ABSTRACT: The intent of this study is to learn about principal intern perceptions of their grasp of the identified state principal standards for Colorado. A non-experimental comparative approach was used for this inquiry. Interns were trained to use an online journaling process called Journey Mapping. On a six-point scale they rated themselves on their knowledge of the state standards. This was done throughout the academic year of the principal internship. Scores were analyzed initially, midway, and finally. Participants indicated an equal amount of learning for each of the intervals and showed significant growth. There was not a statistically significant difference between male and female participants or varying levels of years of experience.

The standards movement in education has infiltrated all aspect of schooling. Historically national standards identification began with the NCTM (national council for teaching mathematics) in the early 1990s. Then social studies and all other concentrations followed suit. In 2002 the Bush Administration's No Child Left Behind (NCLB) Act amended the 1965 Elementary and Secondary Education Act. NCLB requires schools to demonstrate Annual Yearly Progress which is measured by state assessments (Linn, Baker, & Betelenner, 2002). This increased the national attention on standards; as the assessments are aligned with standards. Currently all 50 states have identified standards for K-12 education. State institutions of higher education have also been met with designated standards with the expectation of compliance. Initially school leaders went unnoticed, however, in the late 1990s discussion of leadership standards began to appear in educational reform papers (Murphy, Yff, & Shipman, 2000).

Critiques of principal preparation programs express the belief that principals are not being prepared to lead in today's educational system. They have failed to keep pace with the changing demands of society (Lewis, 1987 & Fullan, 1998 as cited in Boeckmann & Dickinson, 2001). Principals are no longer solely managers of a school. He/she is expected to be an instructional leader, who facilitates collaboration, builds cohesion among all stakeholders, and influences student achievement. Correlation between principals and student achievement has been examined and a large effect was found (Waters, Marzano, & McNulty, 2003). Therefore, principal preparation programs have been called to reform. Efforts first began in 1987-1993 through the Department of Educational Administration Development Program (LEAD) to make improvements for principal preparation (Hale & Moorman, 2003). Prior to the establishment of national standards, Murphy (2001) stated: "the problem with educational leadership preparation programs today is that they are driven by neither education nor leadership" (p.1). Although efforts have been made to improve principal preparation through the establishment of standards, much criticism still exists. The Executive director of the University Council for Educational Administration (UCEA), Michelle Yung, mentions a laissez-fair attitude generally held by faculty about the adoption of standards (as cited in Hale & Moorman, 2003). In Arthur Levine's (2005) report, which is widely discussed and quoted, he expresses much criticism of current principal preparation programs,

...many university-based programs designed to prepare the next generation of educational leaders are engaged in a counterproductive 'race to the bottom,' in which they compete for students by lowering admission standards, watering down coursework, and offering faster less demanding degrees (p.10).

Standards have been used as a guide throughout the effort to implement needed change. Joseph Murphy (2001), notes, "They provide a platform for the reconstruction of leadership preparation programs" (p. 2). Prior to the national movement, most standards were designated within individual states. Then an effort was made to establish national standards in order to more uniformly guide state standards. Most current principal preparation standards are rooted in the Interstate School Leaders Licensure Consortium (ISLLC) standards established in the late 1990s (Jackson & Kelley, 2002). The ISLLC standards were developed using the framework: leaders as community servants, organizational architects, social architects, and moral educators (Murphy, Yff, & Shipman, 2000). The central tenets
agreed upon were: 1) Foundations are similar for all leaders, therefore a set of standards work for all educational leaders; 2) the core of productive leadership is the focus for each standard; 3) they should help to move the profession to a higher level (Murphy, Yff, & Shipman, 2000).

The Educational Leadership Constituent Council (ELCC) standards also contributed to the standards that have been widely used throughout the nation, including the National Council of Accreditation of Teacher Education (NCATE) to accredit programs (English, 2006). The ELCC standards incorporated the ISLLC standards along with the NCATE's performance based objectives. Although these standards have been accused of neither being empirically sound nor research based (English, 2000), Murphy (2005) counters with, "these standards rest heavily on the research on productive schools and districts and on investigations of the women and men who lead schools where all children are well educated" (p.169). He goes on to clarify the regret of the consortium in not systematically describing the evidence supporting the standards.

Controversy aside, standards continue to be an integral part of national educational policy. Actual implementation of standards alignments within colleges, however, has been slow to happen. Therefore, states have taken measures to ensure standard alignment. In order to encourage the use of standards in preparation programs, many states have tied licensure exams to the standards. Other states have developed reform initiatives tying program authorization to use of standards (Murphy, Yff, & Shipman, 2000).

Influence of Standards on Principal Preparation

Current evidence supporting the influence of standards on principal preparation is scant. Evaluation and research in programs, could further guide changes and examine the importance and impact of standards integration. This said there is a significant deficit of such research and evaluation. "Murphy and Vriesenga found that more than 2,000 articles on preparation had been published in leading school leadership journals from 1975-2002, but less than three percent were empirical studies" (Levine, 2005, p. 46). Some studies, however, have been conducted. Superintendent views, principal and leadership views, and preparation program syllabi have been examined.

Using the ISLLC standards, superintendents from a random sample were asked to rate the value they placed on the individual standards. The study indicated they placed high value on the standards; however, they did not incorporate them in their day to day performance at high levels. This implied that more instruction on incorporating standards into day to day activities was needed in preparation programs (Boeckmann & Dickinson, 2001).

In another study, David Barnett (2004) examined the practice of standards among principals, supervisors, and superintendents; as well as their feelings of preparedness as a result of their preparation programs. He also used the ISLLC standards. Respondents were asked to determine the frequency in which they practiced the standards, then to rate the effectiveness of their graduate program preparing them for the identified standard. In all cases, frequency of completing the task was greater than the effectiveness they had received in their preparation program (p. 122). Standards were also recognized as being in line with the daily activities of the leader. This is contradictory to Boeckmann and Dickinson's (2001) findings; therefore further studies should be conducted. Recommendations from this study included the need for more authenticity of practice in preparation programs. Most recently, Fenwick English (2006) has written about standards as a delimitation of principal preparation programs. He especially believes this to be problematic in the case of accreditation and program evaluation. This is a consideration worth taking into account when emphasizing standards integration in program evaluation.

Principal Internships

The internship experience is another important aspect of principal preparation programs. The concept is grounded in the need to blend principal leadership theory and practice for participants. Most critics have recognized the importance of the internship, or field-based experiences (Levine, 2005; Grogan & Andrews, 2002; Williamson & Hudson, 2001). Although internships contribute to quality principal preparation, downfalls have been recognized. Most participants complete their internships at their home schools. There is rarely the opportunity to seek out a principal in another building. Successful internships have master principals who are also quality mentors. An excellent principal or excellent mentor alone does not have the same impact (Williamson & Hudson, 2001). When internships are limited to completion at the home schools, it becomes problematic; there is truly no guarantee for the quality of the internship experience.

The process of reflection, however, has been identified as a way to positively enrich internship experiences. It provides interns with the opportunity to reflect on neutral ground (Williamson & Hudson, 2001). Reflective journaling over time is one way to guide the interns through this kind of reflective process.

Reflection, however, has been difficult to monitor and assess (Cooner, Dickman, & Dugan, 2006). Journey Mapping
is a resource that may help rectify the issues of assessment and data collection. The Journey Mapping program allows for flexibility in questioning and analysis. Both quantitative and qualitative data can be collected. Perception of confidence levels of each standard can be monitored throughout the internship experience via the Journey Mapping program. In this study principal interns logged on at regular intervals throughout their internship to an Internet journaling site, using the Journey Mapping framework, and responded to a set of open-ended questions and Likert-type scaled questions. These scaled questions will be the focus of the study.

The combination of standards, internship, and documentation of learning is especially complex. Therefore, the purpose of this study is to investigate scaled scores from Journey Mapping on perceived standards acquisition throughout the principal internship experience.

Purpose

For decades, principal preparation programs have been faced with criticism (Bridges, 1977; Cooper & Boyd, 1987; Crowson & McPherson, 1987; Griffiths, 1988; Levine, 2005), however, there continues to be a deficit of empirical evaluation of such programs. A longitudinal, in-depth analysis of perceived standards acquisition via the internship journaling experience will add to the principal preparation knowledge base; one that is in need of more evaluation. Therefore, the purpose of this study is to investigate the acquisition of skills to meet licensure standards during the principal internship experience.

Research Questions

With the focus of inquiry being on standards acquisition during principal internships, the research questions included initial, mid-point, and final standards acquisition score analysis. The research questions were:

1. Is there a difference between initial, mid-point, and final standards acquisition scores for the principal interns?
2. Is there a difference between male and female students in regard to initial, mid-point, and final standards acquisition scores?
3. Is there an interaction between teaching experience and gender in regard to initial, mid-point, and final standards acquisition scores for the principal interns?

Limitations & Assumptions

The population examined is from one university principal preparation program. The nature of self reported data may affect the relationships found in the analysis. It is assumed that participants have honestly and accurately assessed their knowledge of the standards. Although there is no control over the population, it should be noted that each participant in the study has met the set admission standards and has been accepted into the program. All principal interns were required to complete 300 hours of internship experiences. During the internship year, there was no control over the number of quality of experiences encountered by the principal interns. Each intern was at a different school with a different mentor principal.

Methodology

Method

This study is grounded in the quantitative tradition. Six-point Likert-type scale scores were used for the data collection and analysis. Data collection occurred during the year-long internship phase of the principal licensure program. Participants rated themselves on a six-point Likert-type scale for each of the eleven principal standards. See Appendix A. Participants entered scores bi-monthly for the first semester. Due to the increase demands during second semester, participants only completed monthly entries during that time.

Design

A non-experimental comparative approach was used for this inquiry. The identified attribute independent variables are gender and years of teaching experience. Time when scores were analyzed; initially, mid-point, and finally, is the third independent variable. The dependent variable is standards acquisition scores from a six-point scale. 2 x 4 x 3 Mixed ANOVA (with repeated measures on the last factor) was utilized for this analysis.
Sample

Candidates from the principal preparation program at Colorado State University during the 2004-2005 and 2005-2006 academic years were included in the study. These principal licensure candidates were involved in their required yearlong 300-hour principal internship during the data gathering process. The majority of the principal interns were completing the internship in their home schools with their supervising principals serving as mentors. It was the responsibility of the principal intern and the mentor principal to ensure exposure to a variety of experiences that would lead to mastery of principal licensure standards.

The entire available sample was used, which is comprised of three cohorts with a total of sixty students; 30 males and 30 females; 10 with 0-5 years of experience; 22 with 6-10 years of experience; 13 with 11-15 years of experience; and 15 with more than 15 years of experience. Equivalency of gender happened by chance.

Reliability

Measurement reliability is supported by using repeated measures with consistent scaled questions. Cronbach's alpha for the correlation of each individual participant's initial standards acquisition scores indicated good internal consistency (a = .92, M = 2.62, SD = 1.59). The scores of each individual mid-year (a = .91, M = 3.70, SD = .92) and final (a = .96, M = 4.80, SD = .79) standards acquisition scores were similarly highly correlated, allowing for the creation of summated scales: Initial, Mid-year, and Final.

Procedure

Participants were trained on the Journey Mapping program during the summer session prior to their internship year and were taught how to log on to the Internet site to complete a journal entry which contained survey questions and open ended journal prompts. Each participant was given an account and password in order to access his/her journal page. The first four guiding questions were open-ended and designed for qualitative analysis. The final questions were scaled and designed for quantitative analysis. The second section of the scaled questions asked participants to rate themselves on a 6-point Likert-type scale of their perceived knowledge of the eleven principal standards designated for Colorado:

1. Foundations of leadership
2. Contextual understanding
3. Planning and organization
4. Content knowledge instruction
5. Individualization of instruction
6. Management and evaluation of instruction
7. Supervision of personnel
8. Supervision of student conduct
9. Resources
10. School site safety and maintenance
11. Parent and Community involvement

Participants entered scores bi-monthly during the first semester and monthly during the second semester.

All information was given and stored electronically. Access was granted to the researcher for each individual journal. Journals were monitored for completion only. Once the academic year was completed analysis of data began.

Data Analysis

This quantitative analysis was done utilizing the SPSS statistical analysis program often used in social sciences (Morgan, Leech, Gloekner, & Barrett, 2004). Descriptive and frequency statistics including skewness were initially examined in order to inform the appropriate statistical tests to be used. Data were determined to be normally distributed therefore; the following statistics were used in order to examine the specific research questions:

1. A one-way, repeated measures ANOVA was used to examine the differences in initial, mid-point, and final standards acquisition scores.
2. A mixed ANOVA was conducted to assess whether there were teaching experience and gender differences or an interaction between gender and initial, mid-point, and final standards acquisition scores.
Results

The standards acquisition scores were examined using a one-way repeated measures analysis of variance (ANOVA) with three levels (initial, mid-point, and final). Mauchly’s test indicated that the assumption of sphericity had been violated ($\chi^2 = .66$, $p = < .05$), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($e = .75$). The results show a significant main effect of scores ($F(1.499, 86.944) = 195.628$, $p < .001$). To assess pairwise differences among the three levels for the main effect of scores, simple contrasts using a Bonferroni correction was performed. The results indicate that the mean initial standards acquisition scores differed significantly from mid-point ($F(1,58) = 63.96$, $p = < .001$, $\chi^2 = .52$) and final scores ($F(1,58) = 224.35$, $p < .001$, $\chi^2 = .80$). In addition to statistical significance, practical significance is suggested by the larger than typical effect sizes (Cohen, 1988). There was an equally distributed amount of growth mean scores from the initial to mid-point (11.283), and mid-point to final (12.136).

Table 1 shows that there was no statistically significant difference between male and female participants on their initial, middle, and final overall scores ($p > .05$). Inspection of the two group means indicates that the average overall scores for male and female participants were within two points of each other.

**Table 1**

<table>
<thead>
<tr>
<th>Independent Samples t-test of gender and the perceived initial, mid-point and final overall standards acquisition scores</th>
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<tbody>
<tr>
<td>Variable</td>
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<tr>
<td>Initial Overall Scores</td>
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<td>Males</td>
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<td>Females</td>
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<td>Mid-Point Overall Scores</td>
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<td>Females</td>
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<tr>
<td>Final Overall Scores</td>
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<tr>
<td>Males</td>
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<td>Females</td>
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Note. The maximum score is 66.

A 2 (gender: male, female) x 4 (years of experience: 1-4 years, 5-10 years, 10-15, >15) x 3 (time of standard acquisition score: initial, mid-point, final) mixed ANOVA, with Greenhouse-Geisser correction, was conducted to assess whether there were differences between gender, years of teaching experience, and time when scores were analyzed and overall scores. Results indicated a significant main effect of time (initial, mid-point, and final) when scores were analyzed, $F(1.43, 72.89) = 132.67$, $p < .000$, $\eta^2 = .722$), but not of gender and time, $F(1, 51) = .314$, $p = .577$, or years of experience and time, $F(3, 51) = 1.479$, $p = .235$. In addition, there is no significant interaction of gender and years of experience on time.
Discussion

Although not surprising that a statistically significant difference for initial and final scores was found, it does indicate that continued growth of participants’ acquisition of standards increases throughout the program. The equivalence of increase in mean scores for initial to middle, and middle to final scores, is especially of interest. It indicates that an equal amount of learning is occurring for each semester. This supports the length of the internship year. If scores leveled off at semester, considerations could be made towards the need for a full academic year for the internship experience.

As for the difference between male and female participants and their overall scores, it is clear that there was not a statistically significant difference. This indicates an equivalence of perception for both males and females in regard to their level of acquisition of skills relating to the Colorado State Principal Standards.

The mixed ANOVA also indicated the significance of the increase of scores over time, which was the only statistically significant result in this particular analysis. The other factors, years of experience and gender, were not found to have a significant interaction with the overall scores. This also supports the equity of perceptions among male and females. The overall years of experience of participants were not a significant factor in the overall scores as well.

Conclusion

With the amount of criticism and pressure principal preparation programs are currently facing, program evaluation is necessary; especially empirical inquiry of specific program components. Many educational leadership scholars have identified aspects of principal preparation to focus on: internships, standards, and reflective journals are examples of significant components often mentioned in research. Brown-Ferringo and Rodney Muth (2004) report, "preparing future school leaders requires that candidates be immersed in authentic learning activities that produce real products used by schools where the work is conducted" (p. 476). Principal preparation programs have also integrated state and national standards into their curricula. Other than state licensure exams, assessing the acquisition of standards has been problematic. Using electronic journaling, such as Journey Mapping, to track learning over time, is a unique way to assess the acquisition of standards. The purpose of this study was to investigate the acquisition of skills to meet licensure standards during the principal internship experience. The findings support the increased knowledge of standards throughout the authentic internship experience for the principal candidates. Almost an equal amount of perceived growth occurred during the fall semester as the spring semester. This evidence supports the need for a full academic year long internship, because scores continued to significantly increase during the second semester. Growth may, however, continue to increase if the internship time was increased beyond the year long experience. Gender and years of teaching experience did not factor significantly into the scores. This supports the readiness level of all participants. It also indicates that both men and women perceive themselves to be equally successful. "Women are currently underrepresented in educational leadership positions" according to Whitney Sherman (2005, p. 711). Sherman also writes of the discrepancy between the percentage of women in principal licensure programs, and the number of women who pursue principal positions. This study suggests women are equally prepared for the role as men. The results could help rectify the current scenario, through encouraging women to pursue positions and by informing districts of the readiness level of women candidates. Those with varying levels of experience could also use this to their benefit. The program appears to be equally preparing future principals with all levels of experience. Beyond the candidates using it for their benefit, programs such as CSU could use the data for recruitment and marketing. Clearly the scores reflect positively on the experiences offered through the program.

Future inquiry into the acquisition of standards and the effects of reflective journaling is necessary in order to generalize the results, as this study is delimited to one university. A qualitative analysis of the open ended questions in Journey Mapping could also support the quantitative findings. Themes for identified successes, challenges, and concerns for standards could be examined. The quantitative analysis, however, reveals journaling during the internship indicates an increased acquisition of skills to meet licensure standards for principal candidate.

References


Appendix A

Standards Acquisition 6 point scale

a. Minimal exposure to the information
b. Reasonable exposure to the information
c. Some Experience in applying this in my work
d. Considerable experience in applying this
e. Feel confident enough about this to teach to others
f. I and others would view me as an expert

Questions aligned directly with Colorado Principal Standards

1. My grasp of how to behave ethically and how to create an environment that encourages and develops responsibility, ethics, and citizenship, in self and others, and set the direction for a school community. Committed to and focused on learning.

2. My grasp of how to acknowledge, and address in planning, the internal and external factors affecting the school and learning process.

3. My grasp of the elements of planning; plan implementation; and organizational change, and time management.

4. My grasp of all requisite Colorado model content standards and knows is able to demonstrate effective instructional and assessment methodologies and strategies.

5. My grasp of instruction, especially as related to the Colorado Model Content Standards and closing the achievement gap.


7. My grasp of national, state, and local district personnel policies.

8. My grasp of the design of a positive learning environment focused on student achievement and characterized by appropriate and acceptable standards of student conduct and effective behavior management strategies.

9. My grasp of the principals and practices for the fiscal management of schools and school districts. A principal should be an ethical business manager, responsible for the fiscal health of the school and entrepreneurial about locating non-state revenue sources to provide enhancements to the instructional process.

10. My grasp of ways to assure a safe learning environment in a secure, well-maintained facility

11. My grasp of effective communication, decision-making, and interpersonal problem-solving and conflict-resolution strategies.

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Cerissa Stevenson is finishing a PhD in the educational leadership program of the College of Applied Human Sciences at Colorado State University. Her dissertation research is on the principal internship and principal standards acquisition. She has a principal and teaching license for Colorado. Her teaching experience includes Grades 1, 2, and 4.
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