the concerns generated by those who hire these graduates and actively seek administrator input for successful program design.

When contemplating a new teaching hire, elementary principals traditionally consider factors such as: scholarship, a candidate's genuine interest in children, organizational skills, flexibility, creativity, teamwork, and experiences. Principals may soon have to also take into account whether the candidate completed his/her teacher preparation in a traditional university setting or through an online web-based program that involved little or no face-to-face meetings between students and professors.

Nearly 3.2 million students were taking at least one online course during fall 2005, an increase of about 850,000 students from the previous year and a growth rate of 35% (Allen & Seaman, 2006). Online students currently represent 17% of all higher education students (Allen & Seaman, 2006). A rising number of colleges and universities across the country are now endeavoring to develop both undergraduate and alternative online teacher preparation programs leading to initial certification or licensure. Many such programs are on a fast track toward completion as universities seek to expand access to under-served populations, alleviate classroom capacity constraints, and capitalize on emerging market opportunities (Eastman & Swift, 2001).

In 2001, for example, the U.S. Department of Education awarded a \$10 million, five-year Star Schools grant to Western Governors University (WGU), an online consortium of 19 Western states and 45 universities, to develop a competency-based distance-learning program for teaching candidates. The WGU Teachers College offers K-8 licensure programs as a bachelor's degree or post baccalaureate certificate, as well as an online bachelor's degree with licensure in secondary mathematics or science and a post baccalaureate-licensing program in math and science for uncertified teachers and mid-career professionals. Arizona, Nevada and Texas have officially accepted WGU programs for licensure; through reciprocity agreements with these states, the WGU degree is recognized by 43 other states (United States Department of Education, 2003). Similarly, the University of Maryland was awarded a \$2 million Department of Education grant to develop its own online teacher certification program. The goal was to produce 300 teachers for a high-need school district over the next five years (United States Department of Education, 2003).

Driven by state standards and a call for blended learning, the modern P-12 school aggressively promotes technology across its curriculum and programs, but whether principals will express confidence, or dubiety, about new teachers who learned their foundations and elementary teaching methodologies *online* remains unclear. The distance-learning upsurge could prove to be both promising and problematic for most stakeholders who participate in the education arena. The impact may be particularly eventful for the elementary school environment, where a consistent integration of the cognitive and non-cognitive aspects of teaching is markedly pronounced. Attitudes toward online preparation will likewise have significant implications for how instruction is delivered in higher education. Those who develop, teach, and pay to take online classes should be apprised of principal reaction because it is ultimately the administrator who chooses to hire or not hire the candidates produced by those programs.

LITERATURE REVIEW

Literature to examine the credibility and marketability of online degree programs, especially for P-12 education, is limited. Most studies have not been discipline-specific and have tended to look at faculty or students and the extent to which they embrace the value of this fresh, still unproven, method of instructional delivery. A scarcity of data clearly exists on a central, yet seemingly overlooked question: How do *employers and supervisors* view the quality and legitimacy of a degree garnered exclusively online? What will it matter when institutions, faculty, and students embrace the online degree programs, but prospective employers and instructional leaders question the value of such degrees? At present, our clues must be drawn from business and industry because no studies are available that focus directly on P-12 administrators.

Adams and DeFluer (2006) conducted a national survey of hiring executives (n=269) to assess the acceptability of a job applicant's qualifications for employment that included a degree earned solely online or one that included a significant amount of online coursework. The questionnaire was sent in response to job advertisements posted in newspapers in eight major metropolitan areas throughout the United States. It described three hypothetical applicants: One earned a degree through a "traditional" institution; a second obtained a degree solely online from a "virtual" institution; and a third obtained a degree by "mixed" online and traditional coursework. The question addressed by this study is whether a job applicant who has earned a bachelor's degree entirely or partially online has the same chance of being hired as one whose degree was completed through traditional coursework.

In the first pairing, when the respondents were asked to choose between an applicant with a traditional degree and one with an online degree, 96% (258 managers) indicated they would choose the candidate with the traditional degree for employment in their organization. Only 4% (11 respondents) selected the candidate with the online degree. In the second pairing, the respondents were asked to choose either an applicant with a traditional degree or an applicant with half of the course work completed online. Seventy-five percent (201 respondents) indicated that they would prefer the applicant with a traditional degree. About 4 % of the respondents did not answer this question, but some of these choose to provide detailed written comments instead. The remaining 19% (51 respondents) selected the candidate with the mix of traditional and online coursework

A poll of 300 human resource executives disclosed that only 20% of employers have hired a job applicant with an online degree. When asked if an online bachelors degree is as credible as an offline degree, 28% responded, "Yes", 58 % answered, "Not as credible, but acceptable" and 14% answered, "No, not credible or acceptable." Eighty five percent of employers, however, felt online degrees are more acceptable today than they were just five years ago (Vault, 2005). A 2004 survey by the Distance Education and Training Council (DETC) revealed that almost 70% of corporate supervisors rated the value of a distance degree as "just as valuable" or "more valuable" than resident-school degrees in the same field. The respondents, however, were managers with at least one employee who had earned a degree through a DETC-accredited distance program.

Many employers believe online programs are good at teaching research skills and theory, but not so good at providing hands-on experiences in the training field (Dolezalek, 2003). According to Blair (2001), teacher preparation is not the right model for separating content, pedagogy, and teaching experiences. The American Federation of Teachers (2000) acknowledge the great potential of distance learning, yet were compelled to pass a resolution calling for mandatory face-to-face coursework in teacher preparation programs: "We believe there is something unique and important about the simultaneous visual and verbal interaction of individuals in the same place working together toward a common educational goal" (p. 9). The union released an extensive report, drawing largely on survey responses from 200 higher education instructors who practiced distance learning. When asked what percentage of an undergraduate course of study ought to be taught by distance education, 70% of the respondents came out in favor of half or less of an undergraduate degree offered in this manner. The report went on to say, "The fact that distance education may be a good option for teaching a particular course, or set of courses, does not automatically mean that it is acceptable to offer an entire undergraduate degree program, two-year or four-year, without providing students in-class experience" (p.12).

Many employers indeed consider a lack of social interaction among classmates to be the largest drawback for candidates who earn their degrees online (Business Wire, 2000). Diaz and Cartnal (1999) provided the following summation:

It is not surprising that students who prefer independent, self-paced instruction would self-select into an online class. It may be that the distance education format appealed to students with independent learning styles, and that independent learning preferences are well suited to the relative isolation of the distance-learning environment (p. 134).

Roblyer (1999) suggested that students who prefer online courses place greater value on their control of the pace of the course than on forming relationships. The American Federation of Teachers (2000) recommended that distance-learning courses should, to the greatest extent possible, incorporate both real-time electronic interchange through devices such as chat rooms and discussion groups, and asynchronous forms of communication such as e-mail and computer bulletin boards. Similarly, Woods and Eversole (2003) advocated communal scaffolding to set practical guidelines for fostering a supportive social network in online programs. Through personal discussion folders, live chats, service learning, and field trips, they suggested cognitive and affective aspects of online learning can be interconnected to better meet student needs.

Another concern for employers may be found in the frequency with which online students drop courses. According to Diaz (2002), online students show a 13.5% drop-rate compared to a 7.2% drop-rate for traditional students. Diaz, however, did not necessarily consider *all* drops as academic failures. Because of the requirements of school, work, and/or family life in general, students can benefit more from a class if they take it when they have enough time to apply themselves to the class work. Therefore, by dropping the class, they may be making a mature, well-informed decision. (Diaz, 2002).

The existing literature on employer attitudes toward online degrees is sparse, yet seems to suggest that overall acceptance of distance learning is on the rise despite a stated preference for traditional degrees. Employers have questioned the level of social interactions found in online formats, the motivations for undertaking an online degree, and the commitment to completion demonstrated by some online students. Although the American Federation of Teachers released a comprehensive report on the expectations for online learning within the field of Education, there is currently no literature base that addresses the attitudes of P-12 principals toward candidates who receive their undergraduate teacher preparation through a web-based medium. If principals who recommend new teachers for classroom positions are receptive to the online degree and view it no differently than a traditional degree, a definite selling point for online education has been established and reinforced for schools and colleges of education. If, however, a substantial number of principals express tentativeness about hiring “online graduates” for the classroom, key areas of concern will be isolated and, perhaps, viable suggestions introduced to alleviate and overcome these undesirable perceptions.

METHOD

Participants and Setting

This project involved principals in the states of Indiana, Kentucky, and Ohio. These states were selected because they comprise the tri-state region serviced by the author’s university. Random cluster sampling was utilized to select participants from a population list of schools/districts in the aforementioned states. Cluster sampling is a technique wherein the entire population is divided into groups and a random sample of these clusters is selected (Marriott, 1990). After districts were determined, principals were surveyed to achieve equal representation across the states. A total of 100 principals (36 from Indiana, 35 from Kentucky, 29 from Ohio) completed questionnaires out of the 150 mailed, for a return rate of 67%. The schools that responded provided an equitable cross-section of rural, suburban, and urban principals.

Research Design

This study followed an explanatory mixed methods design (McMillan, 2004) as it integrated discrete elements of positivism with an interpretive approach. Interpretivism aims to understand phenomena from the point of view of participants directly involved with the phenomenon (Cavaye, 1996). While a survey instrument was utilized for data collection, fixed choice responses were combined with open-ended questions that produced textual rather than numerical input. The qualitative data and analysis were used to elaborate on, refine, or explain the quantitative findings (Creswell, 2005). The design was deductive in nature and no specific hypothesis testing occurred. Such a methodology is appropriate because there is no objective reality, which can be discovered by researchers and necessarily replicated by others (Walsham, 1993; Broadbent & Shanks, 1998). By utilizing quantitative and qualitative techniques within the

same framework, mixed methods research can incorporate the strengths of both methodologies (Sechrest & Sidana, 1995).

Data Analysis

Although questionnaire data were stored, written, and displayed with computer assistance, the bulk of coding, indexing, and interpreting was performed manually. Questionnaire data were categorized into coding families based upon regularities and patterns. A content analysis of the written comments provided by the respondents was conducted to understand the nature of those remarks in context, and to examine their written answers for evidence of overriding concerns. To accomplish this analysis, the written comments were first organized into categories and analyzed for thematic (or contextual) uses of keywords and phrases. To assess these issues, categories were developed by grouping together the most frequently occurring keywords. These can provide insights that go beyond the checkmark answers made among the categorical selections provided in the questionnaire (Schumacher & McMillan, 1993). A combined context of less frequently used keywords was used to form other categories.

This approach, open coding, pertains specifically to the naming and categorizing of basic concepts, themes, and other phenomena through close examination of the databases (Strauss, 1987). Data are broken down into discrete parts, or sub codes, and then named using terms generated by the researcher, drawn from the literature, or derived directly from the data. Categories were then organized into a schema or meaningful sequence used as the basis for writing findings. Each participant's codes were also compared to the others, again checking for commonalities and differences, leading to the creation of a matrix of data patterns. Patterns are defined as observed variations in the phenomena that are systematically related to each other (Yin, 1993).

Appreciating that online programs can be quite complex with intricacies often specific to a particular university, the element they share in common is the almost exclusive delivery of instruction via the web (typically through systematic software platforms that allow managed learning systems and course modules), as opposed to the mere inclusion of web-enhanced courses (i.e. a web facilitated or a blended/hybrid program). A web-based program does not meet for instructional purposes in physical facilities, although students may sometimes be required to meet for an in-class orientation or to take exam. The emphasis then is strictly centered on principals' reaction to the general medium itself as a means for preparing teachers, not on the idiosyncratic nature of individual courses. On that basis, the principals were asked key questions that focused on principal awareness of the aspiration within colleges of education to create online teacher preparation programs, personal experiences with web-based delivery, and reactions to the marketability of online teaching candidates. Years of service for each participating principal were also recorded (see Appendix).

Reliability and Validity

Both face and item validity were assessed through data gathered in a pilot study with local principals in elementary education who were not included in the final sample. Twelve pilot study participants completed the entire survey, and then answered the following questions about whether the survey allowed them to accurately and fully report their attitudes and perceptions of online teacher preparation programs: 1) Which, if any, items on the survey were unclear to you? Explain; 2) which, if any, items did you find difficult to answer? Explain; 3) This survey uses fixed attitudinal responses. While completing the survey, did you feel that this scale adequately

allowed you to express your opinion? If not, explain; 4) In your opinion, which, if any, items on the survey display a bias on the part of the research? Explain; 5) Provide any additional comments that you would like to make. Analysis of respondents' comments to the survey questions did not reveal a pattern of misunderstanding for any item or any reported barriers to their understanding of, or ability to respond to, survey items.

Replication in a study of this nature can be approximated, but not attained. Because this descriptive study utilized self-reporting and subsequently analyzed each item separately, a scale was not invoked, and, therefore, internal consistency reliability ratings were not appropriate. Internal reliability was addressed, however, through mechanically recorded data, which, according to LeCompte & Preissle (1997), "preserves all data, unabstracted" (p. 340). External reliability was addressed by a careful delineation of those who provided the data, and explicit description of how participants were selected, the context in which surveys were conducted, and techniques used to acquire and analyze data.

Regarding validity, qualitative analysis incorporates a researcher reflection, introspection, and self-monitoring that can be called "disciplined subjectivity" (McMillan & Schumacher, 1997), wherein all phases of the research are exposed to continual questioning and reevaluation. Internal validity threats, such as history, maturation, and mortality were not factors. Credibility of participant reports was enhanced through independent corroboration from multiple informants. The inclusion of quantitatively measured attributes, such as years served as an administrator, function to demonstrate what Wolcott (1973) calls the "typicality" of a phenomenon, the extent to which it may be compared and contrasted along relevant dimensions with other phenomena. Inasmuch as data generated in this study captured the *attitudes* of 100 principals and not necessarily an accurate depiction of the overall reality of all elementary school administrators, the threat of spurious conclusions drawn by the researcher was reduced. In consideration of external validity, translatability was enhanced through the use of theoretical frames, definitions, and research techniques accessible to and understood by other researchers in the same or related disciplines

RESULTS

As displayed in Table 1, the participants represented varying levels of administrative experience:

Table 1. Years of Administrative Service by State

	0-3	3-6	6-10	10-15	More than 15
Indiana	7	4	11	2	12
Kentucky	4	9	7	5	10
Ohio	3	6	8	3	9
Totals	14	19	26	10	31

n=100

Fifty-four percent of principals were not aware of the initiative on the part of higher education to develop online preparation programs and 87% had not personally taken an online course.

The remainder of the questions drew responses that were direct, unwavering, and consistent across three states. The prospect of an online degree for elementary teacher preparation was met with disparagement and was unaffected by the number of years served as an administrator. Fifty-nine percent indicated they would be *very* concerned if a teaching candidate applied for a position with a degree garnered wholly or almost wholly online. With 37% expressing they would be *somewhat* concerned, 4% would not be concerned at all. Ninety-six percent did not agree an online degree was as credible as a traditional degree.

Ninety two percent offered narrative comments to elaborate upon their viewpoints and general impressions, which provided a basis for a qualitative analysis that extended the understanding of the principals' perspectives. Sixty-seven principals, for instance, chose to remark on the "social" aspects of teaching that may be compromised in an online program. Many used the phrases "Teachers are *people* persons" and "Education is a people business" or injected the term "face-to-face." One principal expressed, "Relationships and face-to-face communication are absolutely essential when training someone to be an effective elementary school teacher." Another principal stated, "You can't beat face-to-face interactions between students and professors and students and their peers, especially for lab experiences and group work."

Within the "social aspect" theme, principals were protective of traditional teacher preparation programs that allow students to develop cooperative and collegial skills as they interact with fellow members of a cohort group. As one respondent indicated, "I would be skeptical of the social skills and teamwork experiences of an online candidate." Said another, "Online instruction cannot adequately prepare a candidate for working with people. Distance learning never deals with tears, arguments, lost teeth, or vomit. That's real-life in an elementary school." One respondent made the distinction that, "Online is okay for information, but I think one needs interactions and real experiences to be a successful elementary teacher; good teaching depends on good interpersonal relationships." Similarly, the following quotation speaks to the parallel that principals see between preservice and future workplace interactions:

I believe pre-service teachers learn as much from the spontaneous discussions with other students as they do in their classes and really need face-to-face, real-time experiences with others who are on a similar career path. They will be part of a work team someday and they should be part of a work team now.

Forty-two principals were concerned that teacher dispositions would be difficult to gauge in an online environment. A principal conveyed, "I would not be comfortable trying to ascertain if an online teaching candidate possesses the interpersonal skills and professionalism to work cooperatively with peers, parents, school leaders, and the community." The perceived value of having college instructors attest to the dispositions of pre-service candidates was expressed:

To me, a teacher's character is demonstrated over time and really speaks to how that person is likely to respond in various situations. University faculties help to assess those tendencies and look for desirable patterns of behavior. I would definitely question how an online candidate has been measured when it comes to things like dedication, empathy, and respect.

Fifteen respondents commented about the motivation a student might have for choosing an online program in the first place. Principals speculated that some online students might be too

autonomous and less cooperative than face-to-face students. A representative comment was: “It would be hard for me to understand why someone who professes to love working with children and someone who will need to be responsive to the welfare of elementary students would choose to take a program online.”

With comments such as, “I would question the integrity of the entire process. Who is writing the papers and taking the tests?” and “I would wonder if the student him or herself actually completed the work,” eleven principals cited online cheating and the authenticity of a teaching candidate’s pre-service work as a source of concern. Two principals commented on the reputation of the degree-granting institution as having a bearing on the credibility of the candidate. Four principals listed “technological expertise” and/or “written communication skills” as possible advantages for online candidates. Interestingly, none of the 13 principals who had personally taken an online course felt an online preparation program would be as credible as a traditional program.

DISCUSSION

While acknowledging the data reveal *perceptions* as opposed to actual outcomes, the information gathered strongly suggests elementary principals are reluctant to embrace the concept of online pre-service teacher preparation programs at this time. The study provides a baseline for instigating dialogue between the e-learning community and administrators who make decisions about the marketability of teacher candidates. Several ideas were paramount.

First, principals were clear that field placements and student teaching would *have to* remain central to a program. Principals placed great importance on genuine classroom interactions and peer collaboration. Their expectations were consistent with the goals of prominent online programs such as the one provided through Western Governor’s University (WGU). The WGU curriculum, which received accreditation by the National Council for Accreditation of Teacher Education (NCATE), includes demonstration teaching of 12-18 weeks in a supervised field placement (Western Governors University, 2007). The expectations of principals were likewise consistent with the report from the American Federation of Teachers (2000), which advocated a rich level of personal interchange between professor and student and among students themselves. The report called for courses involving content methodologies and instructional delivery systems to maximize synchronous and asynchronous discussion boards, video clips, virtual simulations, and email in order to punctuate student/student and student/professor interactivity.

Principals remarked on teacher dispositions and questioned the capacity of online programs to adequately rate the behavior and actions of pre-service teachers. Respondents suggested a candidate might perform well academically, but, in truth, possess few of the affective characteristics sought by a principal. While both the Interstate New Teacher Assessment and Support Consortium (INTASC) and the National Council for Accreditation of Teacher Education (NCATE) require that dispositions be evaluated for pre-service teaching candidates, there is limited information at this time to validate how and when these qualities are assessed in online programs.

Because apprehension was also expressed about the fundamental ethics of online assessment, the issues raised by the principals pertaining to “cyber-cheating” likewise cannot be disregarded. Reasonable safeguards to address skepticism of online teaching candidates and the authenticity of their pre-service work, while balancing adaptations for disabled students (which often call for extended time allowances and other considerations when completing tests and

assignments), must be in place. Respondents voiced some unease over the motivation of certain pre-service teachers to seek an online alternative. Such trepidation parallels the work of Roblyer (1999) and Diaz and Carnal (1999) when they report some online students have been found to value convenience and flexibility more than interaction with instructors and peers

Recommendations and Future Research

Further research is certainly recommended to expand this inquiry to additional states and additional principals to determine if the trends revealed within this study remain congruous in other regions of the country. While the data captured *initial* impressions of respondents, a systematic examination in the form of a longitudinal study would be helpful to document any evolving perceptions of principals, especially if online teacher preparation becomes a more established and publicized fixture in the training of professional candidates.

To conclude, distance learning must prepare to meet potential resistance when it comes to pre-service teacher preparation; it would behoove higher education to heed the concerns of the consumers because perceptions easily become realities unless and until they are confronted. Principals place much support behind the primary and contiguous nature of traditional programs where students mimic the roles of “real” teachers as they interact with classmates, faculty, and mentors to build trust, reach consensus, solve problems, and hone team membership skills. Online teacher preparation may potentially provide greater opportunities for working students, individuals from diverse and remote areas, and paraprofessionals, but higher education will require both answers and strategic promotion to turn aside an existing disinclination among school administrators

Elementary principals want the best candidates for their classrooms. Early findings suggest they are not convinced an online program for pre-service teachers will necessarily produce those candidates. Addressing the need for fusion and interdependency within teacher preparation clearly poses the greatest challenge. Considering that 54% of surveyed principals were unaware of the movement within higher education to produce online preparation opportunities, communication between local universities and P-12 administrators on program design might prove invaluable and ensure mutual goals are conceived and realized. Exposing local principals to quality online courses through workshop opportunities or a trial access would provide hands-on experiences that demonstrate both how content material is delivered and the level of synergy between faculty and cyber classmates. Familiarity may lend itself to a greater acceptance. Those within elementary education will now watch with interest to see if a connection can be made between online teacher preparation and building administrators, or if the idea will, at least for the moment, be banished to the recycle bin.

Contributor

Dr. John A. Huss is Assistant Professor of Education at Northern Kentucky University. Dr. Huss teaches the educational foundations and applied research courses and has written and presented on topics such as critical thinking, cooperative learning, and online teacher preparation. He also has experience teaching in an online format.

REFERENCES

- Adams, J., & Defleur, M. (2006). The acceptability of online degrees earned as a credential for obtaining employment. *Communication Education, 55*, 32-45.
- Allen, E.I., & Seaman, J. (2006). *Making the Grade: Online Education in the United States 2006*. Needham, MA: Sloan Consortium
- Allen, E. I. & Seaman, J. (2003). *Entering the mainstream: The quality and extent of online education in the United States*. Needham, MA: Sloan Consortium.
- American Federation of Teachers. (2000). *Distance education: Guidelines for good practice*. Washington D.C.: American Federation of Teachers Higher Education Program and Policy Council.
- Blair, J. (2001). Teacher training programs turn to cyberspace. *Education Week, 20*, 1-14.
- Broad bent, M., P., & Shanks, G. (1998). Successfully completing case study research: Combining rigor, relevance and pragmatism. *Information Systems Journal, 4*, 273 - 289.
- Business Wire. (2000, November 20). Lack of social interaction biggest e-learning problem: Vault.com survey uncovers drawbacks of online degrees. *Business Wire*. Retrieved May 3, 2007, from Business Wire News database.
- Cavaye, A. L. M. (1996). Case study research: a multi-faceted research approach for IS. *Information Systems Journal, 6*, 227 - 242.
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Diaz, D. (May/June, 2002). Online drop rates revisited. *The Technology Source*. Retrieved on May 3, 2007 from http://technologysource.org/article/online_drop_rates_revisited/
- Diaz, D. P. & Cartnal, R. B. (1999). Student learning styles in an online course and an equivalent on campus class. *College Teaching, 47* (4), 130-135.
- Distance Education and Training Council. (2004). *Distance education survey: A report on course structure and educational services in distance education and training council member institutions*. Washington D.C.: Distance Education and Training Council.
- Dolezalek, H. (2003). Online degrees. *Training, 40*, 26-32.
- Eastman, J., & Swift, C. (2001). New horizons in distance education: The online learning centered marketing class. *Journal of Marketing Education, 23*(1), 25-34.
- Gallagher, S., & Poroy, B. (2003). *Assessing consumer attitudes toward online education*. Boston, MA: Eduventures.
- LeCompte, M.; & Preissle, J. (1997). *Ethnography and qualitative design in educational research*. San Diego, CA: Academic Press.
- McMillan, J. H., & Schumacher, S. S. (1997). *Research in education: A conceptual introduction*. New York: Longman.
- McMillan, J.J. (2004). *Educational research: fundamentals for the consumer* (4th ed.). Boston: Allyn and Bacon.
- Marriott, F.H.C. (1990). *A dictionary of statistical terms*. White Plains, NY: Longman.
- Roblyer, M. D. (1999). Is choice important in distance learning? *Journal of Research on Computing in Education, 32* (1), 157.
- Schumacher, S., & McMillan, J. (1993) *Research in education: A conceptual introduction*. New York: Harper-Collins.
- Sechrest, L., & Sidana, S. (1995). Quantitative and qualitative methods: Is there an alternative? *Evaluation and Program Planning, 18*, 77-87.
- Strauss, A. (1987). *Qualitative analysis for social scientists*. Cambridge: Cambridge University Press.
- United States Department of Education. (2003). *Meeting the highly qualified teachers challenge: The Secretary's second annual report on teacher quality*. Washington D.C.: United States Department of Education.
- Vault. (2005). Online degrees more acceptable in the workplace according to new Vault survey. Retrieved on May 3, 2007 from

- http://www.vault.com/nr/newsmain.jsp?nr_page=3&ch_id=420&article_id=256380
- Walsham, G. (1993). *Interpreting Information systems in organizations*. Chichester, UK: Wiley.
- Western Governors University. (2007). Retrieved May 3, 2007 from http://www.wgu.edu/education/teacher_certification.asp
- Wolcott, H. (1973). *The man in the principal's office: An ethnography*. New York: Holt, Rinehart and Winston.
- Woods, R., & Ebersole, S. (2003). Social networking in the online classroom: Foundations of effective online learning. Retrieved on May 3, 2007 from *Ejournal*, <http://www.acs.ucalgary.ca/ejournal/archive/v12-13/v12-13n1Woods-print.html>
- Yin, R. (1993). *Applications of case study research*. Thousand Oaks, CA: Sage.

APPENDIX A

The following questions comprised the questionnaire sent to principals concerning their attitudes toward online teacher preparation programs:

- 1) Are you aware of the growing aspiration within Colleges of Education to create full pre-service teacher preparation programs wholly or almost wholly online leading to certification/licensure?
- 2) Have you ever taken a college or university course online (with little or no face-to-face class meetings)?
- 3) If a teaching candidate came to you for employment in your building and you knew his/her degree had been obtained wholly or almost wholly through an online program, how would you describe your level of concern? Not Concerned at All, Somewhat Concerned, Very Concerned.
- 4) Does an online degree in teaching carry as much credibility with you as a teaching degree attained in a traditional offline manner? Please explain.
- 5) I would like your immediate reaction toward an interviewee who completed a web-based online teacher preparation program to attain his/her elementary certification. What advantages would you perceive for this candidate? What disadvantages would you perceive for this candidate?
- 6) Please provide any additional comments or reactions to online teacher preparation that you would like to express.

Grade level and years of service for each participating principal were also recorded.