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In this issue of the *Administrative Issues Journal*, there are 84,969 words and 488,672 characters in the manuscripts alone. I have read every word, every character at least four times in the process of reviewing, editing, and formatting the manuscripts for publication. Despite the repetition, despite all my careful scrutiny, I know that some errors will have escaped my attention. A few days from now, I will click on the issue link, and with the perfect clarity of hindsight, I will notice some glaring typo or inconsistency.

The *AIJ* is published in a digital medium. Mistakes could be repaired with a simple keystroke, but integrity demands that the content presented to readers in each issue remain the same, whether that content is accessed today or two years from today. As an editorial board, we take this commitment seriously because, ultimately, what is at stake is the honest representation of knowledge.

Those who contribute to this journal and those who read it belong to a community of scholars. We know that knowledge is in flux, and a digital medium only escalates that mutability. As scholars, we report, today, the facts as we understand them today, and we report those facts accurately, to the best of our ability. Going back and “fixing” what was conveyed in a constantly adaptable medium could be tempting, but there is much to be learned from error, not the least of which is humility and integrity. Moreover, the printed word, for all its illusion of constancy, can be frustratingly slippery, sometimes betraying us by communicating something we did not intend to say. But such missteps are part of learning, and awareness of them can prod, irritate, and compel us to strive for ever greater accuracy and quality.

The *AIJ* board is also in pursuit of such enhancement. We have learned a great deal this year, and we have used those learning moments to steadily improve the caliber of this journal. In our first year of publication, we have sought out and attained listing in Cabell’s Directory of Publications, Ulrich’s Periodicals Directory, and Google Scholar in order to increase the journal’s accessibility. We have added a blind editorial review to improve the selection process of manuscripts, and we have increased the editorial board membership to better reflect the cross-disciplinary nature of the journal. Finally, we are in the process of moving to a journal management system that will allow authors to track the progress of their manuscripts through the submission, review, and editing process.

The editorial board hopes that you will enjoy reading the newest issue of the *AIJ*. As always, we invite any comments that will help enhance the journal, and we invite you to consider making a submission for an upcoming issue. We also invite you to visit our website and look at the exciting plans for our October 2012 conference: “Seizing Opportunities.”

Sincerely,

Kelly S. Moor
Copy & Production Editor
FACTORS CONTRIBUTING TO SUCCESSFUL TRANSITIONS INTO THE ROLE OF A NEW SUPERINTENDENCY IN TEXAS: A MIXED METHODS TRIANGULATION CONVERGENCE INQUIRY

Nancy B. Jones, Ed. D.
Beeville Independent School District, Beeville, TX

The purpose of this study was to examine the factors contributing to a successful transition into the role of a new superintendency in Texas. A triangular designed mixed methodology with a convergence model was employed. The setting was urban, suburban, and rural school districts in Texas. The participants were superintendents of public school districts in Texas. Quantitative data were collected through the use of an electronic survey, while a focus group was conducted to collect the qualitative data. Participating superintendents indicated that the training and education they received had adequately prepared them for the role of a new superintendent and that school board relations were important during the entry period. Analysis of qualitative data resulted in three themes; namely, community, learning, and goals and expectations. In accordance with the convergence model, the quantitative and qualitative results were synthesized and discussed. Based on the results of the study, a need for additional professional development programs or emphasis in college and university programs on the entry period of the superintendency, negotiating the superintendent’s contract, writing an entry plan, and working with stakeholders was indicated.

Keywords: superintendent, entry period, leadership, mixed methods

Early in its history, the public education system in the United States was localized in cities and communities. In the 1700s, states, such as Massachusetts in 1721, passed laws requiring every town to choose men to manage the schools within the town. Most of these men had other civic duties in addition to managing the schools, such as administering the city government. As their responsibilities grew, both in education and in other civic functions, a need arose to establish committees or other separate entities to manage the business of the public schools. These became the first school boards (Sharp & Walter, 2004).

As the concept of school committees or school boards expanded beyond New England after 1800, many of the members of these committees determined that they needed someone to handle the daily administrative responsibilities of the schools. Buffalo, New York, was the first place to appoint a superintendent in 1837. Other states and communities followed their lead. The primary duty of these early superintendents was to be instructional leaders. Since then, their responsibilities have increased (Sharp & Walter, 2004).

With school districts under increasing accountability by state agencies and the federal Department of Education, the role of the superintendent is more important than ever. This is due to the increased emphasis on academic standards and accountability. With the requirements of No Child Left Behind and other laws, school districts must continue to work to close the achievement gaps between all subpopulations. Over the past 10 years, there has been more attention on teaching and learning, professional development, data-driven decision making, and accountability for all professional staff in schools, especially superintendents. The school systems today are focused on high-stakes testing and accountability. The goal of superintendents and school districts, especially during transitions, is achieving and maintaining academic excellence. Superintendents who are effective keep the emphasis on improved teaching and learning and gather evidence of student achievement that demonstrates this improvement (King, 2002). Instructional leadership is a change from the former role of the superintendent as manager to the current role as leader of instruction (Barnett, 2004).
In the wake of these important changes, the superintendent’s position has become more difficult to execute, more difficult to fill and the job requirements are more demanding. In addition, the average tenure for superintendents may be considered short. Based on various studies, the median length of a superintendent’s tenure is between four and eight years (Alborano, Cooper, Ghosh, Natkin, & Padilla, 2002; Lashway, 2002; Sharp & Walter, 2004).

The superintendent position is like that of a Chief Executive Officer (CEO) in the corporate world. In terms of accountability and responsibility, the job is ever-demanding. Although there are programs, graduate courses of study, and professional development to assist people who want to become superintendents, there appear to be very few programs that provide guidance for the transition involved in the entry period to a new superintendency. There is a small amount of literature-based research on the entry period of a superintendent; however, the reviewer of literature on leadership has no difficulty finding numerous articles and studies for the business world that can appropriately be tailored to the superintendent position. This study compared a business model of the entry period into a CEO position during the first 90 days to the experiences of superintendents in their first 90 days. The researcher wanted to determine if the business model was a good model for predicting entry experienced in educational leadership.

Suggestions for transitions and change vary in the number of steps and details provided by different authors, but all are fairly consistent in their basic ideas. This suggests that there may not be one correct approach to this type of transition, but that certain key steps must be in place to be effective. Kotter (2007) stated that the change process goes through a series of phases which include eight steps to transform an organization. Sharp and Walter (2004) listed 11 suggestions for new superintendents. Other authors provided various steps to facilitate change or transformation (Collins, 2001; Watkins, 2004). This would seem to indicate that there is no one correct approach to the transition, but that knowing and implementing a type of process into a new position would be key to a successful transition.

All of these processes described above have similarities, with the main one being that a new leader or a leader experiencing change, such as transitioning to a new position, must follow a type of formal plan in order to be most successful. For the purpose of this study, superintendents in Texas public school districts were surveyed regarding the transition to a new superintendency. Additionally, a focus group with sitting superintendents was held to gain further information regarding their transitions to new positions. Therefore, a mixed methods design was employed. For the purpose of the study, this transition was considered the first 90 days of a new position.

**THEORETICAL FRAMEWORK**

The hypothesis proposed in this study is that actions by a new leader (such as a superintendent or CEO) in the first 90 days of a new position will largely determine whether he/she succeeds or fails in the position over the long term. This is documented from research of business practices by Kotter (1996; 2007) and Watkins (2004). Their research shows that the goal should be to have a formal plan to accelerate an effective transition in a new position and that there are certain steps that most successful leaders take in the beginning of a new position, such as developing the same terminology with others in the new position; creating a collaborative vision for the new school district; creating coalitions; and negotiating or building early successful achievements (Kotter, 2007; Watkins, 2004).

Kotter (1996) discussed an eight-stage process dealing with change. These steps are 1) creating a sense of urgency, 2) establishing a guiding coalition, 3) developing a vision, 4) communicating the vision, 5) empowering employees for action, 6) producing short term successes, 7) combining the gains, and 8) generating additional change and securing the new approaches in the culture of the organization. Kotter (1996) indicated that these steps are sequential and that it is important not to skip any steps in the process.

Watkins (2004) proposed a series of 10 steps to accelerate change. These involve 1) promoting oneself, 2) accelerating one’s learning, 3) matching strategies to situations, 4) securing early successes, 5) negotiating success, 6) achieving alignment, 7) building the team, 8) creating coalitions, 9) keeping one’s balance, and 10) expediting everyone in the organization. Several of these steps are similar to Kotter’s. These include securing early successes, building the team, creating coalitions, and expediting or empowering everyone. Additional similarities between the two processes include both authors’ view that learning should be ongoing. Matching or creating strategies to fit the situation or vision is another similarity. Watkins included some ideas that Kotter did not, including advancing oneself in the new position.
The purpose of this study was to examine the factors contributing to a successful transition into the role of a new superintendent in Texas. The following research questions guided the study:

1. Did professional development programs in which superintendents participated prepare them for entry into a new superintendency?
2. What were the activities used by the superintendents to determine the district situation prior to entry into superintendency?
3. What were the activities used by the superintendents during their entry into superintendency?
4. What were the leadership efforts of the superintendents during their entry into the superintendency?
5. What were the factors inhibiting the role of the superintendents?
6. What were the superintendents’ leadership areas of strength?
7. What strategies have superintendents found to be the most successful in their entry period?
8. With hindsight, what would the superintendents have done differently upon entry into the superintendency?

Questions 1 through 6 were answered using quantitative data, while questions 7 and 8 were answered using qualitative measures.

METHOD: OVERVIEW OF RESEARCH DESIGN

This was a mixed methods descriptive study. Creswell (2005) stated that the combination of qualitative and quantitative data collection in a mixed methods design provides a better understanding of a research problem than collecting only one type of data. Mixed methods research involves both qualitative and quantitative components, which complement each other and produce deeper insights than either one does by itself (Gall, Gall, & Borg, 2007). According to Meltzoff (1998), the mixed methods design allows for collecting, analyzing, and connecting both quantitative and qualitative data. A triangular designed mixed methodology with a convergence model was employed. Triangulation design is the most common and well-known approach to mixing methods. The integration of qualitative and quantitative research strategies takes advantage of the strengths of each design, allowing them to complement each other and produce deeper insights than either one does by itself (Gall, Gall, & Borg, 2007). In the convergence model, quantitative and qualitative data are collected separately at about the same time, and then the different results are converged or joined during the interpretation. The purpose of the triangular designed mixed methodology with a convergence model is to give both quantitative and qualitative data equal emphasis, to converge the results during the interpretation, and to draw valid and well-substantiated conclusions about the research problem (Creswell & Clark, 2007).

In this mixed methods design, the qualitative data were collected separately, and then the results were converged by comparing and contrasting the quantitative and qualitative results during the interpretation of data (Creswell & Clark, 2007). A model for this design is shown in Figure 1. The data collected and analyzed during the quantitative phase provided information from a large number of participants. This allowed the researcher to generalize the results to the participating superintendents in Texas. This quantitative data provided specific information about the importance of the entry period to a new superintendency, professional development regarding this time period, and other data that were analyzed quantitatively. The qualitative data, although limited to a small number of the superintendents, permitted a more in-depth understanding of the data (Creswell, 2005) and allowed for more comprehensive information regarding the entry periods of superintendents in urban, rural, and suburban areas.

The study explored whether new superintendents had a formal plan for the entry period and whether or not such a plan assisted in making the superintendents successful. The rationale for choosing a mixed methods design for this study was that the researcher sought to collect and analyze qualitative data to complement the quantitative data in order to better understand the nature of the topic. The collection of the quantitative data from a large number of participants enabled the researcher to generalize the results to the participating superintendents in Texas, and the qualitative data, although limited to a small number of the superintendents, permitted a more in-depth understand-
The study used an electronic survey to collect the data for the quantitative research questions. The study employed the use of a focus group with superintendents who served in urban, suburban, and rural school districts to collect qualitative data. The focus group was chosen because focus groups tend to be more natural than one-on-one, face-to-face interviews. Individuals are sometimes reluctant to give responses in the one-on-one format than in a focus group (Lancy, 1993).

Subject Selection
The accessible population for this study consisted of superintendents in Texas public school districts (n = 1271) in 2008. All superintendents were invited to participate in the quantitative portion of the study. For the qualitative component of the study, a non-probability sample of superintendents in the Region 2 Education Service Center was recruited to participate in a focus group. The Region 2 Education Service Center is a non-profit service organization created to provide services to schools. There are 20 service centers in Texas, each serving schools in a specific region. In 1967, the Texas Legislature and the State Board of Education established 20 Education Service Centers throughout the state. The Region 2 Education Service Center, located in Corpus Christi, serves 42 school districts in 11 counties in the Coastal Bend area of South Texas.

Instrumentation
The quantitative data for this study were collected using the Entry to the Superintendency Survey (ESS) (Martinez-Perez, 2005). The ESS consists of six parts: 1) demographic information, 2) preparation for the superintendency, 3) current superintendency prior to entry by new superintendent, 4) current superintendency entry or transition plan, 5) current superintendency entry or transition strategies, and 6) opinions on superintendent’s current leadership. The original instrument consisted of 37 questions. The instrument was revised by the researcher to meet the objectives of the study.

The ESS was examined and pilot tested by a panel of experts to evaluate its content validity. The panel consisted of experts, either current or former superintendents, knowledgeable in the field of public school superintendents (Charles, 1998). The feedback from the panel was used to revise the instrument.

A focus group was conducted to collect the qualitative data. The following areas were addressed: 1) preparation, 2) importance of entry period, 3) transition plan, and 4) strategies during transition plan. The lead question was: What are the factors contributing to a successful transition into the role of a new superintendency in Texas?

Data Collection
For the quantitative data collection, email addresses of current Texas public school superintendents were obtained.
from the Texas Education Agency website. The quantitative data were collected from superintendents responding to an electronic survey over the internet from July 30 to September 1, 2008. An initial invitation email was sent to the superintendents whose names and email addresses were downloaded from the Texas Education Agency (TEA) Website (n = 1271), followed by the email with the survey link and two (2) additional email reminders. There were 289 (24.70%) responses to the survey. Superintendents invited to participate in the study accessed the web-based survey either by clicking on the link in the email or entering the web address onto their web browser.

Qualitative data collection was conducted using a focus group. Perspectives of superintendents regarding the need for a plan during the transition period and strategies for that plan were obtained through the focus group. The researcher served as the facilitator and took notes. The session was audio-taped and later transcribed by the researcher. Informed consent was obtained from all participants. The questions were open-ended, allowing for a free response and not limiting the response to a choice among stated alternatives, as in the electronic survey. Taping the responses allowed the researcher to record the subjects’ responses verbatim, while allowing the researcher to participate in the dialogue during the forum (Ary, Jacobs, & Razavieh, 1990).

DATA ANALYSIS

The quantitative data were collected online and downloaded into the Statistical Package for the Social Sciences (SPSS) for the purpose of data analysis. Descriptive statistics were used to summarize and organize all data and answer the research questions. Specifically, frequency and percentage distribution tables and measures of central tendency and variability were reported. Cronbach’s Coefficient Alpha (Crocker & Algina, 1986; Nunnaly & Bernstein, 1994) was used to estimate the reliability of the aforementioned scales. It is an internal-consistency approach to the estimation of reliability, which is based on the notion that the items of the instrument measure the same phenomenon/construct.

Qualitative data from the focus group were transcribed, analyzed, and summarized, looking for patterns and information regarding the importance of the entry period of the superintendency to the participants. In addition, any formal plans and strategies for the entry period were summarized and categorized. Themes and broad categories arising from the data were analyzed and described. The qualitative nature of the group forum enabled the researcher to describe the phenomena of interest in detail and in the original language of the research participants (Charles, 1998; Thattai, n.d.). According to Thattai (n.d.), quantitative research excels at summarizing large amounts of data and reaching generalizations based on statistical projections, while qualitative research excels at “telling the story” from the participant’s viewpoint, providing the rich descriptive detail that sets quantitative results into their human context. Creswell (2005) described this as a “rich, complex picture” (p. 49).

RESULTS

Quantitative Results

The quantitative results are organized as follows: (1) a description of the demographics of the superintendents who responded to the electronic survey and (2) the results of the responses to the electronic survey as they relate to each of the quantitative research questions. A profile of subjects for the quantitative data can be found in Tables 1 and 2.

Regarding the career path of responding superintendents, most had been either a teacher or a principal before becoming a superintendent. There were a variety of experiences indicated as to whether they had worked previously at a kindergarten-to-grade-six (6) school, a middle school, or a high school. In addition, there were a variety of areas of expertise, with curriculum and administration/operations as the most widely reported attributes. The most frequently selected professional development programs were 1) the Texas Association of School Administrators (TASA) Superintendents Academy and 2) higher education (Ed.D. or Ph.D.) programs.

The results of responses to the electronic survey as they related to the quantitative research questions are summarized below. Quantitative research question 1 asked: Did professional development programs in which superintendents participated prepare them for entry into a new superintendency? The overwhelming majority of the respondents indicated that the professional development programs had prepared them for their roles as new superintendents. Superintendents were also asked how well the professional development programs in which they had engaged prepared them for entry into the superintendency in various leadership and skill areas, such as fiscal management and
personnel management. There were 11 items in the Preparation for the Superintendency section of the ESS. The internal consistency of the items, as estimated by Cronbach's Coefficient Alpha, was 0.91. The professional development programs for preparation into entry-level superintendencies selected most often were *instructional leadership* and *vision creation*.

**Table 1**

Quantitative Data: Profile of Subjects (n = 289)

<table>
<thead>
<tr>
<th>Variable</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<tr>
<td>Native American</td>
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<td>1.00</td>
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<tr>
<td>Hispanic</td>
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<td>Other</td>
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<td>.70</td>
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<tr>
<td>Missing</td>
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<td>1.40</td>
</tr>
<tr>
<td>Education</td>
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<td></td>
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<tr>
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<td>.70</td>
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<tr>
<td>Master’s / MBA</td>
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<td>33.90</td>
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<td>1.70</td>
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<td>First Superintendency, Hired From</td>
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<td></td>
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<td>Inside the District / Organization</td>
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<td>46.00</td>
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<tr>
<td>Outside the District / Organization</td>
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</tr>
<tr>
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<td>3.50</td>
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<tr>
<td>Current Superintendency, Hired From</td>
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<td></td>
</tr>
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<td>Inside the District / Organization</td>
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<td>Outside the District / Organization</td>
<td>174</td>
<td>60.20</td>
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<td>Missing</td>
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<td>4.20</td>
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<td>Current District Type</td>
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<td>Suburban</td>
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<td>6.60</td>
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<tr>
<td>Missing</td>
<td>10</td>
<td>3.50</td>
</tr>
</tbody>
</table>

*Note: f indicates the count or number for each group; % indicates the percentage of the whole for each count.*

Quantitative research question 2 asked: What were the activities used by the superintendents to determine the district situation prior to entry into a new superintendency? The Current Superintendency – Before the First Day on the Job section of the ESS included eight (8) items which had a reliability coefficient of 0.70. The respondents were asked to indicate the level of importance of each activity, using a 4-point Likert-type scaling (4 = essential, 3 = important, 2 = somewhat useful, 1 = not applicable). *Analyzing the district’s budget* and *student achievement* data were the most important activities, while *using search firms to obtain information* was the least important activity.
Table 2
Quantitative Data: Profile of Subjects (n = 289)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Skew Coef.</th>
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<td>Age</td>
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<td>51.00</td>
<td>50.00</td>
<td>7.52</td>
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<td>5.00</td>
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<td>1.02</td>
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<td>Administrative Experience</td>
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<td>15.00</td>
<td>11.00</td>
<td>7.77</td>
<td>0.62</td>
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<td>Superintendent Experience</td>
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<td>6.00</td>
<td>1.00</td>
<td>5.92</td>
<td>1.22</td>
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<td>0.00</td>
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<td>Number of Districts Served</td>
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<td>1.00</td>
<td>1.00</td>
<td>1.12</td>
<td>4.02</td>
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<tr>
<td>Number of Years Served in Current Superintendent</td>
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<td>3.00</td>
<td>1.00</td>
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<td>1.82</td>
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<tr>
<td>Percent of LEP Students</td>
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<td>5.00</td>
<td>1.00</td>
<td>12.37</td>
<td>2.16</td>
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<td>200.00</td>
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</tr>
<tr>
<td>Years until Retirement</td>
<td>8.78</td>
<td>8.00</td>
<td>10.00</td>
<td>5.87</td>
<td>1.09</td>
</tr>
</tbody>
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Note. LEP = Limited English Proficient; ADA = Average Daily Attendance; SD = Standard Deviation; Skew Coef. = SkewCoefficient \[\frac{(\text{mean} - \text{mode})}{\text{standard deviation}}\]

Quantitative research question 3 asked: What were the activities used by the superintendents during their entry into the superintendency? The Current Superintendency – Your Entry or Transition Plan section of the ESS consisted of five (5) subsections. In the first subsection, the respondents were asked to indicate the level of importance of the entry period for a successful superintendency, using a 4-point Likert-type scaling (4 = essential, 3 = important, 2 = somewhat useful, 1 = not applicable). The average response was 3.36 (SD = 0.74), including not applicable. The second subsection included seven (7) items, for which the internal consistency was estimated to be 0.81. Interacting with the board of education was the most important activity, while interacting with the media was the least important activity (mean = 3.42, SD = 0.79).

The third subsection of this part of the survey provided the superintendents with nine (9) items in which they had the options of choosing yes, no, or not applicable regarding entry to current district activities. The top three activities were evaluating the current district situation and the concept of “fit” in pursuing the current superintendency, having an entry strategy in the current superintendency, and having a personal vision for education reflected in the strategy or plan. The activities which were endorsed the least were bringing in people from outside of the district upon entering a new district and being asked or directed by the board of trustees to create an entry or transition plan. The fourth subsection included 11 items, for which the internal consistency was estimated to be 0.65. Respondents had the option of choosing yes or no. Board and community relations, fiscal operations, pre-existing district conditions and student achievement were the most important activities, while labor relations and collective bargaining was the least important activity. The fifth subsection included 10 items, for which the internal consistency was estimated to be 0.65. Respondents marked the items from 1 (least important) to 10 (most important). Board-superintendent relations was the most important activity, while interacting with parent groups, parent teacher organizations or associations (PTO/PTA) and school site councils was the least important activity.
Quantitative research question 4 asked: What were the leadership efforts of the superintendents during their entry into the superintendency? Specifically, the respondents were provided with four (4) areas of leadership and asked to rank them from the most to the least important. Political framework (local, internal, board, community relations) was ranked as the most important, followed by human resources framework (empowerment and support personnel), structure focus (organizational changes, operation, policy), and symbolic focus (outward displays, vision, motivating others).

Quantitative research question 5 asked: What were the factors inhibiting the role of the superintendents? The Current Superintendency – Your Entry or Transition Plan section of the ESS consisted of two (2) subsections. In the first subsection, the respondents were asked to indicate the level of importance of different factors that may inhibit the role of the superintendent and impact their ability to be an effective superintendent, using a 4-point Likert-type scaling (4 = essential, 3 = important, 2 = somewhat useful, 1 = not applicable). Board relations was the most important inhibiting factor, followed by accountability. The second subsection included 13 items. In this section, respondents were asked to indicate the extent to which several factors could affect or inhibit their superintendency responsibilities, using a 4-point Likert-type scaling (4 = major issue, 3 = moderate issue, 2 = slight issue, and 1 = not an issue). The internal consistency of this portion of the ESS was 0.75. Financial resources and superintendent-board relations were selected more often than other factors as major issues.

Quantitative research question 6 asked: What were the superintendents’ leadership areas of strength? The Current Superintendency – Your Entry or Transition Plan section of the ESS consisted of two (2) subsections. In the first subsection, the ESS provided the respondents with seven (7) leadership attributes. The topic school board relations was the most important leadership area, followed by organizational leadership. In the second subsection, respondents were also asked to rank their leadership efforts or focus of their current superintendency as related to four (4) factors: human resources framework (empowerment and support personnel), political framework (local, internal, board, community relations), structural framework (organizational changes, operations, policy), and symbolic framework (outward displays, vision, motivating others). The order in which these were ranked by the respondents, from most to least effect on leadership efforts, were symbolic framework, structural framework, political framework, and human resources framework.

The electronic survey had an open-ended question that asked respondents for the key elements of a plan if the respondent were to enter a new district tomorrow. Many of the responses merely echoed the selections from the survey itself. However, a few respondents chose to elaborate and these responses were very similar to the ones gathered during the qualitative data collection with the focus group.

Qualitative Results

The qualitative results are presented in two sections: (1) a description of the sample, and (2) the coding process and results of the focus group. The researcher contacted the executive director of the Regional Service Center 2, located in South Texas. Located in Corpus Christi, Texas, the Region 2 Education Service Center serves 42 school districts in eleven counties in the South Texas, Coastal Bend Area. The executive director holds monthly meetings of the superintendents in the region. The executive director agreed to announce to the superintendents that the researcher would be holding a focus group after the September 2008 meeting and asked that superintendents agree to attend the focus group. The researcher also emailed an invitation to all of the superintendents in the region.

There were a total of eight (8) superintendents who stayed after the meeting for the focus group. The profile of the superintendents was as follows:

- four male; four female
- seven white; one Hispanic
- five with Master's Degrees; three with doctoral degrees (Ed. D. Ph.D.)
- mean age: 47.8
- mean number of years of teaching experience: 11.25
The focus group was conducted on September 17, 2008, in a meeting room which was set up to accommodate a small group comfortably. The researcher recorded the session and took field notes. All participants signed consent forms at the beginning of the session and provided demographic information about themselves. Although a set of guiding questions was provided, natural discussion was encouraged in order to allow themes to develop independent of the researcher. A tape-recorder was used to record the sessions. In general, all participants made statements about the importance of the first 90 days of a new superintendency and some of the strategies or activities in which they engaged during that time period. One participant was still in the first 90 days of his first superintendency. In particular, they all started by saying that their plan had been informal, but they were then able to delineate the things they did as part of that plan.

The coding process for the results of the focus group used eight (8) codes to analyze and summarize the focus groups’ qualitative data: expectations, goals, listening, trust, visibility, mentors, board relations, and learning on the job.

Three overall themes emerged from analyzing the codes and their respective meaning statements. The first theme was community. In regard to this theme, the superintendent participants discussed relations with the board of trustees, listening to members of the school community, and developing trust and relationships with the school community. Since the board of trustees hires the superintendent, the superintendents worked especially on the relationship with the members of the board, not only during the first 90 days, but continually through their tenure as superintendent. They felt it was important to be visible in the community, not only on each campus, but at various extra-curricular events and around the town in general. Through the activities during this time, the superintendents felt they were building the trust of the board and the community. They all felt that listening to the community during this time was an important component of the entry plan. Quotes from the participants related to the theme of community included: “I think the first 90 days you set your expectations for your staff, what they expect of you, and then you develop relationships” and “First impressions are lasting impressions, especially when you go into a new district and trust they have got to be able to trust.”

The second theme was learning through on-the-job experiences. Although the superintendent participants said they did not receive any formal training on the entry period through their college or other courses, most of them said that the most important guidance or training they had received on the first 90 days was through a mentor of some type or learning on the job through experience. This was true for both experienced and novice superintendents. They discussed reviewing the actions of effective leaders to try to emulate the positive things they did during an entry period. They expressed that the “hands-on” or on-the-job training was more important than what they had experienced in a classroom. Quotes from the participants related to this theme included: “And I think that was just basically a plan that I learned from my mentor, my previous superintendent. He said you have to do this and I said ok I’ll do it” and “I think on the job training and really digging in and doing as much as you possibly can…learning as much as you can is how I felt comfortable with the transition.”

The third theme was setting goals and expectations, not only for themselves, but for the district. This involved finding out what goals and expectations board members had of the new superintendent and the school district, as well as the superintendent setting goals for him or herself. The respondents had a variety of ways to find out expectations and goals of others, but most involved meeting with people and listening to them, while also asking questions of them. In the setting of goals for themselves, the superintendent respondents either set these goals and expectations after listening to others, and/or they set certain specific goals for themselves going into the district, such as the expectation of visiting a certain number of classrooms or visiting certain areas of the district. Quotes from the focus group related to this theme included: “…so I just kind of um went back and looked at our goals and looked at everybody’s roles in achieving our goals and um put a plan in place from there” and “I think the first 90 days you set your expectations for your staff, what they expect of you, and then you develop relationships.”

- mean number of years of administrative experience: 15.38
- mean number of years of superintendent experience: 4.38
FINDINGS

Descriptive statistics revealed that superintendents in Texas did believe that the entry period to a new superintendency is critical, that a plan is important, and that there are certain critical factors to that plan. The study revealed important information related to the entry period of a new superintendent, in particular the type of entry plans, and their implementation for a superintendent. The study also revealed the need for emphasis in both professional development and education in the preparation for aspiring superintendents.

The demographics of the study showed that the participants in the study had a median length of experience in the superintendency of three (3) years with their current district, falling below the range determined by the literature review, which was between four and eight years. Over half (53%) of the respondents indicated that the professional development programs prepared them or prepared them well, leaving 47% of respondents indicating that they were either not prepared or were only adequately prepared. This seemed to indicate a need for additional professional development programs or emphasis in college and university programs on the entry period for a new superintendent. In seeking to find out in which areas of professional development superintendents felt prepared, most of the areas were equal in emphasis, falling between adequately prepared and prepared. These areas included such topics as board-superintendent relations, fiscal management issues, vision creation, and community relations. The only area that fell into the range of not being prepared was negotiating the superintendent’s contract. This is a personal issue between the new superintendent and the board that hires him or her. It would appear that professional development was needed in this important issue. Participants in the focus group stated that the best training they received was on the job and/or through mentors.

Participants in the study indicated a number of activities that were useful to them before and during the entry period to determine the district situation. Some of the ones indicated most frequently by the survey and focus group participants included analyzing the district’s budget and analyzing the district’s student achievement data. Although those responding to the survey indicated participating in these activities and believed that a plan in the entry period was important, only 28.7% indicated they had a written plan or strategy. Professional development in the area of writing entry plans could be useful.

Some of the activities used during the entry period indicated most frequently by the survey and focus group participants included assistance from other colleagues (mentors) and working with the board of education and district leadership team. Working with the media and parent groups was ranked as only somewhat useful. Working with employee groups, the community, and local government were also ranked as somewhat useful. Professional development emphasizing the need to work with stakeholders, such as employees, community members, and local government officials, would be helpful to aspiring superintendents.

Survey participants ranked their leadership efforts during the entry period. Most indicated that efforts in the political area and human resources were the most important. Human resources included the areas of empowerment and support personnel. The political area included local, internal, board, and community relations. The other two areas, structural framework—including organizational changes, operations, and policy—and symbolic framework—which includes outward displays, vision, and motivating others—were not ranked as highly as political and human resources. New superintendents should focus on board and community relations, as well as other areas of the political framework, when entering a new district.

Survey respondents indicated a number of areas that inhibited them in their role as superintendents or inhibited them during the entry period. Interestingly, while relations with board members were selected as an important activity during the entry period, it was also the area that most respondents indicated was the greatest inhibiting factor. They also indicated that dealing with board members who are elected with a single political objective was between a moderate and a major issue. In addition, they ranked superintendent-board relations as a major issue affecting or inhibiting their superintendency. Also, the respondents indicated that accountability is a factor that inhibited them in their job performance and that the demand for assessment and accountability was a major issue. New superintendents should continue to focus on relations with the board of trustees during the entry period to decrease the amount of inhibition caused by board relations.
Survey participants were asked to rank their leadership areas of strength. They indicated that school board relations and organizational leadership were the greatest strength area. School board relations are political, since school board members in Texas are elected. Organizational leadership is associated with human resources and other areas of working in a school district. Other areas ranked as moderate strengths included fiscal leadership and budget, personnel management and evaluation of staff members, assessment, accountability, student achievement, and instructional leadership. The areas with the lowest ranks were community relations and facilities management/safe schools. Respondents to the survey were also asked to rank their leadership efforts or focus for their current superintendency. The highest were political framework and structural framework, with the lowest ranked being human resources framework and symbolic framework. This is different from the responses to the question on their leadership efforts during the entry period, where they ranked political framework and human resources framework as the highest. Participants in the focus group elaborated on the importance of board relations and gave examples of how to foster a good relationship with the board of trustees.

The question regarding successful strategies during the entry period was addressed with the focus group and also in an open-ended question in the survey. Responses from both groups indicated that getting to know the community by being visible and listening to various groups was imperative. They also both indicated that working with a mentor was important and that board relations were crucial.

Responses to the question regarding what they might have done differently in an entry period included continuing what had already been successful. Responses to the open-ended item in the survey included being more visible throughout the district, using a team approach, including key people in decisions and empowering those people, responding to community needs, and building relationships throughout the school and general community. All of these included important components other respondents, both on the survey and in the focus group, expressed as being crucial to a successful entry plan and superintendency.

**CONCLUSION**

In structuring this study, the researcher tried to focus on the factors contributing to a successful transition into the role of a new superintendency in Texas. In other words, she wanted to determine if there were similar structures for school superintendents as the literature in the business models indicated a structure for the entry of people into new leadership positions in business. She focused on the first 90 days, because that is the model used in business. Furthermore, she believed that conducting a quantitative study involving superintendents from across Texas would be complemented by a qualitative component which focused on superintendents from the south Texas region. In particular, the literature reviewed for this study suggested that actions taken by a new superintendent in the entry period of a new position would fundamentally determine whether he/she succeeds or fails in the position over the long term. This study examined those factors indicated in the business model that might apply to the school setting, such as collegiality, development of a vision and strategies, and communication. Similarities were found between the business and school model in many of these areas.

The information obtained through both the quantitative electronic survey and the qualitative focus group gave support to and provided a foundational framework to the importance and significance of the initial entry period of a superintendent and the factors that make a successful entry period. Although most of the superintendents who either responded to the survey or participated in the focus group did have a specific set of goals or a plan in mind prior to or during their entry, the vast majority were not required by the district or the school board to actually produce or develop a plan. In the electronic survey, over half of the respondents indicated that the professional development programs prepared them or prepared them well. Regarding areas of professional development, however, they indicated that they were only adequately prepared to create an entry plan.

This study supplies commentary from Texas superintendents regarding the entry period, with information concerning their own entry, the circumstances, and also the tools and frameworks used in the entry period. Information pertaining to the superintendent-district “fit” and how this applies to a successful entry was also obtained through the study. Most of the superintendents indicated that the areas of fiscal responsibility and budget, as well as student achievement and accountability, were of primary concern in determining if they fit with the new district. Some used the interview process to determine their “fit” with the district. In fact, the vast majority used their evaluation of the
district situation and the concept of “fit” in pursuing their current superintendency. This would indicate that superintendents should research a district’s situation prior to accepting a position and developing an entry plan.

Overall, it appears that Texas superintendents who responded to the survey, as well as those who attended the focus group, not only believed that an entry plan was important, but they also had an entry plan into a new superintendency. In addition, they had a plan for determining the district’s situation, either before entering the district or immediately after receiving the new position. Working closely and carefully with the board of trustees during the entry period seems to be crucial to the success of a new superintendent.

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BUSINESS EDUCATION AND GENDER BIAS AT THE ‘C-LEVEL’

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Women in business are perceived to have been successful; however, the numbers of women in ‘C-level’ positions (e.g., CEO, CFO, CIO, etc.) provide evidence to the contrary. This paper examines obstacles to women rising to ‘C-level’ positions and how business education contributes to, but may ultimately help resolve these problems by identifying ways to increase the effectiveness of business education and educators regarding gender bias. Barriers that prevent women from advancement and contributing factors in business education are identified. Recommendations for strategies in business education to reduce, manage, and create awareness of gender bias in the classroom are presented. For educators in business schools, these findings suggest the importance of acknowledging that gender bias still exists and revising business curricula to address this problem, thus better preparing business graduates of both genders to identify and develop strategies for reducing gender bias in the workplace.

Keywords: business, education, gender bias, glass ceiling

It is the 21st century. Women comprise a growing percentage of the students in business schools globally, but when these same women enter the workplace, their ability to advance beyond middle level management has been both disappointing and unremarkable (Reuteman, 2011). In fact, Carter and Silva (2010) found that “women continue to lag men at every single career stage, right from their first professional jobs” (p. 19). This phenomenon is not confined to one country or culture. The few women who do occupy executive leadership or ‘C-level’ positions (e.g., CEO, CFO, CIO, etc.) are often members of families who own the business or who succeed their spouses in their positions of authority.

The public sector (including public office as well as elected officials) is also amazingly parallel in this regard. Catalyst Inc. (2009) reports that only 3% of chief executive officers and 13.5% of executive officer positions within Fortune 500 corporations are women. This number represents an increase from 2007 data, which showed 2.5% of chief executive officer positions in Fortune 500 firms being occupied by women (Jordan, Clark, & Waldron, 2007), up from 2% in 2003 (Weyer, 2007). This is in sharp contrast to the percentage of women who are graduates of business programs and who hold managerial positions in the firm. When this information is coupled with wage disparity, the discussion is more problematic. Although females earn 57% of master’s degrees and 42% of doctoral degrees, those with graduate degrees, on average, presently earn only slightly more than males with no college and only a high school diploma— $41,995 for women versus $40,882 for men (Business and Professional Women’s Foundation, 2007).

The reason for this discrepancy between education attainment and executive accomplishment as well as wages is complex and requires careful analysis. Despite years of recognition of this issue, there persists a bias which prevents women from advancing to the top. A recent repeat study (Powell, Butterfield, & Parent, 2002) using the Bem Sex Role Inventory (BSRI) of perceived masculine versus feminine characteristics for effective management confirms the hypothesis that a good manager exhibits “masculine” traits. The study also confirms that “feminine” traits are considered to be ineffective. Asexual or “androgynous” characteristics are preferable to feminine characteristics. This perception is particularly problematic for corporate performance in that recent research of managerial styles confirms that a feminine/inclusive leadership style is actually associated with greater firm performance (Luis-Carnicer, Martinez-Sanchez, Perez-Perez, & Jose Vela-Jimenez, 2008).

LITERATURE REVIEW

We conducted a review of the seminal literature in two areas. The first centered on explaining the barriers to women in business and indicating potential areas in which academic intervention and education could remove these ob-
Barriers to Women in the Workplace

A review of the literature reveals that the glass ceiling has not yet been shattered (Carter & Silva, 2010; Insch, McIntyre, & Napier, 2008; Jordan et al., 2007; Pichler, Simpson, & Stroh, 2008; Weyer, 2007). Burnsed (2011) states, “The data suggests that a glass ceiling is still firmly in place in America’s workforce. Across all industries, on average, women have to attain a Ph.D to earn more in their lifetimes ($2.86 million) than men who have only attained a bachelor’s degree ($2.60 million).” This circumstance is a result of a number of different factors that have impeded women’s ability to move into upper level management positions. While many of these factors have been recognized and their related discriminatory behaviors banned through legislation over the last thirty years or addressed through increased access to higher education, the problems still exist. Gender discrimination has simply moved from overt to covert. Thus gender discrimination, as with many other forms of discrimination, has not been eliminated, but has gone “underground” (Meyerson & Fletcher, 2002). Society in general still tends to reinforce gender stereotypes, and women in particular tend to unconsciously conform to these frequently unquestioned norms of what constitutes being female.

Socialization and Gender Traits

Social role theory (Eagly, 1987) is one of the major underpinnings of perceptions of women’s place in society and societal groupings (Weyer, 2007). A study of 1,200 women in Fortune 1000 companies concluded that the obstacles and ceiling on advancement is not intentional (Townsend, 1997). Rather, this obstacle is the structure of social systems and arrangements that result in the “channeling” of women into careers. It is this socialization that is reinforced both through school (formal education) and work life and plays out not only in the corporate arena, but in higher education as well (Guth & Wright, 2009; Probert, 2005), perhaps contributing to the presence of gender bias in the business school classroom.

For example, Fels (2004) demonstrates that one key socialization factor of success in the workplace is ambition. While both women and men have ambition, which is tied to mastering a special skill and being recognized for it, women create and realize their ambitions differently as they move into adulthood and into the workplace. This difference is a result of cultural ideas of femininity. While women openly compete with other women, when in the presence of men, they must provide or relinquish scarce resources to appear feminine, since femininity is defined by giving and exists only in the context of a relationship. Recognition/visibility is one of these scarce resources; thus loss or suppression of ambition is typically one of the first casualties imposed upon women in the workplace and one they have been conditioned to accept easily (Rigg & Sparrow, 1994). This trait is further reinforced by the traditional masculine corporate culture that incorporates systemic gender bias (Carter & Silva, 2010) by providing fewer avenues for recognition in the workplace for women versus men.

Interestingly, the death of ambition and other characteristics associated with business success comes not only from society/corporate culture, but also from women themselves. In fact, women often perceive their own ambition in a negative fashion, classifying it as being unfeminine and therefore undesirable, and tending to attribute any successes to luck, rather than acknowledging them as results of their own accomplishments or efforts. Ambition is further thwarted by the traditional female role model of women as caregivers and homemakers, which presents further challenges, such as time availability (Devetter, 2009), since women must make choices between family and their career advancement in the critical years of their 20s and 30s (Fels, 2004; Probert, 2005).

This self-limiting notion is developed a bit farther with the concept of the “sticky floor—self-defeating and unrecognized beliefs, assumptions, and behaviors that hold women back from achieving their career goals or advancing to
the executive suite” (Shambaugh, 2008, p. 39). Interestingly, the very characteristics (perfectionism, risk avoidance, failure to build strategic relationships, staying in one place too long, not making your words count and not asking for what you want) that took women to the head of the class, typically won’t get them to the ‘C-level’ (Shambaugh, 2008).

Perhaps it is this ready acceptance of stereotypical gender characteristics, by both women and men, which contributes to the common misperception that the glass ceiling has been shattered. Consequently, it should not come as a surprise that the perception of the “lack of barriers” to women in business is not limited to men. Bain & Company’s survey (Needleman, 2010) of 1,834 business professionals reported that 90% of men and 85% of women believe that qualified applicants have an equal opportunity of advancement. But, 81% of men as compared to 52% of women believe that advancement to middle management is gender neutral. This gap widens when pertaining to the executive suite. Sixty-six percent of men, but only 33% of women, report that promotion to the executive level is gender neutral. This study was international in scope and not limited to one specific culture or industry. The study validates the importance of social role theory in setting expectations concerning women and business advancement.

Another consideration in the perceived lack of bias is the advancement that women have made in business. Similar to the attitude exhibited toward other minorities in society, the perception that women have “come so far” and that, therefore, bias in promotion is no longer an obstacle, further legitimizes the lack of promotion for women to executive positions.

**Gender Stereotypes: Working Styles, Firm Performance, and Leadership**

There is no question that gender diversity lends itself to working styles and such diversity is beneficial to firms (Luis-Carnicer et al., 2008). However, the common belief is that masculine characteristics result in better performance for firms (i.e., masculine approaches are the norm) and are indicative of leaders, at least when such characteristics are exhibited by men (Atwater, Carey, & Waldman, 2001; Gmür 2006; Powell et al., 2002; Reuvers, Engen, Vinkenburg, & Wilson-Evered, 2008). Feminine styles of management are typically evaluated as deficient. Yet, the reality is that both masculine and feminine styles can be strengths (Rigg & Sparrow, 1994), and feminine styles frequently are correlated with stronger firm performance (Luis-Carnicer et al., 2008).

Additionally, women are underrepresented on corporate boards, and when they do participate, they are marginalized, as are other minority representatives, because their perspectives are not recognized as relevant or significant. Gender stereotypes play a role here as well (Pesonen, Tienari, & Vanhala, 2009). An article by Schor (1995) examines this phenomenon and reports the findings of Bilimoria & Piderit (1994), which showed that men were appointed to membership on committees related to compensation, executive and finance; whereas women were only favored for the public relations committee.

Perhaps then it is no surprise that, due to the gender bias and lack of validity attributed to feminine management styles and work-life balance issues, many women are choosing to abandon corporations to become CEOs of their own entrepreneurial ventures (Eisner & Harvey, 2009; Winn, 2004). Women’s success in this arena is demonstrated by the fact that women-owned businesses, in aggregate, employ more people than the all the Fortune 500 companies in America combined (Winn 2004). Such success lends credence to the premise that women are not promoted to ‘C-level’ positions within corporations due to lack of ability, drive, or education, but due to invisible barriers (i.e., the glass ceiling) that exist in these environments. However, even entrepreneurship is not an easy path to the top for women, due to obstacles they experience as a result of their self-imposed “sticky floor” or as a result of gender bias in the external environment (e.g., clients, suppliers, financing).

Looking at the barrier of financing, Endres, Chowdhury, & Alam (2008) demonstrated that while both women and men were under-confident in making complex financial decisions, women were more under-confident, which has a cascading impact on women entrepreneurs. Tangentially, Becker-Blease & Sohl (2008) also found that women angel investors have lower confidence levels than men. This has a deleterious effect on the financing of women-owned entrepreneurial ventures, since not only do the women CEOs in general have less confidence in complex financial decision making than their male counterparts, but they are also more likely to seek funding from women angels, who are less confident than men, resulting in more restricted access to early-stage capital than that of male business owners.
Women Versus Men in Management

Another stream of research dealing with barriers to women in business is that of the perceived effectiveness of women in the workplace and managerial skill. The pioneering works in this area include Schein in the 1970s. Schein's (1973; 1975; 2001) work on gender stereotyping and the subsequent development of the BSRI (Bem, 1974), which identifies masculine and feminine attributes and links them to business acumen and influence, is important to examine. In addition, other researchers have found that, when identical circumstances are described to subjects about business professional qualities, perceptions are widely disparate if the examples are attributed to male rather than female managers—with male managers viewed more favorably (Atwater et al., 2001; Gmüür, 2006; Hoyt, Simon, & Reid, 2009; Powell et al., 2002; Reuvers et al., 2008).

For example, more innovative leadership is reported by subjects (both male and female) when the manager is male than when the manager is female (Reuvers et al., 2008). Regarding employee communication and interaction effectiveness, women and men are perceived very differently, with men supervisors preferred by women (Warning & Buchanan, 2009), especially regarding discipline and feedback. Even though the communication content and approach are identical, women are perceived as punitive and negative, whereas men are perceived as direct and honest (Atwater et al., 2001). Women are also more likely to receive less professional respect than male counterparts (Hans-Joachim, Mohr, & Schyns, 2007).

Within corporate cultures, it is common practice for companies to select top performers for managerial development, but a number of firms do not track the number of women versus men who are selected for these career advancing opportunities. Studies conducted by groups such as Development Dimensions International, DDI (Marquez, 2009) found that gender discrimination is present from the very beginning of women's careers. One of the primary ways such discrimination begins is the lack of development opportunities presented to women, such as being invited to participate in a company's high potential program.

The DDI study (Marquez, 2009), based on responses of 12,800 leaders in 76 countries, found that, at the first level of management, there were 28% more men than women in high potential programs. The number increased to 50% more men at the executive level. This discrepancy does not appear to be intentional; however, it might be explained by the reality that many of these programs do not have a standardized procedure for selecting candidates. Subsequently, candidates are selected by managers, who are predominantly male, and male candidates tend to come to mind first because future executives are frequently perceived as being men, due to the traditional masculine corporate culture.

Additionally, this lack of opportunity also manifests itself in corporate expatriate discrepancies, which prevents women from receiving foreign management assignments that are often crucial for promotion (Connerley, Mecham, & Strauss, 2008; Harris, 2002; Insch et al., 2008; Rigg & Sparrow, 1994; Shortland, 2009; Vance & Paik, 2001). Women are often precluded from consideration for expatriate positions due to gender related issues such as being part of a dual career family, beliefs that women cannot handle such assignments due to misperceptions that arise as a part of gender stereotyping, or concerns about host country acceptance due to culture, all of which require companies to re-examine their policies for expatriate assignments. As a result of lack of such key opportunities in companies, succession planning to the most executive levels in corporations is exclusive of women.

Business School Barriers and Interventions

Unfortunately, gender disparity is not only evident in the workplace; it extends to the classroom and is demonstrated in business schools. In the sections below, we present some obstacles to gender neutrality in the business school classroom and identify possible avenues for overcoming these obstacles.

Female Role Modeling

One major deficiency frequently found in business education is the lack of feminine role models and examples. By the use of specific examples, through female executive guest speakers (Butler, 1997) and teaming of male and female faculty, some business schools have attempted to illustrate the significance of women in business and education. In order to sensitize faculty to the importance of women in the workplace, Catherine Smith of Edith Cowan University in Perth, Western Australia, has created a video to be used by educators for illuminating the gender inequities in
management education (Smith, 1998; 1997). Butler (1997) has developed an assignment specific to addressing and reducing gender bias in the classroom through the use of a female executive guest speaker. Ensuring that cross gender academic teams are formed for class assignments also helps provide positive female role modeling.

Faculty Diversity

Of course one way to encourage gender neutrality in the classroom is to have female professors, which is a challenge, since business faculties tend to be predominately male. It is also key for students to see women in administrative roles (e.g., dean, associate dean, and program director) within the business school and in the university at large. The good news is that there is evidence that more women are occupying business school dean roles (Damast, 2009). This provides business students not only the opportunity to observe women in roles of authority and power, leading to reduced gender bias (Butler, 1997), but also to have role models and develop mentoring relationships with other successful women. In addition, it also provides an opportunity to incorporate more gender bias awareness (as discussed later in this paper) into the curriculum and classroom.

Awareness of Gender Bias

Although the glass ceiling persists, due to the perception that it has been shattered, many employees and students remain unaware of gender bias in the workplace and classroom. In fact, they frequently deny its existence, even when it is brought to their attention (Kelan & Jones, 2010; Sipe, Johnson, & Fisher, 2009). This misperception is perhaps because this barrier is frequently hidden (Eisner & Harvey, 2009; Pillis, Kernochan, Meilich, Prosser, & Whiting, 2008; Tai & Sims, 2005). A large part of this denial stems from socialization and the lack of preparation (and even discrimination) experienced by women in education and the gender discrimination they are likely to encounter professionally (Carr, Ash, Friedman, Szalacha, Barnett, & Palepu, 2000; Carr, Szalacha, Barnett, Caswell, & Inui, 2003; Kelan & Jones, 2010; Van Den Brink & Stobbe, 2009).

Unfortunately many faculty members, especially business faculty, deliver education in a fundamentally masculine style (MacLellan & Dobson, 1997; Smith, 1997; 1998). Consequently, they do little to draw attention to this bias, frequently not even recognizing gender as a salient factor, even though it continues to be significant (Kelan & Jones, 2010).

Through providing students with education about gender bias, discrimination can be reduced in the workplace through training, enforcement, and human resource planning. Students, both male and female, should also be exposed to the impact of gender bias in the workplace on self-confidence, job satisfaction, and career commitment, and they should be educated about how to avoid missed opportunities for advancement. At the college level, this should result in courses from student affairs and other relevant university departments, as well as in discipline-specific curricula, such as business law and human resource courses for business majors (Sipe et al., 2009).

We concur with the above recommendations but believe gender issues should also be incorporated throughout business curricula. For example, important tools to reduce gender bias, such as reciprocal accommodation communication could be taught in a core or introductory course and reinforced throughout the curriculum. This strategy aids women in avoiding “sticky floors” by practicing empowering communication strategies and emphasizing the importance of top level management recognizing women’s rights to use such strategies (Baker, 1991). In other words, corporate culture and women’s communication strategies should change (Sheridan, 2007) to not only encourage women to reveal natural assertiveness, but also to recognize and reward such assertiveness on the part of women, rather that categorizing it as unfeminine or undesirable.

The Macho Course Culture

Female business students report bias in professor interaction and the credence given to men by business school professors (Smith, 1998). They report a “macho” environment and see little or no credit attributed to the positive attributes of female characteristics. Although many collaborative qualities inherent in female personalities are inferred as important in contemporary work environments, they are rarely attributed as preferentially exhibited by women executives and are not recognized as connected to firm performance. Consequently, although Fortune annually reports on the best companies to work for, which generally exhibit not only benefits but also cultures of inclusiveness and familial cohesion, the effect of feminine traits and employees on these cultures is not illuminated.
Further, the masculine bias in business education (Simpson, 2006) has led to “reinforcing the notion that women in management are invisible…and…may discourage managers from capitalizing on gender diversity in the workplace” (Mavin & Bryans, 1999, p.99). Thus, this bias harms both male and female students (Kelan & Jones, 2010; Mavin & Bryans, 1999; Simpson, 2006, Smith, 1998 & 1997).

Kelan & Jones (2010, p. 39) note that as a result of the masculine nature of business education, “MBA students have limited access to a critical discourse through which they might identify and challenge the systemic factors that are operating to maintain the normative masculine culture of the business school environment.” Further they and other authors (Mavin & Bryans, 1999; Smith, 1997; 1998) espouse the belief that if business schools are to create leaders, they must provide them with knowledge of how gender shapes the workplace and modify the MBA curriculum to incorporate gender awareness throughout.

Examples of men and women in non-traditional roles can be embedded in all courses, making gender awareness and lack of bias perceived by students as a condition for doing business not just as a special case. Other options are women’s scholarships, all-women recruiting events, having women students share gender bias workplace experiences with the class, introducing research on women in management into the classroom, and unmasking and examining the processes in the workplace that support the status quo (Kelan & Jones, 2010; Mavin & Bryans, 1999). Adopting gender neutral terms (Sheridan, 2007) in business courses, educating students about the problems with sex stereotyping (including hiring, promotion, opportunities, evaluation and legal liability issues), helping them identify signs of diversity problems in the workplace, emphasizing the importance of documenting employment decisions, and helping them learn how to create policies that are family friendly and create a fair work environment are also key (Kelly, Young, & Clark, 1993).

**CONTRIBUTIONS**

Women in business are perceived to have been successful; however, the numbers of women in ‘C-level’ positions provide evidence to the contrary. Business education as a contributing factor to gender bias in the workplace and, conversely, as a potential remedy to such bias is not sufficiently explored in the literature. Therefore, we thought it important to explore the reasons why an insufficient number of women are in ‘C-level’ positions by creating an overview of the major factors in gender bias in the workplace as identified by the existing literature. Understanding the impediments to women trying to advance to ‘C-level’ positions provides a means to examine how business education should be restructured to equip individuals with greater awareness of this issue and strategies to identify, address, and reduce such biases in the workplace. Therefore, we examine obstacles to women rising to ‘C-level’ positions and begin to look at how business education contributes to, but may ultimately help resolve these problems by identifying ways to increase the effectiveness of business education and educators regarding gender bias.

Barriers that prevent women from advancement and contributing factors in business education can be grouped into several key areas as presented earlier in this paper (see Table 1 for summary). Gender barriers to advancement can be mitigated through improved business education practices. For educators in business schools, these findings suggest the importance of acknowledging that gender bias still exists and revising business curricula to address this problem, thus better preparing business graduates of both genders to identify and develop strategies for reducing gender bias in the workplace.

Further, based on the evidence presented in this paper, we suggest that future research in this area should focus on developing a series of additional educational interventions which center on strategies for change including, internal and external professional skill development, firm gender bias awareness and executive development, as well as recognition of enhanced performance through acknowledgement of the positive impact of feminine characteristics on firm performance.

We hope that by bringing more attention to gender bias in the workplace and the responsibility of business educators to help reduce and eliminate such bias, progress can be made toward true gender neutrality at the ‘C-level’ within organizations. Finally, we call on our fellow business educators to perform more research in this area to aid in closing this unacceptable gender gap in the workplace.
Table 1  
Barriers to Advancement and Contributing Factors in Business Education

<table>
<thead>
<tr>
<th>Subject</th>
<th>References</th>
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<tbody>
<tr>
<td><strong>Disparity at the ‘C-level’</strong></td>
<td>Reuteman, 2011; Carter &amp; Silva, 2010; Catalyst, 2009; Jordan et al., 2007; Weyer, 2007; Business and Professional Women’s Foundation, 2007; Powell et al., 2002; Luis-Carnicer et al., 2008</td>
</tr>
<tr>
<td><strong>Barriers in the workplace</strong></td>
<td>Carter &amp; Silva, 2010; Insch et al., 2008; Jordan et al., 2007; Pichler et al., 2008; Weyer, 2007; Burnsed, 2011; Meyerson &amp; Fletcher, 2002</td>
</tr>
<tr>
<td>Socialization and gender traits</td>
<td>Eagly, 1987; Weyer, 2007; Townsend, 1997; Probert, 2005; Guth &amp; Wright, 2009; Rigg &amp; Sparrow, 1994; Devetser, 2009; Fels, 2004; Shambaugh, 2008; Needleman, 2010</td>
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<tr>
<td>Gender stereotypes: working styles, firm performance and leadership</td>
<td>Luis-Carnicer et al., 2008; Atwater et al., 2001; Gmüür 2006; Powell et al., 2002; Reuvers et al., 2008; Rigg &amp; Sparrow, 1994; Eisner &amp; Harvey, 2009; Winn, 2004; Winn 2004; Endres et al., 2008; Becker-Blease &amp; Sohl, 2008; Pesonen et al., 2009; Bilimoria &amp; Piderit, 1994; Schor, 1995</td>
</tr>
<tr>
<td>Women versus men in management</td>
<td>Schein 2001, 1975, 1973; Bem, 1974; Atwater et al., 2001; Gmüür, 2006; Hoyt et al., 2009; Powell et al., 2002; Reuvers et al., 2008; Marquez, 2009; Harris, 2002; Insch et al., 2008; Rigg &amp; Sparrow, 1994; Vance &amp; Paik, 2001; Hans-Joachim et al., 2007; Warning &amp; Buchanan, 2009; Connerley et al., 2008; Shortland, 2009</td>
</tr>
<tr>
<td><strong>Business school barriers and interventions</strong></td>
<td></td>
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<tr>
<td>Female role modeling</td>
<td>Butler, 1997; Smith, 1997 &amp; 1998</td>
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<tr>
<td>Faculty diversity</td>
<td>Butler, 1997; Damast, 2009</td>
</tr>
<tr>
<td>Awareness of gender bias</td>
<td>Eisner &amp; Harvey, 2009; Pillis et al., 2008; Tai &amp; Sims, 2005; Carr et al., 2003 &amp; 2000; Kelan &amp; Jones, 2010; Van Den Brink &amp; Stobbe, 2009; MacLellan &amp; Dobson, 1997; Smith, 1997 &amp; 1998; Sipe et al., 2009; Baker, 1991; Sheridan, 2007</td>
</tr>
<tr>
<td>The macho course culture</td>
<td>Simpson, 2006; Smith, 1997 &amp; 1998; Mavin &amp; Bryans, 1999; Kelan &amp; Jones, 2010; Kelly et al., 1993; Sheridan, 2007</td>
</tr>
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REFERENCES


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COMBATING HEGEMONIC DISCOURSE IN AN ONLINE MULTICULTURAL LEADERSHIP COURSE: A NARRATIVE STUDY OF AN INSTRUCTOR AND STUDENT WORKING IN TANDEM FOR SOCIAL JUSTICE

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This narrative study examines hegemonic discourse in an online multicultural leadership course by translating e-narrative analysis findings into implications for social justice and recommendations for andragogical strategies. These strategies specifically address hegemonic discourse within an online educational environment. The setting for this article is a graduate level class in Multicultural Leadership geared toward Masters’ students in an educational leadership program. Through the e-narrative analysis, four themes emerged that characterized the hegemonic discourse: rejecting social justice; wooing white privilege; the oppressive “other,” and telling it straight. Based on the findings and implications surrounding the research questions, four andragogical strategies were recommended: engaging in moral conversations; adopting bilateral teaching tools; strategizing for collaborative alliances; and enabling emblematic change.

Keywords: hegemonic discourse, e-narrative, critical pedagogy, social justice

My hope is enough! No, my hope is necessary, but it is not enough. Alone, it does not win. But without it, my struggle will be weak and wobbly. We need critical hope the way a fish needs unpolluted water (Freire 1999, p. 8).

We are female and male, Middle-Eastern and White, professor and student. While the binaries present in the professional relationship of one professor and one graduate student at a borderland university may in many instances serve as a base of divisiveness and opposition, the two researchers involved in this conversation are allies. Moreover, we have united under the auspice of combating hegemonic discourse in the higher education classroom. This article presents a narrative study that explores online discussions in an educational leadership program’s Multicultural Leadership course geared toward graduate students of a Southwestern College of Education at a Hispanic-Serving Institution (HSI). Through electronic narrative (e-narrative) analysis of the semester-long discussions, four themes emerged: rejecting social justice; wooing white privilege; the oppressive “other,” and telling it straight. Based on the findings and implications of the e-narrative analysis, we recommend four andragogical strategies for addressing hegemonic discourse specific to an online educational environment. These strategies are grounded in the theoretical influences of Freire, hooks, and Giroux. More specifically, in order to better understand the crux of the role of the social justice educator as it pertains to combating hegemonic discourse, this research is couched in the philosophical underpinnings of Freire’s colloquy on hope and critical pedagogy.

In a year seemingly embraced by the rhetoric of hope, 2009 was also the year we found ourselves marred by hegemonic, and oft racist, discourse. As such, the aim of this research is to deconstruct the factors, roles, and patterns of the upsurge in hegemonic discourse in a multicultural leadership course and contextualize it using the online learning climate. We parlay the shared, yet divergent, experiences of a professor and a student into multidimensional perspectives as we attempt to address hegemonic discourse in a graduate course. The attempts made in this specific course were both successful and unsuccessful. However, after self-reflection, re-examination of dialogue, and review of the data, we are able to offer proposed strategies for addressing similar issues in online courses. These andragogical strategies include engaging in moral conversations, adopting bilateral teaching tools, strategizing for collaborative alliances, and enabling emblematic change.
Important to this research are the terms e-narrative and andragogy. For the purposes of this research, narrative is defined as “a message or story that tells the particulars of an act or occurrence or course of events; presented in writing or drama or cinema or as a radio or television program” (Princeton University, 2010, para. 1). Due to the fact that the narratives took place in an online, or electronic, environment, they are termed e-narratives. E-narratives can be considered as part of the computer-mediated communication that has revolutionized the dissemination of education in the past 20+ years (Hara, Bonk & Angeli, 1998). Andragogy as a concept and philosophy has “taken on distinctly different meaning depending on what part of the world one is discussing” (Knowles, Holton III, & Swanson, 2005, p. 231). In the North American context, Knowles (1986) called it a “conceptual framework that serves as a basis for an emergent theory” with regards to the notion that adult learners have different experiences than younger students. According to Knowles, Holton III, and Swanson, andragogy is “a set of assumptions about how adults learn” (2005, p. 59). More specifically, Knowles (1980) put forth six assumptions with regards to andragogy: (1) the learner’s need to know; (2) the learner’s self-concept; (3) the role of the learner’s experience; (4) a student’s readiness to learn; (5) the student’s orientation towards learning; and (6) the students’ motivation to learn. These tenets of andragogy can provide insight with regards to the need for specific teaching tools aimed at an adult learning population in a multicultural leadership course.

The significance of this research is couched in the offering of multiple perspective teaching tools for combating hegemony that are funneled through the examination of the lived experiences of varying perspectives. The professor of record for the course, and first author, is a Middle-Eastern woman who has taught Multicultural Leadership for five non-consecutive semesters at Southwest State University to primarily Master’s students in educational leadership programs. The graduate student, and second author, is a White male doctoral student who was invited to co-author this article due largely to include the perspective of a participant in the discourse as a supplement to the perspective of the professor. Both authors of this article are invested in the pursuit of social justice, yet approach it from different sociocultural lenses and demographic confines. These experiences include the confrontation that manifested when students’ initial reactions to the concepts of social justice, equity, and white privilege communicated resistance. The upsurge in resistance followed by hegemonic dialogue further necessitates the exploration of tools for professors to create safe spaces wherein students can explore and embrace the conceptual and pedagogical tools of diversity, multiculturalism, and social justice.

**HOPE AND CRITICAL PEDAGOGY AS CONCEPTUAL TOOLS**

Hope has been used in education, and other forums, as a conduit to motivate a collective consciousness. In educational theory, Paulo Freire used the concept of hope to underlie his thoughts on the task of the progressive educator. As Freire (1999) stated:

> One of the tasks of the progressive educator…is to unveil opportunities for hope, no matter what the obstacles may be. After all, without hope there is little we can do. For hope is an ontological need...the attempt to do without hope in the struggle to improve the world, as if that struggle could be reduced to calculated acts alone, or a purely scientific approach, is a frivolous illusion. (p. 9)

Freire believed that, without hope, we are hopeless and cannot begin the struggle to change, as hope is based on the need for truth as an ethical quality of the struggle. As such, he described hope as an ontological need; one that should be anchored in practice so that it may achieve historical concreteness (Freire, 1999, p. 9). Hope and action are inexorably intertwined for Freire, an intermingling of progressive post modern and practice-based struggle. As Freire stated, “the idea that hope alone will transform the world...is an excellent route to hopelessness, pessimism, and fatalism” (1999, p. 8).

Central to recognizing and combating this struggle are educators who adopt a critical pedagogy. The application of a critical pedagogy is the way for many educators to act in a way that endorses hope, while simultaneously engaging in the struggle for equity. Freire argued that any curriculum that ignores the plights of the oppressed - the racialized and marginalized - merely perpetuates the status quo and reaffirms power dynamics in favor of the hegemonic elite (Freire, 1997). Critical pedagogy endorses an expansion of consciousness and favors action aimed at change. In order to challenge and question systems of domination, educators should employ techniques and tools in the classroom that engage students in critical thinking. As hooks stated, “The heartbeat of critical thinking is the longing to know—
to understand how life works” (2010, p. 7). However, hooks warned that students do not become critical thinkers quickly, but rather it is a process that first includes embracing the love, power, freedom, and evolution of knowledge. She further put forth that many students “resist the critical thinking process; they are more comfortable with learning that allows them to remain passive” because passivity does not require engagement (2010, p. 10). Moreover, and important to this research, hooks asserted that “keeping an open mind is an essential requirement of critical thinking” (2010, p. 10).

Giroux’s thoughts regarding critical thinking and action were similar to Freire and hooks’ ideas. “If we think of emancipation as praxis, as both an understanding as well as a form of action designed to overthrow structures of domination, we can begin to illuminate the interplay between historical consciousness, critical thinking, and emancipatory behavior” (1997, p. 26). For Giroux critical thinking as a method of reasoning is obscured in both school and wider society by a culture of positivism, yet he offers that collective communication, critical dialogue, and hermeneutic understanding as strategies for grounding the use of critical thinking as well as delegitimizing institutional arrangements (Giroux, 1997).

As attested to by the three scholars mentioned, hope, action, and critical thinking are powerful tools that can provide conceptual clarification and understanding of hegemonic discourse in the higher education classroom. The collective community that exists within the classroom is certainly affected by these elements. In an online environment, the community is formulated, managed, and experienced in unique ways. Palloff and Pratt (2007) asserted, “key to successful online learning is the formation of an effective learning community as the vehicle through which learning occurs online” (p. 4). One element that is definitively unique to the online learning community is the presence of the technological veil.

**The Technological Veil**

Palloff and Pratt (2007) explained that fear is what keeps individuals in a community from connecting with each other. Due to the unfamiliar nature of the environment, the online experience is approached with natural and expected anxiety from students new to the setting. In her study surrounding the need for online communications ethics, Deborah Johnson found that online communication has encountered problems during its growth and evolution and “the most disturbing of these involves human behavior” (1997, p. 2). The shared experience of this classroom setting did not seem to shed light on ethical issues surrounding hegemonic discourse. More specifically, the online environment seemed to produce a technological veil that students potentially could hide behind after making contentious and polemical statements. This online shield can make it easier to stand on unsupported platforms because students can pick and choose which responses to address and at the same time ignore evidence or responses that do not support their proposed platforms. In general, discourse that may have remained in silent discord in a traditional environment was prevalent in the presence of the technological veil.

Merryfield found that “my experiences with electronic pedagogy have made me question the use of online courses for required courses in multicultural and global education” (2001, p. 1). She found a paradoxical relationship between the students’ ability to be more open in the environment, while at the same time struggling with “knowing the other” (p. 1). Sproull and Kiesler (1991) found that “when people perceive communication to be ephemeral, the stakes of communication seem smaller. People feel less committed to what they say, less concerned about it, and less worried about the social reception they will get” (p. 42). Furthermore, Palloff and Pratt explained that “because students cannot see reactions through facial expression when something is said, they can sometimes be less cautious about what they say and how they say it” (2007, p. 54).

Another concern surrounding this specific scenario is the possibility that groupthink played a role in the passive resistance to the hegemonic discourse. “Groupthink is the subtle and not-so-subtle pressure to conform in thought and action. This kind of oppression can be devastating on a psychological level. When one is experiencing that kind of pressure, the result can be feelings of unease, not belonging, not feeling safe – feelings of being an outsider” (Palloff & Pratt, 2007, p. 52). In terms of understanding the relationship between personal behavior and group phenomena in an electronic forum, it is important to recognize that not only does groupthink come into play (Palloff & Pratt, 2007), but also that the online environment provides a structure that differs from the traditional classroom in a few key areas. These include (1) the ability to post a response without being challenged in real time; (2) the ability to ignore
responses to a post; and (3) the ability to make an assumption of consensus, which can hinder one's motivation for confrontation, based upon the absence of non-verbal communication from fellow classmates in reaction to a posting.

**RESEARCH QUESTIONS**

In light of the problem that is being examined and theoretical foundations inherent to this study, the research questions guiding this article are (1) How can educators and students co-create a community of hope in an online learning environment given a surfeit of hegemonic discourse? and (2) How should educators and students address hegemonic discourse, while encouraging hopeful and critical thinking, in an online course?

**BACKGROUND INFORMATION**

**Mission of the College and Department**

Both the mission of the college and department drive an overall adherence to diversity, community, and social justice at Southwest State University (SSU). The mission of the College of Education at SSU is “to serve the people of New Mexico through education, research, extension education, and public service with specific emphasis on innovative practices, overcoming barriers to learning, international activities, technology, and literacy for the diverse populations of New Mexico, surrounding states and border communities” (SSU, 2010). Parallel to the spirit of the college’s mission, the departmental mission, which was created collectively by the faculty, is “to prepare and graduate capable, skillful and dynamic educational leaders for a diverse society. Through the use of theory and practice we aim to develop change agents and role models for socially-just educational systems” (SSU, 2010).

**Online Course Tools**

Noticeably different from a traditional to online course is the lack of face-to-face communication. In order to assist students in understanding their role as active, engaged, and courteous participants in the online course, Blackboard Protocol and Codes of Conduct documents are posted to the Blackboard site for students at the beginning of the course as part of the introductory information. Together, these online course tools provide students with information pertaining to (1) active and meaningful participation, including substantive posting and responses, and (2) netiquette, a neologism or morphological blend formed from “Internet etiquette” that acts as a catch-all term for the conventions of politeness and respect recognized on Usenet, in mailing lists, in live chat systems, and on other electronic forums such as Internet message boards (Bovard, 2010). These conventions address the relationship between personal behavior and group phenomena.

**Setting and Participants**

The course discussed in this article is a graduate level class in Multicultural Leadership geared towards Master’s students in a College of Education in an educational leadership and preparation department at Southwest State University. This university is designated as a Hispanic-Serving Institution, or HSI. The course is a requirement for students obtaining their Master’s Degree in Educational Administration with an emphasis in Community College and University Administration. Other courses that are required as part of this program include Higher Education Law, Higher Education Finance and Funding, Higher Education Administration, Management of Student Services in Higher Education, Evaluation Design, Management of Educational Change, Elements of Research, Administration of Adult and Continuing Education, Educational Planning and Management, and Advanced Internship I and II. As such, the Multicultural Leadership course is essentially the only course in the program that explicitly addresses issues of diversity, multiculturalism, and social justice. It is important to note that this department does not include possessing a multicultural disposition as a prerequisite to admittance or entrance into the Master’s program, or even course. Instead, students are asked to participate in this course as a degree requirement, bringing in their own preexisting knowledge, ideas, and experiences with relation to multicultural issues and in the hopes of becoming more nurturant towards issues of multicultural leadership.

The duration of the course spanned July 6th through August 7th, 2009, and was primarily conducted in an asynchronous manner over WebCT (web course tools, now owned by Blackboard) with one session over ITV (interactive television). Both are learning management systems used at this university. Twenty-two students were enrolled in the
course, of which 16 were female and six were male. The majority of students, 19 out of 22, in this course were part of a cohort in Educational Administration. The 19 cohort students had by this point taken at least five semesters (including summer) of classes together as part of the cohort-based hybrid distance education program. For these particular students, this course was their last prior to graduation. The other three students who enrolled in the course did so in order to complete degree requirements or credit hours for other programs within the same department.

METHODS

Qualitative research places emphasis on the phenomena and meaning of a socially constructed reality (Denzin & Lincoln, 1994; Merriam, 1998; Patton, 1990). In order to best understand the reality of the students in the course, the qualitative process impels the researchers to closely examine the electronic narratives. Exploring the meanings underlying the narratives of participants’ reactions in this course is essential to understanding and translating these narratives into conduits of change. Once the narratives are thoroughly examined, we can then begin to engage critically and creatively with the narratives (Elliott, 2005; Labov, 1997). This narrative study provides rich sources of data that are organic, student-driven, and didactic.

In a time of competing understandings of what is considered fair, equitable, and just, a variety of narratives abound, each closely linked with personal beliefs, experiences, and ethics. Each narrative becomes a hermeneutic tool for understanding the conceptual foundations that underlie engagement by students. Arnett, Arneson, and Bell (2006) argued the importance of addressing narrative amidst a disputatious climate of diversity and difference. They stated: “Within a multiplicity of narrative structures, the conceptual foundation for a given communication ethic becomes a temporal backdrop for understanding and engaging the foreground issues of communicative implementation and engagement” (p. 79). Moreover, Labov asserted: “[Narrative] is essentially a hermeneutic study, where continual engagement with the discourse as it was delivered gains entrance to the perspective of the speaker and the audience, tracing the transfer of information and experience in a way that deepens our own understandings of what language and social life are all about” (1997, para. 2).

Also important to this study is the dialogue that was created between students. “Dialogue is the methodological heart of the online learning paradigm,” and through discussion forums students were able to express themselves through a dialogic performance (Gibbons & Wentworth, 2001, para. 15). “Well-designed discussions are critical thinking and application-based and are relevant to nontraditional learners’ current life tasks and problems. Students enthusiastically embrace these activities because they are motivated by their intrinsic pursuit of personal growth and achievement” (Gibbons & Wentworth, 2001, para. 16). Moreover, Nipper (1989) described the successful online learner as one that is active and creative in the learning process. This “noisy learner” parallels the characteristics of the successful dialoging for distance education students, which includes willingness to “speak up” if problems arise, to accept critical thinking and decision making as part of the learning process, and the ability to communicate through writing (Illinois Online Network, 2006, para. 6)

E-Narrative Data and Data Analysis

Data were collected from students through electronic narratives. The permanent records of the data were used as verbatim transcripts and provided an audit trail (Merriam, 1998). A boon of working with e-narrative data is the advantage of automatic transcription of the online communications. Collecting e-narrative data is different from that of traditional narrative data due to the dynamic nature of discussion threads. While individual e-narrative responses provide a concrete record, e-narrative threads are not static due to the flux of comments that can be made to postings and to the permanent availability and visibility of the narrative record. They represent a living record of what the student wrote at that exact moment in time. This is an important adaptation of qualitative research to an online environment insofar as the use of e-narrative distinguishes itself from the traditional use of transcripts. Moreover, e-narratives can be ignored or attended to at the discretion of the reader and are free from the added interpretability of social, physical, and non-verbal cues. For this specific research, e-narrative analysis was the best and most appropriate way to understand the technology-mediated interaction of hegemonic discourse in an online multicultural leadership course. As such, the e-narrative analysis is based solely on the observation of textual discourse, a marked difference from traditional qualitative analysis (Kozinets, 2001).
The e-narratives were yielded using two main forms of response methods. The two types of responses are categorized as prompted question and independent anthology. Prompted question responses were responses students made directly to questions the instructor posted, and independent anthology responses were responses students made to anthology readings. The independent anthology responses were unprompted, as students initiated a response based on their reaction to a multicultural reading. Throughout the duration of the course, three prompted question discussion threads and three independent anthology discussion threads were created. Students were asked to respond to one prompted question and independent anthology each week, as well as offer two thoughtful responses to colleagues’ postings. Once the students fulfilled their requirements, they were free to post as much or as little as they liked. Over the course of the six-week summer course, more than 120 pages of data were mined from the WebCT discussion boards based on these six discussion threads. Questions, responses, and readings were grounded in the ideas of multiculturalism, research, experience-based learning, and critical thinking.

Selection of e-narratives was based upon criteria specific to the investigation, as well as preference given to online discussions threads that (1) had a higher “traffic” of responses and postings, (2) higher incidences of rich, descriptive data, and (3) extensive between-student interactions as they pertained to the research questions (Kozinets, 2001).

Bogdan and Bilken defined qualitative data analysis as “working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others” (2006, p. 145). E-narrative data were reviewed eight times each to help determine codes based on smaller units of data that could be organized based on harmonious patterns. Data from the narratives were coded using an extensive open coding and axial coding processes. Open coding allowed for the data to be examined, compared, conceptualized, and taken apart, while axial coding involved sorting the data into emergent themes deemed important (Strauss & Corbin, 1990). Axial coding allowed the researchers to build a conceptual understanding of the phenomena that aided in the assembly of the “big picture.” Several critical themes emerged from the data using an inductive analysis of the data.

**PRESENTATION OF THE DATA**

Through electronic narrative analysis of the semester-long discussions, four themes emerged from the units of data. They were rejecting social justice; wooing white privilege; the oppressive “other;” and telling it straight.

**Rejecting Social Justice**

The theory and praxis of social justice were openly rejected and challenged numerous times during the course of the semester. Polemics surrounding social justice stemmed from readings, the two types of responses, and reactions of students to each other’s postings.

*At best, research exploring issues of social justice can be classified as a pseudo-science and much of the evidence is influenced by perspective, opinion, and speculation. It is difficult to prove direct cause and effect relationships regarding the current perceived inequities among groups of people...I think it is difficult to make the case that there continues to be covert or subconscious marginalization of groups of people based on race, class, and/or gender.*

In *Race, Class, and Gender: An Anthology*, students were assigned a reading by feminist Audre Lorde entitled “Age, Race, Class, and Sex: Women Redefining Difference.” This reading sparked commentary on social justice.

*Boy - this reading was tough. It brings out in me the reasons I tend to reject the study of social justice. In my opinion, to end the hatred, to end the oppression, it should become a simple solution. Stop the hatred- in all directions.*

In light of the “rejection” response to Lorde’s reading the following response was posted:

*I’m not sure why you would “tend to reject the study of social justice” as it is an enterprise designed to help address and potentially rectify historical and institutional inequalities that have persisted in this country, and for the purposes of this class, educational inequalities. Why would one be against rectifying injustice? And while you describe a utopian concept, “let’s just stop the hatred,” things are obviously not that easy or simple. The institutional and systemic race, class, and gender problems in this society are complex, multifaceted, and multi-layered thus requiring more than nice thoughts; they require social-justice minded action.*
The above response was not met with any response. However, the following postings that again challenged the efficacy of social justice concepts, practice, and leadership were started in a new thread.

To say that “the institutional and systemic race, class, and gender problems in this society are complex, multifaceted, and multi-layered...” is an attempt to over complicate an issue that has a relatively simple solution...rather than to continue to focus on our differences, we should look past our differences and treat each other with equality, fairness, and respect.

You stated that social justice “is an enterprise designed to call attention to and even rectify (if ever possible) historical and institutional inequalities that have persisted in this country.” You then asked the question, “Why would one be against rectifying injustice?” Here is my answer; it is impossible to rectify historical inequities.

Oh my you 2!!!! As far as I am concerned you hit the nail directly on top!!! I do so agree to both of your opinions. Isn’t this one of God’s teachings to love unconditionally and love thy neighbor as thyself?

Within this same discussion thread, the response below was posted challenging students to think more critically.

In a society as diverse as ours, it is important to celebrate the differences (rejecting the antiquated and outdated notion of the melting pot) in order to pay attention to the individualism and particularism engrained in different cultures that reside in this country. Again, while your suggestion of “we should look past our differences and treat each other with equality, fairness, and respect” is nice ideal, how does one put that into practice without theoretical examination that bridge varying thoughts with practical applications? In essence, how do we go about treating each other as you suggested, when for many of us, that doesn’t exist? Social justice helps to create those important, timely, and critical conversations.

The comments above were met with no response. However, a new thread was created to address the topic of and concerns over social justice and policy.

I'm fully in favor of need-based initiatives, but using other immutable characteristics (such as race or gender) seems inherently unfair. I would like to hear someone argue on behalf of race- or gender-based initiatives that are non-inclusive of financial need. If justice is “the establishment or determination of rights according to the rules of law or equity” (Merriam-Webster's Online Dictionary), then I have a difficult time understanding how it is “socially just” to create a system that considers immutable qualities such as race, gender, or sexual orientation when constructing policy.

In an attempt to show evidence-based understanding for performance gaps among students, the author tried to demonstrate that inequitable outcomes often result from systemic organizational practices and policies. In my experience, I find it hard to believe that institutional practices continue to provide barriers to a select group of non-white students. Contrarily, white students are becoming more and more disenfranchised by having to compete with many students who are eligible to receive race-based scholarships simply because they were born of a certain ethnicity. If scholarships were handed out to white student simply because they were white, that would be racist. Several states are either currently (or soon to be) minority-majority states. When the demographics in this country change such that the current minorities become the majority class, what then? Will we need to reverse policy and protect the “new” minority?

And finally, the last comments on the topic of social justice were:

After reading the assigned chapters, the basic premise of Leadership for Social Justice, is to indoctrinate education leaders to become social justice activists. To accept this activist role, one must agree “we are still at war against the inequities that...may now be covert, subconscious, or even unintentional” (Marshall and Oliva, p. 2). Although there was a time in the United States when a call for civil rights was prudent and necessary, modern society has evolved beyond those past atrocities. Unfortunately, I find it difficult for myself to agree with much of the current social justice activist rhetoric exposed in the readings.

To argue for social justice is to argue against individual success.

Wooing White Privilege

The concept of white privilege was introduced to students through an article by Peggy McIntosh's article entitled, “White Privilege: Unpacking the Invisible Knapsack,” which was in Race, Class, and Gender: An Anthology. This reading
was guided through the use of instructor notes, supplemental information, and research on white privilege, including the 2010 presidential campaigns. Using the McIntosh article as a vehicle for discussion, students were asked to offer their research-based and experiential knowledge with reference to white privilege.

I don't like the idea that I've had an unearned advantage and I certainly don't like the idea that from birth I've been in a position of dominance relative to people of other races. I am now starting to question my own journey from poverty to success. Is everything I have earned based on my hard work ethic, my own merit (as I have always thought) or had I been born a different color in a similar economic situation, would my journey have been different; would I be less successful than I am now?

My biggest problem is that this was all McIntosh's opinion rather than based on research. The author (McIntosh) says, “whites are taught to not recognize white privilege” (p 98). I disagree with the author when she alludes to white's standards as "unearned assets", as I think of them more as standards that were set on whites from birth, through society, just like the standards were set on non-whites in this country. It's not an "earning" or a "non-earning" it just IS what it was made by society.

Addressing the comments above the following example is the response to the students' claims that there is essentially no such thing as white privilege.

Because our nation was founded on the principal that only white men should vote and own Property, white privilege was created. Thanks to the civil rights movements in the 60's and 70's people began discussions around the fact that it might be a good idea to indeed treat all human beings as equals. Due to these discussions there was an uprising and rights were awarded for females and people of color. To this day white men hold more money and power than people of color especially when you frame this comparison around the rising population of minorities. This is to be expected given the prevalence of white power and discrimination in our country's history. I understand that we need to look ahead and that we no longer live in those days. I truly would like to look ahead to the days Dr. King described some 50 years ago. We are so much closer to those days than we were back in the days of slavery and for that I am proud of my country. The path to this future does not lie in complacency. Just because neither you nor I have tangible evidence showing we were aided by white privilege does not mean that it never existed or that it has suddenly vanished. This position is similar to saying that just because I didn't receive an inheritance from a rich uncle that rich uncles must be imaginary. In actuality, I just don't have one (or at least one from whom I received an inheritance). I struggle with the position that social justice has run its course because you cannot put your finger on any benefit you have received from being a white male. In reference to the end point, I'm not sure where it is but I will only start looking for one when no longer hear stories from people like [name omitted] who have witnessed white male dominance first hand. I guess it is hard for me to assume people with these stories are just ignorant or out of touch with their experiences. Thanks again for making me really think through this issue. Your input has truly solidified where I stand.

The statements above were not met with any response. The discussion thread stopped. The last comment on the subject of white privilege began in a different thread. The comment is below.

I am reminded daily by my mixed Italian/Japanese wife on a daily basis just how much legitimate power I have as a result of me being a white male. I look forward to receiving my allowance next week if I am well behaved.

Both students are open about their personal beliefs; however, the attempt to combat the notion that white privilege is a myth is met with passive resistance.

The Oppressive “Other”

Discussion regarding programming for disenfranchised students was primarily spurred by a chapter in the text that addressed the issue of educational leadership along and around the Southwest borderland. This chapter was specifically selected for student reading, discussion, and response due to the location of SSU as well as the population demographics of the students with whom the educational leaders in this area work.

I strongly believe that by accommodating immigrants in public schools only seeks to be racist in its own right because these programs should encourage and teach families to adapt and can also provide access to the same opportunity as their White counterparts in other areas of the same city/town they live in. I believe in an American's never say die
attitude, which in may mean never settling only for what is in front of us.

I don’t know why I thought of this, because I look at the opportunity my father had compared to the programs for US/Mexico border schools and I tend to not see a great desire by families and students to be something better. What we value as Americans as a culture may not be of value to people of Mexico and I believe sometimes we in the U.S. accommodate immigrants from other countries without providing them the opportunity to themselves accommodate to an American culture or society.

As the discussion progressed, the narrative changed from a conversation on specific programming for borderland students to a more theoretical discourse on racism, discrimination, and higher education policies.

Today I asked if “we at least agree that racism is a 360 degree issue?” I wanted some validation that racism wasn’t just about white people oppressing people of other races. I wanted to hear that mean-spiritedness ran both ways. I was struggling with reading past the emotionally impassioned aspect of so many of these cultural awareness essays that seemed to convey a “life’s not fair” message. I thought these authors were wearing their emotions too much on their sleeve, publicly displaying a “poor disadvantaged me” message. I was struggling with finding empathy for their perspective, because I too felt disadvantaged. I too have been in situations where I felt like an outsider. People had been mean to me and I had cried about it, but I’m not still crying about it. Why couldn’t people just “buck up” and move on to make the best of the cards they were dealt?

I hear you, and I agree that racism is 360 degrees. The Japanese, the Indians, and other races have looked on the Whites as barbarians, with little or no culture. Is that racism? Absolutely! Today, I feel the White people, especially the males, are the ones discriminated against because they are considered the root of all-evil.

We are trying to overcorrect past discrimination. There will always be individuals who will discriminate against others. But, federal and state laws and statutes protect against discrimination and provide opportunities to ethnic minorities—Hispanics, Native Americans, African Americans, and Pacific Islanders—not available to others. Some of these programs are not even need-based. I know of many cases where financially well-off families received scholarships based only on race and ethnicity. If this is not reverse discrimination, I don’t know what is.

Wow, [name omitted] leave it up to you to say what most of us (me) are thinking. By the way, you delivered it very eloquently!

Intersecting with this theme was Lorde’s article, “Age, Race, Class, and Sex: Women Redefining Difference.” It again emerged as a way for students to express their perspectives on oppression and the “other.”

In my humble opinion, Ms. Lourde seems to have a large chip on her shoulder. This reading was a great representation of why, I believe, we have so much hatred in the world. It seems to be blaming everyone else for having a poor opinion about blacks, women, lesbians and more. She begins by discussing oppression, and how the oppressor profits from the oppressed. I am not sure I believe the oppressor can profit from the oppressed, except for some perhaps in an emotional way. I am offended that, once again it is always the whites that are the oppressor against “blacks and third world people.”

McIntosh’s article on white privilege sparked some interesting comments on gender issues and the relationship between the two sexes.

McIntosh starts out by complaining that men are “over privileged” and this leaves women at a disadvantage. The premise seemed to be on “lessening” all things men in order to “raise” all things women. My challenge with this is: why should women care as long as men are willing to bring women up to the level of men (even if it’s a preconceived level)? Just like we don’t want to “dummy down” our classes for academically underdeveloped students, why would we want to “dummy down” men in order to “pump up” women?

Overall, the comments regarding the “oppressive other” were prolific and spanned areas of race, ethnicity, gender, class, and immigration.

Telling It Straight

During the course of the semester, the professor introduced an article that was designed to complement a reading
and discussion on issues of education as they pertain to the lesbian, gay, bisexual, transgender, intersex, and queer (LGBTIQ) community. The article referenced the plans for the Social Justice High School in Chicago. The narrative surrounding this proposed school, which was originally intended to explicitly and specifically address educational issues of the LGBTIQ community, was powerful.

Regarding the article from windy city---while trying to do a good thing (making a safe environment) are they not just creating another social injustice? Isn’t this discrimination and making the differences more noticeable? Is this really a way to protect? This may a temporary resolution but not treating the real problem. What happened to the inclusive theory here? The way I see it, if you do not want to be seen because of your differences then do not go out of the way to point them out!!!! Life is about finding one's own journey; “negative” energy creates havoc and disharmony, “positive” energies balances the path of your choice.

I agree that differences are OK. I'm just not sure that one's sexual preference is something that needs to be on display for gay or straight. Many people find open and public displays of affection distasteful. I don't think public schools (especially K - 12) should be advocating one way or the other on matters that are private in nature.

I personally do not think that giving them their own school will help solve this issue. I think we would be segregating them and at the same not we are not teaching the LGBTIQ students to really see what is out there. This is the world that we live in and we much know how it works so we can then do something about it. Also it would be like singling them out even more. I think that we need to learn to cope with everyone, it doesn't matter is they are LGBTIQ or different race or whatever the case may be.

Amidst the negative reactions to the proposed school, a response in favor of the school was voiced:

Let me tell you why I think having their own public school would work. There are no areas in this country where gay people can show affection, be themselves and openly express their world like gay bars/clubs, bathhouses, gay sex clubs, gay themed parties. I know these are not the best places to mention but it is true. Now the theme for all of these is gay and yes I attended bars and nightclubs, but not the other areas I mentioned (honest). But I know that I was more comfortable being affectionate with my boyfriend in those places and feeling at ease communicating with my friends so having a school with complete acceptance for gay youth to be at ease is better because it is a public school that can provide mentoring, values and ethics for this youth so that they don't have to search out other "gay" themed areas and risk getting sick (HIV, STD) just to be around other gay men or women. As a start, this would be ideal and it might reduce the stresses of public education.

The response above from an openly gay student was met with one rebuttal:

I appreciate your honesty and know that it must be hard for gays or lesbians to openly be affectionate and express themselves, but I don't think school is the place for this. I understand the point you were trying to make, but I don't think LGBTIQ should be able to “bend” the rules or get away with things just because of their sexual preference. Everyone should be treated as equal and as said before a no tolerance policy should be implemented.

The discussion on this conversation proceeded via another student’s comments, which sparked an e-narrative that advocated for reciprocity to be recognized and societal norms to be upheld.

I want to also add in here that it goes the other way also. If you are straight then sometimes there is harassment from LGBTIQs. So the education needs to be across the board for everyone. You can’t say to group A you must respect group B and group B doesn’t have to respect group A.

When we are discussing children in K - 12, many of those children haven't had the time to develop the abstract concepts involved with LGBTIQ issues. Are there no issues that we can leave to parents to discuss with their children? For many families, LGBTIQ issues are often left to religious doctrine as they may impact moral and ethical upbringing. Educating our youth that there are no societal boundaries may be the agenda of social justice, however, it certainly then seeks to deconstruct societal norms.

I do not agree with the idea of segregating these students into separate schools. I thought we were trying to move away from segregation and towards integration? We should be teaching people to accept and celebrate people's differences, however, just how much time spent on “normalizing” fringe behavior? I know that there may be a genetic predisposi-
tion for some people, however others may be just confused. As a paramedic, I’ve ran on several transgender people and compared to the rest of the population at large, those are some strange scenes...people ingesting hormones and going through numerous operations trying to make large “man-bodies” into unattractive “woman-bodies.” It always reminds me of the South Park episode where Kyle’s dad gets an operation to transform himself into a dolphin. I do agree with the statistics presented that people who fall into these categories are at-risk populations. I’ve ran [sic] on disproportionately more people with suicidal ideations that have gender/sexual identity issues than those without gender/sexual identity issues. I think it is difficult for LGBTIQ people to cope. As a group, they are a small minority of the overwhelmingly heterosexual majority. I think is difficult to try to normalize something that is so obviously fringe.

FINDINGS AND DISCUSSION

Findings from the Four Themes

Four primary themes emerged from the data as students navigated the course in multicultural leadership. Again, the four themes are rejecting social justice, wooing white privilege, the oppressive “other,” and telling it straight. It is important to note that the students in this course were not all at the same stages of development regarding the issues and processes; subsequently, the information presented is not strictly linear in terms of understanding and growth, but rather captures a wide range of perspectives. The primary limitation of this study is the reliance on a small group of participants in one specific course in a particular context. However, given the paucity of literature in this specific area, the information presented does provide a platform for discussion and dialogue regarding teaching a multicultural leadership course using the online modality. Additionally, this information can provide educators and students with some pre-course considerations regarding the intersection of teaching multicultural subject matter in an online environment.

Rejecting social justice. Overall, students did not value social justice as a viable theory for understanding the experiences of disenfranchised groups and had pre-conceived negative assumptions regarding the term social justice and implications of social justice policy. Moreover, the utopian ideology of “let’s just stop all the hatred” permeated discussion. As opposed to addressing social justice from a critical, systemic, and institutionized manner, students approached social justice from perspectives that were couched in utopian ideals, the overcomplicating of oppression, as a topic that is too difficult to wholly address, as a backlash against individualism, and filtered into discussions of the “new minority” (whites).

Wooing white privilege. Specifically, students had a difficult time understanding their position(s) of privilege; as well as the historical, contextual, and oft-times traumatic experience of the “other” in the United States. Moreover, white students had a particularly difficult time with the concept of “unearned” privilege.

The oppressive “other.” Generally, students did not accept the notion of racism as an act solely against people of color. In fact, students were quick to point out the perceived oppression faced by whites in modern times and went so far as to implicitly and explicitly mention discrimination and racism aimed at whites. Students advocated against race-based programs aimed at equity in higher education, stating that like policies were attempting to “overcorrect” past discrimination. Sentiments were also grounded in the ideas that minorities should adapt and assimilate to American culture and that “we” should not accommodate their differences.

Telling it straight. The idea of “privacy” triumphed the topic of sexual orientation. Students believed that this sort of difference was private, not an issue for the public schools to handle, and that this “difference” should not be pointed out to others. The discussions also devolved into conversations on sexual contact and strayed away from the ideas of equity, privilege, and safe spaces as they relate to an over-bullied and stigmatized LGBTIQ community. Finally, students put forth that discussion regarding the differences in sexual orientation was contrary to “societal norms” and that there were moral, ethical, and religious implications in regards to this “fringe” behavior.

When students became offended by notions of their own privilege or troubles by issues outside the scope of what was “normal” for them strong statements were levied against the “other.” In fact, a variation of the groupthink mentality was created. The variation is based on the overt negativity of many of the responses. In essence, when one student started a negative rant against social justice and critical thinking, other students joined in quickly to cheer on, congratulate, and perpetuate. The forms of student participation also reveal certain aspects of teaching this material
Findings from the Four Forms of Student Participation

In addition to findings that emerged from the units of data, post hoc examinations of the different forms of student participation were also examined. Based on Zhu’s (1998) analysis of the forms of student participation, data were assessed and analyzed for the way in which a student contributed to the discussion thread. In essence, the form of student participation asks, what role did the student take on when posting a response to a prompted question, independent anthology, thoughtful response, or free post? Understanding these different roles helps to elucidate the patterns of hegemonic knowledge construction in the online discussions. The four forms of student participation that emerged from the data were prodder, perpetuator, cheerleader, and stopper. The galvanizer describes the responder who immediately and strongly challenged the social justice or multicultural integrity of the prompted questions or independent anthology, and who was able to incite others or shut a thread down through a non-responsive acts; the perpetuator describes the responder who waited until another responder, typically the galvanizer, challenged the prompted questions or independent anthology and then engaged with a concomitant attack on the issues pertaining to social justice or multicultural; the cheerleader describes the responder who agree with the other aforementioned responders in a perfunctory manner, but offered no substantive response; and the stopper describes the responder who challenged the postings of the galvanizer, which quickly ended the postings in the thread or was the first to respond to the prompted questions or independent anthology in support of social justice or multiculturalism, which also ended the postings in the thread. In essence, the four forms of student participation were gleaned from three recurring patterns of responses emerged:

- Pattern 1: Initial post, GALVANIZER, PERPETUATORS, CHEERLEADER, end of thread
- Pattern 2: Initial post, GALVANIZER, STOPPER, end of thread
- Pattern 3: Initial post, STOPPER, end of thread

Interesting to note, while this study did not include a discourse analysis of responses, a preliminary review of transcriptions showed that, as the course discussions transpired, the responses became more emotionally laden. This was potentially enabled by the fact that the students were able to continually revisit threads and experience a resurgence of emotions.

RECOMMENDATIONS

We recommend four andragogical strategies for addressing hegemonic discourse specific to an online educational environment, which are based on the findings and implications of the e-narrative analysis as well as the on theoretical influences of Freire’s hope and critical pedagogy.

Engaging in Moral Conversations

Due to the overwhelming inclusion of personal systems of belief, values, and ethics in conversations that address social justice and multiculturalism, it is imperative to continue to engage in and advance moral conversations. Dialogue, disagreement, and deliberative debate are inherent in critical pedagogy. Freire not only valued the importance of dialogue in education, but also insisted that dialogue involves respect. It should not involve one person acting on another, but rather people working with each other (Freire, 1997). Strategies, tools, techniques, and materials should be chosen specifically for their ability to inspire discussions grounded in pluralism, nurturance, and critical self-reflection. Conflict should not be avoided, but rather encouraged so that groupthink does not circumnavigate the learning process. hooks (2003) attested to the dangers of communal thinking when she offered, “In classroom settings I have often listened to groups of students tell me that racism no longer really shapes the contours of our lives, that there is just no such thing as racial difference, that ‘we are all just people’” (p. 25). Similar sentiments abounded in this research and thus call attention to the fact that there is more work to be done in the enterprises of social justice and multiculturalism.

In addition, it is also especially important to engage in the textual discourse of moral conversations due to the fact that the non-verbal, gestural, and articulatory cues so apparent and important in face-to-face speech are missing.
in the online environment. Palloff and Pratt offered that it is important to “demonstrate effective use of group dynamics and dialogue techniques” as a competency of meaningful online teaching (2007, p. 109). One manner to engage in this process is through the use of critical self-reflection activities, which are especially pertinent for adult learners. As Fidishun stated, “Their self-identity including habits and biases are determined from their experience” (2010, para. 11). Mezirow also advocated for “reflective learning” (1991, p. 6) in an online environment. As Mezirow stated, “reflective learning involves assessment or reassessment of assumptions” (1991, p. 6), and “reflective learning becomes transformative whenever assumptions or premises are found to be distorting, inauthentic or otherwise invalid” (1991, p. 6). Reflective learning activities take into account that adult learners are a heterogeneous population as well as assist students in examining their values, beliefs, and assumptions while moving them toward a new understanding (Fidishun, 2010) of information, especially as it pertains to multiculturalism and hegemony.

**Adopting Bilateral Teaching Tools**

In the spirit of creating a classroom that values democratic education, it is essential to encourage experiential discussion (Dewey, 1997, 1997; Freire, 1997; hooks, 1994). Freire’s attention to situating educational activity in the lived experience of students has created new avenues for educators to advance educational theory and practice (1997). Important to this educational information sharing is ensuring that type of academic vulnerability is reciprocal. hooks (1994) speaks of the confessional narratives not only as academic development, but also as a tool by which educators can pedagogically engage and empower. She states: “Engaged pedagogy emphasizes well-being. That means that teachers must be actively involved committed to a process of self-actualization that promotes their own well-being if they are to teach in a manner that empowers students” (p. 15). This calls attention to the notion that teaching is a bilateral endeavor; it involves reciprocity of ideas, thoughts, and exchanges between teacher and student. It is not an undertaking of mere dissemination of information (Freire, 1991), but a more active and dually informed effort.

In order to create a mutually inclusive classroom environment it is helpful to not only choose books and readings based in social justice and multiculturalism, but also to create accompanying activities, experiential logs, and opportunities for continual and critical reflection. This aim can be achieved by using multicultural disposition assessment tools to better gauge where students are at in terms of multiculturalism in the beginning and the end of the course; creating team discussion threads that encourage students to build diversity capacity from multifaceted perspectives; and offering student led lessons in privilege, power, and justice that enable students to “unpack” their own “invisible knapsacks.”

**Strategizing for Collaborative Alliances**

Gray defined collaboration as “A process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible” (1991, p. 4). Collaboration can further the processes of shared decision-making, creation of new information, and trust. In an effort to build collaborative alliances amongst students and between students and the instructor it is imperative to establish a genuine sense of community based on trust (hooks, 2010, p. 109). Furthermore hooks asserted, “it is the absence of a feeling of safety that often promotes prolonged silence or a lack of student engagement” (1994, p. 39). By constructing a safe community grounded in trust, students will have the ability to become more involved in the collaborative efforts and the co-construction of knowledge as related to this course. Simply stated, students will want to learn.

Knowles explains that adults become ready to learn when, “they experience a need to learn it in order to cope more satisfyingly with real-life tasks or problems” (1980, p. 44). Adult learners want to know that what they are learning will have real-life applications (Fidishun, 2010). Fidishun (2010) further elaborated that for adult learners internal priorities are most important; especially as they are related to increased job satisfaction, self-esteem and quality of life. Parallel to this idea, Palloff and Pratt (2007) advocated for “creating a learning community that is intellectually exciting and challenging; and encourage learners to perform to the best of their abilities in all aspects” (2007, pp. 109). Keeping these efforts in mind, instructors can solicit ongoing feedback about the importance and relevance of on-going activities based in multiculturalism; have students attest to times when they have felt oppressed, as the “other,” or marginalized; incorporate activities that ask students to step out of the bounds of their own zones of privilege and put themselves situations in which they are the minority; and have students co-construct projects based on
real-world applications of multicultural campaigns.

**Enabling Emblematic Change**

As educational leaders and students it is imperative that we continue to examine and explore opportunities for enabling emblematic change in consciences, classrooms, and communities. The change we need to effect should be emblematic of equity, diversity, and social justice. We need to remind ourselves that our vocation is one that intermingles the revolving synergy of hope and change. hooks views teaching as a prophetic vocation invested in the ideas of hope, spirituality, inclusiveness, and integrity. She stated (1994):

> To educate, as the practice of freedom is a way of teaching that anyone can learn. That learning process comes easiest to those of us who teach who also believe that there is an aspect of our vocation that is sacred; who believe that our work is not merely to share information but to share in the intellectual and spiritual growth of our students. To teach in a manner that respects and cares for the souls of our students is essential if we are to provide the necessary conditions where learning can most deeply and intimately begin. (p. 13)

As educators we take on the responsibility of helping to transform lives through an oft-times difficult process of growth. We are committed to nurturing intellectual development; and that enterprise requires hope. Hope that change and transformation are possible. Hope that past discomfort and pain is intellectual development. And hope that we can be conduits of this revolution. As hooks (2003) believed “My hope emerges from those places of struggle where I witness individuals positively transforming their lives and the world around them. Educating is always a vocation rooted in hopefulness. As teachers we believe that learning is possible, that nothing can keep an open mind from seeking after knowledge and finding a way to know” (p. xiv).

**CONCLUSION**

In general, this research reveals that books and readings in multiculturalism and social justice are not enough to help transform students from one intellectual place to another and that multicultural leadership can be difficult subject matter to teach online. To investigate these phenomena further, this is one narrative study that is part of a larger qualitative study that will be conducted each summer. As two researchers engaged you in this work, we thought it appropriate that two researchers provide individual final thoughts.

**Comments from the Student**

From a student perspective, it is both liberating and fulfilling to discover tools and andragogical strategies that will undoubtabley enhance my ability to combat hegemonic discourse both as a student and an educational leader. Metacognition enables the curious mind to delve into the process of what makes a person curious. Living one's life in a culture of cultures enables the curious soul to delve into what makes this soul unique and simultaneously homogenous. The ability of a citizen to learn to first recognize and then to grow to affirm the diversity present within our society is both a salient and empowering goal of any educational program. The themes that emerged through this e-narrative analysis show that by forgetting the past and focusing on the present, as the majority of the students wished to do, we ignore the role diversity plays in the here and now by making the assumption that history does not affect the present. The dialogue that ensued in this setting further defines the need for specific andragogical strategies surrounding multicultural education. As with any qualitative approach to research, the findings from the data lend to further questions: Is the technological veil a positive entity because it lends itself to providing a glimpse into just how pervasive hegemony and racist discourse is in modern society? Can racist discourse that would previously have lain latent in a brick and mortar setting now be addressed head on with the use of specific andragogical strategies in an online environment? And, when there is an upsurge in hope is there a competing and parallel spike in incivility?

**Comments from the Professor**

It is interesting to note that the formal student evaluations for this course were overwhelmingly very positive. In fact, for overall performance I received a 4.8 on a scale of 5.0. Some comments from the formal evaluations included, “I liked this class very much. It made me think about things in a new and different way. In ways I have never been taught
before”; “This class should be a requirement for everyone. Especially because the assignments made me think about my position in the world”; and “While I didn’t always agree with the instructor, I found this class to be one of the best of my program. The material was thought-provoking and the discussion were really interesting, even though they made me mad at times.”

However, the class had a few curious notes. Due to my ethnic sounding and gender non-specific name, one student asked if I could send her a video sample before the course got underway so she could gauge my level of proficiency with the English language as well as determine to what extent the presence of an accent would impact her ability to learn. For the record, I am American born with no discernible accent. Two other students emailed me after our first Interactive Television (ITV) session (nearly four weeks into the course) to let me know how happy they were to have an ITV session. “I hope you don’t mind us saying this, but we didn’t think you were a female. So glad we had the ITV session!” ([name omitted], personal email communication, August 1, 2009). In spite of the difficult subject matter and other considerations, the students very much liked the course. Additionally, this sort of professional testimony can also help to alter the course landscape.

Indicative of the spirit of hope and change we aim to put forth, professional testimony is an important endeavor with regards to teaching for educational leadership grounded in multiculturalism. As English (2006) explained, life and professional histories and other forms of life writing can provide insights into educational leadership and administrative practice and were once considered vital sources of information on leadership. He goes on to state, “A postmodern perspective about life writing is not what it reveals regarding the continuities involved in leadership that are valuable, but rather it is the discontinuities, the ruptures and the dissimilarities which are of most importance because that is where solutions to the novel problems of times may be found” (English, 2006, p. 142).

While we do not offer concrete solutions, we do offer recommendations grounded in critical change that take into consideration the adult learner, multiculturalism, and hope. It is in this vein that we offer the need for a revitalized education of hope; one that is especially needed now. “A pedagogy of hope offers practical wisdom about what we do and can do to make the classroom a place that is life-sustaining and mind-expanding, a place of liberating mutuality where the teacher and student work together in partnership. I hope to recover our collective awareness of the spirit of community that is always present when we are truly teaching and learning” (hooks, 2003, p. xv).

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REFERENCES


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WHEN GOVERNMENT IS NO LONGER EMPLOYER OF CHOICE: WHAT MAY THE SECTOR PERCEPTIONS OF PUBLIC MANAGERS BE LIKE AFTER THE ECONOMY RECOVERS?

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Ohio State University
Branco Ponomariov, Ph.D.
University of Texas at San Antonio

In today's economic climate, government is now considered by many to be the “employer of choice.” However, employers at all levels of government may eventually lose their recent gains in the war for talent, as the economy improves. Accordingly, it is important to explain how public sector managers viewed the relative advantages and disadvantages of government employment before the economic downturn along specific parameters, including opportunities for women and minorities, managerial autonomy, and employee talent and innovativeness. This paper assesses these views for state-level public managers across a broad range of public services, using survey data that preceded the economic downturn. Specifically, it examines how their past public and private sector career experiences, controlling for their contemporaneous government work experiences, affect their views of the public and private sectors. The study emphasizes career experiences not because past work experience are the only or the most important predictors of sector perceptions generally, but because career trajectory may be the most important consideration for developing strategy for response to government workforce dynamics once the economy improves. Thus, the findings are explained in terms of the related processes of workplace socialization and attitude formation and change, which see public and perhaps also private sector occupational norms and expectations and experiences, past and present, amalgamating to render personal values conducive to favoring one sector over the other. The importance of sector perceptions for human resources management and for broader government workforce concerns as the economy recovers are discussed, as well theory development regarding the career trajectories of public managers.

Keywords: public service careers, public-private sector differences, attitude formation
such as increases in unemployment and decreases in the public-private sector pay differences have been historically shown to increase interest in working for government (Krueger, 1988). The time period when the data for this study was collected – 2006 – is characterized with relative economic stability and prosperity, and captures the tail end of a period of relative economic calm before the housing and credit crises unfolded, starting in 2007.

The use of data that additionally enables a theoretic model of sector perceptions that emphasizes past career experiences in addition to contemporaneous public sector work context and values is equally important for developing a baseline understanding of what may be public managers’ sector perceptions once the economy improves. The economic downturn has seen an increased number of private to public “sector switchers” (Light, 1999), and, due to the changed makeup of the government workforce in terms of pre-public service career experiences, views of the public and private sectors may not simply “return” to what they were before the downturn, but rather may be different based on the relatively diverse career experiences of the post-downturn public service. Thus the data in this study also track the different career experiences, past and present, public and private, of public managers, which have been shown to be imperative for understanding worker attitudes (Songer-Nocks, 1976; Petty & Krosnick, 1995).

The overarching expectation of this study is that public managers with private sector work experience will have different views of employment in the public and private sectors than their career-bureaucrat counterparts (i.e., public managers without private sector work experiences). The rationale underlying this expectation is that the norms and expectations of the private sector are in many ways different than those of the public sector (Bozeman & Rainey, 2000; Perry & Rainey, 1988). Private sector work experience, moreover, may have residual effects on workers that are not nullified upon their departure for the public sector, perhaps not even after having spent some years outside of the private sector. In contrast, if differences in sector perceptions indeed are the products of professional socialization in different contexts, then characteristics of the contemporaneous public sector workplace too should affect the sector perceptions of public managers, regardless of the presence or absence of private sector job experience and regardless of inherent structural or environmental differences between sectors. Accordingly, the proposed theoretical framework and analysis account for contemporaneous attitudes and factors in addition to past work experiences.

Though past study, including a recent descriptive study by Feeney (2009), is focused on describing general differences in sector perceptions (e.g., favorable vs. unfavorable) across public managers, due to the need to develop strategy for responding to government workforce dynamics once the economy improves, the present study attempts to be more specific and predictive. The focus is on discrete sector perceptions, e.g., opportunity for minorities, worker talent and innovativeness, and managerial autonomy. Responses to workforce dynamics in an improving economy may not see different career experiences affecting all sector perceptions uniformly across all public managers. The current study is also more predictive in that it isolates career trajectory as the primary antecedent to sector perceptions, though also controlling for the contemporaneous work attitudes and experiences emphasized in prior study. This does not mean that past work experiences are the only or even the most important predictors of sector perceptions, but that career trajectory may be among the most important considerations for developing strategy for response to government workforce dynamics once the economy improves. This research also controls for other types of antecedents to worker attitudes emphasized by formal theories of worker attitudes and perceptions (Boardman et al., 2010).

The emphasis on past work experiences implies that individuals will perceive the sector with which they have the “most” (e.g., most recent, most overall) experience more positively than the sector from which they are further removed or lacking in experience altogether. This line of reasoning is derived from more general studies of attitudes and socialization from applied and occupational psychology. But this does not account for the nature of the discrete experiences that individuals have had in each sector that may explain, for example, the specific motivation (e.g., promotion, public service motivation, dissatisfaction with the private sector) for switching from the private sector to the public sector. Because the motivation to work in the public sector may be important for explaining sector perceptions, elements of public service motivation are accounted for in this analysis. However, career trajectory here is emphasized in an explanation of variable sector perceptions across public servants insofar that transitioning to a job that expects different roles and behaviors than those expected by previous jobs has been demonstrated to result in “person-role mismatch” whereby individuals have negative attitudes towards their current job, independent of the motivation to switch jobs (Louis, 1980; West & Rushton, 1989). Indeed, the incidence of “mismatches” may be high.
once the economy improves, given that the workers in the recent influx into the government workforce are perhaps different than those emphasized by Paul Light (1999); i.e., their selection into public service owed less to public motives and more to economic circumstances. Once government is no longer the employer of choice, it will be important to be able to anticipate in what instances such mismatches may occur.

**DATA AND VARIABLES**

Data for this study are from the most recent edition of the National Administrative Studies Project (NASP III). The data were derived from 787 responses to mailed questionnaires sent to a random sample of 1,849 state-level public managers, upper level professionals, and upper level technicians (e.g., professional engineers) in two US states: Georgia and Illinois. The survey was conducted in summer 2006. The response rate was 43%, with 431 responses from Georgia and 356 from Illinois.

In addition to demographic, attitudinal, and motivational questions, the survey asked respondents to provide information about their recent career history (last four jobs, including the current one). Gathering data on individuals’ full employment history would have been ideal, but doing this in a survey format would have increased the respondent burden to an extent that would greatly reduce the response rate. Even with the limitation of data for the last four jobs only, for 39% of the respondents (303 respondents), the span of current job plus three prior jobs was broad enough to cover the entirety of their career histories. Questions about past jobs included start and end dates, number of employees supervised, type of job (managerial, professional, or technical), and type of organization (public sector, private sector, non-profit sector). The survey items used to collect career trajectory data are detailed in the appendix.

Of the 787 respondents, 28% (216) reported that one or more of their prior three jobs was in the private sector (see Table 1). Twelve percent (92) reported that the job they held immediately prior to their current public sector job was in the private sector. These descriptive numbers alone imply that individuals with private sector work experience are fairly common in the public sector workforce. After excluding from the data set 28 respondents whose current job was their first full time job (and therefore by definition they could not have had any prior work experience), the data set consists of 759 respondents.3,4

The analyses below consider two measures of private sector work experience: whether any job in respondents’ last four jobs was in the private sector and whether the job held immediately prior to the current public sector job was in the private sector. Additionally, the study explored whether sector perceptions associated with having had private sector work experience tended to intensify or dissolve with the number of private sector jobs held. It is proposed that respondents’ sector perceptions are a function of numerous factors in addition to career history. These include length of tenure in current public sector job; whether the current job is managerial (versus technical or professional); and attitudinal and perceptual measures demonstrated in previous empirical study to be different across the sectors, including elements of public service motivation. Theoretically, the latter is perhaps the most important control measure for this study. Eighty-four percent of the sample indicated that “ability to serve the public and the public interest” was a motivation for accepting the current public sector position (see Table 1).

Respondents’ perceptions of the government and business sectors fluctuated significantly, depending on the dimension for which they were asked to draw a comparison (worker innovativeness, worker talent, managerial autonomy, opportunity for women, and opportunity for minorities). Respondents were asked to indicate whether they perceived the government or business sector to be superior for each dimension (or if they felt that there is no difference). Therefore, for each dimension the respondent selected one of three mutually exclusive options; i.e., business sector is superior, government sector is superior, there are no perceived differences. (See appendix for a description of the survey items used to measure sector perceptions.)

The two dimensions on which respondents overwhelmingly agreed were that business sector work environments provide more conducive to the innovativeness of employees and to the work autonomy of managers, with 65% and 61% of all respondents, respectively, agreeing that these characteristics are more likely to be present in the business sector (see Table 2). This is perhaps indicative of fundamental normative differences between the public and private sectors. On one hand, centralized control and fragmented governance structures often are credited with deterring or at least inhibiting innovative and autonomous behaviors in public sector organizations (Rainey, 1997, p. 291). On
the other hand, private firms value these behaviors, sometimes to the point that they alter their internal structures and management systems (Peters & Watermans, 1982; Thompson, 1967). The distinction is strongly implied when researchers label public policy innovators as “policy entrepreneurs” and “entrepreneurial leaders” (Doig & Hargrove 1987; Lewis 1980). Further, previous study has noted sector-based differences along these lines (Roessner, 1983).5

Table 1
Description of Variables (n=759)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean**</th>
<th>Std. Dev.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last job was in the private sector</td>
<td>12.1%</td>
<td>0.33</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Any 1 or more of the last 3 jobs were in the private sector</td>
<td>28.5%</td>
<td>0.45</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Primary responsibility on current job is managerial</td>
<td>65.2%</td>
<td>0.48</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Perceived level of red tape on current job</td>
<td>7.08</td>
<td>0 – 10</td>
<td></td>
</tr>
<tr>
<td>Number of years on current job</td>
<td>7.1</td>
<td>6.01</td>
<td>1 – 39</td>
</tr>
<tr>
<td>Male</td>
<td>56.6%</td>
<td>0.50</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Minority</td>
<td>18.9%</td>
<td>0.39</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Age</td>
<td>49.1</td>
<td>8.41</td>
<td>25 – 72</td>
</tr>
<tr>
<td>Ability to serve the public and the public interest important consideration in accepting current job</td>
<td>84%</td>
<td>0.37</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Agency type of current job: health and human services</td>
<td>40.1%</td>
<td>0.49</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Agency type of current job: criminal justice</td>
<td>17.1%</td>
<td>0.38</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Agency type of current job: natural resources and transportation</td>
<td>20.3%</td>
<td>0.40</td>
<td>0 – 1</td>
</tr>
<tr>
<td>Agency type of current job: economic development and regulation</td>
<td>13.7%</td>
<td>0.34</td>
<td>0 – 1</td>
</tr>
<tr>
<td>State of Georgia resident</td>
<td>54.5%</td>
<td>0.50</td>
<td>0 – 1</td>
</tr>
<tr>
<td>First job captured in the survey</td>
<td>36%</td>
<td>0.49</td>
<td>0 – 1</td>
</tr>
<tr>
<td>All in all, I am satisfied with my job</td>
<td>3.21</td>
<td>0.79</td>
<td>1 – 4</td>
</tr>
<tr>
<td>The most important things that happen to me involve my work</td>
<td>2.1</td>
<td>0.85</td>
<td>1 – 4</td>
</tr>
<tr>
<td>I do not have enough authority to determine how to get my job done</td>
<td>2.1</td>
<td>0.97</td>
<td>1 – 4</td>
</tr>
<tr>
<td>Innovation is one of the most important values in this organization</td>
<td>2.4</td>
<td>0.87</td>
<td>1 – 4</td>
</tr>
</tbody>
</table>

*Range 0-1 means a binary variable, coded 1 if the condition is present, 0 otherwise.
**The means for the binary variables are transformed into percentages indicating the proportion of cases meeting the condition.

Table 2
Description of Sector Perceptions for All Respondents (n=759)

In this section we ask your perception of work in the public and business sectors. Please answer these questions even if you have stayed in the same sector for your entire career.

<table>
<thead>
<tr>
<th></th>
<th>Public sector</th>
<th>Business Sector</th>
<th>No Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers have more work autonomy</td>
<td>23.26 %</td>
<td>61.36 %</td>
<td>15.37 %</td>
</tr>
<tr>
<td>Persons doing similar jobs are more talented</td>
<td>55.02 %</td>
<td>35.88 %</td>
<td>9.1 %</td>
</tr>
<tr>
<td>Women have more opportunities</td>
<td>34.89 %</td>
<td>14.57 %</td>
<td>50.53 %</td>
</tr>
<tr>
<td>Minorities have more opportunities</td>
<td>28.74 %</td>
<td>7.89 %</td>
<td>63.37 %</td>
</tr>
<tr>
<td>Employees are more innovative</td>
<td>28.93 %</td>
<td>64.93 %</td>
<td>6.13 %</td>
</tr>
</tbody>
</table>

Two dimensions of comparison where a majority of respondents indicated that they felt there was no difference between the public and private sectors were those regarding opportunities for women and for minorities. At first, this
seems at odds with research on women and minorities working in the public sector versus the private sector. Lewis (1998), for example, demonstrates the gap between the salaries paid to white males and the salaries paid to women and minorities of comparable education and work experience to be smaller in the public sector than in the private sector. However, the sample employed for this study is comprised of higher level public managers (here a collective term for managers and upper level professionals and technical personnel), not of public servants more generally. Because managerial positions in the public sector have been demonstrated to be held predominantly by white males (Steinberg et al., 1990), these non-findings are unsurprising.

THEORY AND HYPOTHESES

This study is part of a growing body of work concerned with careers characterized by employment with numerous organizations (Arthur & Rousseau, 2001), oftentimes across the sectors (Light, 1999). This study is also part of the longer-standing scholarship on public workers’ attitudes and perceptions, including but not limited to sector perceptions. Studies at this topical crossroads can benefit from explicit theory development regarding the variable effects of past experiences, including but not limited to career experiences, on contemporaneous attitudes and perceptions. Accordingly, the overarching premise of this paper is that past career experiences in addition to current workplace ones help to shape public managers’ workaday perceptions and attitudes.

Our hypotheses regarding the effects of private sector work experience and perceptions of current work environment on public managers’ sector perceptions are informed by empirically-supported theoretical propositions from applied and occupational psychology. Specifically, insights from theories of attitude formation and change and from theories of workplace socialization are drawn to inform the theoretical framework. While these areas of work are generally underutilized in public administration scholarship, they prove quite helpful in forming propositions about the expected effects of variable career experiences. In contrast, most explanation in prior work in public administration is focused on contemporaneous attitudes and structural features. One exception is found in Buchanan’s (1974) ideas about workplace socialization, though the present research extends the logic of his ideas to consider the impact of variation in public managers’ career trajectories (e.g., private sector experience, type of position held).6

First, there is direct evidence that prior job experiences can affect perceptions and attitudes towards current employment. For example, transitioning to a job that expects roles and behaviors that are inconsistent with prior work experiences has been demonstrated to create negative attitudes towards one’s job (Louis, 1980). West and Rushton (1989) explain this as “person-role mismatch,” whereby workers experience on the job few if any tasks or encounters that are similar to those they experienced in prior jobs – the result being negative attitudes towards one’s current job regardless of the motivation to take that job. Other studies of workplace socialization emphasize the duration of prior work experiences, suggesting that work attitudes are in part a function of the length of tenure in past jobs (Reichers, Wanous, & Steele, 1994). Except in cases where professional norms and standards prevail (e.g., when a lawyer or medical doctor changes jobs), person-role mismatch seems more likely for sector switchers than for workers transitioning between same-sector jobs.

Second, more general explanations of attitude development and change emphasize both past and current experiences, attitudes, perceptions, and other explanatory factors. The simplified explanation of attitude formation in the applied psychology field describes an individual’s evaluation of an object (e.g., one’s current job, a past job) along multiple attribute dimensions (e.g., innovative-not innovative, satisfying-not satisfying) which, in turn, gives rise to beliefs about that object. An individual’s consideration of these beliefs sees the development of an attitude towards the object (e.g., the business sector has more innovative workers than the public sector). The important point here is that some scholars consider the process of contemporaneous belief evaluation to explain the totality of attitude formation (Fishbein & Middlestadt, 1995).

However, alternate studies, also in applied psychology, have demonstrated that immediate context and beliefs constitute but one component of a larger set of predictors explaining attitudes (Haugtvedt 1997; Miniard & Barone, 1997; Priester & Fleming, 1997). Non-cognitive and non-contemporaneous processes also have been demonstrated to matter in attitude formation and differentiation (Azjen, 2000; Azjen & Fishbein, 2000). Past experiences, including past job experiences, can play a significant role in the formation of attitudes (Songer-Nocks, 1976; Petty & Krosnick, 1995). If so, past work experiences will be particularly influential in the process of forming attitudes regarding the business
and government sectors insofar that such experiences constitute varying experiential “reference points” from which to begin to form sector perceptions. These points about workplace socialization and attitude formation and change, along with prior empirical findings on sector perceptions, are used to formulate the hypotheses below.

Hypotheses for Private Sector Work Experience

The primary question of interest here is the impact of private sector work experience on public managers’ comparative perceptions of the public and private sectors. The NASP III survey asks respondents, even if they have spent their entire careers in the public sector, to indicate whether they view the public or private sector as more conducive to managerial autonomy, having a talented and innovative workforce, and to better career opportunities for women and minorities. The general expectation of this paper is that public managers who have had private sector work experience will hold more positive views of the private sector (in comparison with the public sector) relative to their peers with no such experience. This expectation is tested with the following operationalizations of private sector work experience:

“Immediacy hypothesis” (H1): Having one’s last job (i.e., the job immediately prior to the current public sector job) in the private sector, all else equal, is associated with perceiving the private sector as superior to the public sector on the dimensions of comparison.

“Extent of exposure hypothesis” (H2): The higher the number of jobs in the private sector, all else equal, the more likely will the private sector be perceived as superior to the public sector on the dimensions of comparison.

In regard to the immediacy hypothesis, it is possible that public managers with private sector work experience are not automatically “dissociated” from the private sector upon taking a public sector position, but rather that these employees have “residual socialization” of private sector norms and expectations. Therefore, consistent with theories of attitude formation and workplace socialization, the expectation here is that individuals who transition to employment in the public sector after employment in the private sector do not transform overnight their attitudes and perceptions about the nature of work in general and their personal work experiences in both sectors. Instead, their conditioning in private sector norms and expectations will affect, at least initially, their perceptions of work in the two sectors.

The hypothesized differences in perceptions of the two sectors, if empirically verified, may indicate that individuals who have switched sectors may still be under the influence of attitudes formed during their private sector careers, while the relative recency of their public sector experience has not yet affected their attitudes. Given that an attitude is a “spontaneous evaluation of an object” based on previous as well as current experiences (Azjen, 2000; Azjen & Fishbein, 2000), for respondents whose last job was in the private sector this evaluation may be more favorable regarding the private sector insofar as the new experiences in the public sector may not be completely consistent with the existing attitudes. This inconsistency, arguably, will result in a more favorable evaluation of the private sector. This will occur not necessarily because the private sector is inherently superior, but because new experiences are evaluated against prior experiences and resulting beliefs. That changes in workaday perceptions and attitudes take time to transpire is a fundamental assumption of studies of workplace socialization.

It is easy to conceive of the reverse occurring – past work experience in the private sector resulting in more favorable opinions of the public sector – due to a strong motivation to change jobs. For example, those who have made the private to public sector transition perhaps were highly motivated to do so, perhaps because of dissatisfaction or disillusionment with their private sector jobs. A move from private to public sector work could be for reasons such as promotion (Bozeman & Ponomariov 2008) or perhaps for reasons that are more related to intrinsic motivations. Indeed, 84% of the sample indicated that “ability to serve the public and the public interest” was a motivation for accepting one’s current public sector position. In either of these cases, it is reasonable to expect a more positive assessment of the public sector vis-à-vis the private sector. Accordingly, the empirical models control for elements of public service motivation. However, the “workplace socialization” explanation is emphasized here over the “motivation to switch to the public sector” explanation insofar that transitioning to a job that expects different roles and behaviors than those expected by previous jobs has been demonstrated to result in “person-role mismatch” whereby individuals experi-
ence negative emotional effects related to their current job, independent of the motivation to switch jobs (Louis, 1980; West & Rushton, 1989). Further, the theoretical propositions of attitude formation and change and workplace socialization do not require assumptions about the motivation to change jobs (e.g., dissatisfaction with one's current job).

The “last job” (H1) and “number of jobs” (H2) predictors, as respective indicators of immediacy and degree of private sector work experiences, have limitations. While one's last job may have been in the private sector, this job could have ended many years ago. Second, an individual can have numerous jobs over a relatively short time span, which could signify a lack of satisfaction with private sector jobs (i.e., they may move around a lot due to job dissatisfaction). One way to account for these limits is with a control variable measuring in years the length of tenure respondents have in their current public sector jobs. More directly, an additional indicator is introduced to determine if the respondent’s private sector work experience was two or more jobs ago. Unlike in the “immediacy” hypothesis, for the latter indicator the expectation is of no impact on sector perceptions. Consistent with the proposed theory, having had one or more jobs in the public sector following any private sector job experience implies that the individual may have experienced socialization into public sector norms and expectations and thus will not necessarily any longer experience inconsistencies between current expectations and past experiences.

Specifically, since the approach followed so far implies that work attitudes and attendant sector perceptions are at least in part a product of ongoing professional experiences and socialization, it should also follow that the effect of private sector job experience on such attitudes and perceptions is not static, but that it may diminish over time as public sector experiences accrue. This expectation is consistent with early findings regarding the socialization of managers, with relatively new managers (in their first few years on the job) experiencing anxiety regarding their fit within and commitment to their work organizations when compared to their longer-tenured counterparts (Buchanan, 1974). Therefore, as individuals are socialized into the norms and expectations of the public sector, they increase the normative “distance” between their private sector job experiences and their current public sector careers. Such individuals may begin to exhibit beliefs and perceptions about the public and private sectors that are more congruent with public servants with no private sector job experience (i.e., perceiving the public sector more positively than the private sector) than with the perceptions of “sector switchers” with more recent or immediate experiences in private sector jobs.

Controlling for Perceived Characteristics of Current Public Sector Work Environment

Consistent with the theoretical arguments laid out above regarding attitude formation and workplace socialization, public managers' perceptions of their current jobs and work environments are likely to affect their sector perceptions. The red tape measure used here originates from prior study to differentiate public from private sector managers.

“Red tape hypothesis” (H3): The higher the perceived level of red tape in one's current public sector job, the more likely will the private sector be perceived as superior to the public sector on the four dimensions of comparison.

The perception of organizational rules and procedures as burdensome and/or dated is one of the classic distinctions with which public and private sector managers have been compared (Bozeman, 2000; Buchanan, 1974). Such perceptions may result in a general “grass is greener” propensity to devalue one's current public sector workplace in favor of the private sector. The underlying rationale is general, not pertaining just to red tape. The more negatively one perceives his current workplace, the more likely it is that an alternative could be evaluated higher. Since the presence of red tape in public organizations – defined as rules and regulations that entail compliance burden without contributing to organizational goals (Bozeman, 2000) – is one of the important dimensions according to which public and private sectors differ, it is likely that inter-organizational variations in perceived red tape by public managers will also affect their perceptions of the public versus the private sector.

Per the same rationale, measures of additional perceptions of various characteristics of the current workplace that map closely to some of the dimensions of sector perceptions are used as dependent variables. Specifically, individuals are likely to generalize and build their sector perceptions by at least partially extrapolating from their experiences on their current jobs. The survey allowed for matching perceptual measures (for the current job) to two dimensions of sector comparisons - the extent to which their current public sector workaday environs are conducive to managerial
autonomy and employee creativity.

For the dependent variable comparing perceived worker innovativeness in the public and private sectors:

“Worker innovativeness hypothesis” (H4): The higher the perceived level of innovativeness of the current public sector organization, all else equal, the less likely will private sector employees be perceived as “more innovative” when compared to public sector employees.

To test this hypothesis a survey item asking respondents to evaluate, on a 4-point Likert scale, the statement “Innovation is one of the most important values in this organization.” is used.

For the dependent variable comparing perceived managerial autonomy in the public and private sectors:

“Managerial autonomy hypothesis” (H5): The greater the perceived authority in one’s current public sector job, the less likely will private sector managers be perceived as having greater work autonomy than public sector managers.

To capture this perception of current workplace context, a survey item asking respondents to evaluate the statement “I do not have enough authority to determine how to get my job done” on a 4-point Likert scale is used.

Controlling for Gender and Ethnicity

And for the variables measuring perceived opportunity for women and minorities:

“Gender hypothesis” (H6): Being female, all else equal, is associated with less favorable perceptions of the private sector when compared to the public sector.

“Ethnicity hypothesis” (H7): Being non-white, all else equal, is associated with less favorable perceptions of the private sector when compared to the public sector.

There is a general perception that affirmative action has ensured women and minorities greater opportunities for hiring and promotion in the public sector when compared to the private sector, though this does not mean that barriers in the public sector have ceased to exist (Reid et al., 2003). Studies of the salary gap between white male workers and women and/or minority workers partially confirm this perception, with the gap being smaller in the public sector than the private sector (Asher & Popkin, 1984; Lewis, 1998; Perloff & Wachter, 1984; Smith 1977). If so, the perceptions of women and minorities should reflect these advantages in their assessment of the public sector as having more opportunities for women and minorities.

But this reasoning may not necessarily hold in all circumstances. For example, this study’s sample, which is comprised of public servants in pay grades that imply managerial, professional, and/or technical responsibilities, excludes public servants in lower grades who represent the majority of the public sector workforce. Managerial positions in the public sector have been demonstrated to be held predominantly by white males (Steinberg et al. 1990). Therefore, there may be no perceived differences regarding the opportunities afforded women and minorities in the public versus the private sectors amongst women and/or minority respondents and white male respondents.

The analyses below account for additional control variables. Mentioned above, the models control for time effects, specifically public managers’ length of tenure in their current jobs. We also control for respondent age, the type of agency the respondent is currently working in, whether the respondent works for the state of Georgia or for Illinois, and for public service motivation. The latter is operationalized by respondent indication of degree of importance (on a Likert-type scale) of “ability to serve the public interest” in the decision to take one’s current, public sector job.

RESULTS

Since the dependent variables are categorical, the appropriate estimation technique is multinomial logit. The base outcome is that the public sector is perceived as superior to the private sector on the dimension measured. Therefore, in the regression outputs, positive (and statistically significant) estimates represent an increase in the likelihood of perceiving the private sector as “more conducive” to managerial autonomy, worker talent, worker innovativeness, opportunities for women, or opportunities for minorities – relative to the public sector.
Effect of Last Job Being in the Private Sector

Regarding respondents’ “immediate” work experience in the private sector, H1 is supported for three dimensions of sector perceptions (see Table 3). If the respondent’s last job was in the private sector, she is more likely to perceive the private sector as having more talented and innovative workers than the public sector. Positive effects were also found for perceptions of managerial autonomy, indicating perceived private sector superiority for this dimension of public-private sector differences. Having had one’s last job in the private sector does not affect the perceived opportunities for women and minorities across the sectors.

Effect of Private Sector Job Experience that was Two or More Jobs Ago

The positive effect of private sector work experience on public managers’ perceptions of the private sector (i.e., as “more conducive” than the public sector) wanes with public sector experience. In the second set of regression models (see Table 4), a binary variable indicates that respondents’ private sector work experience, if any, was not in their last job but rather earlier in their careers, at least two or more jobs preceding their current public sector jobs. Also, respondents whose last job was in the private sector are excluded from the analysis to ensure the comparison of individuals with no private sector job experience to individuals with less immediate (in terms of quantity of jobs, not time) private sector experience. Accordingly, these models include respondents who have no private sector work experience or who have had at least one public sector job between their private sector job and their current public sector job. Private sector work experience that was two or more jobs ago has no statistically discernible effect on any of the sector perception dimensions.

Effect of Number of Private Sector Jobs

The above regression models establish a generally positive effect of private sector work experience on holding sector perceptions that favor the private sector, when that experience is relatively “immediate,” just a single job ago. To reinforce the plausibility of the ideas about career history, workplace socialization, and sector perceptions, in addition to the above regression models, the scenario in which private sector work experience was not a one-shot experience, but rather one that spans multiple positions in private companies is considered.

Next, the ideas about the impact of private sector work experience and workplace socialization on sector perceptions are tested by accounting for the number of positions a public manager has occupied in the private sector. Per H2, the expectation is that perceptions favoring the private sector over the public sector to be more likely as the number of private sector positions held increases. To tease out any such additional detail regarding the effects of private sector work experience, cross-tabulations and Chi-square tests are used to present a descriptive depiction of variation of sector perceptions relative to the number of private sector jobs held by respondents, for the dimensions of sector comparisons for which the models in Table 3 where private sector experience had statistically significant effect.

The results provide mixed support regarding the effects of “degree” or “extent” of exposure to the private sector (at least in terms of number of positions held) on sector perceptions, with some of the positive private sector perceptions amplified with increasing exposure to private sector, and some weakened. Table 5 presents the results for the dimensions of sector perceptions for which private sector work experience had a statistically discernible impact.

Specifically, the more private sector jobs an individual has had, the more likely is he to agree that in the private sector “persons doing similar jobs are more talented.” However, as number of private sector jobs increases, the less likely are public managers to perceive the private sector as being conducive to more managerial autonomy when compared to the public sector. Individuals with three private sector jobs were, on average, less likely to assess the private sector as having more managerial autonomy than the public sector when compared to the perceptions of respondents with no private sector experience at all. Perhaps with increased work experience across the sectors, stereotypes about sectoral differences are invalidated (Rainey & Bozeman, 2000).

Effects of Perceptions of and Attitudes toward Current Job

Overall, the evidence suggests that perceived characteristics of one’s current job shape sector perceptions as well. Consistent with the theory used for this analysis, this implies that individuals tend to build their attitudes and opinions in the context of their own experiences in a particular work environment, present as well as past, from which
Table 3
Last job in the Private Sector. Multinomial logit regression results (n=759). Base outcome: public sector. Results for “no difference” not presented.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last job was in the private sector</td>
<td>0.558*</td>
<td>0.761***</td>
<td>0.620*</td>
<td>0.168</td>
<td>0.085</td>
</tr>
<tr>
<td></td>
<td>(0.338)</td>
<td>(0.270)</td>
<td>(0.333)</td>
<td>(0.355)</td>
<td>(0.469)</td>
</tr>
<tr>
<td>The primary responsibility of the current job is managerial</td>
<td>0.207</td>
<td>-0.403**</td>
<td>-0.396**</td>
<td>-0.149</td>
<td>-0.035</td>
</tr>
<tr>
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<td>(0.204)</td>
<td>(0.185)</td>
<td>(0.199)</td>
<td>(0.253)</td>
<td>(0.332)</td>
</tr>
<tr>
<td>Perceived level of organizational red tape</td>
<td>0.097**</td>
<td>0.178***</td>
<td>0.101**</td>
<td>0.198***</td>
<td>0.286***</td>
</tr>
<tr>
<td></td>
<td>(0.048)</td>
<td>(0.046)</td>
<td>(0.045)</td>
<td>(0.067)</td>
<td>(0.095)</td>
</tr>
<tr>
<td>Number of years on current job</td>
<td>-0.030*</td>
<td>-0.034**</td>
<td>-0.009</td>
<td>0.028</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td>(0.018)</td>
<td>(0.016)</td>
<td>(0.017)</td>
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<td>(0.031)</td>
</tr>
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<td>Male</td>
<td>0.320</td>
<td>0.622***</td>
<td>0.605***</td>
<td>-0.244</td>
<td>0.118</td>
</tr>
<tr>
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<td>(0.184)</td>
<td>(0.190)</td>
<td>(0.259)</td>
<td>(0.338)</td>
</tr>
<tr>
<td>Minority</td>
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<td>0.418***</td>
<td>0.228</td>
<td>0.471</td>
<td>0.964***</td>
</tr>
<tr>
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<td>(0.225)</td>
<td>(0.235)</td>
<td>(0.307)</td>
<td>(0.370)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.016</td>
<td>0.007</td>
<td>-0.009</td>
<td>0.003</td>
<td>0.023</td>
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<tr>
<td></td>
<td>(0.013)</td>
<td>(0.012)</td>
<td>(0.012)</td>
<td>(0.016)</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Ability to serve the public interest</td>
<td>0.135</td>
<td>-0.643***</td>
<td>-0.581**</td>
<td>0.572</td>
<td>0.253</td>
</tr>
<tr>
<td>important motivation in accepting</td>
<td>(0.276)</td>
<td>(0.226)</td>
<td>(0.281)</td>
<td>(0.360)</td>
<td>(0.464)</td>
</tr>
<tr>
<td>current job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency type of current job: health and</td>
<td>0.089</td>
<td>0.260</td>
<td>0.346</td>
<td>0.109</td>
<td>0.189</td>
</tr>
<tr>
<td>social services</td>
<td>(0.375)</td>
<td>(0.326)</td>
<td>(0.338)</td>
<td>(0.506)</td>
<td>(0.640)</td>
</tr>
<tr>
<td>Agency type of current job: criminal</td>
<td>-0.012</td>
<td>0.491</td>
<td>0.399</td>
<td>0.783</td>
<td>0.565</td>
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<td>justice</td>
<td>(0.416)</td>
<td>(0.364)</td>
<td>(0.371)</td>
<td>(0.542)</td>
<td>(0.684)</td>
</tr>
<tr>
<td>Agency type of current job: natural</td>
<td>-0.759*</td>
<td>0.158</td>
<td>0.066</td>
<td>0.060</td>
<td>0.108</td>
</tr>
<tr>
<td>resources and transportation</td>
<td>(0.392)</td>
<td>(0.351)</td>
<td>(0.360)</td>
<td>(0.530)</td>
<td>(0.670)</td>
</tr>
<tr>
<td>Agency type of current job: economic</td>
<td>0.150</td>
<td>0.682*</td>
<td>0.359</td>
<td>-0.005</td>
<td>-0.779</td>
</tr>
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<td>development and regulation</td>
<td>(0.424)</td>
<td>(0.363)</td>
<td>(0.381)</td>
<td>(0.558)</td>
<td>(0.840)</td>
</tr>
<tr>
<td>First job captured in the survey</td>
<td>0.001</td>
<td>0.123</td>
<td>0.087</td>
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<td>0.275</td>
</tr>
<tr>
<td></td>
<td>(0.208)</td>
<td>(0.188)</td>
<td>(0.196)</td>
<td>(0.267)</td>
<td>(0.345)</td>
</tr>
<tr>
<td>State of Georgia resident</td>
<td>0.183</td>
<td>-0.198</td>
<td>0.134</td>
<td>0.132</td>
<td>0.376</td>
</tr>
<tr>
<td></td>
<td>(0.214)</td>
<td>(0.193)</td>
<td>(0.203)</td>
<td>(0.270)</td>
<td>(0.357)</td>
</tr>
<tr>
<td>All in all, I am satisfied with my job</td>
<td>-0.175</td>
<td>-0.054</td>
<td>-0.050</td>
<td>0.035</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(0.141)</td>
<td>(0.115)</td>
<td>(0.135)</td>
<td>(0.159)</td>
<td>(0.203)</td>
</tr>
<tr>
<td>I do not have enough authority to</td>
<td>0.142</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>determine how to get my job done</td>
<td>(0.109)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation is one of the most important</td>
<td></td>
<td></td>
<td>-0.449***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>values in this organization</td>
<td></td>
<td></td>
<td>(0.121)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.127</td>
<td>-1.642**</td>
<td>1.835**</td>
<td>-3.344***</td>
<td>-5.583***</td>
</tr>
<tr>
<td></td>
<td>(0.970)</td>
<td>(0.827)</td>
<td>(0.895)</td>
<td>(1.190)</td>
<td>(1.590)</td>
</tr>
<tr>
<td>Observations</td>
<td>700</td>
<td>700</td>
<td>699</td>
<td>700</td>
<td>700</td>
</tr>
</tbody>
</table>

Note: Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%
Table 4
Private Sector Work Experience Two or More Jobs Ago. Multinomial logit regression results (n=759). Base outcome: public sector. Results for “no difference” not presented.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any one or more of the prior 3 jobs in the private sector</td>
<td>0.219</td>
<td>-0.058</td>
<td>0.187</td>
<td>-0.192</td>
<td>0.598</td>
</tr>
<tr>
<td></td>
<td>(0.262)</td>
<td>(0.241)</td>
<td>(0.245)</td>
<td>(0.356)</td>
<td>(0.426)</td>
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<td>The primary responsibility of the current job is managerial</td>
<td>0.203</td>
<td>-0.459**</td>
<td>-0.323</td>
<td>-0.169</td>
<td>-0.096</td>
</tr>
<tr>
<td></td>
<td>(0.217)</td>
<td>(0.202)</td>
<td>(0.211)</td>
<td>(0.278)</td>
<td>(0.361)</td>
</tr>
<tr>
<td>Perceived level of organizational red tape</td>
<td>0.107**</td>
<td>0.205***</td>
<td>0.129***</td>
<td>0.224***</td>
<td>0.265***</td>
</tr>
<tr>
<td></td>
<td>(0.051)</td>
<td>(0.051)</td>
<td>(0.048)</td>
<td>(0.075)</td>
<td>(0.102)</td>
</tr>
<tr>
<td>Number of years on current job</td>
<td>-0.034*</td>
<td>-0.035*</td>
<td>-0.011</td>
<td>0.038</td>
<td>0.044</td>
</tr>
<tr>
<td></td>
<td>(0.019)</td>
<td>(0.018)</td>
<td>(0.018)</td>
<td>(0.026)</td>
<td>(0.034)</td>
</tr>
<tr>
<td>Male</td>
<td>0.265</td>
<td>0.630***</td>
<td>0.497**</td>
<td>-0.413</td>
<td>0.020</td>
</tr>
<tr>
<td></td>
<td>(0.213)</td>
<td>(0.198)</td>
<td>(0.197)</td>
<td>(0.285)</td>
<td>(0.370)</td>
</tr>
<tr>
<td>Minority</td>
<td>-0.217</td>
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<td>0.209</td>
<td>0.336</td>
<td>1.016***</td>
</tr>
<tr>
<td></td>
<td>(0.257)</td>
<td>(0.241)</td>
<td>(0.243)</td>
<td>(0.336)</td>
<td>(0.394)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.010</td>
<td>0.011</td>
<td>-0.005</td>
<td>0.007</td>
<td>0.025</td>
</tr>
<tr>
<td></td>
<td>(0.014)</td>
<td>(0.013)</td>
<td>(0.013)</td>
<td>(0.018)</td>
<td>(0.024)</td>
</tr>
<tr>
<td>Ability to serve the public interest important motivation in accepting current job</td>
<td>0.187</td>
<td>-0.862***</td>
<td>-0.659**</td>
<td>0.351</td>
<td>-0.126</td>
</tr>
<tr>
<td></td>
<td>(0.302)</td>
<td>(0.251)</td>
<td>(0.306)</td>
<td>(0.405)</td>
<td>(0.525)</td>
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<td>Agency type of current job: health and social services</td>
<td>0.281</td>
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<td>0.618</td>
</tr>
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<td>(0.364)</td>
<td>(0.357)</td>
<td>(0.619)</td>
<td>(0.830)</td>
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<td>Agency type of current job: criminal justice</td>
<td>0.137</td>
<td>0.530</td>
<td>0.632</td>
<td>1.279**</td>
<td>1.195</td>
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<td>(0.649)</td>
<td>(0.858)</td>
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<td>Agency type of current job: natural resources and transportation</td>
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<td>(0.417)</td>
<td>(0.387)</td>
<td>(0.380)</td>
<td>(0.637)</td>
<td>(0.847)</td>
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<td>Agency type of current job: economic development and regulation</td>
<td>0.202</td>
<td>0.689*</td>
<td>0.524</td>
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<td>(0.408)</td>
<td>(0.404)</td>
<td>(0.674)</td>
<td>(1.071)</td>
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<tr>
<td>State of Georgia resident</td>
<td>0.307</td>
<td>-0.199</td>
<td>0.179</td>
<td>0.172</td>
<td>0.420</td>
</tr>
<tr>
<td></td>
<td>(0.228)</td>
<td>(0.210)</td>
<td>(0.214)</td>
<td>(0.296)</td>
<td>(0.394)</td>
</tr>
<tr>
<td>First job captured in the survey</td>
<td>0.119</td>
<td>0.122</td>
<td>0.087</td>
<td>-0.097</td>
<td>0.217</td>
</tr>
<tr>
<td></td>
<td>(0.222)</td>
<td>(0.203)</td>
<td>(0.204)</td>
<td>(0.291)</td>
<td>(0.376)</td>
</tr>
<tr>
<td>All in all, I am satisfied with my job</td>
<td>-0.132</td>
<td>0.035</td>
<td>-0.035</td>
<td>0.028</td>
<td>0.010</td>
</tr>
<tr>
<td></td>
<td>(0.148)</td>
<td>(0.126)</td>
<td>(0.141)</td>
<td>(0.178)</td>
<td>(0.230)</td>
</tr>
<tr>
<td>I do not have enough authority to determine how to get my job done</td>
<td>0.172</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.116)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation is one of the most important values in this organization</td>
<td></td>
<td>-0.406***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.127)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.275</td>
<td>-2.095**</td>
<td>1.125</td>
<td>-3.884***</td>
<td>-5.961***</td>
</tr>
<tr>
<td></td>
<td>(1.031)</td>
<td>(0.917)</td>
<td>(0.947)</td>
<td>(1.365)</td>
<td>(1.835)</td>
</tr>
<tr>
<td>Observations</td>
<td>618</td>
<td>619</td>
<td>617</td>
<td>618</td>
<td>618</td>
</tr>
</tbody>
</table>

*Note. Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%
they extrapolate to rationalize general sector differences no matter if they have worked in both the public and private sectors. Most notable, when respondents perceived higher levels of organizational red tape in their current job, they were more likely to perceive the private sector as superior to the public sector on all of the sector comparison dimensions (thereby confirming H3).

Regarding the current job perceptions that “match” the sector perception dependent variables (H4-H7), support is mixed. The only statistically significant finding was for respondents’ perceived innovativeness of their current workplaces. If the respondent perceives her current public sector employer as valuing and emphasizing worker innovation, she is less likely to perceive the private sector as superior to the public in terms of employee innovativeness (H4).

**Effects of Public Service Motivation and Other Controls**

For the control variables, public service motivation (approximated here by an item indicating that “ability to serve the public interest” was important to respondents’ decisions to accept offers for their current jobs) affects sector perceptions. Public managers who considered the public interest in accepting their current job were less likely to agree that the private sector is superior to the public sector in terms of worker talent. Though this relationship is not surprising, it does not explain directly why public service motivation would be associated with devaluing the talent of private sector employees. Last, respondents in managerial occupations were more reluc-

---

**Table 5**  
*Sector Perceptions by Number of Private Sector Jobs*

<table>
<thead>
<tr>
<th>Managers have more work autonomy</th>
<th>Number of Private Sector Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Public sector</td>
<td>24.53%</td>
</tr>
<tr>
<td>Private sector</td>
<td>60.3%</td>
</tr>
<tr>
<td>No difference</td>
<td>15.17%</td>
</tr>
</tbody>
</table>

Chi-squared=11.38, p=0.077

<table>
<thead>
<tr>
<th>Persons doing similar jobs are more talented</th>
<th>Number of Private Sector Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Public sector</td>
<td>57.41%</td>
</tr>
<tr>
<td>Private sector</td>
<td>32.83%</td>
</tr>
<tr>
<td>No difference</td>
<td>9.76%</td>
</tr>
</tbody>
</table>

Chi-squared=13.39, p=0.037

<table>
<thead>
<tr>
<th>Employees are more innovative</th>
<th>Number of Private Sector Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Public sector</td>
<td>31.21%</td>
</tr>
<tr>
<td>Private sector</td>
<td>62.06%</td>
</tr>
<tr>
<td>No difference</td>
<td>6.73%</td>
</tr>
</tbody>
</table>

Chi-squared=12.59, p=0.05
tant (relative to their peers in technical or professional occupations) to assess private sector employees as superior to the public sector employees in terms of innovativeness as well as talent.

**DISCUSSION**

The results above generally support the theory and hypotheses advanced. Specifically, having a private sector job immediately before the current public sector job was associated with perceiving the private sector more favorably, while private sector work experience that was 2 or more jobs ago had no statistically discernible effect on any of the sector perception dimensions. Consistent with the theories of attitude change and workplace socialization, this suggests that as the normative and temporal “distance” between private sector job experience and one’s current public sector career increases, the residual internalized norms and expectations accrued from private sector work experience fade, and are perhaps supplanted by public sector norms and expectations. This is consistent with studies emphasizing the length of time spent in past jobs. Reichers and colleagues (1994) demonstrate the immediacy and duration of previous work experiences to correlate with the favorableness of worker attitudes towards one’s current job. While “converts” who have had recent job experiences quite different than those in their current jobs have negative attitudes about contemporaneous work, “initiates” with some but not extensive career experiences similar to their current occupation and “veterans” who have worked for an extended period in their current position or in positions quite similar to their current ones do not demonstrate such negativity. In contrast to workers whose last job was in the private sector, workers with relatively prolonged public sector work experience do not perceive differences between the sectors in terms of talent, innovativeness, or autonomy. This finding is in indirect support of the workplace socialization and attitude formation rationales articulated above, as it suggests that favorable perception of the private sector by employees with recent private sector experience is due not necessarily to inherent differences between sectors, but rather to inconsistencies between relatively new experiences in the public sector as evaluated against pre-existing and not-yet-adjusted expectations and attitudes.

These results are consistent with the framing public managers’ sector perceptions as a function of workplace socialization, which is likely a dynamic process that results in changing perceptions and attitudes over time. The regression results imply that an “imprint” indeed is made by past work environments, but that this impression, while it may be evident early on after a job change, does not last as current career experiences accrue, perhaps due to socialization into the current work environment. For sector perceptions, this means that public managers with private sector work experience perceive more favorably the private sector early on in their careers as public servants, but that sector switchers eventually come to perceive the public and private sectors in the same way as career bureaucrats who have never worked in the private sector.

These results are also consistent with early findings regarding the socialization of public managers, with relatively new managers (in their first few years on the job) experiencing anxiety regarding their fit within and commitment to their work organizations when compared to their longer-tenured counterparts (Buchanan, 1974). However, the emphasis here on the impact of variation across past career trajectories does not agree with the notion that relatively new managers constitute “tabula rasa” (Brim, 1968; Buchanan, 1974; Parsons, 1951). That relatively “immediate” private sector work experience affects sector perceptions (revisit Table 3) suggests that individuals bring to their public sector careers different notions about their careers and about the sectors. In this way, the findings align more closely with more recent empirical studies of workplace socialization acknowledging variation in the experiences and expectations of new workers (Reichers et al., 1994).

It is important to note that this process is not necessarily reflective of any actual differences (e.g., structural, environmental) between the public and private sectors because, by design, the reported differences originate primarily through transitions and adjustments between different career contexts, rather than in any actual measurement of such differences. However, the process implies the existence of particular differences and reinforces extant study focused on structural and environmental comparisons of public and private organizations. For instance, centralized control and fragmented governance structures often are credited with deterring or at least inhibiting innovative and autonomous behaviors in public sector organizations (Rainey 1997, p. 291), while private firms have been demonstrated to value these behaviors (Peters & Watermans, 1982; Thompson 1967). The results for having worked in the private sector immediately prior to one’s current public sector employment (Table 3) supports this characterization,
though – consistent with the process of workplace socialization – the effect does not exist when using the more general indicator of private sector work experience (Table 4). That public managers with private sector work experiences perceive the public and private sectors consistently and differently from managers without such experiences implies an actual distinction between the general structures and contexts of each sector.

CONCLUSIONS

The results in this paper suggest public vs. private sector perceptions to be moderated by past and present work experiences. We explain the effects of past work experiences in the private sector and of current public sector workday attitudes and perceptions on public managers’ sector perceptions in terms of the related processes of workplace socialization and attitude formation and change. These processes see occupational norms and expectations and experiences, both past and present, amalgamating in each individual worker to render a unique set of values conducive to favoring one sector over another. These processes are “sector neutral,” emphasizing the extent to which past and present work experiences “match,” with “mismatches,” leading individuals to perceive their prior sector of occupation more favorably – though this effect wanes with prolonged exposure to one’s current (in this case – the public) sector. This consideration of past work experiences in addition to contemporaneous factors in a discussion of antecedents to public managers’ workday attitudes provides an important, and overdue, linkage between public administration research and formal theories of attitude formation and change.

We have been able to test this theory for workers who have switched from the private sector to public service. Generally, when public managers have had private sector work experience, they tend to perceive the private sector more favorably than the public sector, across multiple comparative dimensions, while controlling for important personal characteristics and attitudes towards contemporaneous work environment, including public service motivation.

Throughout the analysis, it was maintained that sector perceptions are not necessarily reflective of any structural or environmental differences between the public and private sectors. Though sector perceptions are subjective phenomena, consistency in these perceptions when controlling individual-level variation in career trajectory, attitudes towards and perceptions of contemporaneous work environments, work motivation, and personal characteristics may indeed be implicative of actual differences across the sectors. That public managers with private sector work experiences perceive the opportunities and constraints of the public and private sectors consistently and differently from managers without such experiences implies a distinction between the general structures and contexts of each sector. This suggests that sectoral contexts represent different “stimuli and phenomena that surround and thus exist in the environment external to the individuals, most often at a different level of analysis” (Mowday & Sutton, 1993, p. 198). Accordingly, the public and private sectors may pose for individual workers unique sets of “opportunities and constraints” that affect sector perceptions in ways dependent on contextual attributes. However, that the results in this study demonstrate a waning of relatively favorable perceptions of the private sector as private to public switchers become further removed from their private sector work experiences suggests, alternatively, that some of the usual stereotypes differentiating the sectors may be precisely that – widely held assumptions not necessarily corresponding to actual differences. Else, sector perceptions may not change so readily.

This analysis of sector perceptions is important for reasons other than speculation about distinctions between the public and private sectors. The recent job market has been characterized (both empirically and rhetorically) as a “talent war” between the public and private sectors – and one which the public sector is losing (Light, 2002), at least until the recent recession. Accordingly, how the sectors are perceived by their respective workforces and by new entries into the job market (e.g., recent college graduates) becomes, by definition, an important human resources management concern. Moreover, previous study suggests that sector perceptions, accurate or not, correlate with negative work attitudes and also with negative behaviors such as turnover (West & Rushton, 1989).

Our explanation of how sector perceptions develop suggests that workplace experiences can be structured to influence these perceptions. We are not suggesting that public organizations engage in sector-touting propaganda to increase worker commitment and decrease turnover, though perceived organizational efficacy has been demonstrated to have desirable effects on worker attitudes (Sundquist & Boardman, 2008). Rather, public organizations may wish to consider engaging in “socialization tactics” (Ashforth et al., 1998) to ensure that public servants with divergent backgrounds and experiences engage in a common set of experiences that contribute to a common understanding of the
rules and procedures and cultures of a particular organization, no matter the sector. Such tactics may even be as important as the acknowledgement of the diverse motivations and incentives that operate within organizations (Barnard, 1938) in that they stand to lessen the possibility that sector switchers experiencing substantial inconsistencies between their previous and contemporaneous work experiences will re-evaluate their motivation to pursue careers in public service. In this sense, sector perceptions may be really no different than other heuristics individuals use to adopt behavioral and decision making strategies. The findings in this paper suggest that such heuristics may come into play before socialization occurs for sector switchers. If human resources managers proactively socialize new workers (especially “converts” [Ashforth et al. 1998]) with appropriate information and clear articulation of expectations, it is plausible that public agencies will enhance their ability to retain private sector employees in their ranks.

NOTES

1. Unfortunately, the data used for this paper do not include observations of individuals switching from public sector careers to private sector jobs. Even if the data did include these “inverse” observations, the theoretical argument that workers must be socialized into their current workplaces and that the socialization process takes time would remain unchanged. Therefore, for the “inverse” observations that the data do not include, one would expect that private sector workers with past experience in public sector jobs to perceive the public sector as more conducive than the private sector to gratification, worker talent, worker innovativeness, managerial autonomy, and opportunities for women and ethnic minorities – at least until they have spent a sufficient amount of time in the private sector to erode and eventually reverse these perceptions.

2. Feeney (2009) was important to the ideas developed in this study. The paper is discussed in a subsequent section of this paper.

3. Indication of self-employment (31 jobs for the entire data set) was removed from the data to facilitate comparison of respondents with private sector work experience to those with none. That is, the data and analysis only consider private sector job experiences that were full time and have taken place in a private sector organization (e.g. a company).

4. That only two states are examined is of course a limitation of the paper, as is the fact that only state-level employees are examined. For instance, one would expect federal employees to be working under somewhat different system constraints and to have different structural factors influencing career choice and perceptions of past and present work environments. Moreover, needed is longitudinal data rich enough to control for cohort effects, including data for sector switchers who have moved from the public to the private sector in addition to data for the switchers examined in this paper, who have moved from the private sector to the public. However, even with these limitations, the findings speak at least provisionally to the importance of considering past experiences when explaining current perceptions and attitudes. Such consideration is especially important when assessing sector perceptions and ramifications for workforce retention.

5. However, sector distinctions among organizations based on relative levels of exposure to political authority versus economic authority (i.e., “publicness,” Bozeman 1987) instead of legal status could confound these findings. For instance, private companies dependent solely on government contracts may be more similar to government agencies in their valuation of workplace innovativeness and autonomy when compared to private companies without a heavy reliance on government.

6. Discussion of prior empirical study of sector differences and of sector perceptions is reserved for the hypotheses.

7. If the NASP III data set included respondents currently working in the private sector with prior work experience as public servants, the logic would be the same – with past public sector experience correlating with perceiving the public sector as more favorable along these dimensions. Accordingly, the theories employed in this paper have borrowed from studies of applied and occupational psychology, is “sector neutral.”
8. The study sample is representative for the public managers in Georgia and Illinois from agencies from all service areas and state agency types (not including employees at technical colleges, commissions, authorities, the office of the governor, and institutions from the judicial or legislative branch, and any institutions with less than 20 employees). The population of managers in Georgia was drawn from the Georgia Department of Audits comprehensive list of state employees who were on state agency payrolls during the 2003/2004 fiscal year. The population included any job titles coded as “director” “coordinator” “officials or manager” and “professionals” under the pay grade of 017 and all individuals with a pay grade of 017 or higher. The resulting population included 6,164 Georgia managers. The population of managers in Illinois was developed through a Freedom of Information Act request for a list of all state employees designated as either “senior public service administrators” or “public service administrators.” This list included information on 5,461 state employees, including name, agency, and county. From these populations, a random sample of 1,849 managers was drawn (The study began with a sample of 2000 but was eventually reduced to 1849 (912 Georgia, 937 Illinois) because of respondents who had retired (16 cases) or were no longer working for the state (135 cases).

9. Estimates for the “no difference” outcomes (i.e. the estimates of how more or less likely it is that respondents to give the “no difference” response versus “public sector is better”), although computed along with the estimates for the “private sector is better outcome”, are omitted from the output table for parsimony, and more importantly - because this does not provide meaningful information in the context of the hypotheses outlined above. Specifically, the research questions asked pertain to variables that could explain under what circumstances the private sector could be perceived as superior to the public sector on a number of dimensions. Factors explaining the likelihood that the “no difference” alternative is chose versus the “public sector is better alternative” have no apparent connection with the hypotheses.

10. The authors also estimated a model featuring the variables “last job was in the private sector” and “any one or more of the jobs preceding the last job was in the private sector” into a single model. In this model (not presented here), the parameter estimates on all independent variables were practically the same. Specifically, last job being in the private sector has a positive influence on the various sector perceptions, while private sector jobs preceding the last job of the respondent had no statistically discernible effect. Although the parameter estimates are practically the same, the results are presented in two sets of models for better consistency with the proposed reasoning and also because of ease of interpretation and possible multicol-linearity concerns.

REFERENCES


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APPENDIX

NASP III survey items

The NASP III survey was designed using Dillman’s (2000) “tailor design method,” and the survey went through multiple iterations by a panel of senior public administration scholars experienced in employing the Dillman method for survey design. (See http://www.uga.edu/padp/nasphome.htm for a copy of the survey and other information about the project.) For the independent variables indicating career trajectory, the NASP III survey asked respondents to fill out the “boxes” for their current job and previous three jobs (totaling four jobs).

Figure 1. Career Trajectory Survey Questions

<table>
<thead>
<tr>
<th>Box 2: The job you held immediately before your current job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization type</td>
</tr>
<tr>
<td>Public (government)</td>
</tr>
<tr>
<td>Private company</td>
</tr>
<tr>
<td>Non-profit organization</td>
</tr>
<tr>
<td>Different job but same organization as current one</td>
</tr>
<tr>
<td>Agency or Company:</td>
</tr>
<tr>
<td>Year started:</td>
</tr>
</tbody>
</table>

Each box on the survey represents a single job. Respondents “worked backwards,” filling out the first box for their current public sector job, the second box (shown) for the job held immediately prior, and so on. If respondents changed jobs within the same organization, they were instructed to use separate boxes for each job. If respondents had not held four positions, they were instructed to leave the extra boxes blank and continue to the next section. Important, the survey item also solicited the name of the employing organization with which to verify the sector classification.

For the dependent variables indicating sector perceptions, the following item was employed.

Figure 2. Sector Perceptions Survey Questions

9. In this section we ask your perception of work in the public and business sectors. Please answer these questions even if you have stayed in the same sector for your entire career. [Please check only ONE box in each row]

<table>
<thead>
<tr>
<th>Work is more personally gratifying</th>
<th>Public Sector</th>
<th>Business Sector</th>
<th>No Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers have more work autonomy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons doing similar jobs are more talented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women have more opportunity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minorities have more opportunity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees are more creative and innovative</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EFFECTS OF PRESENCE, COPRESENCE, AND FLOW ON LEARNING OUTCOMES IN 3D LEARNING SPACES

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The level of satisfaction and effectiveness of 3D virtual learning environments were examined. Additionally, 3D virtual learning environments were compared with face-to-face learning environments. Students that experienced higher levels of flow and presence also experienced more satisfaction but not necessarily more effectiveness with 3D virtual learning environments. There were no significant differences between satisfaction and effectiveness of 3D virtual learning environments and face-to-face environments. These findings suggest that 3D virtual learning environments can be made to provide high levels of learning satisfaction. Additionally, these findings suggest that 3D virtual learning environments may be a viable delivery method for instruction and training because they compare favorably with face-to-face learning environments.

Keywords: virtual learning, virtual worlds, presence, copresence, flow

Technology mediated learning (TML) (commonly referred to as e-learning) provides a way for people to learn at their own time, pace, and location. Individuals often can study topics of their own choosing and customize the depth of the learning. In some instances, learners interact only with the technology and do not actively work with other people. In other instances, learners utilize environments that are representative of physical classrooms. These settings allow individuals to interact with the class instructor and other learners. Individuals likely do not give thought to how learning outcomes may be influenced in different TML environments.

Unfortunately TML may result in less effective learning and less satisfaction with the learning. If learners experience less effective learning and less satisfaction, they may choose to abandon TML systems and choose a traditional learning environment. A further issue, moreover, is that in many instances, learners may not have a choice of the type of learning system they use and must learn through TML systems. Typically, people that do not self-select into e-learning courses are not as satisfied with the learning experience, and they do not find the learning to be as effective as face-to-face learning (Piccoli, Ahmad, & Ives, 2001; Sitzman, Kraiger, Stewart, & Wisher, 2006). In order for TML to be successful, all individuals, whether they self-select into e-learning courses or not, should find the learning experience satisfying and effective. Organizations spend a lot of money on TML, over $16 billion in 2006 (Johnson, Hornik, & Salas, 2007); therefore, they expect the e-learning to be effective and satisfying. Additionally, universities are facing increasing enrollments in online courses (Allen & Seaman, 2007), and they also rely on having effective and satisfying TML. For these reasons, there is a continuing need for research that focuses on understanding and improving TML effectiveness and satisfaction.

Over the last several years, there has been an increasing interest in better TML development. Specifically, there has been a focus on virtual learning. Virtual learning encompasses learning systems that provide many resources for
learners to communicate with the instructor and with other learners. These systems are relatively open and are Internet-based (Anohina, 2005). One particularly interesting environment for virtual learning is 3D virtual worlds. These are technology-based environments that allow users to participate in a digital 3D world. When individuals are logged into the virtual world, they can interact with other people inside the virtual world.

Virtual worlds have the potential to overcome some of the challenges of traditional e-learning systems. Because users can see representations of and interact with other learners and instructors, the level of frustration that typically comes from remote learning is likely to be reduced. Also, virtual worlds provide opportunities for learners to become more involved in the learning process and the discussion. This research is intended to help justify and motivate the use of virtual worlds for learning and training by universities and organizations.

Two potentially important concepts that relate to virtual worlds are presence and copresence (Hendaoui & Limayem, 2008). Presence is the sense of actually being in a virtual environment. It is a psychological phenomenon that occurs when individuals focus their attention on a constructed environment and lose consciousness of their external environment (Schubert, Friedmann, & Regenbrecht, 2001). Copresence is the perception of being present in a virtual environment with other people (Schroeder, 2006). Individuals will likely feel greater satisfaction with TML if they perceive that they are present in the learning environment with other learners.

This research addresses three key research questions:

RQ1: How does virtual world learning influence learning satisfaction?
RQ2: How does virtual world learning influence learning effectiveness?
RQ3: How does virtual world learning compare to face-to-face learning in terms of satisfaction and effectiveness?

**BACKGROUND**

Virtual worlds are Web-based, 3D representations of the real world (for a recent review, see Barnes & Mattson, 2008). Users of virtual worlds create 3D characters, called avatars, which they can use to travel throughout the different areas in the world, communicate with other avatars, and perform activities (like driving a car or purchasing virtual clothing for their avatars). With their avatars, users can also perform actions that are similar to those performed by real people; for example, they can walk, run, and perform gestures. Virtual worlds are also a source of virtual commerce because virtual goods and virtual real estate can be bought and sold with credits purchased with real currency. Moreover, some organizations are using virtual worlds for marketing or brand awareness, e.g., Mazda (Barnes & Mattson, 2008). Other uses of virtual worlds include virtual meetings, virtual conferences, virtual recruitment, and virtual collaboration.

Because of the capability of bringing physically distant students virtually near, instructors can use virtual worlds to replicate face-to-face classrooms. Within the virtual environment, instructors can supplement their instruction with slideshows, videos, and other electronic media. There may be additional opportunities for instructors to improve the learning experience by utilizing the virtual world technology to create virtual representations of real-world phenomena or by giving trainees opportunities to practice applying newly acquired knowledge.

In prior research on learning in asynchronous virtual environments, researchers found that students experienced similar learning effectiveness as compared to that of students in face-to-face environments. However, students learning in virtual environments experienced less satisfaction than did those learning in face-to-face settings (Piccoli et al., 2001; Sitzmann et al., 2006). Virtual worlds potentially present an environment that is as satisfying as a classroom environment and may even be more effective.

**THEORETICAL DEVELOPMENT**

Several theories provide information about the effects of virtual worlds that may increase learning satisfaction and effectiveness. In this research, we draw on the presence and copresence literature and on flow in order to support our claims. Presence and copresence have been studied extensively in social virtual environments (e.g., Biocca, 1997; Biocca, Harms, & Burgoon, 2003; Schroeder, 2006; Schubert et al., 2001). Flow has been used to explain why some
activities are more enjoyable and compelling than others (Csikszentmihalyi, 1990). We argue that virtual worlds are a type of virtual environment that are likely to have high degrees of presence, copresence, and flow.

## Presence and Copresence

### Presence.

As virtual technologies have progressed, researchers have studied related issues and implications of these technologies. Much of the research has focused on the concepts of presence and copresence (e.g., Biocca et al., 2003; Schroeder, 2006; Schubert et al., 2001). Presence is a sense of actually being in the virtual world (Shroeder, 2006). When individuals interact with a virtual world, they become stimulated by the experience. As the stimulation increases, they begin to focus their attention toward the interaction with the system, and they lose consciousness of the external environment so that the virtual environment becomes their temporary reality. The perception of presence may be one of the key benefits of 3D virtual worlds. By recreating representations of places and objects, users within virtual worlds can perceive that they are actually interacting with these objects and places.

Presence is related to the concept of immersion. Slater & Wilbur (1997) describe immersion as the extent to which technology can give a user “an inclusive, exclusive, surrounding, and vivid illusion of reality to the senses” (p. 604). Presence, conversely, is the psychological experience that occurs when individuals forget about the outside world and begin to act in the virtual environment as they do in the real world (Slater & Wilbur, 1997). Prior research on the outcomes of presence has focused much on consumer research. Presence has been shown to lead to greater consumer learning (Jiang & Benbasat, 2004; Suh & Lee, 2005) and to influence product beliefs and attitudes (Klien, 2003).

Learners likely perceive themselves as being present in the virtual classroom when they experience high levels of presence; their actions and behavior will be similar to that in the real environment, and their concentration will be focused on the activity taking place in the virtual environment. These experiences should cause individuals to learn more effectively in the virtual environment because of the increase in effort and attention. Furthermore, because higher levels of presence will give learners the perception of being a part of the virtual classroom, they should feel more satisfied with the learning experience.

H1A: The experience of presence will enhance satisfaction with the virtual world learning environment.

H1B: The experience of presence will enhance learning effectiveness in the virtual world learning environment.

### Copresence.

Related to the concept of presence is the concept of copresence. In a way, it is an extension of presence. Copresence relates to the perception of being present in a virtual environment with others (Schroeder, 2006). Perceptions of copresence are on a continuum, and individuals experience different levels of copresence depending on the psychological involvement of the individuals and the amount of realism of the avatars. Human-like characters that are perceived to be driven by intelligences increase the psychological involvement of individuals. This is because people are able to observe and interact with avatars that they perceive to represent other real people (Biocca et al., 2003). This increased psychological involvement contributes to greater perceptions of copresence.

In virtual worlds, most avatars are controlled by actual people. Depending on the psychological involvement of the individual users, this should contribute to perceptions of copresence. Individuals that experience copresence should not feel isolated because they actually perceive that they are in the learning environment with other people. Much of the dissatisfaction that comes from learning in traditional TML environments is the result of isolation and loneliness (Piccoli et al., 2001). By reducing feelings of isolation, virtual worlds will likely contribute to learners feeling more satisfied with the learning experience. Therefore, greater perceptions of copresence should result in greater satisfaction.

H2: The experience of copresence will enhance satisfaction with the virtual world learning environment.

## Flow

People participate in activities because of the rewarding outcomes of those activities. Enjoyment is one potential outcome of an activity. Flow is described as a state of intense pleasure that comes from doing something enjoyable (Agarwal & Karahanna, 2000; Csikszentmihalyi, 1990). Typically people participate in these activities because of the pleasure they derive from it, not the external rewards that result from the activities.

Csikszentmihalyi (1975) originally described six elements of the flow experience. These elements are merging of ac-
tion and awareness, centering of attention, loss of ego, control of action and environment, demands for action and clear feedback, and autotelic nature of flow. Individuals that experience flow while participating in an activity are more likely to experience satisfaction with the activity (Choi, Kim, & Kim, 2007), and they are more likely to repeat the activity (Koufaris, 2002).

Many features of virtual worlds create the potential for learners to experience flow. Some of the elements that must be present for the flow experience to be achieved are control, curiosity, intrinsic interest (Trevino & Webster, 1992; Webster, Trevino, & Ryan; 1993), and telepresence (Novak, Hoffman, & Yung; 1999). Learners in the virtual world have control over the actions and views of their avatars. The virtual world can be perceived as being a game-based learning environment; therefore, users probably will experience some curiosity toward using the system. Users are likely to feel intrinsic motivation toward using the virtual world because they may find it a novel and enjoyable way to learn. Finally, the virtual world learning environment provides opportunities for users to experience telepresence because of the immersive nature of the system. Based on these reasons, we believe that using a virtual world for learning will contribute to learners experiencing flow while learning.

Because the flow experience includes focused attention and high concentration, individuals learn more effectively when they experience flow (see Csikszentmihalyi & LeFevre, 1989). Flow experience has also been found to increase positive attitudes toward learning (Choi et al., 2007).

H3A: The experience of flow will enhance satisfaction with the virtual world learning environment.
H3B: The experience of flow will enhance learning effectiveness in the virtual world learning environment.

Figure 1. Research Model

Based on our predictions that users will experience presence, copresence, and flow in the virtual world learning environment, we believe that individuals learning in a virtual world may experience greater satisfaction and learning effectiveness than do those who are learning in face-to-face classrooms. Furthermore, Webster and Hackley (1997) proposed that greater perceived media richness would lead to greater learning outcomes. Virtual worlds should give learners high perceptions of media richness because of the visual and audio stimuli and the communication capabilities.

H4A: Learners will experience greater satisfaction in the virtual world learning environment than in the face-to-face learning environment.
H4B: Learners will experience greater learning effectiveness in the virtual world learning environment than in the face-to-face learning environment.
METHODOLOGY

In order to test our first three hypotheses, we conducted a class lecture in Second Life, a popular virtual world. To test our fourth hypotheses, we compared learning in the virtual world with learning in a face-to-face classroom.

Participants

The participants were undergraduate students enrolled in an introduction to information systems course at a large university. The course is required of all business students and is open to any student at the university. A total of 53 students participated in the study. All but one of the students were business majors. There were 27 students that received the lecture in Second Life and 26 students that received it in the face-to-face classroom. Students received extra credit for completing a survey at the conclusion of the lectures.

Of the virtual world participants, eight (30%) were female. Some of the students had prior experience with TML courses. Nine (33%) had taken at least one TML course in college. Very few of the students (six or 22%) had previous experience with virtual worlds. Of those students with experience with virtual worlds, only two (33%) had been using virtual worlds for more than three months. The average age of the students in the virtual world group was 21.25. The students in the face-to-face group had an average age of 21.89, and three (12%) were females.

Procedure

Students participating in the lecture in Second Life were assigned to one of two classrooms equipped with computers capable of delivering the lecture in Second Life. The students were provided with headsets that allowed them to audibly communicate with the instructor and the other students. In order to reduce the likelihood of the students exploring Second Life and not focusing on the lecture, the participants were told that they would have time after the lecture to play around in the virtual world. Also, observers monitored the computer labs during the session.

To compare the virtual world learning experience to the face-to-face learning experience, an additional section of the course received the lecture in a face-to-face classroom. The same instructor presented both lectures to the groups. The topic and the instructional methods were the same in both lectures. A quiz on the lecture material was given to the students at the beginning and the end of the lecture. A posttest survey was administered after the lecture to collect students’ responses.

Measures

Learning effectiveness was measured by administering a quiz to the participants before and after the lecture. The difference in scores between the post-quiz and the pre-quiz was taken as the measure for learning effectiveness. Satisfaction was measured using items adapted from Piccoli et al. (2000). To measure presence, we adapted measures from Schubert et al. (2001). Copresence measures were adapted from Bailenson and Yee (2006). We adapted flow measures from Koufaris (2002). Additionally, there are several control variables that are relevant to virtual world learning that we account for. We controlled for computer playfulness and personal innovativeness in the domain of information technology using measures from Agarwal and Karahanna (2000). We also controlled for years in college, virtual world experience, and TML experience.

RESULTS

In order to test the hypotheses, we looked at how presence, copresence, and flow influence learning satisfaction and learning effectiveness. The descriptive information, reliabilities, and correlations are displayed in Table 1. We analyzed the relationships using multiple regression analysis. We ran two models for each learning outcome. The first models contain the regression coefficients for the control variables. The second models include the regression coefficients for the control variables plus the independent variables. The regression results for learning satisfaction and learning effectiveness are displayed in Tables 2 and 3.

Presence did have a significant, positive effect on learning satisfaction; however, it did not have a significant influence on learning effectiveness. Therefore we found support for hypothesis 1A, but not for 1B. Hypothesis 2 was not
supported: copresence did not have a significant effect on satisfaction. Flow had a significant, positive effect on satisfaction, supporting hypothesis 3A. Flow had a non-significant negative effect on learning effectiveness; therefore, hypothesis 3B was not supported.

We conducted an analysis of variance test to determine whether the students learning in the virtual world experienced greater satisfaction and learned more effectively than did those learning in the face-to-face classroom. Table 4 displays the descriptive statistics, and Table 5 displays the ANOVA results. We found no significant differences between the two environments. Therefore, neither hypothesis 4A nor hypothesis 4B was supported.
### Table 3
*Predicting Learning Effectiveness in Virtual Worlds*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1 B</th>
<th>Model 2 B</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Experience</td>
<td>-.193</td>
<td>-.167</td>
</tr>
<tr>
<td>Virtual World Experience</td>
<td>.043</td>
<td>.039</td>
</tr>
<tr>
<td>TML Experience</td>
<td>-.067</td>
<td>.039</td>
</tr>
<tr>
<td>Innovativeness with IT</td>
<td>.426</td>
<td>.479</td>
</tr>
<tr>
<td>Computer Playfulness</td>
<td>-.221</td>
<td>.220</td>
</tr>
<tr>
<td>Presence</td>
<td></td>
<td>.734</td>
</tr>
<tr>
<td>Copresence</td>
<td></td>
<td>-.463</td>
</tr>
<tr>
<td>Flow</td>
<td></td>
<td>-.542</td>
</tr>
<tr>
<td>$r^2$</td>
<td>.078</td>
<td>.249</td>
</tr>
</tbody>
</table>

*Note: *p < .05, **p < .01, ***p < .001

### Table 4
*Descriptive Statistics of Virtual World (VW) vs. Face to Face (Ftf)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>VW Satisfaction</td>
<td>27</td>
<td>5.05</td>
<td>1.104</td>
</tr>
<tr>
<td>FtF Satisfaction</td>
<td>26</td>
<td>5.58</td>
<td>1.161</td>
</tr>
<tr>
<td>VW Learning Effectiveness</td>
<td>27</td>
<td>4.33</td>
<td>1.209</td>
</tr>
<tr>
<td>FtF Learning Effectiveness</td>
<td>26</td>
<td>4.23</td>
<td>1.070</td>
</tr>
</tbody>
</table>

### Table 5
*ANOVA Table*

<table>
<thead>
<tr>
<th>Variable</th>
<th>d.f.</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Satisfaction</td>
<td>1</td>
<td>3.693</td>
<td>2.88</td>
<td>.096</td>
</tr>
<tr>
<td>Learning Effectiveness</td>
<td>1</td>
<td>.139</td>
<td>.107</td>
<td>.745</td>
</tr>
</tbody>
</table>
DISCUSSION

Our key research questions were about identifying how virtual worlds influence learning satisfaction and learning effectiveness. We found that learners who perceived greater presence and experienced more flow were more satisfied with the learning experience. This causes us to believe that virtual world learning environments should be designed in a way to give the users high perceptions of presence. The experience should also be enjoyable and attract the attention of the learners so that they can experience flow. It is likely that, in our study, the learners did not actually experience or become comfortable interacting with other learners because the system was new to them; this may be why we did not see evidence of copresence enhancing learning satisfaction. In future research, it may be helpful to give the learners more practice interacting with others in the environment. Having more informal interaction would likely increase the users’ satisfaction with the learning system, and it may contribute to greater levels of copresence.

We did not find any significant relationships with virtual world learning and learning effectiveness. Although flow was influential for satisfaction, it actually demonstrated a negative (non-significant) effect on learning effectiveness. In our particular study, the experience may have been novel enough to the students that they focused too much on the experience in the virtual world rather than on the lecture. Therefore, students expended most of their resources in interacting with the virtual world environment, leaving little cognitive resources for effective learning.

Presence did not have any significant effects on learning effectiveness. We believe that presence may influence learning effectiveness; however, it may depend upon the context. Learners that perceive that they are present in a virtual classroom may not experience more effective learning. This is because in this setting, presence may not contribute to additional learning above what can be achieved through seeing and hearing the instructor and slides. Conversely, learners will probably learn more effectively in situations in which they feel present while exploring or examining unfamiliar objects represented by technology. Thus, the influence of presence may be realized in unfamiliar or complex situations.

Finally, we did not find that the virtual world learning environment led to greater satisfaction or learning effectiveness over that of the face-to-face environment. In fact, the face-to-face group appeared to be more satisfied with the learning experience than the virtual world group was. In our study, we did have some minor technical problems with the communication system in the virtual world. It is possible that these problems reduced learners’ satisfaction with the experience. Nevertheless, we support the notion that virtual worlds are a successful system for TML because of the capabilities of the technology to enhance learning.

The lack of evidence for our hypotheses, as may be the case for other hypotheses, could be a function of the small sample size of the study. With only 53 students for testing hypotheses 4A and 4B and only 27 students for the remaining hypotheses, our sample size may not have had enough power to detect significance in the relationships. Despite this shortcoming, we found various significant relationships, demonstrating the possibility of strong relationships among these focal constructs. Additional research, with a larger sample size, is necessary to more fully understand the implications and the outcomes of different uses of virtual world learning technologies. Overall, this research serves as a starting point for other researchers to examine how virtual world environments can ameliorate the factors known to inhibit satisfaction and learning effectiveness.

According to our knowledge, presence has not been studied in a virtual learning context. We make a contribution to the presence literature and the virtual learning literature by showing that presence enhances learning satisfaction in virtual learning environments. We also applied copresence to a learning context. We believe that we did not find any significant copresence results due to the limitations of our study.

This research has practical relevance as well. A better understanding of the outcomes of learning in virtual worlds helps organizations and universities make better decisions about whether or not to use virtual worlds for learning. Knowledge about some of the important characteristics of learning in virtual worlds also contributes to the development of this learning technology. Designers of virtual world learning systems would do well to incorporate characteristics that contribute to presence and flow. In addition, learners will likely experience better results if they are trained to use virtual worlds before the learning experience.
CONCLUSION

Virtual worlds present an environment that appears to have potential for enhancing learning outcomes. One reason is the media-rich, immersive nature of the environment. Another reason is the capabilities for students to interact richly with instructors and other students. Universities are already using virtual worlds for learning. It is important to understand the outcomes of learning in virtual worlds and to understand how to make the process most effective. Virtual world learning environments that give users perceptions of being present in the virtual world should increase learners’ satisfaction with the experience. Those people who experience flow while learning should also feel more satisfaction; virtual worlds should include enjoyable, interesting characteristics.

A virtual world learning environment that imitates a classroom environment does not necessarily lead to better learning outcomes. Nevertheless, there are many possibilities for new uses of virtual world technologies for learning. Benefits will likely come to universities and organizations that experiment with innovative uses of virtual worlds.

APPENDIX 1

Measures

Satisfaction

7-point Likert-type scale anchored by the following three descriptions:

How would you describe the learning process in the virtual world?
- Coordinated/Uncoordinated
- Confusing/Understandable
- Satisfying/Dissatisfying

Presence

7-point Likert-type scale anchored by strongly agree/strongly disagree except where noted:

- How aware were you of the real world surrounding you while navigating in the virtual world? (i.e., sounds room temperature, other people, etc.) (very aware/very unaware)
- How real did the virtual world seem to you? (strongly real/very unreal)
- I had a sense of acting in the virtual world rather than operating something from the outside. How much did your experience in the virtual world seem consistent with your real world experience? (very consistent/very inconsistent)
- I was not aware of my real environment.
- In the virtual world I had a sense of "being there."
- Somehow I felt that the virtual world surrounded me.
- I felt present in the virtual world.
- I still paid attention to the real environment.
- The virtual world seemed more realistic that the real world.
- I felt like I was just perceiving pictures.
- I was completely captivated by the virtual world.

Copresence

7-point Likert-type scale anchored by strongly agree/strongly disagree:
- I perceived that I was in the presence of other people in the virtual world with me.
- I felt that people in the virtual world were watching me and were aware of my presence.
- People in the virtual world appeared to be sentient (conscious and alive) to me.
- I perceived people as being only a computerized image, not as real people.

Flow

7-point Likert-type scale anchored by strongly agree/strongly disagree:

During my virtual world experience...

- I was absorbed intensely in the activity.
- My attention was focused on the activity.
- I concentrated fully on the activity.
- I was deeply engrossed in the activity.
- I found my visit interesting.
- I found my visit enjoyable.
- I found my visit exciting.
- I found my visit fun.
- I felt confused (reversed).
- I felt calm.
- I felt in control.
- I felt frustrated (reversed).
REFERENCES


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Public school teachers with high leadership potential who stated that they had no interest in being school principals were surveyed on their attitudes about six alternative school site administrative organizational models. Of the 391 teachers surveyed, 53% identified the Co-Principal model as the preferred school site administrative structure. In order of preference were the Co-Principal model, the Principal/Business Manager model, the Multi-Principal model, the Principal/Associate Principal model, the Principal/Teacher/Principal Administrator model, and the Principal/Educational Specialist model. Among teachers at the elementary, middle, and secondary levels, the only significant difference was on the Multi-Principal model, which was favored more by middle and high school teachers than by elementary teachers. The findings suggest that teachers who had previously reported a lack of interest in becoming school principals might be interested in the position if the organizational structure of the school site were different from the traditional organizational model.

Keywords: co-principal; school site administration; school site organization; school administration alternatives

The school principal plays a pivotal role in the success of a school and is the key person responsible for the maintenance of a high quality educational program (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005; Edmonds, 1979; Leithwood & Montgomery, 1982; Reynolds & Teddlie, 2000). According to Loeb and Valant (2009), the principal is the critical individual in a school and the key to success for any reform effort or other school improvement initiative. Despite the critical importance of the principal position, fewer people are choosing to leave the teaching ranks and become school principals based in part on the fear that their job satisfaction would decrease and their personal life would be negatively impacted (Winter, Rinehart, & Munoz, 2004). Several studies have reported a shortage of principal applicants at a time when the job is becoming more demanding, complex, and important (Bell, 2001; Cusick, 2002; Guterman, 2007; Whitaker, 2003; Winter, Rinehart, Keedy, & Bjork, 2004). According to Carnine, Denny, Hewitt, and Pijanowski (2008), teachers elect not to become principals because of the extreme stress, unrealistic time demands, and the excessive pressure associated with the position. Given the shortage of candidates for the principalship and the generally negative perceptions that teachers have about the position, one possible solution is to restructure the duties of the principal to make the position more attractive to teachers who have the potential to be quality school site leaders.

According to Cannon (2004), the school site administrative structure must be reexamined or school districts will not be able to attract high quality applicants or retain high quality incumbents. Cannon stated:

The research revealed that…a fundamental restructuring of the principalship is necessary and that such momentous change requires nothing less than a paradigm shift. The new paradigm would be based on sharing leadership rather than on a hierarchical approach. It would have structures that are flexible and customized to the local needs of the school and school community. Learning would be central and a work/life balance would be essential, for all principals. The new paradigm would also offer flexibility to encourage women to both take up, and remain in, the principalship. (p. 4)

According to Whitaker (2002), school district leaders must look for ways to alter the job of the school principal and decrease the time demands of the current position. Hirsch and Groff (2002) concluded that the principal’s job should be re-organized so the job responsibilities are re-distributed.
PURPOSE OF THE STUDY

Given the need to re-examine the traditional school site administrative structure, this study identifies alternative school site administrative structures and explores the dispositions of teachers who were identified as being in one of two distinct groups: teachers with strong leadership potential and teachers who have leadership potential while also serving the school site in a leadership capacity that does not require administrative certification. The group surveyed for this study had been identified as individuals who had clearly stated that they had no interest in becoming school administrators or principals. The teachers were surveyed to determine if an alternative administrative organization would make them more likely to change their current position and consider becoming a public school principal. This study identifies and explores six alternative school organizations to determine which administrative organizational structure would be preferred by teacher leaders and teachers with strong leadership potential.

REVIEW OF THE LITERATURE

The principalship is often a very isolated position. The standard format for school administrative organization is usually a principal with an assistant principal. It is often perceived that larger middle and high schools may have more than one assistant principal. However, this perception is in many cases not grounded in fact. According to Protheroe (2008), 91% of elementary schools with enrollments under 400 do not have an assistant principal. For schools between 400 and 600 students, the number of schools without an assistant principal decreases to 64%, and for schools with over 600 students there are still 27% that do not have an assistant principal to provide support to the principal.

Shortage of Principals and Stress

In a study of principal transiency in Arkansas, Carnine et al. (2008) found that, for schools at all grade levels, 50.7% of schools had experienced a change of principal in the prior three years. The change of principals was most pronounced at the high school level where 62.7% of principals were replaced over the three-year period. Johnson (2005) summarized the reasons why principals quit their jobs. The reasons included an entrenched faculty that made it difficult to bring about change; the extremely heavy workload with the excessive number of hours demanded by the job; the large number of employees principals were expected to supervise; bureaucratic impediments such as district office directives and union contracts; irate and unsupportive parents; and student discipline issues that were complicated and emotional.

The job of the principal is becoming extremely complex and requires a higher degree of skill than in past decades (Archer, 2004). Pounder and Merrill (2001) reported that because of the increasing demands placed upon principals there is a shortage of teachers who aspire to become principals. Valentine, Clark, Hackmann, and Petzko (2003) reported that there is an image of the strong school principal who shoulders all the burdens of running the organization. They felt this image comes from a traditional view of labor-management, with the principal sitting at the top of the organization. The effective schools movement perpetuated this almost super-human view of the principalship by concluding that all good schools have high quality principals (Edmonds, 1979). Grubb and Flessa (2006) stated that the principal is “responsible for hiring and perhaps firing teachers, coordinating bus schedules, mollifying angry parents, disciplining children, overseeing the cafeteria, supervising special education and other categorical programs, and responding to all the stuff that walks in the door” (p. 519).

The time demands and overall workload of the principalship are contributors to a shortage of applicants. Flessa (2003) reported that the principalship is often an impossible job that isolates the principal, who is already overwhelmed with job requirements that make it difficult to focus on the instructional program. Kochan, Spencer, and Mathews (1999) found that women were twice as likely as men to identify an overwhelming workload as a major reason for not wanting to be a principal. A later study by Carnine et al. (2008) found that women rated the stress of the principalship as the number one reason why they would not want to be school principals. Although the male respondents ranked the same item as their second choice, the difference between the male and female respondents was statistically significant at the .001 level. Yerkes and Guaglianone (1998) reported that non-instructional job tasks are the major source of stress for principals and often result in their resignation. The duties and functions of the principal can also create stress when there is not a clear definition of what teachers and parents view as the role of the principal. Winter, McCabe, and Newton (1998) found that elementary and middle school teachers favored principal
positions that were focused on instructional leadership, while high school teachers preferred principal position that focused on school management.

The salary levels of the principalship are often viewed as not commensurate with the demands of the job. Protheroe (2008) found that elementary school principals, although satisfied with their job, felt the salary was not commensurate with the duties and reported, as well, that the time demands of the job and the work load were excessive and the overall stress factors were extreme. Principals believed these factors will make it difficult to recruit good candidates for the position in the future. According to Goldstein (2002) the shortage of principal candidates is compounded by legislation that holds the principal more accountable. He explains that the termination, or the threat of termination, of principals in under-performing schools is counter-productive when there is a shortage of principal candidates and no one waiting to take the vacant positions.

A lack of support at the school site is another contributing factor to a shortage of principal applicants, and the possibility of an elementary school principal getting additional help is remote. According to Protheroe (2008), the average elementary school principal does not have an assistant principal, and it is unlikely that the district office will assign additional support personnel to make the job more manageable. Protheroe found that “in 1958, 87% of the supervising (nonteaching) principals reported they did not have an assistant principal. In 2008, two-thirds of the respondents reported they had no assistant principal in their building” (p. 6). Barnett (2001) studied a selected group of beginning principals in Colorado and found that the major challenges facing new principals included absorbing a massive amount of information in a short period of time, trying to be a change agent while facing resistance, and trying to prove their competence to others. In most cases the principals felt isolated and alone at their school site. The shortage of school principal applicants, based on the pressure, time demands, and sense of isolation of the position, might be addressed by further examination of alternative school site administrative organizations.

Need for Alternative Organizations

Chapman (2005) reported that the job of the principal has become increasingly difficult with recent educational reform mandates contributing to the complexity. These changes require principals to have training that prepares them for a new and more complicated role. Chapman states that “there is a need to adopt new approaches to conceptualizing the role of principal and alternative strategies for redesigning and restructuring positions of leadership across the school” (p. 8). Grubb and Flessa (2006) strongly supported alternative school site organizational models as a way to alleviate growing pressure on the solo principal. They supported alternative administrative organizations by stating that, “given the pressures on schools, we can anticipate ever-worsening conditions for principals, increasing shortages of candidates, continued inattention to instructional leadership, and further domination of the rational bureaucratic model with all its flaws” (p. 536). According to Newton and Zeitoun (2001), the extensive menu of skills needed by today’s school principal discourages teachers and other potential applicants from considering and applying for the position. In response to the shortage of applicants for the principalship, Newton and Zeitoun stated that “policymakers are challenged to reinvent the role in ways that will increase the size of the applicant pool” (p. 3).

Restructuring a school’s administrative organizational structure requires broad-based support reflective of the realization that change from tradition is difficult. Schools must have the authority and autonomy to take action for improvement. Newmann and Wehlage (1995) stated: “The school needs the discretionary authority to act according to the staff’s best professional judgment, with minimum interference from bureaucratic directives or political pressure that can undermine rather than promote, the intellectual quality of student learning” (p. 37). As a way to change the job and role of the principal, Johnson (2005) proposed an alternative by identifying the need to “find ways to reduce the workload, such as appointing ‘partner’ principals or providing stipends to teachers to take on certain managerial tasks” (p. 23). The appointment of an equal partner principal would reduce the burden and demands of the job and allow each “partner principal” to focus their energy. According to Norton (2002), the job description of the school principal must be re-examined and the position must be restructured to allow the principal an opportunity to focus on instructional leadership. A study by Protheroe (2008) determined that the alternative school site organizational model that separates administrative and instructional duties between two people is currently in use in about 8.0% of elementary schools, with 4.1% of elementary schools reporting that this organizational pattern is being considered. When asked if this alternative organization was being considered for their district, 88.0% of elementary principals...
reported it was “unlikely to happen in the near future” (p. 157).

**Alternative School Site Administrative Organizations**

While faced with increasing time demands and stress factors that make the job difficult for one person, the principal must still be an effective leader. In attempting to define how schools could have more effective school site leadership, Cannon (2004) stated that “four areas emerge from the literature as possible ways of responding to the challenges impacting the principalship; namely, building capacity, sharing leadership, frameworks for building leadership capabilities, and alternative models of principalship” (p. 73). The efficacy of an alternative organizational model must examine whether the model improves conditions in the workplace that insures more applicants are attracted, job retention is increased while turnover is reduced, minorities and underrepresented groups are attracted to apply, instructional leadership results in increased student achievement, and more time is available to supervise instruction and provide professional development (Zeitoun & Newton, 2002).

Cannon (2004) developed five alternative models of leadership that could be applied to the school site setting. The five designs identified included

- Supported Leadership (A), a business matrix model;
- Supported Leadership (B), a distributed leadership model;
- Dual Leadership with split task specialization;
- Dual Leadership with job-sharing; and
- Integrative Leadership - a two-principal model with responsibilities integrated (p. 72).

Zeitoun and Newton (2002) identified six alternative models that could be utilized to restructure the traditional school model consisting of a principal and an assistant principal. The six models included

- the Co-Principal model;
- the Principal/Business Manager model;
- the Multi-Principal model;
- the Principal/Associate Principal model;
- the Principal Teacher/Principal Administrator model;
- and the Principal/Educational Specialist model.

The six alternative models for school site organization identified by Zeitoun and Newton (1999) can be described as follows:

**The Co-Principal model.** In this model there are two principals. One assumes responsibility for instructional leadership and the other for management-type activities such as buildings and grounds. Another organization might be that one principal assumes responsibility for instruction and the other is in charge of student services. Budgeting, staffing, community relations, and supervision would be shared. An assistant principal at large or secondary schools would be in charge of athletics, counseling, and discipline issues.

**The Principal/Business Manager model.** In this model the duties are split, with one person being the business manager dealing with all non-instructional duties. The principal then focuses on all instructional leadership issues and personnel issues related to licensed staff members.

**The Multi-Principal model.** This model, designed for larger schools, especially high schools, has a chief principal, a curriculum principal, and four grade-specific principals. This model allows the chief principal to focus on long-range plans, expanding the academic program, and working with teachers from each subject area to share best practices. The grade-level principals stay with their class for all four years and take responsibility for all aspects of their educational experience.
The Principal/Associate Principal model. This model uses a principal in charge of instructional leadership and an associate principal in charge of all management issues and operations. This model also calls for a separate budget director.

The Principal Teacher/Principal Administrator model. This model calls for a principal teacher and a principal administrator. The principal teacher has responsibility for hiring and other personnel decisions, as well as for technology and other student achievement issues. The principal administrator is responsible for plant management, transportation, food, secretaries and custodians, scheduling, data collection, and parent involvement, and is accountable to the principal teacher.

The Principal/Educational Specialist model. This model provides an instructional specialist whose role is to take over many instructional leadership duties focusing on improving instruction among teachers. In smaller schools, the educational specialist may be assigned two schools and will alternate between the two schools.

Of the alternative organizational models identified, the Co-Principal model appears to be the most popular. Grubb and Flessa (2006) identified 10 schools with alternative administrative organizational models and found that eight of the schools used the Co-Principal model. Of the other two schools, one had a rotating principal who held the job for three years, and the second school was small enough they had no principal and the teachers divided up the duties of the principal. Flessa and Grubb reported that respondents liked the Co-Principal model because it reduced isolation and provided them with someone to talk to and share concerns and frustrations. Given the popularity of the Co-Principal model as the desired alternative organizational structure, the leadership of the school must still be assumed by the principal (Institute for Educational Leadership, 2000). However, the work of the principal can be broken up, with responsibilities distributed to other school staff members. The Institute for Educational Leadership reports that “some schools have found such approaches for distributing discrete leadership roles among individuals other than the principal highly effective “ (p. 5).

METHODOLOGY

This study solicited the recommendation of school site principals from throughout the state of Arkansas to identify teachers who possessed strong leadership potential, yet had clearly stated to the principal, by words or actions, they had no desire to become a school principal. The intent of this study was to identify teachers who had the potential ability to be good school principals, but who had chosen against that career path. Through this process, the identified teachers were then disaggregated into two groups: classroom teachers with strong leadership potential, and classroom teachers with strong leadership potential who had already assumed leadership roles on the school campus. The additional leadership roles included leadership of student government, advising, lead teacher, literacy and math specialist, athletic director, coach, and other leadership roles above and beyond their classroom duties that did not require administrative certification.

The process resulted in the identification of 391 teachers responding from 139 different school districts. Although all 245 school districts in Arkansas were not represented, the large number of respondents and a review of the districts from which they responded may be viewed as providing a reasonably representative sample of the state as a whole. Of the 106 school districts not accounted for in the study, 53 school principals responded that they did not have a teacher at their school that met the desired criteria for this study.

The survey instrument utilized the six alternative models for school site organization identified by Zeitoun and Newton (2002) because the six alternative models appeared to provide options that were realistic and had a high potential for actual implementation. The teachers identified themselves as elementary, middle level, or high school. The teachers then responded to each of the six alternative models using a five-point Likert scale where 1 was “no interest” and 5 was “highly interested.” Each alternative model included a brief description of the model to insure the respondent clearly understood the parameters of the model. Respondents were directed to mark the model and score it a 5 if the model would make them highly interested in becoming a school principal and a 4 if the model would make them interested in becoming a school administrator. Scores of less than 4 would reveal a diminishing interest.
RESULTS

By gender, the sample was 76% female and 24% male. By community type, 55% taught in rural schools, 28% in suburban, and 27% urban. By grade level, 49% taught elementary, 27% taught middle level, and 30% taught secondary. Of the responding teachers, 39% were identified as having leadership responsibilities, and 61% were regular classroom teachers. Teachers also had a mix of experience levels: 18% had 0-5 years; 19% had 6-10 years; 22% had 11-15 years; 16% had 16-20 years; 12% had 21-25 years; and 14% had 26 or more years.

Teacher ratings of interest in alternative principal models are listed in Table 1. The model with the highest level of interest (M = 3.35) was the Co-Principal Model, the only model with mean ratings above 3.00, the midpoint of the 5-point scale. The Principal/Business Manager Model was second of the six models, with a mean rating of 2.94. The lowest rated model was the Principal Teacher / Principal Administrator Model, with a mean rating of 2.60.

Table 1
Teacher Interest in Alternative Principal Models

<table>
<thead>
<tr>
<th>Alternative Model</th>
<th>No Interest</th>
<th>Highly Interested</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Co-Principal</td>
<td>390</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Principal / Business Manager</td>
<td>388</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>Multi-Principal</td>
<td>391</td>
<td>30%</td>
<td>16%</td>
</tr>
<tr>
<td>Principal / Associate Principal</td>
<td>388</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Principal Teacher / Principal Administrator</td>
<td>390</td>
<td>25%</td>
<td>23%</td>
</tr>
<tr>
<td>Principal / Educational Specialist</td>
<td>391</td>
<td>24%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Statistical tests were also conducted to identify subgroups that gave significantly higher or lower ratings to the alternative principal models. When comparing the means of two groups (males vs. females, teachers with leadership responsibilities vs. those without), we conducted separate t tests for independent samples. When comparing the means of three or more groups (rural/suburban/urban, elementary/middle/secondary, years of experience categories), we conducted analyses of variance (ANOVA). No significant differences were found in any of the ratings by gender, by community type, or by years of experience. Teachers identified as having leadership responsibilities gave significantly higher ratings than regular classroom teachers on the Multi-Principal Model; on the other five scales there was no significant difference between the two groups. Ratings for the Multi-Principal model also differed significantly by grade level, and a Tukey post hoc test found lower ratings from elementary teachers than from middle level or secondary teachers. On the other five models, ratings did not differ by grade level taught. Ratings for the leadership and grade level variables are detailed in Table 2.
Table 2
Teacher Interest in Alternative Principal Models: Mean Levels by Subgroups

<table>
<thead>
<tr>
<th>Alternative Model</th>
<th>Regular Classroom Teachers (N = 236)</th>
<th>Teachers with Leadership (N = 152)</th>
<th>Elementary (N = 191)</th>
<th>Middle (N = 79)</th>
<th>Secondary (N = 117)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-Principal</td>
<td>3.30</td>
<td>3.44</td>
<td>3.29</td>
<td>3.47</td>
<td>3.38</td>
</tr>
<tr>
<td>Principal / Business Manager</td>
<td>2.93</td>
<td>2.95</td>
<td>2.99</td>
<td>2.97</td>
<td>2.81</td>
</tr>
<tr>
<td>Multi-Principal</td>
<td>2.60*</td>
<td>2.91</td>
<td>2.45*</td>
<td>2.94</td>
<td>3.03</td>
</tr>
<tr>
<td>Principal / Associate Principal</td>
<td>2.75</td>
<td>2.83</td>
<td>2.83</td>
<td>2.62</td>
<td>2.81</td>
</tr>
<tr>
<td>Principal Teacher/Administrator</td>
<td>2.69</td>
<td>2.65</td>
<td>2.76</td>
<td>2.59</td>
<td>2.60</td>
</tr>
<tr>
<td>Principal / Educ. Specialist</td>
<td>2.70</td>
<td>2.93</td>
<td>2.83</td>
<td>2.70</td>
<td>2.77</td>
</tr>
</tbody>
</table>

Note: *p < .05

SUMMARY AND CONCLUSIONS

The shortage of applicants for school administrative positions and the lack of interest by teachers who would potentially be good educational leaders should be of great concern to educational policy makers. The cause of this lack of interest among teachers is well documented and includes the stress and excessive time demands of the job. It is critical that options be explored to reorganize the structure of the administrative staffing at the school site to reduce the stress and time demands on the principal. This study sought to determine whether an alternative organizational pattern to the traditional principal and vice-principal configuration might prove attractive to potential leaders and make them consider, or reconsider, a career in school administration.

The Co-Principal model was the alternative model favored by elementary, middle, and secondary teachers. This finding is consistent with findings of Grubb and Flessa (2006) that the Co-Principal model was the most desirable. Of the 391 participants in the study, 206 respondents scored the co-principal with a score of either 4 or 5. This might indicate that approximately 53% of teachers who stated they had no interest in being a principal might consider entering school administration if the Co-Principal model were used in place of the traditional administration model.

Although there was a wide variation in scores from the number 1 rated Co-Principal model to the lowest rated Principal/Educational Specialist model, the Principal/Educational Specialist model still received scores of 4 or 5 from 137, or 35%, of the respondents. This may indicate that even for the lowest rated alternative organization, there were still 35% of the respondents who might become school administrators if this organizational model were used.

The current school administrative organization of principal functioning alone or with a vice-principal does not appear to be keeping pace with the demands placed on the principal. To attract a larger pool of potential leaders from the teaching ranks requires that policy makers, school boards, and superintendents look at alternative organizational patterns to reduce the stress and time demands currently associated with the principalship. This study concludes that using an alternative organizational structure to reduce stress and time demands has a high probability of increasing the number of people, especially those with high leadership potential, who would be willing to become principals.

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REVIEWING THE ROOTS OF RESPONSE TO INTERVENTION: IS THERE ENOUGH RESEARCH TO SUPPORT THE PROMISE?

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In the United States, Response to Intervention (RtI) is used to promote the use of evidence-based instruction in educational institutions, with the goal of supporting general and specialized educators and enabling these professionals to work together in a comprehensive, integrated manner. In doing so, RtI provides a protocol for identifying students with specific academic deficits and who demonstrate the need for individualized forms of instruction. Specifically, professional educators utilize quantitative data accumulated from common student assessment scores, which is thought to reflect a student's response to instruction in the general classroom, in addition to his or her response to more targeted forms of intervention. This article presents a conceptual overview of RtI and discusses key dimensions most salient to its development and implementation within the United States, while carefully reviewing the research supporting the effectiveness of this multi-tiered framework. As RtI gains prominence in other countries, this article serves to educate others on what may well become a more universal response to intervention.

Keywords: Response to Intervention, Special Education, Reading, RtI, education

While, heavily touted in the United States as an effective alternative method of addressing a variety of issues confronting the education of students with special needs, there is a dearth of research substantiating the effectiveness of Response to Intervention (RtI; Sugai & Horner, 2009). Despite limited empirical evidence, RtI is gaining acceptance in the educational sector because the approach is theoretically grounded in research-based practices. This foundation has been aligned with recent educational legislation such as the Individuals with Disabilities Education Act (IDEA) of 2004 (this act is the reauthorization of federal legislation mandating the types and breadth of services offered in educating students with special needs), which authorizes the evaluation and identification of specific learning disabilities (LD) through a student's response to evidence-based instruction and intervention (IDEA, 2004; Sugai & Horner, 2009). This article presents a conceptual overview of RtI and discusses key dimensions most salient to development and implementation, while carefully reviewing the research supporting the effectiveness of a multi-tiered framework. If RtI is successful in meeting the needs of students with disabilities by adequately addressing least restrictive environment, the continuum of services, and the overidentification of specific learning disabilities, then this model could have international implications.

Similar to the United States, an achievement gap exists in Canadian schools, and while this gap is smaller than that in schools in the U.S., it is noteworthy (Levin, 2007). Westheimer (2008) examined historical trends in education and concluded that Canadians should expect educational policy trends from the U.S. to “arrive – perhaps in diluted form” (p. 8). Westheimer (2008) also argued that Canadians may be less politically knowledgeable and warns that educational policies in the U.S. could affect the Canadian education system. Since RtI serves as a mechanism to address current educational policies in the U.S., the RtI movement may indirectly impact the Canadian educational system.

This article outlines the framework of RtI and addresses the limited empirical base available regarding educational effectiveness. Specifically, this article explores the following questions:

- What is the fundamental framework of Response to Intervention?
• Are the principal components of Response to Intervention built on a solid empirical foundation?
• What is the promise of Response to Intervention?
• Is the empirical foundation enough to support the promise of Response to Intervention?

WHAT IS THE FUNDAMENTAL FRAMEWORK OF RESPONSE TO INTERVENTION? A MULTI-TIERED APPROACH

According to Yell, Shriner, and Katsiyannis, (2006), “A response to intervention model is designed to identify students who are having academic problems when the problems first become apparent, and then matching evidence-based instruction to their educational needs” (p. 13). The Response to Intervention design is a multi-tiered approach to providing individualized instructional services and interventions to students at increasing levels of intensity, based on careful monitoring of student progress and data analysis (Batsche et al., 2006). The rate of improvement demonstrated over time is used to make important educational decisions, including possible determination of eligibility for specialized educational services (Fuchs & Fuchs, 2006). Although the comprehensive instruction and targeted interventions included within the RtI framework may encompass many different levels of intensity and individualization, interventions are generally situated into three broad classes or tiers.

Primary Tier

Primary intervention is available to the entire student body in a general education environment and consists of high-quality, research based instruction (Bradley, Danielson, & Doolittle, 2007). When a universal screening instrument or progress monitoring reveals that a student is not performing at normative academic levels, the student is eligible to receive additional, individualized instruction, which is provided by the general education teacher in the general education classroom (Ardoin, Witt, Connel, & Koeing, 2005). If a student demonstrates little to no academic progress after continued progress monitoring, despite the documented implementation of individualized interventions, the classroom teacher should consult with the school’s multi-disciplinary team, which is generally comprised of school administrators, intervention specialists, counselors, and general and specialized educators (VanDerHeyden, Witt, & Gilbertson, 2007). Together, this multi-disciplinary team should utilize the data collected to determine the most appropriate method of meeting the diverse needs of a student who has not demonstrated measurable academic gains at the primary tier.

Secondary Tier

Second tier interventions are more intense, individualized approaches that supplement core instruction and are provided in combination with the existing primary tier interventions (Hoover & Patton, 2008). To maintain the fluidity of the RtI framework, secondary interventions typically range between 8 and 12 weeks (Bradley et al., 2007) for 30 to 50 minutes per day (Burns, 2008). Secondary tier interventions often include small group instruction (Bollman, Silberglitt, & Gibbons, 2007; Fuchs & Fuchs, 2006). These small group interventions allow for more response opportunities and increased teacher-student interactions, which provide increased opportunities for immediate feedback.

While the location and service provider of secondary tier interventions may vary, these interventions should include comprehensive tracking and progress monitoring of each student (Johnson & Smith, 2004). For example, the service provider may administer a fluency battery biweekly. The service provider should utilize these data to monitor student progress over the course for several weeks, and a determination of progress by the multi-disciplinary team should be made by analyzing these data. If these secondary tier interventions prove beneficial for the student and he/she demonstrates substantial gains in academic outcomes, this more intense instruction may no longer be necessary. If the multi-disciplinary team makes the decision to discontinue secondary tier services, the classroom teacher should carefully monitor the student’s progress in order to confirm that these gains generalize and are maintained (Fuchs, Mock, Morgan, & Young, 2003).

If a student still does not demonstrate measurable gains, even after several weeks of intensive secondary tier instruction, the service provider and multi-disciplinary team should consult with the student’s parents to determine an alternative course of action. Depending on the individual situation and the specific needs of the student, it may be
most beneficial to continue with secondary tier instruction using an alternative type of intervention or instructional approach. On the other hand, the service provider, multi-disciplinary team, and the student’s parents may decide that more individualized instruction is necessary and recommend more intense tertiary services (Fuchs & Deshler, 2007).

**Tertiary Tier**

The intensity of instructional services again increases in the tertiary tier because the service provider is generally only working with one or two students at a time. Furthermore, this individualized instruction results in a greater number of teacher-student interactions (Fairbanks, Sugai, Guardino, & Lathrop, 2007). Instruction can be tailored specifically to the needs of each student. Progress is again monitored frequently in the tertiary tier for the purposes of tracking academic gains and data-based decision making (Bruns, 2008; Sugai & Horner, 2009). While continuously monitoring improvement, the service provider may determine that the student requires more individualized instructional time or needs specific interventions using a varied instructional method (Cummings, Atkins, Allison, & Cole, 2008; Johnson & Smith, 2008). If measurable academic progress is achieved through tertiary tier instruction, the service provider, multi-disciplinary team, and parents should determine the best educational plan to promote and maintain student success. This determination may also include a discussion of special education eligibility because the RtI model can serve as a vehicle for special education identification (Fuchs & Fuchs, 2006; Hoover & Patton, 2008). Therefore, information about a student’s individualized instruction and comprehensive progress during tiered instruction can be very helpful in determining whether the student demonstrates deeper deficits that could be better characterized through formal special education evaluations (Vaughn, Linan-Thompson, & Hickman, 2003).

**EXPANDING OUR UNDERSTANDING**

The remainder of this article will address the following questions:

- Are the principal components of RtI built on a solid foundation of credible research?
- What is the promise of Response to Intervention?
- Is there enough research to support the promise of Response to Intervention?

**Database Search Procedures**

The authors employed a two-step search procedure for the purpose of identifying RtI field studies. A precedence criterion for inclusion was initially established and incorporated the following:

- The field study must have been published in a scholarly, peer-reviewed journal;
- The RtI intervention method studied by researchers must have included a multi-tier approach to instruction;
- The rationale of the academic or behavioral intervention must have targeted students who were experiencing behavioral or academic difficulties; and
- Descriptive procedures of data collection and analysis of quantitative outcome measures must have been reported by researchers.

Next, the authors compiled a list of key words and phrases associated with the elements, theoretical framework, history, and implementation of Response to Intervention. Overall, the search of the Google Scholar, ERIC, JSTOR, EBSCO Host, and Professional Development Collection databases was successful and established eleven studies that matched the precedence criterion for inclusion.

**ARE THE PRINCIPAL COMPONENTS OF RESPONSE TO INTERVENTION BUILT ON A SOLID FOUNDATION OF CREDIBLE RESEARCH?**

Several components of RtI, including high quality classroom instruction, research based instruction, common assessments, universal screening, continuous progress monitoring, fidelity, professional development, and variations of implementation of RtI, have been examined to determine the credibility of the multi-tier methodology. While each
component has an empirical foundation, the multi-tier approach utilizes attempts to combine these components to meet the diverse needs of students. Therefore, within RtI, these components do not function independently, and this combination of components serves as a vehicle for providing students with the most appropriate academic services.

High Quality Classroom Instruction

One significant component of Response to Intervention pertains to the emphasis on high-quality classroom instruction. Although the term “high-quality” serves as an optimistic descriptor for “instruction,” attempts to discover a comprehensive definition were rather disheartening. According to Pianta, Belsky, Houts, and Morrison (2007), in one of the first large-scale efforts to assess the quality of instruction in elementary school classrooms, the quality of instruction in nearly all American elementary schools combines high levels of basic skills seatwork with mediocre instruction, where these practices are not indicative of specific indicators, such as teacher qualifications. Through an extensive review of the literature, Darling-Hammond (2009) explained, “teacher quality might be thought of as the bundle of personal traits, skills, and understanding an individual brings to teaching, including dispositions to behavior in certain ways” (p. 2). These characteristics include strong general intelligence and verbal ability, strong content knowledge, pedagogical dexterity, an understanding of assessment and scaffolding techniques, and adaptive expertise (Darling-Hammond, 2009). While many of these attributes are difficult to quantify, teaching quality is instrumental in achieving increased student outcomes.

Response to Intervention advocates consistently emphasize the importance of high-quality instruction in the general education setting. For instance, Callender (2007) advocated that before students are selected to receive specialized intervention, it must be determined that instruction in the general classroom is considered “high-quality” and individuals in a decision-making position must also ensure that any student in question has been given an adequate opportunity to learn. Furthermore, it may be argued that the “quality” of instruction can be assessed quantitatively by comparing student outcomes across classrooms at the same grade level or qualitatively through formal and informal observation and/or interviews (Callender, 2007).

Research-Based Instruction

The current No Child Left Behind (NCLB; 2002) legislation requires educational institutions to utilize research-based reading programs. According to Wright and Wright (2003),

A primary focus of this law is the requirement that school districts and individual schools use effective research-based reading remediation programs so all children are reading at grade level by the end of third grade. The law authorizes funds to provide assistance to State educational agencies and local educational agencies in establishing reading programs for students in kindergarten through grade 3 that are based on scientifically based reading research, to ensure that every student can read at grade level or above no later than the end of grade three. (p. 73)

Fuchs and Fuchs (2006) argued that the focus on research-based reading programs is not accidental, and in fact, the RtI policy makers also conceptualized Reading First, which is a fundamental component of NCLB (2002). The direct focus on research-based reading programs is understandable because reading fluency and comprehension are major factors in increased academic outcomes throughout the core curriculum.

While the law requires research-based programs, common classroom methodologies and academic curricula vary in efficacy; therefore, assuring that instructional methodologies and/or instructional curricula have exhibited legitimacy is fundamental. Researchers affirm that it is relatively difficult to determine if a student’s limited academic gains are independent of classroom experiences when the research-based requisite is not implemented (Wright & Wright, 2003). When universal screening results or progress monitoring data reveal a specific learning deficit, an appropriate instructional intervention should be implemented. Particularly, appropriate interventions may consist of a uniquely designed instructional package or a standardized treatment that has been empirically validated (Cummings et al., 2008; Johnson & Smith, 2008; Vaughn et al., 2008). Furthermore, educators are expected to implement unambiguous, research-based interventions when facilitating the needs of students indicative of identified academic deficits (Wright & Wright, 2003). These interventions might include repetition of the classroom instruction presented utilizing a different instructional method. It is essential to note that these interventions are not adaptations of the current curricula or accommodations to the content or expected learning outcome. These individualized research-based inter-
ventions should be implemented in 8 to 12 week increments and are designed to intensify and accelerate learning, based on the student’s specific learning needs (Vaughn et al., 2003).

Common Assessments

Within the RtI framework, general education professionals and specialized school personnel assume an active role in student assessments. This element emphasizes the critical role that educators play in designing and administering common assessments, rather than relying on externally developed measures of student success (Deno, Fuchs, Marston, & Shinn, 2001.) The design of common assessments can be resourceful when aligning the curriculum with academic standards, for reaching consensus on priorities for instruction and assessment, and for generating dialogue and building common language among educators and students (Deno, 2002). Common local assessments can also be beneficial when preparing for standardized statewide assessments and can provide a clear context for reporting student performance. Additionally, these instruments can be used to assess prior student learning and to make initial decisions related to academic content, grouping, pacing, and individual instructional strategies (Deno, 2002). These assessments are typically administered at the outset of the school year or unit of study.

Common assessments should include both formative and summative measures. Common formative assessments provide essential data used to drive instruction during the teaching/learning process and can then be employed for the purposes of differentiating instruction. Formative assessments are typically embedded in instruction and may take the form of specifically-focused measures, providing immediate feedback on narrowly defined standards and/or curriculum (Deno, 1985). Common summative assessments provide data regarding individual student performance and offer key information used for both program placement purposes and for program evaluation. These evaluation tools are typically designed to be administered at the end of a unit, end of quarter or semester, or end of course (Deno et al., 2001).

Universal Screening

Universal screeners are a type of measurement that is characterized by the administration of quick, low-cost, repeatable assessment of age-appropriate skills, which are used to establish the effectiveness of a specific curricula, classroom instruction, and to determine a pupil’s level of proficiency in essential academic areas. Generally, screeners are administered to all students at the beginning, middle, and end of each academic school year (NRCLD, 2006). Screening data are organized in a format that allows for the inspection of both group performance and individual student performance on specific skills (NRCLD, 2006). The quantitative data derived from universal screening provide two useful pieces of information. In particular, the collected data highlight the effectiveness of the core curriculum and Tier I instruction. Specifically, in a multi-tiered model of school support, about 80% of the student population should demonstrate adequate academic progress in a particular academic or curricular area (NASDSE, 2005). However, if greater than 20% of the student population does not demonstrate acceptable academic progress in a particular content area, it may be necessary to make adjustments to the core curriculum and/or the manner in which the curriculum is delivered (NASDSE, 2005). Furthermore, quantitative universal screening data identify individual learners who are demonstrating academic deficits in comparison to their same-age peer group. These learners may require additional intervention, either in small groups or on an individual basis (NASDSE, 2005).

Continuous Progress Monitoring

One of the most important components of the RtI is the collection of data that allows staff to evaluate treatment effectiveness. In RtI, consistent monitoring of student progress is necessary to identify learners who are not meeting stated goals. Norm Reference Tests (NRT) may not be the most appropriate way of progress monitoring for several reasons. First, many of the NRTs do not provide adequate information necessary for driving instruction (Thurlow and Ysseldyke, 1980). Additionally, most NRTs are not sensitive to measuring growth or academic change over a short period of time. Carver (1974) argues that educators should also make use of edumetric tests, or measurements that are valid for monitoring individual academic growth. Furthermore, NRTs typically can only be administered one or two times per year, which is problematic because teachers need more immediate feedback in order to drive instructional decisions. Curriculum-Based Measurements (CBM), however, were designed to measure individual academic progress. Specifically, several comprehensive studies have documented the validity and reliability of CBM (Deno,
1985; Fuchs, Deno, & Mirkin, 1984) as well as the utility in evaluating student growth and guiding instructional changes (Fuchs et al., 1984). Therefore, for the purposes of consistent progress monitoring, CBM may be a superior measure in comparison to NRTs.

Fidelity

Fidelity of program implementation is essential and specifically refers to the delivery of instruction (Gresham, MacMillan, Boebe-Frankenberger, & Bocian, 2000). Program fidelity is an important component of RtI, and is imperative at both the campus and classroom levels. For valid placement consideration purposes, a designated diagnostically team of intervention specialists should always be able to verify that a student in the primary tier has received appropriate and adequate instruction in the general education classroom. Therefore, implementing instruction with fidelity is essential when measuring outcomes of both the core curricula and individualized interventions. Additionally, adequate program fidelity satisfies one of the legal requirements for appropriate instruction as indicated in the Individuals with Disabilities Education Act (NJCLD, 2005). This is supported by extensive research, confirming the importance of program fidelity to maximize student outcome (Foorman & Moats, 2004; Foorman & Schatschneider, 2003; Gresham et al., 2000; Kovalieski, Gickling, Morrow, & Swank, 1999; Telzrow, McNamara, & Hollinger, 2000).

Professional Development

Regardless of the appeal of each of the aforementioned components, successful implementation of RtI is heavily dependent on both general and specialized educators. The reliability and validity with which an RtI model is employed will be determined to a great extent by the quality of professional development and educational support offered to these educators. Ideally, these methods of staff training should be used to translate research into practice. The Council of Administrators of Special Education (CASE) and Spectrum K12 School Solutions (2010) educators asserted that the biggest obstacle in regards to the implementation to RtI was lack of adequate staff education and training. Furthermore, adequate, on-going professional development, focusing on the framework, essential components, and proper implementation, is crucial to the fidelity and effective implementation of RtI within an educational institution.

Variations of RtI Model Implementation

The implementation of an RtI approach may vary from school to school, depending on resources and the individual needs of the student body. The following examples illustrate the different approaches utilized for the implementation of RtI. In Texas, a three-tier RtI model approach known as the University of Texas Model was implemented for elementary students who demonstrated below average competencies in reading (Vaughn et al., 2003). This study focused on the performance of 45 second grade students placed in the secondary tier. Students, who did not respond to the core reading instruction in the primary tier, received intense, individualized intervention that addressed the five essential reading components outlined by the National Reading Panel. Students who responded positively to secondary tier interventions and met the exit criteria were able to return to the primary tier. Vaughn et al. (2003) concluded that the majority of students who reach the secondary tier required a minimum of 20 weeks of intervention before the team determines whether or not a tertiary intervention was necessary.

David Tilley of the Iowa State Department of Special Education (2003) examined the implementation of a multi-tiered intervention “problem-solving” model across a large number of school districts. The Iowa Model consists of four problem-solving levels. Each level represents an increase in the intensity of the problem and the amount of resources needed to address the problem. Level I entails cooperative correlation and open dialogue between teachers and parents in order to address specific student concerns. Level II includes the targeted use of specific interventions and/or resources that exist within the educational institution. Consultation with a specialized problem-solving team is the focus of Level III. Level IV involves specialized placement options and consideration of special education eligibility.

The Minneapolis Public Schools employ an RtI approach known as the Minneapolis Model (Marston, 2001; Marston, Muyskens, Lau, & Canter, 2003). In this three-stage process, student interventions are monitored and RtI data are used to determine whether students are eligible for special education services. Classroom Interventions are implemented at Stage 1. After determining that a student qualifies for additional instructional support, the service provider begins to collect frequent student-level data and initiates a modification in the instructional approach. If the student does not respond to this intervention, he or she receives secondary tier services. At Stage 2, the school’s Problem Solving
Team, comprised of general education teachers, specialized personnel, and school administrators, review each individual case of concern. The objective of this review is to identify individualized resources that can be implemented to target the specific needs of the student. Frequent data are collected, and if the student does not respond to the interventions at Stage 2, the student receives tertiary services, which include a special education evaluation.

WHAT IS THE PROMISE OF RESPONSE TO INTERVENTION?

The RtI Coordination Council of Texas (RICC; 2008) maintains that the RtI holds the promise of ensuring that all children have access to high quality instruction, struggling learners will be identified early, and these students will be adequately supported with appropriate academic interventions. Furthermore, the RICC (2008) emphasizes that the implementation of RtI in Texas schools should result in effective classroom instruction, individualized student intervention, and increased collaboration among professional educators, and should contribute to an overall improvement of Texas schools due to the data-driven foundation of RtI. RtI advocates have recommended the use of multi-tiered strategies to help reduce the achievement gap among learners from diverse and economically disadvantaged backgrounds (Ikeda, Tilly, Stumme, Volmer, & Allison, 1996). The National Research Council on Learning Disabilities (NRCLD, 2006) recommended using RtI techniques to increase achievement, decrease problem behaviors, and reduce the disproportional representation of students from minority backgrounds in special education. Unfortunately, there is a limited empirical base to substantiate these claims, justifying the need for a comprehensive analysis on the effectiveness of RtI as it pertains to measurable student outcomes.

IS THERE ENOUGH RESEARCH TO SUPPORT THE PROMISES OF RESPONSE TO INTERVENTION?

With few exceptions, the research reviewed in regards to RtI has focused largely on the efficacy of each individual component in the model, but not on the value of the RtI process as an integrated whole. Consequently the question of whether the overall process is effective must also be adequately addressed (VanDerHeyden et al., 2007). Based on this concern, we have included a review of 11 published field studies focusing on the efficacy of a multi-tier model. Overall, seven of the studies can be classified as problem-solving models, three are classified as standard protocol models, and one is identified as a combination model (See Table 1). For clarification purposes, a problem-solving model includes individually tailored interventions, usually selected by a multi-disciplinary team, designed to address student deficits (Callender, 2007). A standard protocol model refers to preselected interventions that are implemented after a multi-disciplinary team has determined that the current level of intervention is not producing adequate student outcomes (Fuchs & Fuchs, 2006). Overall the reviewed studies included students ranging from kindergarten to eighth grade. While the focus of these studies ranged from special education placement to specific core academic gains, all of the studies explored the effectiveness of RtI.

In addition to the variation in primary focus, the methodological design varied between the selected studies. Three of the field studies utilized an A-B single-case methodology. This design is employed by first examining baseline data and then implementing a specific intervention to determine if student performance increases. The fundamental problem with this procedure is that it does not demonstrate experimental control by exploring outcome variations when intervention is removed, making it difficult to infer causality. Additionally, this method does not provide any explanation for why the targeted behavior changed (Shadish, Cook, & Campbell, 2002). Three studies made use of a Historical Contrast Design (HCD), comparing post-test data collected from the treatment group with a similar group of participants from the past. Specifically, quantitative data revealing measurement outcomes for student participants were collected for students exposed to RtI for a specified period of time and compared with other student participants within the same district who were not exposed to an RtI. The HCD design is also considered weak in establishing causality due to uncontrolled extraneous variables (Shadish, Cook, & Campbell, 2002). Additionally, three studies employed the Quasi-Experimental Design (QED). The QED is a grouping design that does make use of a control group, but is considered less rigorous when compared to other designs, such as Randomized Control Trials, because it does not employ randomization procedures. Researchers suggest that this limitation can be compensated for if baseline data indicates that the experimental and control groups were equivalent based on all measured variables (Shadish et al., 2002).
<table>
<thead>
<tr>
<th>Multi-Tier Intervention Model Name</th>
<th>Article Author(s)</th>
<th>Researcher(s)</th>
<th>Participant(s)</th>
<th>Research Design/Protocol</th>
<th>Measured Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Croix River Education District Model</td>
<td>Bollman, et al. (2007)</td>
<td>Teacher</td>
<td>K-8 # of schools &amp; participants not reported</td>
<td>Descriptive QED and HCD/Problem-Solving</td>
<td>Reading-Spec. Ed Placements</td>
</tr>
<tr>
<td>Tiers of Reading Intervention</td>
<td>O'Connor et al. (2005)</td>
<td>Researcher/Educator</td>
<td>K-3 2 schools 22 students</td>
<td>HCD/Problem-Solving</td>
<td>Reading-Words, word identification, word attack, passage comprehension, fluency, Spec. Ed Placement</td>
</tr>
<tr>
<td>Pennsylvania instructional Support Teams</td>
<td>Kovaleski et al. (1999)</td>
<td>Educator</td>
<td>1-4 117 schools 492 students</td>
<td>QED/Problem-Solving</td>
<td>Implementation of academics</td>
</tr>
<tr>
<td>Minneapolis Problem-Solving Model</td>
<td>Marston et al. (2003)</td>
<td>Educator</td>
<td>k-12 Schools not reported 121 students</td>
<td>HCD/Problem-Solving</td>
<td>Placement Rates, achievement, referral rates</td>
</tr>
</tbody>
</table>
Table 1 (Part 2 of 2)
Overview of the Studies included in this Review

<table>
<thead>
<tr>
<th>Multi-Tier Intervention Model Name</th>
<th>Article Author(s)</th>
<th>Researcher(s)</th>
<th>Participant(s)</th>
<th>Research Design/Protocol</th>
<th>Measured Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois Flexible Service Delivery System Model</td>
<td>Peterson et al. (2007)</td>
<td>Educator</td>
<td>K-8, 26 schools, 556 students</td>
<td>Descriptive/Problem-Solving</td>
<td>Referral Rates, Spec. Ed Placements, Parent and Staff Satisfaction</td>
</tr>
<tr>
<td>Ohio intervention-Based Assessment</td>
<td>Telzrow et al. (2000)</td>
<td>Educator</td>
<td>1-6, 227 Schools, # of students not reported</td>
<td>Correlational and Descriptive/Problem-Solving</td>
<td>Implementation fidelity, student goals and fidelity correlation</td>
</tr>
</tbody>
</table>

Special Education Referral/Placement Outcomes

Overall, six studies focused on the effects of RtI on special education referral and/or placement rates. Peterson, Prasse, Shinn, and Swerdlik (2007) indicated that special education referrals and placements remained stable over time after the implementation of a RtI. Bollman et al. (2007) studied the impact of RtI on special education identification rates and reported that placement rates dropped from 4.5% to 2.5% over a ten year period. Callendar (2007) indicated that special education placement rates decreased by 3% for schools that implemented RtI, where the state rate decreased by 1%. In addition, Marston et al. (2003) reported that special education placement rates remained constant for schools implementing an RtI model.

Focused specifically on placement rates, O’Connor, Harty, and Fulmer (2005) determined that during the four year time-span of RtI implementation, special education placement rates fell to 8%, compared to 15% for the historical contrast group. Finally, VanDerHeyden et al. (2007) indicated a decrease in the number of special education referrals, but an increase in the number of special education placements. Based on these studies, it is difficult to discern whether RtI serves as a vehicle for significant decreases in special education placement.

Reading Outcomes

Based on the emphasis of evidence-based reading programs in NCLB (2002), an increasing number of empirical explorations are investigating the link between RtI and reading outcomes. In the current investigation, four studies measured reading outcomes relative to an RtI model (Bollman et al., 2007; Callender, 2007; O’Connor et al., 2005; Vaughn et al., 2003). Bollman et al. (2007) suggested that students who were considered to be academically at-risk exhibited a steady improvement on curriculum-based measurements over a ten-year time span. A specific limitation of this study was the lack of a control group to compare these gradual gains, making it difficult to link improvement to the implementation of RtI. Utilizing a Historical Contrast Design, Bollman et al. (2007) compared past student performance to current achievement levels, using student scores from the Minnesota state assessment. Bollman et al. (2007) reported that the rate of students involved in the RtI program reached grade-level standards earlier than students who were not exposed to multi-tiered instruction. These findings were replicated by Callendar (2007), who
found that students in the Idaho RtI program with individualized reading intervention plans demonstrated higher reading outcomes than their peers without individualized plans. Similarly, O’Connor et al. (2005) determined that students who were exposed to multi-tiered reading interventions at the secondary and tertiary tiers performed higher on standardized reading measures when compared to a historical contrast group.

While implementing a tiered intervention program for 45 students, Vaughn et al. (2003) provided supplemental instruction five times per week, in 35-minute intervals. She reported that all students exhibited significant gains on reading measures, where 10 students exited after 10 weeks of instruction, 14 after 20 weeks, and 10 more after 30 weeks. While demonstrating significant reading gains, 11 students did not meet exit criteria after 30 weeks. However, it was determined that approximately one-third of students exiting the program failed to maintain those academic gains after returning to the general education classroom. Therefore, these students required additional supplemental instruction shortly after they were exited from the program (Vaughn et al., 2003).

**Math Outcomes**

Interestingly, only one study that met inclusion criteria explored outcomes related to mathematics. Ardoin et al. (2005) implemented an RtI model to explore the effectiveness of secondary and tertiary interventions, consisting of individualized instruction and peer tutoring, of 15 fourth graders who were struggling in mathematics. Ardoin et al. (2005) determined that one-third of the student participants did not demonstrate satisfactory gains when provided with secondary tier interventions. These students were provided with more individualized tertiary instruction. Following the tertiary intervention, only one student did not demonstrate expected gains at tier 3 (Ardoin et al., 2005).

**Other Targeted Outcomes**

For the purpose of analyzing the academic behaviors associated with time on task and task completion, Kovaleski et al. (1999) wanted to determine if student participants who were exposed to a multi-tiered intervention model performed better on these academically-related tasks when compared to students at other schools that did not employ an RtI model. Kovaleski et al. (1999) determined that students who were exposed to multi-tier interventions outperformed the comparison group on all measured variables (Kovaleski et al., 1999). While limited, this study demonstrates the promise of a multi-tiered model for addressing academic related behaviors.

**CONCLUSION**

Based on the analysis of the discussed studies, several conclusions and observations about these findings can be determined. Specifically, the majority of studies that examined the impact of RtI on academic achievement or student performance resulted in some level of notable improvement, thereby suggesting that a multi-tiered intervention approach can improve the academic outcomes for students at risk of academic failure. However, limitations exist due to the use of particular research designs and procedures that deter the degree to which the measured outcomes can be associated with the intervention approach (Burns, Appleton, & Stehouwer, 2005; Fuchs et al, 2003; VanDerHeyden et al., 2007). Furthermore, while evidence suggests, to a certain degree, that the implementation of the RtI model improves academic performance, this generalization relates primarily to early literacy skills, which may only apply to students at the elementary level. Implication for future research should include more comprehensive designs that focus on higher level cognitive and literacy skills, content area instruction, core curriculum, and teacher efficacy. These studies will serve as the foundation of the emerging, yet promising, model.

In addition to academic outcomes, a direct relationship between RtI implementation and special education placement rates exists, where the selected studies determined that special education referral rates either declined or remained constant. A concern regarding RtI is that the model is used to identify learners who are not responding to normative levels of instruction. O’Connor et al. (2005) addressed this concern, where it was observed that a number of student participants, once identified as non-responders in the early elementary grades, did not meet the qualifications for secondary or tertiary interventions in the later elementary grades. Conversely, some students who were responding adequately to primary tier intervention in the early elementary grades demonstrated difficulties in the later elementary grades (O’Connor et al., 2005). However, it should be noted that the consistent progress monitoring in RtI allows for the fluidity between tiers, and specific tier interventions should be needs driven.
The research base for establishing the impact of the various RtI approaches on students’ learning is obviously emerging. It is without question that the verdict is still out on the actual benefits of RtI. Additionally, more comprehensive research is needed in order to determine if the RtI approach is an effective intervention method for all learners, ultimately contributing to positive outcomes regarding special education referral and placement rates. However, with the national push for research-based multi-tiered interventions in the U.S., an increasing number of schools and school districts are beginning to utilize the RtI approach. Effectiveness of these programs may be viewed internationally, because educational legislation in the U.S. may indirectly influence international policy. Therefore, given the promise of RtI models in the U.S., multi-tiered interventions may become commonplace for special education identification and increasing academic outcomes for students throughout the world.

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Individuals with Disabilities Education Improvement Act, H. R. 1350, 108th Congress (2004).


SOCIALIZATION PROCESSES OF ENGINEERING STUDENTS: DIFFERENCES IN THE EXPERIENCES OF FEMALES AND MALES

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The primary purpose of this study was to explore the personal experiences of female and male engineering students in both Division I (17 females and 16 males) and Division II (11 females and 11 males) programs. Analyses of narratives of 55 undergraduate engineering students revealed that the sociocultural experiences of female and male students differ in substantial ways in that socialization processes into engineering are problematic for women, who often rely on one another to bolster their self-efficacy perceptions and resiliency. Another important finding is that Division II female students were provided much more support by both professors and male peers than were their Division I counterparts, who reported more incidents of negative interactions with male students, especially when working in collaborative groups.

Keywords: engineering education; gender; socialization

During the latter half of the twentieth century, three watershed developments in American education created more opportunities for students. The first major change occurred in 1954 when the United States Supreme Court mandated the desegregation of public schools in the Brown vs. the Board of Education decision. The second and third substantial developments occurred in 1975 and were the result of federal legislation. The Education for Handicapped Children Act (Public Law 94-142) extended services and educational opportunities for students with disabilities, while Title IX of the Education Amendments Act mandated that no students—male or female—were to be excluded from participation in activities or denied benefits of educational programs receiving federal funding.

Title IX profoundly affected public education in that today females are participating in more sports-related activities and are taking more higher-level science and mathematics courses than they did before Title IX was enacted (Sleeter & Grant, 2009). Statistics have shown how achievement levels of girls and young women in mathematics and science have improved steadily over the past thirty years, and females now perform as well as males do in mathematics and the sciences (Nieto, 2004; Willingham & Cole, 1997). Nevertheless, research on public school students’ participation patterns has shown that males and females differ in their levels of classroom participation in mathematics and science (Jovanovic & King, 1998; Reid, 2000).

For example, Sadker, Sadker, and Klein (1991) found girls participate less in classroom activities after seventh grade, and they often are not as active or assertive as boys during hands-on science activities. In addition, Sadker and Sadker (1994) found teachers are more inclined to expect more compliant and passive behavior patterns from girls than they are from boys, and teachers reprimand girls more often than boys for calling out answers during discussions. Equally problematic, teachers are more apt to call on and to listen to boys than they are to girls during discussions even though girls are more inclined to ask questions (Eccles & Blumenfeld, 1985; Monaco & Gaier, 1992; Ornstein, 1994; Sadker, Sadker, & Long, 1997). Other researchers (e.g, Barbar & Cardinale, 1991; Jones & Wheatley, 1990) have found how patterns of teacher-student interactions favoring boys are more pronounced in science and mathematics classes than they are in language arts classes.

These inequalities explain to some extent why girls become less positive about science as they advance in age (Reid, 2000; Weinbaugh, 1995a). Although research has shown that girls perform as well as boys in the sciences, academi-
cally successful females interested in science often perceive themselves as less capable science students than their male counterparts (Andre, Whigham, Hendrickson, & Chambers, 1999; Tai & Sadler, 2001). For example, Brainard and Carlin (1998) conducted a six-year longitudinal study of persistence in undergraduate women enrolled in engineering and science programs. The researchers found women performed well in these disciplines, and there was little difference in grade point averages between those women who stayed in their respective programs and those who left engineering and science programs. Instead, a lack of a supportive educational environment for women in engineering and science programs and ineffective pedagogical practices were the primary factors contributing to the attrition of women, and women reported a loss of confidence in their abilities during their undergraduate programs even though they performed well academically.

Research also has shown how women who remain in engineering programs typically have lower self-efficacy perceptions than do their male counterparts (Zeldin, Britner, & Pajares, 2008). Self-efficacy, which according to Bandura (2000) is one’s judgment about one’s ability to perform well in a given endeavor, is a key factor determining whether a person will attempt and persist through the completion of an academic task. In fact, self-efficacy beliefs are often stronger indicators of academic success than innate ability (Bandura, 2000; Schunk, 2004), and recent research has shown how students’ self-efficacy perceptions are important predictors of academic success in engineering programs (Vogt, Hocevar, & Hagedorn, 2007).

According to Bandura (1997), people primarily form self-efficacy perceptions through their interpretations of past performances, which he termed mastery experiences. When individuals successfully complete a given task, their self-efficacy perceptions are strengthened. Consequently, they become more willing to persist through difficult academic tasks in the future because they believe their persistence will result in favorable outcomes. Conversely, perceived experiences of failure undermine people’s self-efficacy perceptions and decrease their willingness to persist when academic work becomes difficult. Because rigorous academic programs like engineering require concentrated effort and persistence, it is especially important for students to develop strong self-efficacy perceptions at the beginning of their academic programs.

In addition to mastery experiences, self-efficacy perceptions are influenced by vicarious experiences, social persuasions, and physiological indexes (Bandura, 2000). Vicarious persuasions are formed when people observe the successes or failures of others who seem to have similar abilities as themselves. If students observe how peers from similar backgrounds either succeed or fail in a given academic program, they often believe they, too, would perform at the same levels if enrolled in those respective courses. Unfortunately, high attrition rates of women in engineering programs may discourage capable women from entering engineering (Adelman, 1998; Vogt et al., 2007).

Similarly, social or verbal persuasions impact people’s self-efficacy perceptions in various ways and involve complex interactions of affect and cognition. For example, students’ self-efficacy perceptions are strengthened when individuals such as engineering professors validate the quality of their work, but are undermined to some degree when professors question their competency. Unfortunately, research has shown how women in male-dominated fields such as engineering are more susceptible to negative verbal persuasions than are men (Zeldin & Pajares, 2000), and negative socio-cultural experiences often undermine the self-efficacy perceptions of even the most capable women (Hartman & Hartman, 2006).

THE PURPOSE OF THIS STUDY

As previously noted, women have lower self-efficacy perceptions in mathematics, science, and engineering than do their male peers. Consequently, it is not surprising that only 20% of the engineers in the United States are women even though the achievement levels of girls and young women in mathematics and science equal those of boys and young men, and in the United States and many other nations women are leaving the engineering profession at much higher rates than men are (Gill, Sharp, Mills, & Franzway, 2008). According to Blickenstaff (2005), socialization processes into the engineering profession were designed historically by men for male engineers.

Therefore, it is important to investigate whether or not socialization processes into the engineering profession differ for males and females, especially in terms of how socio-cultural experiences of males and females affect their self-efficacy perceptions and views of the engineering profession in general. A careful examination of male and female
engineering students' perceptions of their academic work and socialization processes into engineering would encourage further study on how to assist engineering students to improve retention rates, especially those of women, who, as reported by Hartman and Hartman (2006), often experience a decline of self-confidence in their science, mathematics, and engineering programs even when they have excelled academically.

METHODS AND PROCEDURES

This qualitative study was designed to elicit undergraduate students’ perspectives about their experiences in engineering programs. As noted by Patton (2002), qualitative research investigates complex, multifaceted realities of social interactions as a person attempts to interpret and make sense of personal experiences. From a phenomenological perspective, one’s experiences and interpretations of those respective experiences are important aspects of how one understands one’s inner reality (Merleau-Ponty, 1964), and the primary focus of this study was to capture the inner views of participants’ lived experiences to understand the commonalities and differences between the socio-cultural experiences of male and female engineering students. As advocated by Strauss and Corbin (1990), a grounded theory approach was employed to provide participants with opportunities to voice their interpretations of social interactions within their respective engineering programs.

Participants

Our sample consisted of 55 undergraduate engineering students (juniors and seniors), who volunteered to participate in this study. Thirty-three of the participants (17 women and 16 men) were enrolled in an engineering program at a Division I research university, and 21 students (11 women and 11 men) were from a Division II teaching university. Both the Division I and Division II universities are located in the American Southwest. We have not revealed the names of engineering students or their respective university programs because several Division I students stated they would not answer questions candidly if they and their engineering programs were identified. Consequently, we assured participants we would not reveal names of students or universities.

Data Collection

A protocol of open-ended questions was designed to allow engineering students opportunities to discuss their experiences in detail to capture the complexities of their interpretations of memorable events. When we initially administered the open-ended questionnaires, we gave students as much time as necessary to voice their views in sufficient detail. Two weeks later, we returned students’ initial responses and provided them another opportunity to expand on their previous responses or to discuss other important issues, and students were given as much time as they deemed necessary to complete their second responses.

Data Analysis

Qualitative methods as advocated by Strauss and Corbin (1990) were employed to identify salient themes for categorization into units of analysis. Careful attention focused on themes in which similarities and differences in the experiences of males and females emerged. An understanding of multiple perspectives is a critical component of any phenomenon studied in that both common and dissenting voices often serve as significant counterpoints to identify seminal themes and to understand their complexities (Creswell, 1998).

Two researchers coded the data, and differences in coding patterns were referred to a third researcher, who also coded the given items in question. In most cases, the third coder resolved discrepancies between the two primary coders; however, any unresolved discrepancies in codings by the third coder resulted in the elimination of the disputed item. Next, a componential analysis was prepared to delineate and summarize patterns of coded themes, and two additional colleagues familiar with qualitative analyses were asked to comment on selected themes and their respective patterns to strengthen the internal validity of this study (Merriam, 1988).

RESULTS AND DISCUSSION

Academic Stress

The most common theme mentioned by both Division I (9 males and 14 females) and Division II (6 males and 10
females) students concerned academic stress. The intense workloads and fast-paced curriculum typical of any engineering program apparently challenged and required students to study long hours to complete their rigorous academic work. Most male and female engineering students mentioned how studying for examinations and completing projects demanded most of their time, and they had few free moments for relaxation. Nevertheless, the majority of those engineering students (7 male and 8 female Division I students and 6 male and 8 female Division II students) who discussed the stressful nature of engineering programs also noted their satisfaction with engineering as a program of study. For instance, one male Division I student noted:

The past few years as an engineering student have been stressful and consisted of making many sacrifices and spending countless hours on homework and projects to meet unreasonable deadlines in most cases. However, as hard as it was, I am thankful for the problem-solving skills and the work ethic I got out of it. If I had to do it again, I would pursue engineering.

Other engineering students from both universities reported that the challenges, stresses, and intense workloads did not undermine their enthusiasm for their respective engineering programs. One reflective female Division II student noted that persevering through the difficulties of her engineering program helped her to develop more self-confidence:

The engineering program is often stressful- more than I would have expected. The challenges often test my faith in myself, but I always learn how to work through it and am a stronger person now.

In cases like these, it seems students’ mastery experiences resulted in the positive development of their self-efficacy beliefs, which are a source of internal encouragement and confidence when they perform difficult academic tasks.

On the other hand, some students (2 male and 6 female Division I students and 1 male and 2 female Division II students) referred to the stress of their workloads in pejorative terms. Typical comments focused on students’ perceptions that the amount of work expected from engineering students is unreasonable as represented by the following comment from a male Division I student:

The harsh & fast pace of the program is made unnecessarily stressful by unnecessary assignments- especially when we [engineering students] are not really sure what professors expect from us.

Such comments seem to imply that professors could have mitigated some academic stress and confusion about assignments if they had clarified their expectations for academic tasks. Perhaps these same students would have accepted the challenges of their respective engineering programs more willingly if they had been more aware of how to focus their efforts to complete academic tasks. Clear expectations and guidelines for academic tasks are essential aspects of effective pedagogy in that they scaffold instruction and guide students through the successful completion of academic work (Moll, 1990; Vygotsky, 1997a), which often strengthens their self-efficacy perceptions (Lent, Brown, & Gore, 1997).

**Concern for Students**

Another frequently mentioned theme common to both Division I and Division II students concentrated on professors’ concern for students. However, there is stark contrast between the commentaries of Division I (2 males and 5 females) and Division II students (1 male and 6 females). No Division I student explicitly stated professors were concerned about students, and both male and female students voiced their frustrations with professors who seemed unwilling to help students with assignments because they primarily focused on research instead of on teaching. For instance, a Division I male student noted:

Professors do not care about teaching, only about their research, and the homework assignments do not prepare you for examinations. It seems they are indifferent to students- and they show up for class only because they have to.

Likewise, a Division I female student stated:

Engineering professors don’t care about teaching or students. They are seldom there for office hours. Research,
research, research is what really matters to them— not teaching.

Conversely, typical comments from Division II engineering students (1 male and 6 females) emphasized how professors made active efforts to assist students. For example, one female student noted: “Professors are caring and do their best to help you understand everything to the fullest.” Likewise, another female student stated, “Professors are very accepting and welcoming, and the professors here are great.” Even when Division II students emphasized the difficulties of their program, they still mentioned that professors were willing to help with their academic work as representative of a comment from a male student:

The deadlines for projects and the projects themselves are not always reasonable, but I can say my professors are willing to help me and other students. This makes a huge difference in my attitude about the program.

Also, both male and female Division II students reported that professors were available during their office hours to answer questions about assignments. Consequently, it is not surprising that Division II students expressed more satisfaction and less frustration with their respective engineering programs than did their Division I counterparts.

Working on Group Projects

Like the concern for students theme, Division I and Division II students differed in their commentaries about working on required group projects. In terms of Division I students (3 males and 11 females) who mentioned working on group projects, all men referred to working in groups as positive learning experiences, while only 4 of the 11 women reported positive experiences. In contrast, of the 8 Division II students (2 males and 6 females) who discussed work group activities, all engineering students except 1 woman referred to working on group projects as a positive experience.

Positive Experiences When Working in Groups

Students who viewed group projects in positive terms, whether they were male/female or Division I/Division II students, typically noted how working closely with peers enhanced their academic work, improved their work ethic and communication skills, and provided opportunities for personal development. For example, one female Division II student stated:

I have always had a strong work ethic, but working in the learning community groups stretched my work ethic as it does when I’m on an athletic team. I always try to do my best but having other people depending on you makes you push yourself even more. At this point I know my work ethic and confidence in myself is stronger as a result of this program and my group. I learned a great deal from the others.

Some students even noted how working in groups on engineering projects was their first positive experience with group work as representative of the following comment by a Division II female student:

I’m sorry to say I never had this type of experience working in groups before. In the past it always seemed like I had the double duty of carrying myself and my group, but this was a good team and team building experience.

These findings are similar to those of studies on cooperative learning in that students often work more conscientiously when completing a common group goal because each student is required to complete a given component of an assignment for the group to succeed (Johnson & Johnson, 1999; Slavin, 1996b).

Equally important, several male and female engineering students from the Division I and Division II universities emphasized how they benefited from the moral support and encouragement of their respective work groups. As representative of the following response from a Division I female student, students noted how effective work groups helped to ameliorate the stress of their intense workloads:

I cannot say it was all bad, but it would have been without my group that supported and encouraged me. As hard as the engineering program was, I am thankful for the support from my work group and problem-solving skills I got out of it.

Since engineers often work in teams, these positive experiences in completing group projects and meeting deadlines provide engineering students opportunities to develop the type of interpersonal skills necessary for working in the
engineering profession.

Another reported benefit of work groups concentrated on the development of friendships in addition to positive professional relationships. Such friendships seemed especially important for those students whose family members live at a distance from their respective university, as one female Division II student noted:

Making connections and developing friendships in my work group is one benefit of being in an engineering program, and these friendships make the engineering program much better, especially since my family is not within even a day’s drive, so I don’t see them until the end of each semester.

Positive interactions among group members seemed to provide some students an important support structure, which improves student retention (Veenstra, Dey, & Herrin, 2009).

**Negative Experiences When Working in Groups**

Although some male and female students reported positive experiences while working on group projects, several female engineering students voiced their frustrations about what they perceived as unequal treatment and different expectations for male and female students. However, in regard to inequities between the genders, only one female engineering student from the Division II University voiced her frustrations, in contrast to 7 of the 11 female Division I students who commented about working on group projects. The Division II female student expressed her concerns about having “to prove herself as a female who is competent, intelligent, and equal to the men” in her classes, and she emphasized:

There is definitely an amount of exclusions toward women, whether it’s intentional or not. It’s harder for me as a woman to prove I’m just as experienced and competent as everyone else. I just want everyone (including me) to be treated equally.

Her commentary about whether or not the exclusion of women is intentional voices an important concern for women in the male dominated profession of engineering. She understands the culture of engineering is historically male-oriented, and she realizes incidents of the inequitable exclusion of female engineering students by their male counterparts may not be intentional acts or recognized as inequalities by male students.

It is not unusual for people to accept various cultural norms without thinking about their underlying assumptions or their intended and unintended consequences (Nieto, 2004). Nevertheless, exclusion is still exclusion whether it is intentional or not, and the results of exclusion are still the same regardless of the circumstances causing such inequities. The female Division II student does not seem to perceive a polarized situation of women vs. men. Instead, she, as a female engineering student, wants to be equal to “everyone” — that is, equal to but not considered better than male students.

In terms of voicing concerns about gender bias, the criticisms of Division I female students were more emphatic than those of the Division II female student. As noted by several Division I female students, some male students attempted to reduce the roles of female students to that of passive observers, and one Division I female student stated:

Sometimes I wish the guys would let me do the experiments. They push the girls back and tell us to take notes. When we have opportunity to do so, we [women] work in the same group so we can actually do it. I don’t think they [men] do it [exclude the female students] on purpose, but they still do it.

Similarly, other Division I women reported being upset by negative sociocultural comments from their male counterparts. For example, one woman was told, “Your job is to make coffee. We don’t want your help.” Another Division I female student woman stated she disliked being expected to perform secretarial duties when she was the only female in a work group:

I resent being expected to type every report for my group just because I’m the only girl in the group. This creates a lot of extra work and stress for me, and I did not enter engineering to be my group’s personal secretary. I entered engineering to be an engineer.

Some Division I female students also expressed their frustrations when discussing incidents about how their male counterparts made inappropriate sexual related comments during group work on projects. For instance, one woman
stated, “They [male engineering students] also made sexual jokes and used me as a reference. I was completely humiliated.” Likewise, another Division I woman reported:

My team had six members, and I was the only female. During one meeting while we were brainstorming ideas, my group got off topic and began discussing Halloween costumes. I remained quiet, but two group members began saying that I should dress up as a Playboy Bunny. When I got upset and told them we should get back to the project ideas, they told me to go make coffee.

Unfortunately, these types of gender bias and discrimination have been documented by other researchers (Sonnert & Shelby, 1999; Vogt et al., 2007).

Consequently, it is not surprising that seven Division I female students reported they prefer to work with women than they do with men. For instance, one woman stated, “In programs like this where women are considered second class, it’s much better to work in a group of women.” Similarly, another female engineering student simply emphasized:

Women need women—period—to build each other up. There are always a few men who try to tear us down.

As previously noted, both men and women commented that the academic demands of engineering programs created high levels of stress, and if women also have to deal with negative sociocultural interactions in male-dominated work groups, it is understandable why some women prefer to work in groups with other women as a means of support and a way to avoid additional stress caused by negative group dynamics.

Biased Professors

Another salient theme concerned derogatory comments from professors. No men from either Division I or Division II programs and no women from the Division II program voiced concerns about negative comments from professors. However, seven Division I women reported that a few professors voiced pejorative commentaries about women in engineering. For instance, one Division I female student stated:

I’m tired of professors who think girls are second class citizens. They make comments indicating we do not belong in the field. This indicates to the boys to do the same thing. Without other girls in the program, I wouldn’t make it. We help each other.

Likewise, another Division I woman voiced her chagrin when male professors subjected female students to disparagement:

Most of the male professors are good but some don’t want girls in the program and do their best to make you feel like a piece of meat. They try to tear down our confidence while other girls build us up again when this happens. It’s a matter of survival!

In lieu of the these aforementioned comments by female Division I students, it is not surprising that a Division I student noted that she “was much better off during her second year of courses [than she was during her first year]” because she “had better professors who didn’t egg it on to seemingly tell the boys in the class it’s OK to make insulting comments about the girls.”

If female engineering students have to deal with derogatory gender-biased verbal persuasions from male professors in addition to coping with the demands of their academic work, it is understandable why many capable women leave engineering and why women rely on other women for support to mitigate derogatory sociocultural persuasions, which sometimes undermine a person’s self-efficacy perceptions (Blickenstaff, 2005; Parjares, 2005).

Gender Bias during Job Fairs

Three women (1 Division II and 2 Division I students) also reported experiencing unpleasant comments from male recruiters when interviewing at job fairs. One female student noted she was rejected as a viable candidate for an engineering firm because the recruiter considered her an attractive woman:

I was told at a job fair interview last week that I was too pretty to work for the company because the men would be flirting with me instead of working. He said he couldn’t afford to pay guys to be distracted by me. In 2009! How disgusting!
Similarly, another female student noted how another recruiter was more concerned about her appearance than her qualifications to work for an engineering firm:

At the last job fair, I talked to a recruiter whose only comment was, “You are so beautiful. You look nice in that dress.” You know, I worked so hard to get where I am and just want to be treated like I know something. I have better grades than anyone and yet, I can’t seem to be taken seriously when applying for engineering jobs. I wish for once, I could be treated like everyone else.

The female students who made the aforementioned comments about their experiences at job fairs have not asked for special treatment, only for equality as mandated by federal hiring guidelines. These incidents of discrimination may or may not be common occurrences; nevertheless, they raise concerns about hiring practices of engineering firms. If women who graduate from engineering programs are denied employment or are discouraged from applying for engineering jobs because recruiters consider them attractive, then fewer women will enter the engineering profession, thereby continuing the shortage of female role models in engineering.

Resiliency and Familial Support

Another prevalent theme reported by female engineering students concerns familial support. Several women (6 Division I and 4 Division II students) noted that female family members encouraged them to excel in mathematics during their elementary, middle school, and high school years of schooling. For instance, one female Division I student commented:

My mother encouraged me throughout my life at whatever I studied—and she especially helped me to excel at math. Without her encouragement I do not think I could have succeeded. My mother is the positive role model I look to in my life.

In the case of this student and that of others, her mother’s positive verbal persuasions became a source of emotional support and encouragement for her to excel in mathematics and engineering. Her mother’s support seems to have affected the development of her strong self-efficacy perceptions, which may have provided her with the resiliency to persevere through her engineering program.

Some female students who emphasized how maternal support positively impacted their lives also noted how their sisters or father encouraged them. One Division II woman stated:

My mom and dad have been great—they are always there for me. My sisters are supportive and helpful also. I am so fortunate to have the support of everyone—and I go home as often as possible to reenergize myself emotionally. I don’t know how I would make it through the program without my family behind me.

As noted by various researchers (Bandura, 2000; Eccles, 1992; Zeldin & Pajares, 2000), significant individuals in a person’s life, such as parents, counselors, teachers, and coaches, profoundly affect an individual’s self-efficacy perceptions. Consequently, it is not surprising that some female engineering students reported how they need support and affirmation from women (e.g., mothers, grandmothers, sisters) to reassure them that engineering is a viable career choice for female students even though it deviates from stereotypical career choices such as nursing or teaching.

In contrast, no male Division I or Division II engineering students mentioned anything about how family support influenced their respective career decisions. This does not imply that no men were influenced by family members; this seems highly unlikely especially in consideration of research on the positive effects of parental involvement on academic achievement for both males and females (Comer, Haynes, Joyner, & Ben-Avie, 1996; Epstein & Sanders, 2000). A more plausible explanation is that men are more accepted in male-dominated fields such as engineering than are women; consequently, men are less inclined to seek support outside of their engineering programs for positive social persuasions and encouragement. Also, since most engineering professors are men, male engineering students may have more role models and mentors to assist them in socialization processes into the engineering profession.

Lack of Background Knowledge

Another reported difficulty experienced by 5 Division I and 4 Division II female students but by no male engineering students concerned the lack of background knowledge of everyday mechanical applications. Some female engineer-
ing students mentioned that test items often concentrated on concepts not discussed in class as representative of the following comment of a Division II student:

It’s hard to succeed in classes when tests ask questions about things related to how cars, pumps, and machines work, but yet these things are not discussed in class. My dad has helped me a lot explaining these things to me. The problem is when they are used as examples on tests and I’ve never been taught about these things. The guys all seem to know about these things because they learned about them growing up. . . .

During their formative years of growing up, some female engineering students seem to have been socialized into stereotypical gender roles in which men work on cars and women perform household chores. Consequently, some female students lack important background knowledge about various mechanical functions common to most male engineering students, and they must learn about theoretical concepts emphasized by engineering professors while also struggling to understand the significance of their professors’ references to car engines and various machines.

**CONCLUSION**

The experiences of male and female engineering students are similar in some respects, although they differ in significant ways. Both men and women noted that their respective engineering programs were challenging academically and, at times, stressful, and a number of male and female students reported that they benefited from working in groups to complete projects. On the other hand, some women—especially those from the Division I university—reported that men expected them to accept secretarial roles, such as making coffee and typing reports for their groups, and in these types of cases it seems as if female engineers were expected to resign themselves to the roles of paraprofessionals instead of trained engineers. In some respects, the expectations of women to take on secondary roles while working on hands-on engineering projects is similar to behavior patterns found in many middle and high school science classes in that females typically are excluded from taking active roles in projects and often are expected to take notes for their respective groups while males handle the laboratory equipment (Sleeter and Grant, 2009). Consequently, it is not surprising that some female engineering students preferred to work with other women and that they needed support from female colleagues and the family members to ameliorate the effects of negative verbal persuasions and to strengthen their self-efficacy perceptions.

Some Division I female students noted that a few male professors do not want women in engineering. Conversely, the Division II women were provided much more support from male peers and professors, and they noted that professors were concerned about students’ academic success. The primary mission of this Division II university is and has always been teaching, instead of research, and the professors apparently provided more encouragement for female students, who experienced fewer difficulties in socialization processes than did female students from the Division I university. The small sample of this study prevents us from generalizing these findings to other Division I and Division II engineering programs; however, the negative sociocultural experiences reported by Division I females while working in collaborative groups raises questions about the social interactions of these respective work groups.

Although recent research findings (e.g., Stump, Hilpert, Husman, Chung, & Kim, 2011; Vogt et al., 2007) have shown that collaborative work groups increase student learning, there is a paucity of research in terms of detailed analyzes on how effective work groups actually interact as they complete assigned projects. Consequently, more research on collaborative work groups is needed to set guidelines for social interactions, to create models of efficacious team building, to improve instruction, and to increase the retention of female engineering students. Because engineers collaborate in teams in the work place, the development of efficacious social skills is an important part of socialization processes for both male and female students and should be emphasized more overtly in engineering programs (Veenstra et al., 2009).

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SELECTING A BUSINESS MAJOR WITHIN THE COLLEGE OF BUSINESS

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This study employed a survey in examining the important influences that shape a student’s selection of a major in the College of Business (COB). In particular, it compared these influences, by major, to assess which items were most (and least) important to the students majoring in accounting, general business, finance, management, marketing, and MIS. The influences, totaling 37, included internal influences (e.g., interest in the field), external influences (e.g., projected salary), and interpersonal influences (influence of significant others). Some of the findings were consistent with those of prior studies. For example, interesting work was highly important for all business majors, and specific interpersonal influences such as parents, high school teachers, and peers were relatively unimportant. The findings presented herein suggest that the overall impact of interpersonal influence may have been underestimated in previous studies. Unlike many previous studies, this study showed that job availability and job security were more important to students than interest in the field. This study augments the extant literature in that the survey was conducted right after the 2009 recession, which allowed an analysis of student decision making during a period of high unemployment and lingering economic uncertainty. Implications and suggestions for further research are discussed.

Keywords: business, college major, careers, survey

In recent years, declining support for higher education (Hugstad, 1997), increased competition for business students from nontraditional educational providers, corporate universities, online universities (Pappu, 2004; Smart, Kelley, & Conant 1999), and negative headlines (Enron, dotcom bust, outsourcing, the “Great Recession,” etc.) have combined to affect enrollment in business schools and the various departments within business schools. For universities and the colleges, and for departments within a university, students’ collective decisions regarding college majors affect funding and resource allocation to and within the university. Resource allocation may be particularly salient to state universities where resources are allocated using funding formulas based on faculty credit hours generated, attendance, number of majors, retention, and/or number of graduates. Moreover, for organizations that employ college graduates, and for the general economy of states and nations where those organizations reside, students’ collective decisions regarding college majors also affect the degree to which college graduates can contribute to organizational and broader economic and social objectives.

The choice of major, a decision that every student makes at least once in his or her college career, also affects that individual’s life during and after college. A college student faces an uncertain future, and most are aware of the likely importance of the choice of a college major on future employment opportunities, compensation, and job satisfaction. In this context, most students are likely to give thoughtful and at least intentionally-rational consideration to the decision (Simon, 1977).

The primary purpose of this research is to examine factors that business students perceive as having been important in their earlier decision to pursue both (a) a major in the College of Business and (b) the specific major selected within the College of Business. To the degree that identifying the perceived influences provides insight into the factors that lead an individual to select a business (or any) major, this information may be relevant for individuals as they try to match their own interests and abilities to potential careers, to universities, colleges, and departments that seek to
understand and affect student decisions, and to the organizations and society within which those students will work. In addition to providing insight regarding earlier decisions, identifying perceptions regarding factors students recall as having been important could help us better understand how students are socialized (anticipatory socialization) and prepared for their future lives.

LITERATURE REVIEW

Our review of the literature focuses on students pursuing four-year bachelor’s business degrees. In examining this literature, influences that shape the choice of major may be broadly categorized as internal influences, such as ability, skills, and self-efficacy, external influences, including rewards related to both compensation and job security, and the influence of other people (Downey, McGaughey, & Roach, 2009; Roach, McGaughey, & Downey, 2011; Strasser, Ozgur, & Schroeder, 2002).

Ability, Skills, and Self-Efficacy

One set of influences on a student’s selection of a college major are the student’s skills or abilities and the student’s personal assessment of his or her abilities (Coperthwaite & Knight, 1995; Downey et al., 2009; Hansen & Newman, 1999; Roach et al., 2011; Strasser et al., 2002). Students tend to choose majors perceived as a good fit with their skills and abilities and the skills and abilities required in related fields of work (Schlee, Curren, Kiesler, & Harich, 2007). Skills that may have a bearing on the selection of a specific business major include quantitative, technical, entrepreneurial, creative, and people-oriented skills. This interpretation is consistent with self-efficacy theory, which argues that perceptions regarding one’s capabilities in a specific domain are an important precursor to motivation and performance (Bandura, 1986, 1997). To paraphrase an oft cited quotation of Henry Ford, if you think you can, you can, but if you think you cannot, then you cannot. This interpretation is supported by findings that students with high standardized scores in math and science tend to choose technical majors and, more to the point, students who believe they have high quantitative and/or technical abilities tend to choose math, science, or engineering majors (Farley & Staniec, 2004; Lapan, Shaughnessy, & Boggs, 1996). By contrast, students with lower quantitative scores are more likely to pursue liberal arts’ degrees (Carter, 2006; Maple & Stage, 1991).

Studies of business majors mirror studies that focus more broadly on majors across the university as a whole. Business students tend to pursue a fit between perceived ability and the degree they pursue; i.e., students with high quantitative self-efficacy tend to pursue accounting degrees, students with high people-oriented self-efficacy tend to pursue management and/or marketing degrees, students with high creative self-efficacy tend to pursue marketing degrees, and students with high technical self-efficacy tend to pursue MIS degrees (Kim, Markham, & Cangelosi, 2002; Schlee et al., 2007). The relationship between quantitative skills and business school majors is also supported by a study indicating that sophomores majoring in accounting score higher on quantitative tests than do their counterparts majoring in management or marketing (Pritchard, Potter, & Saccucci, 2004).

Perceptions regarding people-oriented skills also influence student choice of major (Strasser et al., 2002). Interpersonal skill may be more important than technical skills as students try to ensure that their skills and preferences match their expectations with careers in different fields (Strasser et al., 2002). Students tend to perceive that management and marketing majors and associated careers require strong interpersonal skills, and students pursuing those degrees see themselves, and are seen by other students (pursuing accounting, finance, and MIS degrees), as possessing strong people-oriented skills and relatively low quantitative skills (Schlee et al., 2007).

Perceptions regarding creativity may also influence students’ selection of a college major. For example, creative skills are often viewed as important for students pursuing a degree and career in marketing. By contrast, the stereotypical accountant may be viewed as a number cruncher whose job requires little to no creativity (Hunt, Falgiani, & Intrieri, 2004; Siegel, 2000). This leads to our first hypotheses:

Hypothesis 1: The importance of quantitative skills as a reported influence on the choice of a college major within the College of Business will be higher for students pursuing majors perceived as quantitative (accounting, finance) than for students pursuing other majors.

Hypothesis 2: The importance of technical skills as a reported influence on the choice of a college major within
the College of Business will be higher for students pursuing majors perceived as technical (MIS) than for students pursuing less technical business majors.

Hypothesis 3: The importance of interpersonal skills as a reported influence on the choice of a college major within the College of Business will be higher for students pursuing majors in general business, management, and marketing than for students pursuing other majors.

Hypothesis 4: The importance of creative skills as a reported influence on the choice of a college major within the College of Business will be higher for students pursuing majors perceived as creative (marketing) than for students pursuing other majors and lower for students pursuing majors perceived as not requiring creativity (accounting) than for other majors.

Personal Interest in Subject

Genuine interest in a field may be the most important factor when it comes to choosing a college major (Adams, Pryor, & Adams, 1994; Cohen & Hanno, 1993; Coperthwaite & Knight, 1995; Malgwi, Howe, & Burnaby, 2005; Strasser et al., 2002; Zhang, 2007). As students decide on a college major, they likely think about the implications of that choice on the type of work they will do after graduation and whether or not they will find that work interesting.

Many studies support the importance of interest in the field on students’ decisions regarding college major. For example, both Kim et al. (2002) and Strasser et al. (2002) reported that business students rated interest in the field as the most important factor when choosing a major, above monetary compensation and job opportunity. Similarly, Moorman and Johnson (2003) report a correlation between interest in technology and majoring in technology fields such as computer science. Several authors conclude that interest in the field in college is related to student perceptions regarding work in that field following graduation (Adams et al. 1994; Malgwi et al., 2005; Mauldin, Crain, & Mounce, 2000; Strasser et al., 2002) and that interest in the field is the most influential factor in the choice of a college major (Adams et al., 1994; Cohen & Hanno, 1993; Malgwi et al., 2005; Strasser et al., 2002; Zhang, 2007). Strasser et al. (2002), while acknowledging its importance for all business majors, provide evidence suggesting that personal interest may be particularly important to management majors. They also suggest that the finding that business students valued interesting work more highly than career benefits and pay runs counter to commonly held perceptions of business students as individuals whose sole concern is money rather than enjoyment or interest.

While students identify personal interest as a driving force in their selection of a major, some research suggests that there may be a mismatch between students’ perceptions regarding the work they expect to do after graduating with a particular degree and what they actually end up doing in jobs that are available. For example, marketing students’ perception of marketing as consisting of advertising and selling may be too narrow (O’Brien & Deans, 1995). Such mismatches often lead to disappointment and low job satisfaction (Premack & Wanous, 1985; Wanous, 1992). One antidote is to provide students with realistic job previews (Wanous, 1992). By better informing students about career realities, it may be possible to help them make more effective choices of a college major and career path.

Personal interest may be particularly important for majors where students perceive themselves as having made a heavy investment in their education. For example, students pursuing accounting or finance degrees may view the quantitative requirements for these degrees as making their degrees more difficult to obtain than other degrees in the business school. Similarly, students pursuing MIS degrees may view the technology requirements for these degrees as making their degrees more difficult to obtain than other degrees in the business school. In addition to the nature of the degrees themselves, the 150 hour requirement for accounting students who want to become CPAs increases the investment, both in time and money, for accounting students. Students pursuing these degrees may justify their decisions in terms of personal interest in order to reduce cognitive dissonance (Festinger, 1957).

Hypothesis 5: The importance of personal interest as a reported influence on the choice of a college major within the College of Business will be relatively high among all majors.

Hypothesis 6: The importance of personal interest as a reported influence on the choice of a college major within the College of Business will be higher for students pursuing accounting, finance, and MIS majors than for students pursuing general business, management, and marketing majors.
Financial Concerns: Compensation and Job Security

Consistent with both behavioral (e.g., reinforcement) and cognitive (e.g., equity, expectancy) theories of motivation, anticipated outcomes, such as starting salary and expected future earnings (Berger, 1988; Farley & Staniec, 2004; Felton, Buhr & Northey, 1994) as well as “career opportunities” (Mauldin et al., 2000; Pappu, 2004), affect students’ selection of college majors. Issues related to job security are also likely to be quite important to many students’ selection of a college major, and perhaps especially important to business students. Several studies suggest that career prospects and job availability are at or near the top of the list of influences on an individual’s choice (O’Brien & Deans, 1995). Compensation and job security are principal reasons cited by business students reflecting on their selection of a college major (Cebula & Lopes, 1983; Kim et al., 2002; Mauldin et al., 2000), and that is consistent across the spectrum for different business majors, including accounting (Giladi, Amoo, & Friedman, 2001), finance (Kim et al., 2002; Siegall, Chapman, & Boykin, 2007), marketing (Kim et al., 2002; Siegall et al., 2007; Swenson et al., 1993), management (Kim et al., 2002; Siegall et al., 2007), and MIS/CIS (Downey et al., 2009; Goff, 2000; Roach et al., 2011).

High school and college students likely perceive business careers as alternatives in which both starting salary and career earnings will be high, and rightly so. Recent statistics reported in the Payscale Salary Report for 2011-2012 and in the Occupational Outlook Handbook for 2010-2011 show that starting salaries and career earnings for traditional business majors like general business, finance, accounting, management, marketing, finance, and MIS, while not as high as those for more technical degrees like engineering, are higher than most majors, particularly those in liberal arts and the social sciences. Those same sources show that expected salaries in accounting, finance, and MIS are greater than those for management, marketing, and general business. Students may obtain specific information about expected salaries from sources like those cited before choosing a major, or they may be affected by more general information that they glean from magazines, television, and movies. Once in college, these expectations may be reinforced by faculty, other students, and wage survey information provided by career services, departments, or schools. Given initial perceptions regarding anticipated pay and subsequent reinforcement of those perceptions, business majors are likely to recall both starting salary and career earnings as having been important influences on their selection of a business major. Similarly, prestige or status may be another extrinsic reward that affects a student’s selection of a college major (Thomas & Allen, 2006).

In addition to external rewards related to pay, students facing an uncertain future are also affected by the job opportunities, job availability, and job security associated with the majors they are pursuing (Aiken et al., 2008; Beggs, Bantham, & Taylor, 2008; Crampton, Walstrom, & Schambach, 2006; Felton, Buhr, & Northey, 1994; Kim et al., 2002; Li & Thompson, 2011; Malgwi et al., 2005; Mauldin et al., 2000). These factors are likely to have been particularly important in the current study due to economic conditions when the data were collected, late 2009 and early 2010, a time when national news and attention were riveted on economic conditions and persistent reports of high unemployment. Students who do their research are likely to notice that some majors outperform others in periods of economic uncertainty. For instance, MIS in particular fared quite well in the latest recession in terms of salary and job security (Sussman, 2010). Similarly the Federal Government’s bailout of financial institutions saved many jobs in finance (Sloan & Burke, 2011), and accounting jobs offer stability because businesses and individuals put even greater importance on taxes and accounting during a recession (Top 25 Careers to Pursue in Recession, 2011).

Like personal interest, financial outcomes may be particularly important for majors where students perceive themselves as having made a heavy investment in their education. In addition to justifying their decisions to pursue those degrees in terms of financial outcomes in order to reduce cognitive dissonance (Festinger, 1957), students pursuing degrees they perceive as especially difficult are likely to view anticipated future salary differentials and job security as a fair outcome (Adams, 1963). Because accounting, finance, and MIS major requirements typically involve more math and analytical skills (as in programming courses for MIS majors), these majors are likely to be perceived as more difficult by students (Downey, McGaughey, & Roach, 2011; Saeman & Crooker, 1999; Stinebrickner & Stinebrickner, 2011).

Hypothesis 7: The importance of financial remuneration as a reported influence on the choice of a college major within the College of Business will be relatively high among all majors.

Hypothesis 8: The importance of financial remuneration as a reported influence on the choice of a college major within the College of Business will be higher for students pursuing accounting, finance, and MIS majors than for
students pursuing general business, management, and marketing majors.

Hypothesis 9: The importance of job availability and security as reported influences on the choice of a college major within the College of Business will be relatively high among all majors.

Hypothesis 10: The importance of job availability and security as reported influences on the choice of a college major within the College of Business will be higher for students pursuing accounting, finance, and MIS majors than for students pursuing general business, management, and marketing majors.

Interpersonal Influences

Parents (Calkins & Welki, 2006; Farley & Staniec, 2004), high school teachers or counselors (Calkins & Welki, 2006; Mauldin et al., 2000), college instructors (Saemann & Crooker, 1999; Strasser et al., 2002), and friends or other students (Bartol, 1976; Calkins & Welki, 2006; Mauldin et al., 2000), may provide information, opinions, verbal encouragement, and support regarding the selection of a college major. They may also serve as role models or vicarious examples of success or failure. Research concerning the influence of others is mixed. For example, interviews of women working in information technology suggest that the impact of parents, family, peers, high school teachers, and college professors is important (Trauth, 2002; Woodfield, 2002; Zeldin & Pajares, 2000). Female subjects often cited male professors and/or fathers as having provided significant support as they pursued degrees and careers in IT (Trauth, 2002; Turner, Bernt, & Pecora, 2002; Zeldin & Pajares, 2000). Social influences may be greater for females than for males (Bartol, 1976; Calkins & Welki, 2006; Farley & Staniec, 2004). Parental influence may vary by major, with parents being more involved when students select some majors (e.g., engineering) than others (Astin, 1993). Research addressing the impact of peers, high school teachers, and high school counselors follows the same pattern: they have more influence on females than males, but overall, social influences tend to be perceived as less important than other influences (Calkins & Welki, 2004; Strasser et al., 2002; Zhang, 2007).

Though research tends to show that students perceive social influences as having little influence on their decisions, there are reasons to think that students underestimate the impact of others on their decision making. First, the impact of parents and high school teachers, counselors, and peers may have faded from memory. Second, as suggested by attribution theory (Jones & Nisbett, 1971; Nisbett, Caputo, Legant, & Marecek, 1973), people tend to underestimate the impact of external influences and overestimate the impact of internal influences on their own decisions. Finally, reflecting on the influence of others on his or her decision to pursue a particular major, a student is likely to focus more or less exclusively on the one interpersonal influence he or she regards as the most important.

Previous studies (Calkins & Welki, 2004; Downey et al., 2009; Roach et al., 2011; Strasser et al., 2002; Zhang, 2007) may also have underestimated the impact of others on students’ decisions by focusing on each interpersonal influence individually. Because different individuals may be affected by different sources of interpersonal influence, the average for each interpersonal influence may be low even when many students are greatly affected by at least one interpersonal influence. For example, one individual may be influenced by her parents but not by her peers, while another individual may be influenced by his peers but not by his parents. As a result, though both are influenced by someone, the average for each specific influence may be moderate or low. In this study, we replicate previous studies by considering each interpersonal influence separately. We extend previous analyses by also considering the highest interpersonal influence for each respondent as a separate variable.

Hypothesis 11: The importance of each specific social influence (parent, teacher, etc.) as a reported influence on the choice of a college major within the College of Business will be relatively low among all majors.

Hypothesis 12: The importance of the most important social influence (parent, teacher, etc.) as a reported influence on the choice of a college major within the College of Business will be relatively high among all majors.

Additional Descriptive Statistics

Our review of the literature and interviews with faculty suggest several other factors not addressed with specific hypotheses. Along with the hypotheses stated above, we report additional descriptive statistics that may inform future research.
METHODOLOGY

We employed a survey methodology in our study. Survey participants were college students majoring in business at a Southern university with an enrollment of approximately 12,000. At the time of the survey, the College of Business included 1,276 students majoring in eight different disciplines, including accounting, economics, finance, insurance/risk management, management, marketing, management information systems (MIS), and General Business (see Table 1). At this university, students must be admitted to the College of Business, typically in their sophomore year. Students declare a major at that time. Many students who have not decided on a particular business discipline select the General Business major, which allows them to take courses in several disciplines, and many General Business majors switch to another major at a later time. Almost all students surveyed were pursuing a BBA (Bachelor of Business Administration) degree, the only degree available for almost all undergraduate business majors. The exception was Economics, wherein students could choose a BBA, BA or BS degree.

Table 1
Demographic Information

<table>
<thead>
<tr>
<th>Major</th>
<th>N</th>
<th>Age (mean/sd)</th>
<th>Male %/Female %</th>
<th>Class Fr/So/Jr/Sr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>62</td>
<td>21.8 (3.5)</td>
<td>43/57</td>
<td>2/11/28/21</td>
</tr>
<tr>
<td>Finance</td>
<td>62</td>
<td>21.9 (1.5)</td>
<td>72/28</td>
<td>0/2/15/45</td>
</tr>
<tr>
<td>General Business</td>
<td>60</td>
<td>22.3 (3.7)</td>
<td>56/44</td>
<td>1/10/23/26</td>
</tr>
<tr>
<td>MIS</td>
<td>60</td>
<td>22.8 (4.9)</td>
<td>80/20</td>
<td>0/7/15/38</td>
</tr>
<tr>
<td>Marketing</td>
<td>65</td>
<td>21.1 (1.1)</td>
<td>50/50</td>
<td>0/12/28/25</td>
</tr>
<tr>
<td>Management</td>
<td>63</td>
<td>22.2 (2.5)</td>
<td>58/42</td>
<td>0/8/29/26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>372</strong></td>
<td><strong>22.03 (3.0)</strong></td>
<td><strong>60/40</strong></td>
<td><strong>3/50/138/181</strong></td>
</tr>
</tbody>
</table>

As we developed our survey, we began by reviewing the literature regarding factors that influence a student’s selection of a college major. Previous useful surveys included those developed by Downey et al. (2009), Kim et al. (2002), Mauldin et al. (2000), Pappu (2004), and Worthington and Higgs (2004). The items in these surveys and in the literature cited formed the beginning of our potential list of influences. Next, we presented a preliminary survey to several faculty members from different business disciplines. Following minor modifications, the survey was pilot tested on 20 students. This testing led to the rewording of some questions to enhance clarity. The final version consisted of 37 items of influence, demographic information, and various other items useful for future studies. For each item, influence was measured on a seven-point scale, with 1 = “Completely Unimportant” and 7 = “Very Important.” The 37 items included influences such as job security, salary, interests, skills, the influence of other people, etc. These items, plus the variable we created to examine the “largest interpersonal influence,” can be seen with relevant statistics in Table 2, presented in the next section.

In order to provide a cross-section of majors, we chose three courses to survey which were required of all business majors. These courses included Principles of Accounting 1 (taken mostly by sophomores/juniors), the management core class (taken mostly by juniors and seniors), and Managing Policy and Strategy (a capstone course taken by seniors). None of these courses were part of the general education courses that any major could take for credit, which meant that only business majors were likely to be in these courses. After obtaining permission from both chairs and instructors, multiple sections in each of these three courses were surveyed during class time.

In gathering these data, we tried to obtain an equal number of respondents from each major, so as not to unduly bias the results toward a particular major. Because the initial classes surveyed did not provide this equity, an additional upper division accounting class was also included. The result was an approximately equal number of respondents...
per major (between 60 and 63 for each). A total of 433 surveys were received. In all, 61 were eliminated; 10 were incomplete, 12 were not business majors, and the rest were either economics majors (16) or insurance majors (23), which were excluded because many business colleges do not include such majors. In addition, these two majors had the smallest enrollments and obtaining sufficient sample size was problematic. This left a total of 372. As shown in Table 1, respondents in our sample averaged 22 years of age; about 40% were female; and most (approximately 85%) were juniors or seniors.

RESULTS

Table 2 provides means, standard deviations, and rank for each influence item. To facilitate interpretation, the items are ordered with items rated higher at the top of the table. In addition, we ran one-way ANOVA and Tukey’s test in examining differences across majors. For tests where the ANOVA produced a statistically significant result, we conducted a Tukey’s post hoc test to identify specific differences between means. A summary of those results is presented in Table 2 as well.

Ability, Skills, and Self-efficacy

Hypothesis 1 was not supported. There were no significant differences across majors regarding the importance of quantitative skills. Hypothesis 2 was supported by our data. The importance of technical skills was higher for MIS majors than for general business, management, marketing, and finance majors. Hypothesis 3 received partial support. Marketing majors rated the importance of both people skills and communications skills higher than did accounting or MIS majors. Similarly, general business rated the importance of both people skills and communications skills higher than did MIS majors. Somewhat surprisingly, management majors did not rate people skills and communications skills higher than any of the more technical or quantitative majors. Hypothesis 4 was supported. The opportunity to be creative was more important to marketing majors compared to other business majors and less important to accounting majors than to other majors.

Personal Interest

Hypothesis 5 was supported. Interest in both the work and the field were rated near the top of the list (numbers 3 and 4, respectively). Hypothesis 6 was not supported. There were no significant differences among different majors when it came to the influence of interest in the work and field associated with the majors students were pursuing.

Financial Concerns

Hypothesis 7 received partial support, with career earnings rated near the top of the list (number 5), while starting pay was rated a bit further down on the list (number 12). Hypothesis 8 received very limited support from our results. The omnibus test indicated that there were significant differences between majors, but the specific differences were not detectable (at the 0.05 level of significance). Hypothesis 9 was supported. Job security (number 1) and job availability (number 2) topped the list of factors that influenced students’ selection of a college major in the College of Business. Hypothesis 10 was partially supported. Accounting majors rated the influence of job security higher than did marketing and management majors. Similarly, accounting majors rated the influence of job availability higher than did marketing and management majors. Though not hypothesized, accounting majors rated the influence of job security higher than did finance majors, perhaps indicative of a greater aversion to risk.

Interpersonal Influences

Hypothesis 11 was supported by our results. We examined ten sources of interpersonal influence. Taken together, they were the last ten on the list. Hypothesis 12 was also supported. By contrast, the highest interpersonal influence would have been tied for tenth on the list, suggesting that, while individual interpersonal influences were not reported to be highly important by the business students studied, interpersonal influence more broadly defined was a significant influence on students’ choice of major.

Descriptive Statistics

Additional items are also reported in Table 2. These items are those identified in previous literature and/or in discus-
sions with colleagues and students but are not the subject of any hypotheses in this study.

**Table 2, Part 1**

*Item Influences*

<table>
<thead>
<tr>
<th>Influence of Each Item</th>
<th>Mean</th>
<th>F^1</th>
<th>P</th>
<th>Differences between Means^2</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job security (long term)</td>
<td>6.12</td>
<td>3.51</td>
<td>.004</td>
<td>ACCT &gt; MKT = MGMT</td>
<td>9, 10</td>
</tr>
<tr>
<td>Job availability (after graduation)</td>
<td>5.96</td>
<td>3.82</td>
<td>.002</td>
<td>ACCT &gt; FIN = MKT = MGMT</td>
<td>9, 10</td>
</tr>
<tr>
<td>Interesting work</td>
<td>5.91</td>
<td>1.61</td>
<td>.157</td>
<td>Ns</td>
<td>5, 6</td>
</tr>
<tr>
<td>Interest in the field</td>
<td>5.90</td>
<td>1.32</td>
<td>.255</td>
<td>Ns</td>
<td>5, 6</td>
</tr>
<tr>
<td>Career earnings</td>
<td>5.81</td>
<td>3.10</td>
<td>.009</td>
<td>Could not detect</td>
<td>7, 8</td>
</tr>
<tr>
<td>Opportunity to lead</td>
<td>5.81</td>
<td>5.04</td>
<td>.000</td>
<td>MGMT = FIN = MKT = GENBUS &gt; MIS</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Lifestyle assoc. with major</td>
<td>5.74</td>
<td>2.82</td>
<td>.016</td>
<td>FIN &gt; MIS</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Opportunity to manage business</td>
<td>5.46</td>
<td>4.16</td>
<td>.001</td>
<td>MGMT &gt; FIN = MIS = ACCT</td>
<td>Exploratory</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and GENBUS = MKT &gt; MIS = ACCT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and MKT &gt; ACCT = MGMT</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and GENBUS &gt; MGMT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MKT &gt; ACCT = MGMT</td>
<td>3</td>
</tr>
<tr>
<td>Opportunity to use people skills</td>
<td>5.45</td>
<td>6.90</td>
<td>.000</td>
<td>MGMT &gt; FIN = MIS = ACCT</td>
<td>Exploratory</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and GENBUS = MKT &gt; MIS = ACCT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and MKT &gt; ACCT = MGMT</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and GENBUS &gt; MGMT</td>
<td></td>
</tr>
<tr>
<td>Opportunity to use communication skills</td>
<td>5.42</td>
<td>5.56</td>
<td>.000</td>
<td>MGMT &gt; FIN = MIS = ACCT</td>
<td>Exploratory</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and GENBUS = MKT &gt; MIS = ACCT</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and MKT &gt; ACCT = MGMT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and GENBUS &gt; MGMT</td>
<td></td>
</tr>
<tr>
<td>Highest Interpersonal Influence^3</td>
<td>5.42</td>
<td>3.12</td>
<td>.247</td>
<td>Ns</td>
<td>11, 12, post hoc</td>
</tr>
<tr>
<td>Interest in business organizations</td>
<td>5.40</td>
<td>2.92</td>
<td>.013</td>
<td>GENBUS &gt; MIS</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Starting salary</td>
<td>5.40</td>
<td>2.85</td>
<td>.015</td>
<td>Could not detect</td>
<td>7, 8</td>
</tr>
<tr>
<td>Opportunity to use creativity</td>
<td>5.29</td>
<td>12.39</td>
<td>.000</td>
<td>MKT &gt; MIS = MGMT = FIN &gt; ACCT</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and GENBUS = MGMT = FIN &gt; ACCT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and Ns</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Quality of education in major</td>
<td>5.25</td>
<td>1.80</td>
<td>.112</td>
<td></td>
<td>Exploratory</td>
</tr>
<tr>
<td>Respect associated with major</td>
<td>5.24</td>
<td>3.61</td>
<td>.003</td>
<td>FIN = ACCT &gt; MIS</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Opportunity to use negotiation skills</td>
<td>5.21</td>
<td>4.42</td>
<td>.001</td>
<td>MKT &gt; ACCT = MGMT</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Work is challenging</td>
<td>5.21</td>
<td>.98</td>
<td>.428</td>
<td>Ns</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Opportunity to use technical skills</td>
<td>5.13</td>
<td>4.37</td>
<td>.001</td>
<td>MIS &gt; FIN = MGMT = MKT = GENBUS</td>
<td>2</td>
</tr>
<tr>
<td>Opportunity to own a business</td>
<td>5.13</td>
<td>4.07</td>
<td>.001</td>
<td>GENBUS &gt; MIS = ACCT</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Prestige associated with major</td>
<td>5.09</td>
<td>3.28</td>
<td>.007</td>
<td>FIN = ACCT &gt; MIS</td>
<td>Exploratory</td>
</tr>
</tbody>
</table>
Table 2, Part 2

<table>
<thead>
<tr>
<th>Influence of Each Item</th>
<th>Mean</th>
<th>F(^1)</th>
<th>P</th>
<th>Differences between Means(^2)</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity to manage people</td>
<td>5.08</td>
<td>5.86</td>
<td>.000</td>
<td>MGMT &gt; FIN = MIS = ACCT and GENBUS &gt; MIS = ACCT</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Opportunity to use quantitative skills</td>
<td>4.95</td>
<td>1.87</td>
<td>.098</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunity to be part of a team</td>
<td>4.76</td>
<td>2.62</td>
<td>.024</td>
<td>Could not detect</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Influence of introductory course in major</td>
<td>4.62</td>
<td>2.90</td>
<td>.014</td>
<td>ACCT &gt; MIS = MGMT</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Perceived degree of difficulty in major</td>
<td>4.37</td>
<td>1.29</td>
<td>.266</td>
<td></td>
<td>Exploratory</td>
</tr>
<tr>
<td>Previous work experience in major</td>
<td>4.35</td>
<td>5.40</td>
<td>.000</td>
<td>MGMT &gt; FIN = ACCT and GENBUS = MKT &gt; ACCT</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Opportunity to manage non-human assets</td>
<td>4.33</td>
<td>6.73</td>
<td>.000</td>
<td>MIS &gt; FIN = ACCT = MKT</td>
<td>Exploratory</td>
</tr>
<tr>
<td>University department's reputation</td>
<td>4.17</td>
<td>1.36</td>
<td>.237</td>
<td>MGMT = GENBUS = FIN &gt; ACCT = MKT</td>
<td></td>
</tr>
<tr>
<td>Influence of both parents</td>
<td>4.04</td>
<td>1.02</td>
<td>.404</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of a college instructor</td>
<td>3.88</td>
<td>.670</td>
<td>.647</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of male parent</td>
<td>3.57</td>
<td>.669</td>
<td>.648</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of female parent</td>
<td>3.47</td>
<td>1.38</td>
<td>.229</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of other male working in field</td>
<td>3.28</td>
<td>.81</td>
<td>.715</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of friends or other students</td>
<td>3.28</td>
<td>1.07</td>
<td>.377</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of other female working in field</td>
<td>3.05</td>
<td>2.94</td>
<td>.013</td>
<td>MKT = ACCT = MGMT &gt; FIN</td>
<td></td>
</tr>
<tr>
<td>Influence of high school teacher(s)</td>
<td>2.85</td>
<td>1.80</td>
<td>.112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influence of high school counselor(s)</td>
<td>2.43</td>
<td>1.82</td>
<td>.108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. \(^1\) F-tests were all one way ANOVAs with 6 groups (majors); \(n = 373\), df = 5, 368 for all tests

\(^2\) Tukey’s tests to detect specific differences between group means with .05 level of significance; ns = F-test not significant and Tukey’s test was not conducted; could not detect = Significant F-test but Tukey’s test is not significant at 0.05 level of significance.

\(^3\) Unlike other items in this table, Highest Interpersonal Influence was not a specific survey item but was computed as the maximum value for any of the interpersonal influences tested separately in hypotheses 11-12.
Based on this exploratory analysis, some tentative observations can be made. First, surprising to us, MIS rated the importance of respect and prestige lower than did accounting and finance majors and, though not statistically significant, they rated respect and prestige lower than did any other major. It is unclear as to whether the MIS majors simply do not regard prestige as important, or that they believe MIS has little prestige and thus it did not influence their choice. Second, MIS majors, sometimes significantly, rated the importance of the opportunity to lead, lifestyle, communication skills, and negotiation skills lower than did other majors. Finally, the influence of the introductory course was higher for accounting majors than for MIS and management majors.

DISCUSSION

Studies of business student choice of major are not novel, and the findings of such studies over time have been largely consistent. Our findings to a large extent mirror the findings of prior studies of business student choice of major. We found, for example, that students pursuing different majors tend to choose majors that they see as a good “fit” for them—it reflects their interests. This finding is not unique, as most prior studies have shown interest in the field to be the most important influence on student choice of major. We found interest to be very important, as well, and that the nature of that “interest” varied across the business majors studied. A noteworthy difference in our findings was the increased importance of job availability and security. We found job availability and job security to be the most important influences overall on business student choice of major. Data for this study were collected in late 2009 and early 2010, a time during which the unemployment rate had hovered over 9% for three consecutive quarters and economists were warning of a jobless recovery. Our findings thus seem to indicate that student career choices may be influenced by economic conditions in much the same way as consumer choices are influenced—they tend to select “safe” alternatives, as opposed to alternatives that might better appeal to their “personal taste,” during periods of economic uncertainty.

Ability, Skills, and Self-efficacy

Consistent with self-efficacy theory, students report that skills normally associated with a particular major influence their choice of a major. Specifically, MIS majors report technology skills as an important influence; marketing and general business majors report people skills as an important influence; and marketing students report creativity as an important influence. Our findings, or more accurately our lack of finding, with regard to management majors and people/communications skills, suggest that management majors may have focused on other macro issues, such as strategic management, rather than micro issues, such as people/communications skills, when they decided upon a college major. This interpretation is supported by the finding that management majors were at the top of the list, and were more likely than some majors to recall having been influenced by the opportunity to manage a business. It is also worth noting that accounting majors were significantly less influenced by the opportunity to be creative. This suggests that many, including students who do major in accounting, view accounting as a rule-based profession, despite research challenging that view (Sugahara, Boland, & Cilloni, 2008). To the degree that accounting can be demonstrated to provide opportunities to be creative—we are not referring to what some, in jest, call “creative accounting”—it may broaden the pool of students who consider that major. In terms of student recruiting, our study reinforces the importance of stressing the skills and competencies associated with a particular major. From a recruiting standpoint, students are likely to seek majors and careers where they perceive there to be a good fit between their skills and abilities and the requirements of the profession. Future research should consider placement by examining the relationship between student self-efficacy perceptions and actual performance within associated careers. It is also worth examining whether someone who lacks specific skills could develop those skills. As Schlee et al. (2007) note, it may be possible to broaden the pool of potential students and perhaps, by focusing on general capabilities, personal interest inventories, and personality measures, to better match individuals to majors and careers.

Personal Interest

Among the most significant influences students recall affecting their decision process were interest in the field associated with each major and with the type of work students can expect to do when they graduate. These perceptions are uniform across majors. From a recruiting standpoint, these facets should be stressed as much as issues related to remuneration. Students need to have accurate information on the nature of work associated with the many business
Economic Concerns

In previous studies, personal interest has typically been rated the most influential factor in student choice of a college major. Perhaps due to the time period during which our data were collected, a period of high and persistent unemployment immediately following what politicians and the media have labeled the “great recession,” economic influences topped the list of influences in our study. This was particularly true for majors generally regarded as quantitative and technical, majors that prepare graduates for jobs likely to be viewed as “safe bets” in a time of economic turmoil. Moreover, it is likely that these majors, accounting, finance, and management information systems, are regarded as requiring high commitment in terms of the time required to study and to complete assignments outside the classroom. A concern for economic uncertainty could, in part, reflect these students’ justifications (to themselves and others) for the increased commitment and concomitant effort associated with the degrees they are pursuing. In terms of student recruiting and placement, these results support the importance of stressing financial benefits and job security. Though always important, it may be especially important to stress these potential influences in times of economic uncertainty.

Interpersonal influences

Previous studies, especially those based on surveys, have tended to find that interpersonal influences are substantially less important than personal interest and economic influences on choice of a college major. In one sense, our results mirror those findings. When considered individually, the reported influence of others at college, high school, and outside of school (parents and friends) was relatively low. In fact, high school and outside school influences were generally regarded as unimportant. Thus, mirroring previous studies, we found social influences to be relatively unimportant. However, another interpretation is possible. It may be that the impact of social influences is and has been underestimated by looking at each social influence separately. To examine this possibility, we created a new variable that examined the maximum social influence for each student. For some students, economic concerns might top the list. For others, social influences might top the list. Construed in this fashion, social influences rose to the approximate level of economic and personal interest. In terms of student recruiting and placement, our results suggest a more nuanced and multi-pronged approach. Some students are influenced by parents. It thus becomes important to ensure that parents are informed. This may be particularly true in universities, such as the one where this study was conducted, where many students are “first-generation” students. Other students are influenced by high school teachers and counselors. Given the small number of required business classes in the high school curriculum, providing information to counselors or simply visiting high schools to provide information directly may help influence some students. Finally, some students are influenced by early college experiences, such as a class taken early in the student’s academic career. Course design and the assignment of instructors to early courses are factors Business Schools may want to consider. Given the well-established importance of self-efficacy as an influence on students’ decisions regarding the selection of a college major, providing both academic support (e.g., help labs, extended office hours, review sessions) and encouragement aimed at increasing the likelihood that students attribute successful performance to ability and self-efficacy rather than to effort or luck would also be appropriate. Self-efficacy attributions may be particularly important for female students (Dweck, 1999, 2006; Kloosterman, 1988; Roach et al., 2011). Increased numbers of female instructors for disciplines with a gender imbalance (like MIS) could be helpful in showing young women that “they can do it.” The accounting profession seems to have been somewhat successful with this approach.

LIMITATIONS AND FUTURE RESEARCH

Our study has several limitations that can be addressed in future research. First, the data for this study were obtained from a single public university in the South. To ensure the generalizability of our results, future research might consider similarities and differences for other universities (e.g., private and public, urban and small town, different geographic regions).

Second, our study does not directly assess self-efficacy for each skill. Though the relationship between self-efficacy and college major decisions is well-established, the relationship between self-efficacy and factors business students
perceived to have been influential as they decided among majors within the business school has not, as far as we know, been adequately addressed in extant research.

Third, our study addresses factors that students recall as having influenced their earlier decisions to select a particular major. Collecting longitudinal data, including data for high school students and college freshmen, would provide added insight. One plausible alternative explanation for the results reported herein is that the differences observed in our study were due to socialization (both in terms of self-efficacy, and more generally, factors likely to be talked about by teachers and peers as important) rather than self-efficacy per se. If this is true, then the importance of major-related skills ought to become more important over time to students in those majors. We think research examining the impact of socialization processes on what students find important would be useful.

Finally, for both research and practical purposes, research should be broadened to include non-business majors in order to consider the factors important to students as they select various paths (business, computer science, engineering, arts and sciences, education, etc.). Efforts to expand overall business school enrollment should involve attracting students who might otherwise major in non-business disciplines. An understanding of what drives these students’ choice of major would be important to any effort to attract them to the business disciplines.

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THE PROMISES AND REALITIES OF EVIDENCE-BASED PRACTICES: PERCEPTIONS FROM ASSESSMENT PERSONNEL

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Assessment personnel are those individuals who work in the capacity of evaluation of students with disabilities, including, but not limited to, educational diagnosticians, educational examiners, psychometrists, and instructional specialists. These professionals are responsible for identifying strengths and weaknesses and for providing teachers with evidence-based recommendations that can be implemented in the classroom to improve performance of students with learning deficits. This qualitative study examines 19 educational diagnosticians' perceptions related to the barriers and supports that impacted their ability to provide evidence-based recommendations for students who are learning disabled. Three categories of barriers to issuing successful evidence-based recommendations emerged as a result of the study: Knowledge of Evidence-Based Interventions, Time to Complete Assessments, and Support from Administrators and Teachers.

Keywords: assessment personnel, educational diagnosticians, assessment, learning disabilities, evidence-based recommendations

Providing early intervention is an essential principle in response to intervention (RTI) models (Shinn, 2007). Numerous studies indicate that the use of RTI models are more prevalently implemented in school districts as a means, within the general education curriculum, to prevent referrals for special education services (Cummings, Atkins, Allison, & Cole, 2008; Fuchs, Fuchs, & Stecker, 2010; Overton, 2009).

The transition toward a Response to Intervention (RTI) approach has created new professional dialogues and discussions regarding the best conceptions and practices to follow. The new approaches to assessments and tiered interventions have defined new roles and systemic changes in how students experiencing academic and literacy difficulties are viewed and served. Questions are under scrutiny related to identifying promising principles, instructional approaches, professional preparation, and progress monitoring systems. (Simpson, Lynch, & Swicegood, 2011)

Although the literature is replete with evidence-based intervention practices for schools, little is known about the knowledge and recommendations of evidence-based interventions made by assessment personnel in full individual evaluations (FIE). Specifically, a lack of information exists regarding the ability of assessment personnel to link evaluation findings to evidence-based intervention practices that are communicated to special and general education teachers serving students identified with learning disabilities.

Individuals who work in the capacity of assessment personnel may have the job titles of educational diagnosticians, educational examiners, psychometrists, or instructional specialists. Regardless of titles, employment, and certification practices by states, educational diagnosticians share an ability to diagnose the learning problems of students (Council for Exceptional Children [CEC], 2000).

In searching databases such as EBSCO, only two articles were found that address RTI among assessment personnel, specifically educational diagnosticians. Key-terms such as diagnostian, educational diagnostian, educational examiners, psychometrist, psychometrician, and instructional specialists were used in the search. The lack of findings may be linked to the fact that the role of educational diagnosticians varies from state to state, and the titles by which they are known are not consistent. Moreover, there is a lack of information available about the degree to which edu-
cational diagnosticians recommend evidence-based practices in relation to the level of knowledge that educational diagnosticians have regarding such practices themselves.

Despite limited findings of research directly related to recommendations of evidence-based practices in relation to the knowledge level of educational diagnosticians, research on educational diagnosticians practicing in a large southern state indicates that educators are becoming more comfortable with the RTI process, possibly as it “relates to having the flexibility to build assessment and intervention schemes that are familiar and logically implemented” (Simpson, Lynch, & Swicegood, 2011, p. 3). The Simpson et al. study revealed that “virtually all respondents indicated that a Teacher Assistance Team (TAT) shared roles and responsibilities in the process. Other specifics in the process include universal screening, increased collaboration, and the provision of evidence-based interventions” (2011, p. 12). Moreover, the educational diagnosticians that participated in the study indicated that they have a greater comfort with the RTI process in comparison to data elicited from a similar study conducted three years prior. However, concerns outside the realm of collaboration, specifically making evidence-based recommendations and the RTI process, still exist.

In one of the few studies published regarding educational diagnosticians and intervention practices, Chappell, Stephens, Kinnison, and Pettigrew (2009), reported that nearly half of the educational diagnosticians (N=22) that participated in a survey regarding their understanding of reading were unable to correctly identify the definition of phonological awareness. In contrast, nearly 80% identified phonological awareness as a predictor to read. In a second study, in which 110 educational diagnosticians completed a 34-question survey on the knowledge and recommendations of Strategic Instruction Model (SIM) strategies in FIE, participants reported that they possessed limited knowledge of SIM strategies related to reading, storing and remembering information. (Rueter & Kinnison 2009).

The results of these studies are not surprising, as the focus within FIE has been on student eligibility for special education services (Mather & Wendling, 2005) rather than on recommendations of evidence-based interventions. General roles and responsibilities involve educational diagnosticians scheduling and holding individualized education program (IEP) meetings with teachers and parents to review assessment results and student progress, and determining eligibility for special education services. Because the emphasis in most states has been on referral to placement for special education, limited time has been devoted to consultative and direct services related to intervention practices for students who are at-risk for academic and behavioral disorders (Rueter & Trice, 2011).

In many cases, educational diagnosticians spend the majority of their time assessing students and writing reports, completing paperwork, and conducting IEP meetings. These activities have resulted in less time to focus on educational strategies or interventions (Stephens, Kinnison, Naquin, & Rueter, 2007). The results of a study about the role of the education diagnostician indicated that the profile of an educational diagnostician encompasses their spending approximately 10 to 20 hours per week in testing, interpretation of testing, and report writing (Cook, 1997). Findings also revealed that the two most important duties of the educational diagnostician were testing and coordinating, and conducting IEP team meetings. However, there were disagreements as to which duty was identified as the most important. For instance, half of the educational diagnosticians rated their primary role or first duty as testing, while the other half rated coordinating and conducting IEP meetings as the number one priority (Cook, 1997). Because the focus of full individual evaluations is on eligibility (Mather & Wendling, 2005; Meyer, 2000), little importance has been placed on obtaining knowledge of evidence-based interventions.

In addition to the aforementioned reasons for an absence of specific evidence-based strategy knowledge, assessment training programs and state procedural practices that emphasize eligibility criteria (Rueter & Kinnison, 2009) may factor in. Cavin (2007) conducted a study of 432 educational diagnosticians in a larger southern state regarding the state competencies for certification. Participants reported that they received little to no training in understanding appropriate curricula and instructional strategies for students with disabilities. Such findings are important because educational diagnosticians are responsible for identifying strengths and weaknesses and for providing teachers with evidence-based recommendations that can be implemented in the classroom to improve students’ deficits. Without instruction in this area, educational diagnosticians’ skills may lack proficiency.

Although the literature is limited regarding educational diagnosticians and intervention practices, comparisons to school psychology provide valuable insight into general evaluation practices and early intervention activities. Within
In school psychology literature, there is a movement to shift from traditional evaluation practices toward early intervening and consultation (Stoiber & Vanderwood, 2008). This trend reflects the emphasis on response to intervention and preventive measures. In 2002, the President’s Commission on Excellence in Special Education suggested the following:

Eliminating IQ tests from the identification process would help shift the emphasis in special education away from the current focus, which is on determining whether students are eligible for services, towards providing students the interventions they need to successfully learn. There is little justification for the ubiquitous use of IQ tests for children with high-incidence disabilities, except when mild mental retardation is a consideration, especially given their cost and the lack of evidence indicating that IQ test results are related meaningfully to intervention outcomes. (p. 25)

A study that examined the use, importance, and level of competence of traditional assessment, consultation, and intervention practices of 86 school psychologists in an urban district reported that their greatest level of proficiency was in traditional assessment rather than in consultation and intervention processes. The same participants reported that consultation and intervention activities were more important and thus more valued as compared to traditional assessment practices (Stoiber & Vanderwood, 2008). The authors stated that “a practice gap was noted in our school psychologists with regard to what they value (rate as most important) and what they do and do well (as indicated by their use and competence ratings)” (p. 282). Moreover, Shernoff, Kratochwill, and Stoiber (2003) conducted a study of school psychology programs that provided training in evidence-based interventions. The results of the study indicated that the lack of time was rated as the most serious challenge to evidence-based intervention training. However the same study results indicated that evidence-based interventions were either somewhat important or important.

**PURPOSE OF THE STUDY**

The purpose of the study was to obtain information regarding educational diagnosticians’ perceptions of the barriers and supports that impact their ability in recommending evidence-based interventions for students who are learning disabled. The following research questions guided the study:

- What are the barriers that educational diagnosticians experience when writing evidence-based recommendations?
- What supports do educational diagnosticians require in order to overcome barriers when writing evidence-based recommendations?

**METHOD**

Participants

Participants voluntarily selected the focus group session as conference attendees at the Texas Educational Diagnostician Conference (TEDA) held in Arlington, Texas, in April 2009. Informed written consent was obtained prior to participation. Participants were able to opt out of the focus group session and attend another session if they did not want to participate in the study. The time length of the focus group session was approximately 60 minutes.

Nineteen individuals participated in the focus group session. All participants were Caucasian. Eighteen of the participants were female and one was male. The age of participants ranged from one in the 25-30 age group to seven in the 50-plus age group. The experience level of participants also varied. Twelve of the participants had less than five years of experience as educational diagnosticians; two individuals had 11-plus years of experience. The majority of the participants reported having 12 hours of assessment credit hours. Two individuals reported having 18 credit hours, and two individuals reported having 18-plus credit hours (See Table 1).

Data Collection

Two types of measurement systems were used to measure participants’ responses. The first measure was the written responses of participants gathered during the focus group meeting and categories of responses generated by participants, moderator, and assistant moderator. Second, individual participant rating and voting sheets were utilized.
to verify the importance of each category generated by the group.

**Written Focus Group Measures**

Focus group participants recorded their individual responses on 3x5-inch color-coded sticky notecards using statements of seven words or less if possible. The statements were responses to the research questions asked by the moderator. After focus group members recorded responses onto the notecards, the notecards were clustered into sets by the participants, moderator, and assistant moderator. Each set of notecards was then given a categorical label.

**Participants’ Voting and Rating Sheets**

Two rating and voting sheets were developed which corresponded with the two questions discussed during the focus group meeting. Each rating and voting sheet had a two-part design. The purpose of the first part of each measurement sheet was to validate individual participant’s perception of the importance of each category that had been generated by the group. A line was provided for participants to record the name of each established category. A 7-point Likert scale with number values ranging from 1 as “Very Unimportant” to 7 as “Very Important” was located to the right of each line on which the category was recorded. Participants circled a number according to how they rated the category when considering importance of the category.

The purpose of the second part of each measurement sheet was for the moderator to determine the most important categories for each question according to participants’ votes. Blank lines were provided for participants to list their top choices from among the total set of categories. Participants were requested to vote for one-half of the categories (e.g., if the group had identified six categories, they were asked to vote for the three categories they valued most). Before the questioning session began, each participant received an individual file folder with the following items:

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**Table 1**

*Demographic Data for Focus Group (N=19)*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in Years</td>
<td></td>
</tr>
<tr>
<td>25-30</td>
<td>1</td>
</tr>
<tr>
<td>31-35</td>
<td>3</td>
</tr>
<tr>
<td>36-40</td>
<td>2</td>
</tr>
<tr>
<td>41-45</td>
<td>1</td>
</tr>
<tr>
<td>46-50</td>
<td>5</td>
</tr>
<tr>
<td>50+</td>
<td>7</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>19</td>
</tr>
<tr>
<td>Degree</td>
<td></td>
</tr>
<tr>
<td>Master’s</td>
<td>5</td>
</tr>
<tr>
<td>Master’s degree plus</td>
<td>14</td>
</tr>
<tr>
<td>Years of experience as educational diagnostician</td>
<td></td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>12</td>
</tr>
<tr>
<td>6-10 years</td>
<td>5</td>
</tr>
<tr>
<td>11 plus years</td>
<td>2</td>
</tr>
<tr>
<td>Course credits completed in assessment</td>
<td></td>
</tr>
<tr>
<td>12-15 hours</td>
<td>15</td>
</tr>
<tr>
<td>18 hours</td>
<td>2</td>
</tr>
<tr>
<td>18 plus hours</td>
<td>2</td>
</tr>
</tbody>
</table>
inside the folder: Focus Group Discussion Protocol and two color-coded rating and voting sheets. Two sets of color-coded sticky notecards were also distributed. The sticky notecards corresponded with the two color-coded rating and voting sheets.

Second, the moderator, assistant moderator, and participants read and discussed the Focus Group Discussion Protocol with the moderator being the group leader. During this time, concepts related to the importance of evidence-based recommendations in FIE were highlighted. The ground rules for discussion were based on the Metaplan procedure. This technique is a tool for creating more effective and efficient focus group discussions (Metaplan, n.d.; Schnelle & Stoltz, 1987; Vance, 1995). The Metaplan Steps are presented below:

- Step 1: A question is stated.
- Step 2: Participants write thoughts and feelings on notecards.
- Step 3: Participants write clearly and neatly.
- Step 4: Write on one idea per card.
- Step 5: Use seven words or less if possible.
- Step 6: The moderator collects and reads note-cards aloud and displays them on the wall.
- Step 7: The moderator, with participants’ assistance, organizes the notecards into clusters or categories of thoughts, feelings, and opinions.
- Step 8: Participants may continue writing their thoughts during the clustering process.
- Step 9: The moderator and participants discuss their thoughts, feelings, and ideas through the clustering process.
- Step 10: The participants conclude the process by rating the categories according to how important they perceive them to be. They also rank their top categories according to perceived importance.

After the steps were presented, the moderator and assistant moderator modeled how participants were to record their answers. During the modeling, the moderator asked the assistant moderator to write down as many characteristics as she could think of that described her favorite teacher. The assistant moderator wrote her responses on sticky notecards with no individual response totaling more than seven words. During the modeling, the assistant moderator thought out loud as she wrote the responses onto the sticky notecards. When finished, the moderator read each of the assistant moderator’s responses. With participants and assistant moderator’s help, the moderator and assistant moderator began clustering responses into definable groups on the white board in front of the room.

Once the modeling concluded, the focus group questions were posed, with time allowed after each question for the participants to record responses and to complete the Focus Group Member Rating and Voting process. Following is the sequence of events that occurred for each question posed during the meeting.

**Recording, Voting, and Rating of Participants’ Responses**

Participants recorded their written responses to each of the focus group questions on 3x5-inch color-coded sticky notecards using statements of one to seven words if possible. As the participants recorded their responses, the moderator and assistant moderator collected the responses and posted them on the white board. The notecards were read individually by the moderator or the assistant moderator, and were clustered into groups by participants, moderator, and assistant moderator. During the process of clustering, focus group members, moderator, and assistant moderator discussed the individual responses, moving responses as needed into other categories. This process allowed for member-checking of the data. Next, each clustering of note-cards was given a categorical label. The categorical labels were also written on the white board above each clustering of notecards.

Following the clustering of the notecards, participants were directed to complete the Focus Group Member Rating and Voting sheet. First, participants wrote each category onto their rating and voting sheets, and then the participants rated each category individually on a Likert scale of 1 to 7 as to the importance of the category. Second, participants were instructed to vote for one-half of the categories that they felt were most important.
Data Analysis

From the rating sheets, a mean rating was calculated for each category by tallying the number values the participants circled for a particular category and dividing the total number by the number of persons who had responded. Next, standard deviations were calculated for each of the individual categories.

Following the focus group meeting, the moderator analyzed the rating and voting sheets. A tally mark systemization process was utilized to determine how the person ranked their choice of top categories determined by the group. Each time a category appeared on a participant’s voting sheet, a tally mark was noted for that category. The category with the most tally marks received the group rank of 1, the next category with the highest number received a 2, and so forth. Once the categories were ranked by importance, the researchers engaged in peer examination, in which a colleague outside of the field of special education sifted through the data and commented on the findings as they emerged (Merriam, 1998).

FINDINGS

Three categories received a group ranking of 1 were verified during the peer examination process and were validated by descriptive statistics: Knowledge of Evidence-Based Interventions, Time to Complete Assessments, and Support from Administrators and Teachers. The following is a discussion of the categories. See Table 2 for descriptive statistics of the research study and Table 3 for summary of the research findings.

Knowledge of Evidence-Based Interventions

Knowledge of evidence-based interventions materialized as a barrier that prevents educational diagnosticians from writing recommendations that are evidence-based. This category received 13 individual tally marks and a shared group rank of 1, a mean rating of 6.21, and a standard deviation of 1.22.

Two subthemes were noted within the category of Knowledge. The first subtheme was the lack of understanding of evidence-based interventions and thus what to recommend in full individual evaluations. Participants responded that they lack knowledge of what constitutes evidence-based interventions for the children they are testing. This finding is consistent with Mather and Wendling (2005) and Meyer’s (2000) premise that assessment personnel (e.g. educational diagnosticians) have focused on eligibility rather than on providing evidence-based recommendations that can be translated to measurable goals and objectives. This is an important point with respect to what is valued in the FIE process. If the emphasis is on establishing or maintaining eligibility, there is little value placed on providing evidence-based recommendations.

The second subtheme related to Knowledge was directly related to the theme of Time; not as the lack of time to complete tasks, but the time it takes to research recommendations due to the lack of understanding regarding evidence-based interventions. This concept is noted in the following comment in which a participant identified/reported a need for “Time to write and research appropriate recommendations.” Another participant summed it up this way: “Sufficient time to research appropriate strategies and write effective recommendations.” In other words, participants lack knowledge of what constitutes evidence-based practices, and therefore they need to spend time researching strategies in order to write recommendations that are evidence-based. This is not surprising given that one of Cavin’s (2007) study conclusions indicated that educational diagnosticians received little to no training in understanding instructional strategies for students with disabilities.

Time to Complete Assessments

Time to complete assessments emerged as both a barrier and a support that educational diagnosticians face. With regards to barriers that educational diagnosticians face, Time obtained a shared group ranking of 1, with 13 individual tally marks, a mean rating of 6.15, and a standard deviation of 1.21. With regard to supports that educational diagnosticians require, Time obtained a group ranking of 2 with 13 individual tally marks and a mean rating of 6.52 with a standard deviation of 1.02.
Table 2
Mean Ratings and Group Ranks on Categories of Barriers and Supports Related to Knowledge and Recommendations of Evidence-Based Strategies

<table>
<thead>
<tr>
<th>Categories</th>
<th>MR</th>
<th>SD</th>
<th>GV</th>
<th>GR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Barriers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of evidence-based interventions</td>
<td>6.21</td>
<td>1.22</td>
<td>13.0</td>
<td>1.00</td>
</tr>
<tr>
<td>Time to complete assessments</td>
<td>6.15</td>
<td>1.21</td>
<td>13.0</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Supports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support from administrator and teachers</td>
<td>6.47</td>
<td>0.96</td>
<td>14.0</td>
<td>1.00</td>
</tr>
<tr>
<td>Time to complete assessments</td>
<td>6.52</td>
<td>1.02</td>
<td>13.0</td>
<td>2.00</td>
</tr>
</tbody>
</table>

*Note: MR = Mean rating based on individual ratings; SD = Standard deviation; GV = Group votes based on raw votes of the group; GR = Group rank based on member votes.*

Table 3
Summary of Findings

<table>
<thead>
<tr>
<th>Categories</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of evidence-based interventions</td>
<td>Lack of understanding of evidence-based interventions</td>
</tr>
<tr>
<td></td>
<td>Time it takes to research evidence-based interventions due to the lack of understanding regarding evidence-based interventions</td>
</tr>
<tr>
<td>Time to complete assessments</td>
<td>Large caseloads</td>
</tr>
<tr>
<td>Support from administrator and teachers</td>
<td>Administrators must ensure that recommendations are being implemented by classroom teachers</td>
</tr>
<tr>
<td></td>
<td>Teachers must be willing to implement recommendations in their classrooms</td>
</tr>
<tr>
<td>Time to talk to and discuss with classroom teachers</td>
<td>Smaller caseloads</td>
</tr>
<tr>
<td></td>
<td>Collaborative time to talk to and discuss with classroom teachers about the instructional practices that are being implemented in their classroom</td>
</tr>
</tbody>
</table>

Within the category of Time, two subthemes were noted. The first subtheme relates to caseload size. Responses from participants for barriers concentrated on the following point: “Caseload too large so not enough time.” With respect for supports that are needed, the following response, “Smaller caseloads to spend more time on report writing,” emerged as the key point. One of the goals of RTI is to provide interventions for students who are at-risk for special education, thereby reducing the numbers of students who are referred (Fuchs & Fuchs, 2007). Obviously, for these participants, little has changed with regard to the size of caseloads and the numbers of students who are being referred to special education. Educational diagnosticians are still experiencing caseloads that are too large, with the implication being that the focus of FIE is still on establishing or maintaining eligibility status. The results are also consistent with Rueters’ (2008) findings, where knowledge of recommendations and time to complete assessments emerged as the two most important categories with respect to barriers that educational diagnosticians face.

Time to work with classroom teachers also emerged as a support and as the second subtheme within the category of Time. Overall, participants reported that they needed more collaborative time to talk to and discuss the instructional practices being implemented in teachers’ classrooms. They also noted that without this collaborative time, it is difficult to know what to recommend. This point is illustrated by the following participant comment, which identified a
desire/need for “more time to discuss issues.” More time to discuss issues that teachers are willing to try.” This implies that there is a need for open lines of communication between the teacher and the educational diagnostician.

Support from Administrators and Teachers

The category of Support from administrator and teachers was in response to the second research question that asked, “What supports do educational diagnosticians require in order to overcome barriers when writing evidence-based recommendations?” This category received 14 individual tally marks, a group rank of 1, a mean rating of 6.47, and the lowest standard deviation of 0.96 of all of the primary categories that were generated by the focus group.

Two subthemes emerged. The first subtheme centered on administrators’ support in implementing the recommendations that are written in FIE. Also related to this subtheme is the idea that administrators must ensure that recommendations are being implemented and followed by classroom teachers. The following comment illustrates this point: “Support of administration so that recommendations are used.” It is reasonable to expect that if educational diagnosticians take the time to write evidence-based recommendations, support must be provided in seeing that the recommendations are being implemented. If there is no administrator support, little will change in the day-to-day instructional practice.

Teacher-follow-through and willingness to implement evidence-based recommendations is the second subtheme that emerged in this category. Participants reported that when they write evidence-based recommendations teachers must be willing to implement the recommendations in their classrooms. They also expressed feelings of disillusionment with respect to special education teachers using the results of the FIE in their everyday instructional practices. One of the participants summed it up this way: “Feelings that no one reads them.”

However, the news is not all negative. Burns and Ysseldyke (2009) conducted a study concerning the frequency with which evidence-based practices are engaged in the education of students with disabilities. One hundred and seventy-four special education teachers and 333 school psychologists completed a 12-item survey in which they rated the frequency of various practices used in special education. The results of this study indicate that 60% of the special education teachers reported using mnemonic strategies at least once per week. With a mean effect size strategy of 1.62, mnemonic strategy instruction is an effective instructional practice (Kavale, 2007). The results of the study indicate that special education teachers report that they engage in practices that are grounded in research, “but there is definite room for improvement” (Burns and Ysseldyke, p. 9).

Limitations

While a pattern has emerged regarding the barriers and supports that impact educational diagnosticians’ ability to make evidence-based recommendations for inclusion in FIE, the research presented should be interpreted with caution for the specific reasons identified:

1. The evidence presented above represents a single focus group session consisting of 19 participants which makes its scope somewhat limited.
2. The demographics of participants are limited to those educational diagnosticians who volunteered to be a part of the study at a state assessment conference.
3. The demographics of the participants are primarily those who perform the duties of the educational diagnostician under the certification title of “educational diagnostician.” Other certification or titles given to personnel who serve in the same capacity as the educational diagnostician were not represented in the study.

However, given that the emphasis of full individual evaluations is on eligibility, rather than on provision of evidence-based recommendations (Mather & Wendling, 2005; Meyer, 2000), and that there is a greater level of proficiency on traditional assessment rather than in consultation and intervention processes (Stoiber & Vanderwood, 2008), the findings suggest that the results of this study are not unique to the individuals who participated in the session.

Implications

Even with the limitations of research described above and the issues identified, there are several implications that
were derived from the study. Each implication is identified by the corresponding category and/or subcategory described within the methods section of this paper and each is based on the original purpose of the study: to obtain information about educational diagnosticians’ perceptions of the barriers and supports that impact their ability in writing evidence-based interventions.

Knowledge of Evidence-based Interventions

It is clear that the participants in this study indicated a lack of knowledge of evidence-based interventions. In order for an educational diagnostician to make valid and reliable recommendations, an understanding of such practices is necessary. To improve the outcomes of successful intervention strategies assessment personnel should be provided with:

- training/workshops with a focus on what constitutes an evidence–based practice;
- educational preparation programs that include components of evidence-based interventions/strategy training; and
- assessment personnel preparation programs should place a greater emphasis on linking to classroom practices and less on eligibility when training pre-service professionals on report writing.

Time to Complete Assessments

The feedback obtained from the study indicated that caseloads are often too large, which impacts the amount of time spent on report writing. Larger caseloads limit the time that assessment personnel can dedicate in providing evidence-based recommendations for interventions for students. Larger caseloads may also impact the time available for these professionals to receive specific training on making evidence-based interventions. In an effort to overcome time challenges, the following recommendations can be made:

- Placing less emphasis on eligibility and strengthening the district RTI models will permit more time to develop strong, evidence-based practices.
- By communicating to response to intervention teams a strong value on interventions and prioritizing eligibility less, administrators can facilitate a culture of prevention rather than reactive measures such as identification and placement in special education.

Time to Collaborate with Teachers

Collaboration between assessment personnel and teachers in determining evidence-based practices for children with learning disabilities will enable assessment personnel to obtain information from general and special education teachers to be included into students’ FIE. This can be obtained by building collaborative planning time into standard assessment practices. School administrators should also encourage and value increasing communication between special education and general education teachers.

Support from Administrator and Teachers

Administrators, teachers, and assessment personnel must work collaboratively to ensure that evidence-based practices are implemented in the classroom. However, given that recommendations are not often shared or read, as indicated by one of the participant’s statements “Feelings that no one reads them,” the following suggestions apply:

- Once evidence-based recommendations are written into the FIE, they should be shared with the IEP team.
- A standard process or procedure should be developed to assure such practice occurs.
- Once recommendations are discussed at the IEP meeting, measurable goals and objectives should be developed.
- Once recommended and implemented in the classroom setting, evidence-based practices/strategies should be monitored on a continual basis.
CONCLUSION

There are few who would argue that teachers, administrators, and parents expect assessment personnel to produce recommendations for instructional interventions based on assessment findings. However, some controversy exists as to whether or not assessment personnel are adequately prepared to make evidence-based recommendations. The current research further examined this issue and identified three main categories (Knowledge of Evidence-Based Interventions, Time to Complete Assessments, and Support from Administrator and Teachers) that had a direct impact on the educational diagnosticians’ perception of their ability to make evidence-based recommendations based on assessment results and to relay such findings within the assessment report. Data collected suggests that a need to strengthen this component of linking assessment to instruction is critical.

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MAJOR DIFFERENCE: AN EXAMINATION OF STUDENT WRITING PERFORMANCE BY MAJOR AND ITS IMPLICATIONS FOR BUSINESS COMMUNICATION

Lucia S. Sigmar, Ph.D.
Geraldine E. Hynes, Ph.D.
Sam Houston State University

This study analyzes the writing performance levels of 352 students to determine the extent to which business students are achieving written communication competency and whether differences exist among the business majors. Although most students met or exceeded expectations in format and content on a common writing task, students were weakest in grammar and mechanics, with almost half scoring below expectations across all majors. The findings indicate no statistically significant differences in writing competency among majors. This study also suggests that business communicators can serve as “collegial consultants” in a cross-disciplinary effort to improve student writing.

Keywords: business writing, writing competency, academic major, assessment, assurance of learning, rubrics, writing pedagogy

As higher education costs increase, colleges and universities are coming under increasing scrutiny for “value added” in degree programs and accountability to state governments and accrediting agencies. The pressure is on higher education to provide students with the skills they need to be effective citizens and workers. One skill set that has gained increasing attention is communication. Across the business disciplines, communication skills—in particular, writing skills—are recognized as critical for academic and professional success (National Commission on Writing, 2003). In the workplace, employers consistently rate the organization and development of ideas in a clear, concise manner and the correct use of English (grammar, punctuation, and spelling) as the most preferred skills in written communication. While national initiatives have made it possible for more students to pursue higher education, only about one quarter of high school seniors has the ability to do college-level writing, and improvement at the secondary school level is unlikely for a number of reasons, among them cultural and social forces that inform literacy (Jameson, 2007). More than 50% of college freshmen are “unable to produce papers relatively free of language errors,” and “analyzing…arguments and synthesizing information are also beyond the scope of most first-year students” (Intersegmental Committee, 2002, p. 4).

Higher education cannot afford to ignore this downward trend in literacy. The cost of poor writing skills to business is staggering. The Industry Report (1999) found that organizations within the United States spent roughly $62 billion on training budgets, and nearly 88% of those companies provided communication training to their employees. A survey of 120 American corporations concluded that a third of employees in the nation’s blue chip companies write poorly (National Commission on Writing, 2003). Sean Phillips, recruitment director at Applera, a Silicon Valley supplier of equipment for life science research, reflects this corporate perspective: “Considering how highly educated our people are, many can’t write clearly in their day-to-day work” (qtd. in Dillon, 2004, p. 1).

As educators, we must acknowledge the fact that our students are not performing to our expectations. We must resist the urge to lay blame elsewhere. And most importantly, we must teach students how to write.

Business schools, spurred to action by the accreditation requirements of the Association to Advance Collegiate Schools of Business (AACSB), are directly addressing the issue. In 2003 the AACSB approved and, two years later, implemented its Eligibility Procedures and Standards for Business Accreditation. The new accreditation standards shifted the primary focus from “what teachers taught to what students learned” (Martell, 2007, p. 189). The new Assurance of Learning (AoL) requirements reflected a major change in the area of assessment measures. Previously used
indirect measures (e.g. student or employer surveys) were supplanted by direct measures that required students to demonstrate their skills and knowledge (Martell & Calderon, 2005).

While the assessment process is a key component of AACSB's Assurance of Learning (AoL) Standards, making continuous improvements to the curriculum based on the assessment data (i.e., “closing the loop”) is “the final step in AoL [and] the raison d'être for assessing student learning” (Martell, 2007, p. 192). The focus, then, is the actual knowledge, skills, and competencies that graduates of a particular degree program possess (Association to Advance Collegiate Schools of Business, 2006; Blood, 2006). Moreover, “[i]f, despite the faculty’s best efforts, students have not learned certain information or a particular knowledge or skill they must be taught those things” (Martell, 2007, p. 192).

A REVIEW OF WRITING PEDAGOGY IN THE BUSINESS DISCIPLINES

Clearly, business schools are responding to the expectation that they provide students with the skills and competencies needed for successful careers. Although writing enhanced courses are an integral part of the business curriculum, assessing their effectiveness is problematic. With AACSB-sponsored assessment recommendations as our impetus, this paper presents an overview of the effectiveness and methodology of writing interventions across the business disciplines and investigates the level of our students' business writing skills. It further seeks to determine whether student major is a predictor of writing ability.

An investigation of discipline-specific literature reveals an awareness of the problem and how various business disciplines have attempted to improve their majors’ writing competency. The following is a brief summary for accounting, economics, finance, marketing, and international business.

Accounting

A predominance of literature in accounting suggests an awareness of the weaknesses in student writing. According to Steadman and Green (1995), accounting curricula do not prepare graduates for articulating goals and strategies in the corporate world. A range of initiatives has been tried with positive outcomes (Ashbaugh, Johnstone, & Warfield, 2002; Craig & McKinney, 2010; Reinstein & Houston, 2004; Riordan, Riordan, & Sullivan, 2000; Stout & Hoff, 1989/90; Wygal & Stout, 1989). One notable approach is to develop modules addressing specific aspects of student writing (Stout & Dacrema, 2004). Modules have a number of advantages: they are inexpensive, brief, substantial, informal, and practical as “stand-alone resources” for different instructors, different classes, and different writing issues. As an added benefit, weak writers are less intimidated by the informal shaping of this type of resource.

Although Stout and Dacrema used their intervention in the accounting classroom, such writing interventions could be adapted to other business disciplines in the form of “electronic-interventions,” such as online podcasts or narrated slideshows, in which specific and recurring writing problems (such as paragraph development or apostrophe usage) are addressed by business communication or discipline-specific faculty.

Economics

Two notable attempts to improve economics majors’ writing are the use of essay exams, which forces the students “to own” the course content by maximizing critical learning and retention for years to come (Jasso, 2009), and a team approach to maintaining standards for writing assessment (Plutsky & Wilson, 2001).

Finance

A recent survey indicates that 50% of finance faculty use writing assignments in their classes (Saunders, 2001). Two major student writing challenges in this discipline appear to be the inability to translate financial concepts into lay language and the inability to construct rhetorically useful graphics (Carrithers & Bean, 2008; Carrithers, Ling, & Bean, 2008). Short, frequent, informal writing assignments such as journaling seem to improve student understanding of financial concepts as well as their writing (Hall & Tiggeman, 1995; Harmon, 1990).

Marketing

A number of studies described initiatives in marketing departments such as establishing writing standards, requiring students to attend writing workshops, offering handouts, feedback, and periodic reassessment. Skills significantly
improved as a result of all such interventions (Bacon & Anderson, 2004; Bacon, Paul, Johnson, & Conley, 2008; Corbin & Glynn, 1992). Noting the effect of holding students accountable for their writing, researchers concluded that “…students may not need to be taught so much as motivated to learn” (Bacon & Anderson, 2004, p. 446).

**International Business (IB)**

Consistent with the research conducted in other business disciplines, Ranney and McNeilly (1996) found that when writing assignments were incorporated into an IB course, and a writing specialist explained the assignments and evaluated them, not only did students improve their writing, but their comprehension of IB issues improved, as well.

This brief literature review indicates various interventions and strategies that are being applied in the business disciplines in an attempt to improve students’ writing skills. Clearly, all business faculty, not just business communication faculty, are addressing this goal. Although business communication courses may be the logical location for teaching and assessing writing competency for a business school, business communication courses alone do not produce competent business communicators (Flanegin & Rudd, 2000). Emphasis on writing competency needs to be consistent across the disciplines. In addition, assessment is a “curricular task” that all stakeholders share in and learn from (Yancey & Huot, 1997, p. 12).

**RESEARCH QUESTIONS**

This study of business students’ writing competency was inspired by two organizational catalysts. The first was the College Board’s National Commission on Writing in America’s Schools and Colleges (2003), which called on public and private leaders and assessment experts to ensure that

- assessment of writing competence is fair and authentic;
- standards, curriculum, and assessment are aligned, in writing and elsewhere in the curriculum, in reality as well as in rhetoric;
- assessments of student writing go beyond multiple-choice, machine-scorable items; and
- assessment provides students with adequate time to write and requires students to actually create a piece of prose (p. 24).

Our research design was an attempt to comply with these standards set by the College Board.

The AACSB assessment process recommendations were the second catalyst for our investigation of student writing competency by major. As we began to “close the loop,” we questioned whether certain majors within the College of Business Administration demonstrated different levels of writing ability. According to Martell, “[u]ncovering these differences, if they exist, can identify groups of students that may need remediation or can reveal best practices in one major or delivery system that can be shared with others” and can help faculty “close the loop” (2007, p. 193).

Therefore, the two research questions for this study are:

- **RQ1**: To what extent are business students achieving written communication competency?
- **RQ2**: To what extent do students with different business majors differ in writing competency?

**METHODOLOGY**

**Sample**

Data for this study were gathered from 352 undergraduate students enrolled in 12 sections of a required, writing-enhanced, junior-level business communication course during one semester. Students were business majors at a mid-sized (17,000 total students) public (state-supported) university in the southwestern United States. The institution is classified as a Doctoral Research University by the Carnegie Commission on Higher Education. The College of Business Administration is AACSB-accredited.

Each section of the business communication course was comprised of 20 to 30 students. Since students decide in-
dependently in which particular section of the course to enroll, it is assumed that the distribution of business majors across the sections was random.

Data about student majors was gathered during the assessment of writing competency. Table 1 shows the breakdown of the study sample by student major.

**Table 1**

<table>
<thead>
<tr>
<th>Student Sample by Major</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major</strong></td>
</tr>
<tr>
<td>General Business (GBA)</td>
</tr>
<tr>
<td>Accounting (ACCT)</td>
</tr>
<tr>
<td>Marketing (MKT)</td>
</tr>
<tr>
<td>Finance (FIN)</td>
</tr>
<tr>
<td>Management (MGT)</td>
</tr>
<tr>
<td>International Business (INB)</td>
</tr>
<tr>
<td>Human Resources Management (HRM)</td>
</tr>
<tr>
<td>Economics (ECO)</td>
</tr>
<tr>
<td>Management Information Systems (MIS)</td>
</tr>
<tr>
<td>Banking &amp; Financial Institutions (BFI)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

Demographic data were not collected for factors such as ethnicity, gender, or age. However, the university's Institutional Research Board publishes an undergraduate student profile showing that students’ mean age is 27. The proportion of females to males on campus is 40/60%. Campus-wide, 3.5% are international students. Of the U.S. students, about 25% are African-American, 15% are Hispanic/Latino-American, 53% are White (non-Hispanic), 0.8% are Asian-American, and 2.8% are Multiethnic/Multiracial (“Business Schools Ranking,” 2011). The business communication course prerequisite is a course in electronic communication techniques, a skills-based course that is designed to develop student competency in MS Office Suite, including Word. Thus, the investigators assumed the student sample was computer literate and had at least some previous writing instruction and/or experience.

**Instrumentation**

A writing rubric (Appendix A), developed the previous year in response to the AACSB initiative, was used by the graders to evaluate students' writing competency for three performance elements (*format*, including document design; *content*, including organization and diction/tone; and *grammar/mechanics*) in a brief business message assignment.

Competency in format was determined by evaluating the extent to which students' documents included standard elements of a business letter or memo, in the appropriate location.

Competency in content was determined by evaluating the extent to which students' writing samples included information that was appropriate for the purpose and audience, clarity, diction, tone, organization of ideas, and paragraph development.

Competency in grammar and mechanics was determined by evaluating syntax and the number of surface errors in the documents, including spelling, punctuation, capitalization, run-on sentences and fragments, use of passive voice,
and usage errors.

The writing rubric used in this study allocates a certain number of points for each performance element, which allows for weighting. For example, content might be worth up to 30 points out of the maximum 100 points for the assignment (30% of the grade). Further, the total points possible for each performance element is divided into three categories on the rubric—"exceeds expectations," "meets expectations," and "below expectations," roughly interpreted as A-B level, C-level, and D-F level. These terms are consistent with rubric guidelines for evaluating student writing assignments (Appendix A).

Procedure

For the writing sample evaluated in this study, students were asked to compose a persuasive letter or memo in response to a business case. The students keyed and printed their responses to the case during one class period, under the supervision of the instructor.

The writing assignment was the third of three, in-class, brief business writing tasks, performed during the last half of the semester. Because the assignment was required in all sections of the course, no extra credit was given for participation. According to the Chair of the university’s Protection of Human Subjects Committee, there was no need to acquire students’ informed consent because personal identifiers were not included in the data set.

Five business communication instructors who taught 12 sections of the course used the same rubric to evaluate their students’ persuasive messages. The instructors were equally familiar with the rubric, the assignment, and the course content. All used the same textbook and followed a Master Syllabus for the course. The instructors were all full-time business communication faculty in the College of Business Administration. They were seasoned veterans, having taught the undergraduate business communication course for at least five years, and for as many as 35 years, at the same institution.

Although all five instructors used the same rubric to evaluate their students’ writing sample, it is possible that researcher bias was inadvertently introduced. No formal attempt was made to standardize the instructors’ level of expectations. Some instructors may have judged the writing more leniently or harshly than others. Inter-rater reliability among the graders, therefore, was not ensured.

FINDINGS

RQ1: To what extent are business students achieving written communication competency?

Results are reported below for three performance elements: format, content, and grammar/mechanics. Table 2 summarizes the distribution of students who exceeded expectations, met expectations, and fell below expectations for the performance elements of the writing sample. As Table 2 shows, students’ writing samples were strongest in format, with 35.8% exceeding expectations. The writing samples were weakest in grammar and mechanics, with almost half (49.1%) scoring below expectations on this performance element.

Table 2
Distribution of Scores for Each Performance Element across Majors

<table>
<thead>
<tr>
<th></th>
<th>Format</th>
<th>Content</th>
<th>Grammar/Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Exceeded Expectations</td>
<td>126</td>
<td>35.8</td>
<td>55</td>
</tr>
<tr>
<td>Met Expectations</td>
<td>175</td>
<td>49.7</td>
<td>245</td>
</tr>
<tr>
<td>Below Expectations</td>
<td>51</td>
<td>14.5</td>
<td>173</td>
</tr>
<tr>
<td>Total</td>
<td>352</td>
<td>100.0</td>
<td>352</td>
</tr>
</tbody>
</table>
RQ2: To what extent do students with different business majors differ in writing competency?

Results are reported below for three performance elements (format, content, and grammar/mechanics) that were evaluated in the writing samples. The distribution of students’ scores is reported by student major.

Figure 1 shows the distribution of scores for letter and memo format by student major.

As Figure 1 shows, Banking and Financial Institutions majors scored the best in format of their business letters and memos, with 67% exceeding expectations. Accounting (48%), Marketing (43%), and Management Information Systems (42%) majors also scored well in the format performance element. On the other hand, Human Resources Management majors scored lowest in format, with 32% below expectations.

Figure 2 shows the distribution of scores for letter and memo content by student major.
As Figure 2 shows, the content of students’ writing samples overwhelmingly met expectations across all business majors. General Business Administration and Accounting majors had the highest percentage of scores that exceeded expectations (20%). On the other hand, the Human Resource Management and Economics majors had the greatest percentage of scores at the below expectations level (24%), while none of the MIS majors scored below expectations on content.

Figure 3 shows the distribution of scores on the writing sample for the performance element of grammar and mechanics by major.

As Figure 3 shows, performance on grammar and mechanics was the weakest for the students across all majors. At least 33% of every major scored below expectations on this element of the writing sample. The Human Resources Management and Marketing majors performed the most poorly, with about two-thirds scoring below expectations. The students who scored the best on grammar and mechanics were the Banking and Financial Institutions majors, with 50% exceeding expectations on grammar and mechanics.

In an attempt to determine whether any of the differences in writing competency among different majors were significant, statistical analyses were conducted. We focused on the results for grammar and mechanics because overall performance was the poorest among the three elements in this study (format, content, and grammar/mechanics). The ordinal nature of the rubric outcomes dictated our choice of analytical techniques. Thus, the ordinal logistic regression model seemed appropriate. In this model, the dependent variable was competency, which took on the value of 1 if the student was below expectations, 2 if the student met expectations, and 3 if the student exceeded expectations. This is an ordinal scale in that a 3 is better than a 2 and a 2 is better than a 1, but the amount of increased competency (“how much better”) is unknown.

Table 3 depicts the results of the ordinal logistic regression of competency against the students’ major. General Business (GBA) majors were excluded and used as the base case because they were the largest group (n=138) (Table 1). The estimated coefficients of the ordinal logistic regression model represent the natural log of the odds ratio for a student with the corresponding major. For example, the estimated coefficient for accounting majors is 0.61. Raising the number $e$ to the power of 0.61 gives us the odds ratio for accounting majors. The odds ratio is the ratio of the probability of exceeding expectations to the probability of not exceeding expectations. Thus, for accounting majors the odds ratio is 1.84.
Table 3
Regression Statistics

<table>
<thead>
<tr>
<th>Major</th>
<th>B/Se</th>
<th>Odds Ratio</th>
<th>Probability Of Exceeding Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFI</td>
<td>1.64</td>
<td>5.16</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>-0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRM</td>
<td>-0.42</td>
<td>0.66</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>-0.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIS</td>
<td>0.38</td>
<td>1.46</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>-0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACCT</td>
<td>0.61*</td>
<td>1.84</td>
<td>0.65</td>
</tr>
<tr>
<td></td>
<td>-0.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECO</td>
<td>0.5</td>
<td>1.65</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td>-0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGT</td>
<td>0.27</td>
<td>1.31</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>-0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MKT</td>
<td>-0.4</td>
<td>0.67</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>-0.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIN</td>
<td>0.22</td>
<td>1.25</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>-0.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INB</td>
<td>0.01</td>
<td>1.01</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>-0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>_cut1</td>
<td>0.11</td>
<td>1.12</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>-0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>_cut2</td>
<td>2.12***</td>
<td>8.33</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>-0.21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: log_likelihod -338.63; LR_ch_i_square 12.47; Prob > chi_square 0.188; r2_p-value 0.02

The probability of exceeding expectations can be computed from the odds ratio. As shown in Table 3, the only significant coefficient is for Accounting majors (p<.05). According to the model, an Accounting major would have a 65% probability of exceeding expectations on grammar and mechanics.

Unfortunately, the p-value of the likelihood ratio test for significance of the model (0.188) indicates that the fit of the model overall is not significant. Because some majors have few observations in the data set, the estimation is unstable and is sensitive to which variable is left out. Future research will attempt to overcome this obstacle by increasing the size of the dataset and incorporating a wider variety of demographic information.

In summary, the statistical analyses that were conducted on the data reported above were not significant, and any differences in performance on the various writing elements are simply due to chance. The wide variation in sample sizes for each major precludes further analysis (Table 1). After all, only six of the 352 students in the study were Banking and Financial Institutions (BFI) majors, so their relatively strong performance on content, grammar and mechanics does not imply anything about BFI majors. Rather, despite the variations by major, the data imply that all business majors have strengths and weaknesses in writing competency, and the greatest weakness for all business majors appears to be grammar and mechanics.
DISCUSSION

The results of this study indicate that our business students are achieving higher levels of competency in some areas of business writing than in others (Research Question 1). The students’ writing samples were stronger in format and content than in grammar/mechanics, with almost half scoring below expectations on the latter performance element.

Second, the results of this study indicate that, although interesting differences emerged, our students’ writing competency does not vary significantly by business major (Research Question 2). Banking and Financial Institutions majors, for instance, scored the strongest in format of their business messages. Accounting majors scored the best on grammar/mechanics. General Business Administration and Accounting majors scored the best on content of their messages. However, the widely varying sample sizes of each major precluded measures of statistical significance. In addition, college major may not be a good predictor of writing competency. Future research will attempt to identify other predictors that faculty could use to help differentiate students so that interventions can be designed to address these differences in prior experiences or knowledge.

Implications

The study has strong implications for business instructors. If students at the university level lack the skills to write an effective business message, then educators must provide them additional writing instruction, practice, motivation, and feedback until they can produce an acceptable document. As a brief review of the literature in Accounting, Economics, Finance, Marketing, and International Business has demonstrated, expanding writing skills training throughout the business school curriculum positively impacts writing competency. Research also indicates that collaboration among departments of business and their external stakeholders improves students’ perception of the importance of writing (Ashbaugh, Johnstone, & Warfield, 2002; Gabriel & Hirsch, 1992; Hirsch & Collins, 1988; Mcissac & Sepe, 1996). To produce competent graduates then, the business disciplines must “close the loop” with effective teaching methodologies at the degree program level, in various courses and across majors.

Business communication faculty can lead the way by offering to collaborate on writing improvement with their colleagues in other disciplines. One important opportunity for collaboration between business communication faculty and faculty in other business disciplines is in the development of rubrics. While not an “intervention” per se, rubrics are a first step in assessing student learning goals because they systematically and objectively measure the level of student competency. Faculty can use that assessment data to continuously reinforce student writing competency through effective pedagogical strategies.

While common in education, rubric development in the business disciplines—with perhaps the exception of business communication—is still relatively new. Critics complain that rubrics are too standard and overlook differences in learning styles and experiences (Kilpatrick, Duean, & Kilpatrick, 2008). Rubrics also may not accommodate different mission statements and operational environments (Varner & Pomerene, 1998). To avoid these issues, writing rubrics for the business disciplines should be tailored to specific assignments, specific performance criteria, and specific levels of competency. More importantly, each rubric should be aligned with achievement of learning outcomes (Mannino & Shoaf, 2007).

Business communication faculty can consult with colleagues in other business disciplines to sidestep the potential hazards of evaluating writing. Moreover, it is well established in the literature that many professors outside the writing disciplines are uncomfortable with the idea of teaching writing (Munter, 1999; Plutsky & Wilson, 2001; Riordan, Riordan, & Sullivan, 2000). While many of these professionals generally recognize good writing when they see it, some may find it difficult to articulate a series of writing performance goals tailored to a specific assignment. However, a team of “reasonably qualified readers and writers of English can, when guided by a rubric, make legitimate subjective decisions about a given piece of writing” (Warnock, 2009, p. 98).

Business communicators engaged in collegial consultancy can assist faculty in other disciplines in developing course-specific writing assignments with rubrics that evaluate student writing. Such assignments and rubrics need not be uniform. As Warnock (2009) points out, synchronizing the opinions of assessors is not the goal here; meaningful results can be achieved “without ignoring the effects of context and by respecting the natural subjectivity of the task”
(p. 98). For example, a rubric designed by the authors for a business presentations course is being used in other business courses, and a marketing faculty member has consulted with the authors to develop rubrics for course-specific writing assignments.

CONCLUSIONS

In consideration of learning outcomes of business students for assessment purposes, Warnock (2009) notes that large numbers gain “statistical power” and reduce individual subjectivity in the assessment process. With greater saturation of writing practice across the business disciplines, business schools and their faculty can predict, with greater accuracy, the learning outcomes of their students in writing competency. Assessment is not done for assessment’s sake; rather it endeavors to improve student writing competency. Collegial consulting on simple assessment tools such as rubrics is a good first step toward that goal.

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## APPENDIX A

### GBA 389 - Persuasive Business Message Rubric

<table>
<thead>
<tr>
<th>Competency</th>
<th>Exceeds Expectations</th>
<th>Meets Expectations</th>
<th>Below Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter / Memo Format</td>
<td>- Letterhead is complete</td>
<td>- Letterhead is incomplete</td>
<td>- Letterhead is missing</td>
</tr>
<tr>
<td></td>
<td>- (Memo) “From” line is complete &amp; accurate</td>
<td>- (Memo) “From” line is wrong or incomplete; initials are missing</td>
<td>- (Memo) “From” line is missing</td>
</tr>
<tr>
<td></td>
<td>- Date is complete &amp; correct</td>
<td>- Date is complete but wrong format</td>
<td>- Date is incorrect or missing</td>
</tr>
<tr>
<td></td>
<td>- Inside address (“To”) is complete &amp; accurate</td>
<td>- Inside address (“To”) is wrong or incomplete</td>
<td>- Inside address (“To”) is missing</td>
</tr>
<tr>
<td></td>
<td>- Salutation is appropriate &amp; complete.</td>
<td>- Salutation is wrong or incomplete</td>
<td>- Salutation is inappropriate or missing</td>
</tr>
<tr>
<td></td>
<td>- “Subject” line tells purpose &amp; topic</td>
<td>- “Subject” line is incomplete</td>
<td>- “Subject” line is misleading or missing</td>
</tr>
<tr>
<td></td>
<td>- (Letter) Complimentary close/signature is correct &amp; complete</td>
<td>- (Letter) Complimentary close/signature is wrong or incomplete</td>
<td>- (Letter) No complimentary close/signature</td>
</tr>
<tr>
<td>Document Design</td>
<td>- Font is attractive and readable</td>
<td>- Font is readable</td>
<td>- Font style changes within the doc</td>
</tr>
<tr>
<td></td>
<td>- Margins are balanced</td>
<td>- Margins are mostly balanced</td>
<td>- Margins are unbalanced</td>
</tr>
<tr>
<td></td>
<td>- Bullets/numbers are used effectively</td>
<td>- Bullets /numbers are used, but incorrectly</td>
<td>- No bullets / numbers</td>
</tr>
<tr>
<td></td>
<td>- Headings are used effectively</td>
<td>- Minimal headings</td>
<td>- No headings or inappropriate</td>
</tr>
<tr>
<td></td>
<td>- Spacing between elements is correct</td>
<td>- Spacing between elements is mostly effective</td>
<td>- Spacing between elements is wrong</td>
</tr>
<tr>
<td>Organization</td>
<td>- Opening gets attention</td>
<td>- Weak attention getter in opening</td>
<td>- No attention getter in opening</td>
</tr>
<tr>
<td></td>
<td>- Body information maintains interest and raises desires</td>
<td>- Weak attempt to maintain interest and desires in body of message</td>
<td>- Interest and desires are missing or repeated in body of message</td>
</tr>
<tr>
<td></td>
<td>- Paragraphs are short, limited to a single topic</td>
<td>- Some paragraphs are too long</td>
<td>- More than one topic per paragraph or no topic sentence</td>
</tr>
<tr>
<td></td>
<td>- Closing includes a clear, concrete action item</td>
<td>- Closing action item is generic or vague</td>
<td>- No action item in closing</td>
</tr>
<tr>
<td></td>
<td>- Final thought (PS) is effective</td>
<td>- Weak final thought (PS)</td>
<td>- No final thought (PS)</td>
</tr>
<tr>
<td>Diction &amp; Tone</td>
<td>- Language suits the audience</td>
<td>- Language level varies</td>
<td>- Word choice is too formal or casual</td>
</tr>
<tr>
<td></td>
<td>- Action verbs and concrete words are used throughout</td>
<td>- Some action verbs and concrete words are used</td>
<td>- No action verbs or concrete words</td>
</tr>
<tr>
<td></td>
<td>- You-viewpoint is used throughout</td>
<td>- Some you-viewpoint is used</td>
<td>- No you-viewpoint; no rapport</td>
</tr>
<tr>
<td></td>
<td>- Positive tone is used throughout</td>
<td>- Some negative language</td>
<td>- Tone is negative throughout</td>
</tr>
<tr>
<td></td>
<td>- No clichés or trite expressions</td>
<td>- Some clichés or trite expressions</td>
<td>- Too many clichés or trite expressions</td>
</tr>
</tbody>
</table>
### Content

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Information is complete</td>
<td>Information is incomplete</td>
<td>Too much missing information</td>
</tr>
<tr>
<td></td>
<td>Information is clear</td>
<td>Some information is unclear</td>
<td>Message is unclear</td>
</tr>
<tr>
<td></td>
<td>Only relevant info is included</td>
<td>Some information is irrelevant</td>
<td>Too much irrelevant Information</td>
</tr>
<tr>
<td></td>
<td>Strong reader benefits</td>
<td>Weak reader benefits</td>
<td>No reader benefits</td>
</tr>
<tr>
<td></td>
<td>All information is correct</td>
<td>Some information is incorrect</td>
<td>Too much inaccurate Information</td>
</tr>
</tbody>
</table>

### Grammar, Usage, Mechanics

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sentence syntax is correct</td>
<td>1 fragment or run-on sentence</td>
<td>2 or more fragments or run-on sentences</td>
</tr>
<tr>
<td></td>
<td>Sentences are concise</td>
<td>1-2 wordy expressions</td>
<td>Sentences lack conciseness</td>
</tr>
<tr>
<td></td>
<td>No passive voice sentences</td>
<td>Some passive voice</td>
<td>Too much passive voice</td>
</tr>
<tr>
<td></td>
<td>No spelling errors</td>
<td>1 spelling error</td>
<td>2 or more spelling errors</td>
</tr>
<tr>
<td></td>
<td>No mechanics errors</td>
<td>1 mechanics error</td>
<td>2 or more mechanics errors</td>
</tr>
<tr>
<td></td>
<td>No grammar errors</td>
<td>1 grammar error</td>
<td>2 or more grammar errors</td>
</tr>
<tr>
<td></td>
<td>No word choice errors</td>
<td>1 word choice error</td>
<td>2 or more word choice errors</td>
</tr>
</tbody>
</table>

**Total Points:** __________/100
Four factors in teaching intern effectiveness, as measured by a Praxis III-similar instrument, were found among observational data of teaching interns during the 2010 spring semester. Those factors were lesson planning, teacher/student reflection, fairness & safe environment, and professionalism/efficacy. This factor analysis was as much of a statement about effective teaching as it is about the technical aspects of an instrument utilized to assess it. Forty-one percent of effective teaching was found to be in the lesson planning.

Keywords: effective teaching, supervision of interns, efficacy, safe school environment, teacher reflection, higher order thinking, NCATE Standard One, novice teachers, observation systems

At our university, we are constantly looking for ways to help teacher education candidates improve their teaching. As is probably the case in most teacher education units in the United States, our College of Education uses an observation form for assessing teacher intern performance and for giving feedback. When the Formative Observation and Intervention form was created several years ago, it was constructed so that items and domains had a great resemblance to the Pathwise evaluation (ETS, 1996). Accordingly, out of respect for intellectual property rights, we obtained written permission from the Educational Testing Service before beginning to use it with our candidates. This form has become useful not only for assessing intern performance, but also for identifying the most salient elements of effective teaching. In other words, the form identifies what is really being identified as effective in teaching.

Pathwise was developed through Educational Testing Service as an observation system to gather rich, research-based, objective classroom data based on evidence stemming from the effective teaching research (Chan, 1998). The effectiveness of teachers during classroom settings is rated as a category one, category two, or category three, depending upon very specific scoring criteria (ETS, 1996), with a category one denoting an unacceptable level of effectiveness. The assessment of teaching competency is thus a very authentic portrayal of teaching performance, since a minimum of subjectivity is employed. In addition to the 19 heavily research-based items related to the Pathwise system, two items were added locally for administrative and pragmatic reasons: one under Domain A, to denote total preparedness to teach, and another under Domain D, to denote the candidate's consistency in meeting professional responsibilities.

The observation form was used to collect data on 21 research-based items of teacher performance. These 21 areas were grouped into four domains: (A) Organizing Content for Student Learning; (B) Creating an Environment for Student Learning; (C) Teaching for Student Learning; and (D) Teacher Professionalism. The items (not yet the factors) of the observation form are shown in Table 1. Since the data obtained using the Formative Observation and Intervention form were used to make personnel decisions about candidates, we decided to study it in depth, using candidate data from the Spring Semester of 2010. We felt that, by doing this study, we could gain insight into the characteristics of effective teaching in addition to exploring some technical aspects of the instrument.

A PRIORI ASSUMPTIONS

Factor analysis can be used to test whether initial assumptions about a factor structure of an assessment instrument have empirical validity. Our assumptions were as follows:

1. Four factors would be found, corresponding to the four domains of Pathwise.
2. The items that measured these factors would be located within the domain structure suggested by Pathwise.
3. The two items that had been added locally would not “load” (correlate) significantly upon the rest of the factor structure.
4. Decisions about the factor structure would not be based heavily upon the two locally-developed items alone.

**DEFINITIONS**

**Domain:** A collection of five or more items on the *Formative Observation and Intervention* form designed to assess the same construct. The number of items on the form exceeded the minimum number of three items to create a component (expected factor), as described by Hatcher and Stepanski (p. 460).

**Effective teaching:** An assessment of teaching using the *Formative Observation and Intervention* form (sometimes referred to simply as the *form*) which yielded measurements of 2 or above in every one of 21 items on the form. Teaching was not regarded as effective if there was not enough evidence during an observation to support a category of at least a 2 in each and every one of the 21 items.

**Factor:** A mathematical communality with an Eigenvalue of at least 1. On the *Formative Observation and Intervention* form, a mathematical communality that accounted for at least 1/21st of the variance of the entire 21-item instrument used to measure teacher effectiveness.

**Factor name:** The name given to a collection of items from the form identified during the factor analysis process whose items have a statistically significant ($p<.01$, n=130, one-tailed test) (Ferguson, p. 494) correlation to the factor and which seem to best typify the construct of the five items most correlated to the factor.

**PURPOSE OF THE STUDY**

The principal purpose of our study was to determine if there were factor loadings on this measure of effective teaching and, if principal factors were found, to determine what those factors were by carefully assigning names to them.

**METHOD**

Hatchett and Stepanski (1994, p. 461) state that for factor analysis, the sample size should be the larger of 100 subjects or five times the number of variables being analyzed. Five times 21 items is 105. There were 130 teaching interns in the sample, and 416 teaching observations recorded, so the sample was more than adequate in size to accommodate this type of analysis. Methodologically this study should be considered a “common factor analysis” (Ingram, 2011).

**Participants**

Participants were 63 early childhood, 9 middle level, and 58 secondary education interns, a total of 130 senior intern candidates. They were assigned to school campuses in the Western part of Arkansas, particularly along the I-40 corridor from Morrilton westward to the Arkansas-Oklahoma state line. All were assigned to accredited public schools and in content areas appropriate to their majors and expected licensures. Placement was done through the office of Teacher Education Student Services at the university. All public school and university faculty who participated in any direct way in intern evaluations were made thoroughly familiar with the Pathwise Evaluation System from the Educational Testing Service through professional development experiences provided through the College of Education. The items of the form and their organization into subscales called domains are shown in Table 1.

**Materials and Procedures**

Before interns located to their respective placements, they were briefed about the expectations for the field experience. Early childhood majors and middle level majors enrolled in a 16-week course for 15 and 12 semester hours, respectively; secondary majors enrolled in a nine-semester hour course encompassing a 12-week internship. Secondary majors completed an on-campus course in public school law, history and philosophy of education, and content area reading before beginning their 12-week internship. All interns had completed substantially all of the requirements for their respective majors except for the internship itself.
The Formative Observation and Intervention form was used by campus-based and field-based supervisors for evaluation purposes and to provide feedback to interns. For the purposes of this study, we decided to use the form to investigate the factor structure of effective teaching, using data from 130 interns of the spring semester of 2010. It was the intent of the supervisory experience to observe each intern at least four times while the intern was teaching; this occurred in most but not entirely all instances. Prior to this investigation, a previous study utilizing the same data had been done to determine the reliability, validity, and suitability of the Formative Observation and Intervention form in our application of it. These facets of the form were believed to be more than adequate (Womack, Hanna, Woodall, & Callaway, 2011).

Artifact Reliability. The uncorrected split-half reliability of the Formative Observation and Intervention form was 0.976 with 416 usable observations. The standard error of measurement was 2.6 points out of 63 possible points on
Artifact validity. All items on the form were mapped to the state’s licensing standards and to the Praxis III (Pathwise) assessments. These mappings were recorded on several documents that became part of the teacher education unit’s electronic exhibits pursuant to accreditation by the National Council for Accreditation for Teacher Education (NCATE) and by the State.

RESULTS

Data from 416 observations of 130 candidates were obtained during the spring semester of 2010. These occurred as faculty or clinical practice instructors completed four cycles of evaluations while observing interns in teaching situations.

Factor Loading

The principal purpose of our study was to determine if there were factor loadings on this measure of effective teaching and, if principal factors were found, to determine what those factors were by carefully assigning names to them. Procedure FACTOR of the Statistical Analysis System was used to discover factors, using the suggested prior communality estimate of one and a minimum Eigenvalue of one (Hatcher & Stepanskie, 1994).

Table 2
Eigenvalues of the Correlation Matrix (N=416 observations from 130 teaching interns)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Difference</th>
<th>Variance accounted for</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.63922</td>
<td>7.28065</td>
<td>41.14 %</td>
<td>41.14</td>
</tr>
<tr>
<td>2</td>
<td>1.35857</td>
<td>0.09839</td>
<td>6.47</td>
<td>47.61</td>
</tr>
<tr>
<td>3</td>
<td>1.26018</td>
<td>0.21271</td>
<td>6.00</td>
<td>53.61</td>
</tr>
<tr>
<td>4</td>
<td>1.04748</td>
<td>0.06676</td>
<td>4.99</td>
<td>58.60</td>
</tr>
<tr>
<td>5</td>
<td>0.98072</td>
<td>0.03118</td>
<td>4.67</td>
<td>63.27</td>
</tr>
</tbody>
</table>

SAS output indicated that there were likely four factors within the observational data from the interns that met these criteria. The fifth factor was indicated on Table 2 to show the reader where the Eigen break was. The scree plot was somewhat consonant with that finding while indicating the presence of an initial large factor (Figure 1) that accounted for 41% of the variance in teaching effectiveness scores.

Factor Detection

As Hatcher and Stepanski (1994) and Ingram (2011) indicate, interpretation of factors and of items correlating with factors is subjective. This may seem counter to the appearance of the mathematical precision of the output of a program like PROC FACTOR, but researchers, given a few suggestions from the statistical literature, are left to adopt their own criteria for factors and items. We determined that we would recognize a factor if it had an Eigenvalue of at least one, appeared distinct on the scree plot, and accounted for at least 5% of the variance. The scree plot (Figure 1) is a depiction of the variance extracted at each stage of the factor analysis. Hatcher and Stepanski say “The word ‘scree’ refers to the loose rubble that lies at the base of a cliff. When performing a scree test, you normally hope that the scree plot will take the form of a cliff: At the top will be the eigenvalues for the few meaningful components, followed by a break (the edge of the cliff). The bottom of the cliff will be like the scree: eigenvalues for the trivial components” (p. 473). We determined that we would recognize an item as being associated with a factor if its correlation with a factor reached statistical significance at the .01 level. We planned to name a factor in special consideration of its five greatest correlates (assuming there would be at least five), in view of the a priori domains from which the items came, and in view of the language of the items. The number five was chosen because of the original minimum of five items per domain on the form.
Figure 1. Scree Plot of Eigenvalues for Ratings of Teacher Intern Performance

Item-Factor Identification

Items from the Formative Observation and Intervention form were allowed to remain in the factor structure if they correlated significantly (critical $r=.230, p<.001$) with the factor. Statistical significance is not mandated in factor-naming, but it is a standard that is commonly used. Fifteen items correlated significantly with the first factor (see Table 3), a factor that accounted for 41% of the total variance.

Factor Naming

The first factor was named “lesson planning.” In referencing the correlations to the items on the observation form, two of the top five correlations were with items that dealt very obviously with planning (A2, A5). B3 (challenging learning expectations) usually occur as a result of careful lesson planning. D2 and D4 could be considered extensions of planning in that planning promotes efficacy and a sense of capability in reaching out to parents.
Using the rotated varimax factor pattern, the other three factors were also named. The number of items correlating significantly with the remaining three factors was considerably less. The second factor correlated significantly with items C3, D1, D2, C5, and D4. The second factor was named “Teacher and student reflection” in consideration of the language of the items about teacher reflection on goals met, initiation of modifications for students’ needs, and student higher order thinking. The third factor was named “Fairness/safe environment” in view of the language of most of the items contributing to its variance. The third factor correlated significantly with items B1, B4, B5, A2, and D3. Three of these are addressed in Domain B, Creating Environment for Student Learning. Domain B was measured during the dynamics of actual instructional events. The fourth factor correlated with items D5, D3, D2, A1, and D4. The fourth factor was named “Professionalism and efficacy” in deference to the predominant language of the items most associated with it—“on time, professional appearance, follows policies . . . builds professional relationships, collaborates . . . accepts responsibility, efficacy . . . reflects on goals met.”

In an effort to better visualize which items actually loaded with which factors, we constructed a simple incidence table (Table 4). It seemed apparent that items correlated with factors were spread across rather than within what had been considered a priori to be in different domains. We were able to see some interrelationships that make up the complex task called “teaching.” Planning, for instance, touches not only items A1 through A6, but also on the rapport that teach-

<table>
<thead>
<tr>
<th>Factor</th>
<th>1 Planning</th>
<th>2 Reflection</th>
<th>3 Fair/Safe</th>
<th>4 Professionalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items/correlations</td>
<td>A3/0.67</td>
<td>C3/0.77</td>
<td>B1/0.77</td>
<td>D5/0.71</td>
</tr>
<tr>
<td></td>
<td>C4/0.66</td>
<td>D1/0.66</td>
<td>B4/0.63</td>
<td>D3/0.64</td>
</tr>
<tr>
<td></td>
<td>A4/0.62</td>
<td>D2/0.66</td>
<td>B5/0.54</td>
<td>D2/0.46</td>
</tr>
<tr>
<td></td>
<td>D2/0.59</td>
<td>C5/0.51</td>
<td>A2/0.46</td>
<td>A1/0.45</td>
</tr>
<tr>
<td></td>
<td>C1/0.57</td>
<td>D4/0.51</td>
<td>D3/0.44</td>
<td>D4/0.42</td>
</tr>
<tr>
<td></td>
<td>C2/0.56</td>
<td>C1/0.45</td>
<td>A5/0.39</td>
<td>A4/0.35</td>
</tr>
<tr>
<td></td>
<td>A6/0.53</td>
<td>C2/0.44</td>
<td>B2/0.36</td>
<td>B3/0.33</td>
</tr>
<tr>
<td></td>
<td>B2/0.51</td>
<td>B4/0.43</td>
<td>A1/0.35</td>
<td>B2/0.29</td>
</tr>
<tr>
<td></td>
<td>B5/0.50</td>
<td>A6/0.39</td>
<td>D2/0.39</td>
<td>A2/0.28</td>
</tr>
<tr>
<td></td>
<td>C5/0.50</td>
<td>A5/0.35</td>
<td>A3/0.29</td>
<td>A6/0.27</td>
</tr>
<tr>
<td></td>
<td>A5/0.47</td>
<td>C4/0.25</td>
<td>D1/0.27</td>
<td>A3/0.27</td>
</tr>
<tr>
<td>A2/0.47</td>
<td>______*</td>
<td>C5/0.24</td>
<td>D1/0.27</td>
<td></td>
</tr>
<tr>
<td>B3/0.46</td>
<td>______*</td>
<td>______*</td>
<td>______*</td>
<td></td>
</tr>
<tr>
<td>D4/0.45</td>
<td>______*</td>
<td>______*</td>
<td>______*</td>
<td></td>
</tr>
<tr>
<td>A1/0.43</td>
<td>______*</td>
<td>______*</td>
<td>______*</td>
<td></td>
</tr>
<tr>
<td>______*</td>
<td>______*</td>
<td>______*</td>
<td>______*</td>
<td></td>
</tr>
</tbody>
</table>

* correlation was not significant
ers are able to build with students (B2), the framing of challenging learning expectations (B3), planning for physical safety (B5), the making of content comprehensible (C2), and five other items.

Table 4
Factors Loaded on by Each Item

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1. Awareness of student diversity</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>A2. Prepare clear learning objectives</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>A3. Connect past, present, future content</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>A4. Vary methods/ materials for learning</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>A5. Align learning goals with assessments</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>A6. Total preparedness for teaching</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>B1. Models and promotes fairness</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>B2. Rapport with all students</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>B3. Challenging learning expectations</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>B4. Consistent behavior management</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>B5. Physical environment, safety</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1. Clear goals &amp; instructional procedures</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2. Makes content comprehensible</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3. Critical thinking, creative thinking</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C4. Teachable moments, monitor &amp; adjust</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C5. Effective pacing, time on task</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D1. Reflect on extent of goals met</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D2. Accepts responsibility, efficacy</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D3. Professional relationships, collaborates</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D4. Parent/guardian communication</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>D5. On time, prof. appearance, policies</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISCUSSION**

Given the nature of the assessment instrument—one designed to assess effective teaching, with its reliability and validity, this study was not only a study on technical issues, but also on the nature of effective teaching itself. As mentioned earlier, there were four *a priori* assumptions about the factor structure of the instrument that were tested in this factor analysis:
1. Four factors would be found, corresponding to the four domains of Pathwise.

2. The items that measured these factors would be located within the domain structure suggested by Pathwise.

3. The two items that had been added locally would not load significantly upon the rest of the factor structure.

4. Decisions about the factor structure would not be based heavily upon the two locally-developed items alone.

With regard to assumption one, four factors were found, but they did not nearly correspond to the subscales suggested by our Praxis III-like instrument, the Formative Observation and Intervention form. Regarding assumption two, the items that loaded most heavily on each of the four factors were not all from the respective domains of the form; rather they were scattered across several domains. The first and largest factor, that of planning, had item loadings from all four domains. Lesson planning correlated significantly with 15 of 21 items of our research-based instrument that were designed to assess effective teaching. Only in the fourth factor were most of the five most-correlated items from the domains that had been suggested a priori. Regarding the third assumption about the two locally developed items—ones that had not been expected to load or correlate with the rest of the instrument—item A6 as a reflection of total preparedness to teach a specific lesson was at least significantly correlated to three of the four factors. The locally-added item on Domain D, item D5 about being on time and meeting professional responsibilities, loaded on and was significantly correlated on factor four, being the most correlated of the items within the factor. Thus, speaking to the fourth assumption, while decisions about the factor structure ended up being related to the two locally-developed items, the data did not suggest that these two items were “out of place,” compared to the 19 ETS-based items.

The Value of Lesson Planning

Forty-one percent (41%) of the variance in effective teaching in our interns was accounted for by lesson planning. That is, before they walked into a classroom and uttered the first word of the day, 41% of student learning has already been decided by the preparedness or lack thereof of the teacher for that specific moment. Intuitively we in teacher education have emphasized to novice teachers the importance of careful and thorough lesson planning. With the findings of this study, that importance need no longer be one advanced only by intuition. Lesson planning as a significant endeavor goes beyond just deciding which method or which activity to utilize in a lesson. There was little evidence in our findings to promote any particular methodology as a panacea for teaching any or all subjects. Rather, lesson planning touches the eventual method of assessment that students will face, planning for safety in the physical environment, planning for fairness, planning for challenging learning expectations and for higher-order thinking, planning for effective pacing and time on task, and more. Teachers who are constantly prepared for the next day, week, and month of teaching find it easy to approach and interact with parents. It is easier to cultivate rapport with students when “What will I be doing next period?” is not a real concern. For these and other reasons, the value of lesson planning can hardly be overstated.

The Value of Reflection and Higher-order Thinking

Teacher reflection and student higher order thinking, the second largest factor, accounted for 6.47% of the total variance in teacher effectiveness. Reflection enables teachers at all experience levels to gain much more from their experiences than just the initial exposure. Our interns are required to write reflections about the events of each day. The value of higher order thinking for both the teachers and their students is well established in the literature.

The Value of Fairness and of a Safe-School Environment

Fairness and safe-school environment accounted for 6% of the variance in teacher effectiveness. Students need to be treated fairly by teachers and by other students. Students need to be assured that their work will be evaluated fairly by teachers. They also need to be assured that they will not be bullied by classmates. Most states have passed laws during the past decade to deal with bullying. Teachers and administrators should do their part in enforcing these long-overdue laws.

Professionalism, Responsibility, and Efficacy

Professionalism accounted for about 5% of the variance in teacher effectiveness. At least two Domain D items loaded on each of the four factors. Professionalism must be part of everything that a teacher does. Professionalism is ex-
pressed in the effort level that teachers show in always being prepared for classes, in the preparedness that teachers show in adopting and implementing classroom management strategies, in the ways that teachers treat other teachers and administrators, and in the ways that teachers seek interactions with parents.

Other Variance

About 41% of the variance was not accounted for by the model. This variance in teaching effectiveness was scattered among many small categories. With the high reliability and small error of measurement, it was not believed that measurement error was a large factor. Many small but essential behaviors comprise effective teaching. They add in small but incremental ways to the total amount of student learning that takes place.

CONCLUSIONS

After years of utilizing the Formative Observation and Intervention form, this study helps the observer to be able to have a discussion with interns about the importance of planning. As professionals, we often try to stress this to pre-service teachers, but without much success. Now we have a number that we can place on what is really important and to what degree planning is important. That number is 41% of their success. This information can help to give concrete evidence to students as well as teachers how important their planning can be.

Knowing what areas make a real difference can also help with planning on the part of the university. It seems crucial to spend time training our pre-service teachers in the skill of planning. Therefore, it is important to spend the time in our courses with specific training on the importance and the methodology in specifically how to plan for teaching.

The values of teacher reflection and of student higher-order thinking are well established in the literature. When teachers reflect, they are able to “re-experience” a lesson many times over and to learn from both their successes and failures. Students absorb, rearrange content, and store it in long-term memory in ways that are personal and idiosyncratic to each of them. Reflection and higher-order thinking should continue to be emphasized, regardless of the grade level of the teachers and students involved.

Fairness and safe-school environment have arisen as significant factors especially in the past twenty years. Incidents such as those in Jonesboro, Arkansas, Columbine, Colorado, and Virginia Tech have given a heightened awareness of the need to feel secure. Without these feelings of security, higher-order thinking and reflection are not likely to occur (Maslow, in Ormrod, 2004, pp. 432-433). In the past generation, our society has become more aware of bullying and the long-term, negative effects of bullying. Students need to feel safe not only from the forces outside of the classroom, but also from those that are within.

The factor of professionalism, responsibility, and efficacy lies not only in the interactions with other teachers and parents, but goes much deeper. It involves the teacher caring about their profession. It involves the teacher taking on the responsibility for their students learning. Interestingly, without good daily planning, it is nearly impossible for any of this to happen. In conclusion, it all comes back to planning. Without substantial effort and skill in this area, the intern or teacher cannot effectively establish a classroom of learning that is fair, safe, elicits higher order thinking, or enables students to grow in a productive manner. We, as teacher educators, must be prepared to model and teach these skills to our pre-service teachers and to our interns in order to enhance their opportunities to succeed and become effective teachers.

RECOMMENDATIONS

A recommendation for future research would be to further explore which kinds of planning seem to enhance teacher effectiveness the most. It is likely that all forms of planning are not equally productive.

REFERENCES


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