Instructor Transformational Leadership and Student Outcomes

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This study addresses the research question of how instructor transformational leadership behaviors and transactional leadership behaviors affect student outcomes of cognitive learning, affective learning, student perceptions of instructor credibility, and communication satisfaction in distance education. An overview of the theoretical underpinnings of the study is provided, as well as the tested hypotheses. A summary of the methodology, including sampling procedures, instrumentation, and data collection processes is presented, along with the procedures used for data analysis. Multiple linear regression was used to examine the relationships among the specified variables. Results support all four hypotheses, indicating that instructor transformational leadership behaviors are a more significant predictor of cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction than instructor transactional leadership behaviors. The implications of the findings as well as the limitations of this research and suggestions for future research are discussed.

The purpose of this study is to examine the relationship between student perceptions of instructor transformational and transactional leadership behaviors and student outcomes of cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction. This research stems from a lack of literature pertaining to the relationship between the specified variables in online courses. Independent variables are identified as transformational leadership behaviors and transactional leadership behaviors. Dependent variables are student cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction.

This study is based on transformational leadership theory, transactional leadership theory, and social learning theory to understand how instructor leadership behaviors affect student cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction. This research effort suggests that the concepts of transformational and transactional leadership, drawn from leadership research, can help fill the research gap and strengthen understanding of instructor leadership and student outcomes in online courses.

Review of Relevant Literature

Since Burns first introduced the concept of transformational leadership in 1978, a great deal of research has been devoted to exploring the behaviors of leadership styles (Avolio, Bass, & Jung, 1999; Bass & Avolio, 1994; Bass, 1985). Current studies typically examine the effects of transformational leadership on outcome variables in an organizational setting (Bolkan & Goodboy, 2009). Literature examining the phenomenon of instructor transformational leadership and student outcomes, specifically in online courses is limited; however, studies contributing to the development of the hypotheses for this study are examined with respect to an overview of transformational and transactional leadership, and of transformational leadership in education.

An Overview of Transformational Leadership

Originally developed by Burns (1978), transformational leadership occurs when one or more persons engage with others in such a way that leaders and followers raise one another to a higher level of motivation, performance, and morality (p. 20). Transformational leaders have been described in prior literature as highly interactive, passionate, empowering, visionary, and creative (Hackman & Johnson, 2004). Bass (1985) further expanded Burn's theory by conceptualizing transformational leadership behaviors into four categories: idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation.

Idealized influence. Bass (1999) described idealized influence as the transformational leader's ability to clearly articulate a vision to followers and the ability to motivate followers to join the vision (p. 19). As a result, followers place a high degree of trust in the leader (Bass, 1985). Yukl (2006) stated that idealized influence behaviors arouse strong follower emotions and identification with the leader. Banjeri and Krishnan (2000) found that followers usually describe this aspect of transformational leadership in terms of charisma. Banjeri and Krishnan went on to note that followers describe their charismatic leaders as making followers enthusiastic about tasks, commanding respect, and having a sense of mission that they transmit to followers (p. 407).

Intellectual stimulation. Avolio et al. (1999) described intellectual stimulation as getting followers to question the tried and true methods of solving problems by encouraging them to improve upon those methods (p. 444). Intellectual stimulation encourages followers to challenge leader decisions and group processes, thus encouraging innovative thinking (Bass & Steidlmeier, 1999). Brown and Posner (2001) advocate intellectual stimulation as a component of organizational learning and change by appealing to follower needs for achievement and growth in ways that the follower finds attractive. Brown and Posner (2001) found that the intellectual stimulation

component of transformational leadership plays a healthy and beneficial role in organizational learning because leaders place value in learning for both themselves and their followers.

Individualized consideration. Avolio et al. (1999) found that through the process of transformational leadership, the leader takes on the role of mentor by assigning responsibilities to followers as opportunities for growth and development through a process of self-actualization. Corrigan and Garman (1999) found that individualized consideration positively affects and facilitates team-building efforts. Yukl (2006) described individualized consideration behaviors as support, encouragement, and coaching to followers. The relationship used for mentoring and coaching is based on followers' individual development needs with the outcome being the evolvement of followers into leaders (Bass & Steidlmeir, 1999; Bass, 2000). Barnett, McCormick, and Conners (2001) described individualized consideration as occurring when leaders develop interpersonal relationships with followers. It is these interactions that allow the leader to personalize leadership and establish goals for each individual follower (Barnett et al.).

Inspirational motivation. Bass (1999) described inspirational motivation as providing followers with challenges and meaning for engaging in shared goals. Bass and Steidlmeier (1999) took it further by identifying inspirational motivation as the leader's ability to communicate his or her vision in a way that inspires followers to take action in an effort to fulfill the vision. Inspirational motivation enables leaders to remain focused on the vision of the group despite any obstacles that may arise (Kent, Crotts, & Azziz, 2001). Yukl (2006) described inspirational motivation behaviors as communicating an appealing vision, using symbols to focus subordinate effort, and modeling appropriate behaviors. Some researchers have related inspirational motivation to concepts of ethics, claiming that when leaders show concern for organizational vision and follower motivation, they are more inclined to make ethical decisions (Banjeri & Krishnan, 2000; Kent et al.).

An Overview of Transactional Leadership

The other conceptualization of leadership often cited in management literature is transactional leadership (Bolkan & Goodboy, 2009). Transactional leadership is traditionally described as an instrumental approach to organizational leadership that is associated with task orientation (Conger, 1999). Jung and Avolio (2000) described transactional leadership as occurring when the leader and his or her followers agree on what the followers need to do to get rewards, with little effort to change follower personal values or to develop a sense of follower trust and commitment to the leader (p. 951). According to Hackman and Johnson (2004), transactional leaders rely heavily on rewards to motivate followers and prevent poor performance using negative feedback

and criticism. Managers may even attempt to motivate subordinates by withholding extrinsic rewards (Conger).

Barbuto (2005) described three behaviors that make up the transactional leadership typology: contingent reward, management by exception-active, and management by exception-passive. The contingent reward system serves as positive reinforcement of the desired behaviors in the workplace, and is based on the leader's efforts to satisfy follower needs in exchange for desired performance outcomes (Bass, 1985; Barbuto; Jung & Avolio, 2000). This system of reward can yield effective results, but does not place emphasis on follower personal development or the facilitation of trust and identification between the leader and the follower (Jung & Avolio). Bass described management by exception as taking action only when problems or failures occur. Active management by exception occurs when the leader attempts to preserve the status quo and does not consider trying to make improvements as long as things are going according to plan (Bass). Barbuto expanded upon this explanation, stating that active management by exception leadership is when the leader becomes involved in situations to enforce prearranged punishments associated with a given problem or failure, as necessary. This type of feedback is often negative and involves reprimands (Bass & Steidlmeier, 1999). In contrast, passive management by exception generally occurs when leaders do not get involved until it is absolutely necessary, and then tend to refuse to develop a plan of action when punishment is in order or problems occur (Barbuto; Bass).

Transformational Leadership in Virtual Environments

The applicability of transformational leader behaviors in an online classroom has yet to be examined. However, outcomes of transformational leadership in virtual organizational settings have been the focus of many studies. Virtual environments, both classroom and organizational, provide unique opportunities for leaders in terms of achieving goals, facilitating collaboration, and establishing strategic relationships, in addition to overcoming traditional barriers such as cost, location, time, and space (Eom, 2009). Eom found that transformational leader behaviors in virtual organizations led to employees' increased trust in the leader and higher overall performance. Purvanova and Bono (2009) examined employee outcomes in terms of performance and satisfaction in virtual organizations compared to face-to-face organizations with leaders considered to display transformational behaviors of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Results indicated that the more transformational leadership behaviors that are displayed by leaders, the more satisfied employees are. Additionally, Ruggieri (2009) examined the construct of transformational and transactional leadership in relation to follower outcomes in interactive virtual contexts. They discovered that transformational leaders are described by followers as oriented more toward the future and development of followers than are

transactional leaders (Ruggieri). These findings are consistent with Hoyt and Blascovich's (2003) study, which observed higher levels of follower satisfaction with leaders displaying transformational leadership behaviors than those displaying transactional leadership behaviors in virtual interactive contexts. When led by a transformational leader, followers reported higher levels of satisfaction, motivation, empowerment, and cohesion (Hoyt & Blascovich; Ruggieri).

Instructors as Leaders

Since leadership is not routinely coupled with teaching, the exploration of the proposed relationship requires justification (Kuchinke, 1999). While instruction and organizational leadership are by no means identical, there are enough parallels and overlaps to warrant further investigation (Kuchinke). A number of scholars have noted that leadership theories are applicable to instruction (Baba & Ace, 1989; Cheng, 1994; Harvey, Royal, & Stout, 2003; Kuchinke; Pounder, 2003; Walumbwa, Wu, & Ojode, 2004). Both instruction and organizational leadership consist of complex interactions comprised of communication, control, and coordination of activities (Barnard, 1938; Kuchinke). Additionally, both leadership situations and classroom instruction are characterized by power differentials related to reward, coercion, expertise, and referent bases of power (Raven & French, 1958). Kramer and Pier (1999) claim that effective teaching requires a combination of patience, skill, expertise in a particular discipline, and expertise in the social dynamics of classroom interactions in order to create better student outcomes. Specifically, university instructors must be able to effectively manage the classroom and facilitate maximum student involvement if they desire to enhance student learning (Catt, Miller, & Schallenkamp, 2007). House and Podsakoff (1994) help bridge domains of instructor leadership and organizational leadership by saying that instructors influence students, shape their future development, focus their attention on specific tasks, and induct them into the field or profession in a manner similar to the way organizational leaders influence, initiate, focus attention, set direction, and coordinate activities toward a goal. An additional rationale for exploring the commonalities between the domain of instructor leadership and organizational leadership is the approach of the learning organization. Here, leaders evoke affective as well as cognitive responses by acting as role models, building commitment and pride, challenging existing ways of thinking, and expressing concern for the developmental needs of the individual (Kuchinke, 1999). In an empirical study by Darling, Darling, and Elliot (1999), leaders of learning organizations were found to serve as mentors and coaches, fostering work performance as well as learning in ways similar to educational instruction.

Studies have found that instructors who display idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation can positively influence student behaviors, perceptions, and learning outcomes by providing support

and encouragement and building trust (Bolkan & Goodboy, 2009). Lee (2001) pointed out eight conditions for a distance educator's success, many of which are reflective of transformational leadership: (a) recognition of follower need, (b) articulation of purpose and guide, (c) identification of structure, (d) innovation, (e) participation and support, and (f) the use of adequate resources. Marcus (2004) examined distance education and transformational leadership, and found that students perceive instructors as demonstrating transformational leadership when the instructor creates conditions for innovative change, enables students to share a vision and move toward its direction, and helps contribute to the creation of new ideas.

Behaviors of a Transformational Teacher

Studies by Ingram (1997) and Yuen and Cheng (2000) have found certain leadership behaviors to be important to successful transformational leadership for educators. Yuen and Cheng classified these behaviors as inspiring, social supporting, and enabling. Inspiring refers to building a vision and providing motivational tasks; social supporting refers to fostering a learning culture, facilitating support networks, and handling conflicts; and enabling refers to enhancing knowledge and skills and offering intellectual stimulation (Yuen & Cheng). Each of these behaviors have been empirically tested and found to increase employee motivation and satisfaction in an organizational setting, and to improve student cognitive, affective, and motivational outcomes in classroom settings (Bolkan & Goodboy, 2009; Gooty, Gavin, Johnson, Frazier, & Snow, 2009; Hardy et al., 2010, Hoehl, 2008; Ingram, 1997). Mulford and Silins (2003) posited that an instructor who is transformational focuses on individual students by providing moral support, showing appreciation for the work of individual students, and considering their opinion. Furthermore, a transformational instructor sets a respectful tone for interaction with students, demonstrates a willingness to change in light of new understandings, and establishes a classroom structure that promotes participative decision-making and delegation (Mulford & Silins). Mulford and Silins went on to state that transformational instructors work toward communicating school priorities and goals to students in an attempt to provide a sense of overall purpose, as well as have high expectations for students to be innovative and encourage students to reflect on what they are trying to achieve.

Instructor Transformational Leadership and Student Outcomes

The positive effects of transformational leadership in instruction are demonstrated at the student level through overall higher levels of student engagement due to instructor behaviors of inspirational motivation and intellectual stimulation (Kuchinke, 1999; Leithwood & Jantzi, 2000). Harvey et al. (2003) examined the effect of instructor transformational leadership on student outcomes and found that instructor transformational behaviors such as charisma and intellectual stimulation are the

primary predictors of student respect for an instructor, satisfaction with an instructor, and trust in an instructor. In addition, individualized consideration and intellectual stimulation are the primary predictors of student involvement (Harvey et al.). Griffith (2004) and Politis (2004) both conducted studies measuring instructor transformational leadership behaviors and student outcomes. Results indicated that student achievement, affective learning, motivation, knowledge management, and student evaluations of teacher credibility are positively correlated with transformational instructors who demonstrate encouragement, motivation, coaching, intellectual stimulation, and charisma (Bolkan & Goodboy, 2009; Griffith; Kuchinke; Politis). Additionally, student willingness to exert extra effort, their perceptions of instructor effectiveness, and their overall satisfaction with the instructor are all positively associated with instructor transformational leadership behaviors such as individualized consideration and intellectual stimulation (Walumbwa et al., 2004). Pounder (2008) also examined instructor leadership in a university setting and found positive correlations between instructor transformational leadership behaviors, specifically charisma, intellectual stimulation, and inspirational motivation, and extra effort from students, increased student satisfaction, and increased student perceptions of instructor effectiveness. Moreover, Hoehl (2008) found that instructor idealized influence and individualized consideration are significant predictors of student outcomes of affective learning, student evaluations of teacher credibility, and student motivation. Similarly, the results of Bolkan and Goodboy's study indicated a strong correlation between instructor charisma, intellectual stimulation, and inspirational motivation and student cognitive learning, affective learning, state motivation, and communication satisfaction.

The Benefits of Transformational Leadership in Education

Many studies have set forth the recommendation that educators adopt a transformational style of teaching due to its beneficial implications for instruction and student learning outcomes (Bolkan & Goodboy, 2009; Goodboy & Myers, 2008; Griffith, 2004; Harvey et al., 2003; Hoehl, 2008; Goodboy, Martin, & Bolkan, 2009; Politis, 2004; Pounder, 2008; Walumbwa et al., 2004). The benefits of transformational instruction are not limited to student outcomes. Transformational instruction is positively correlated with lower faculty turnover rates, higher levels of faculty job satisfaction, increased faculty commitment to university reform and change, and faculty empowerment (Griffith, 2004; Jason, 2000; Leithwood & Jantzi, 2000). Adams and Hambright (2005) stated that today's universities need to be learning organizations that are led by transformational leaders. Based on current literature, it is apparent that the practice of transformational leadership in educational contexts yields increased affective learning, student motivation, and student perceptions of instructor credibility (Hoehl).

Definition of Terms

Transformational leadership. Transformational leadership is defined as leadership behaviors that inspire followers, resulting in both leader and follower raising each other up to higher levels of morality, motivation, and performance based on four categories of leader behavior, including idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation (Bass, 1985, 1999).

Idealized influence. The idealized influence component of transformational leadership, also referred to as charisma, encompasses the leader behaviors of vision communication, motivational language use, and serving as an example of what it means to carry out the proposed vision (Bass, 1999).

Inspirational motivation. Inspirational motivation occurs when transformational leaders also engage in behaviors that articulate expectations and reveal the leader's commitment to the goals of the organization. These behaviors enhance the meaningfulness of followers' work experiences and offer them challenging goals and opportunities (Bass, 1999).

Intellectual stimulation. Intellectual stimulation is defined as the transformational leader's desire to challenge follower thinking about problem-solving strategies and promote creativity and innovation (Bass, 1999).

Individualized consideration. Individualized consideration refers to the leader's actions that guide followers toward reaching their respective levels of potential. In this role, the leader acts as a mentor and coach, offering followers work opportunities that challenge their growth and development (Bass, 1999).

Transactional leadership. Transactional leadership is defined as a transaction or exchange among leaders, colleagues, and followers based on the leader discussing with others what is required and specifying the conditions and rewards that will be received if those requirements are fulfilled (Bass, 1985).

Student outcomes. For the purpose of this study, student outcomes are considered cognitive learning, affective learning, student perceptions of instructor credibility, and communication satisfaction.

Cognitive learning. For the purpose of this research, cognitive learning is defined as comprehending information, organizing ideas, analyzing and synthesizing data, applying knowledge, choosing among alternatives in problem-solving, and evaluating ideas or actions (Bloom, Hastings, & Madaus, 1971).

Affective learning. For the purpose of this study, affective learning is defined as student feelings, emotions, and degrees of acceptance toward the subject matter (Krathwohl, Bloom, & Masia, 1964).

Instructor credibility. For the purpose of this research, instructor credibility is defined as student perceptions of instructor competence, trustworthiness, and goodwill (Bolkan & Goodboy, 2009).

Communication satisfaction. Student communication satisfaction, for the intent of this study, is defined as an affective response to the accomplishment of communication goals and expectations (Hecht, 1978).

Statement of the Problem

Results from research examining transformational leadership in management make it clear that transformational leadership has its advantages in organizations (Banjeri & Krishnan, 2000; Barnett et al., 2001; Conger, 1999; Goodwin, Wofford, & Whittington, 2001; Hackman & Johnson, 2004; Ravlin & Meglino, 1989). More recently, a handful of scholars have begun to investigate the relationship between instructor transformational leadership behaviors and student learning outcomes (Blokan & Goodboy, 2009; Hoehl, 2008; Leithwood & Jantzi, 2006; Pounder, 2003). Overall, research studying transformational leadership in school and university settings is minimal, and an examination of these constructs within online courses is completely missing. This research provides a solution to this oversight by examining the link between instructor transformational leadership behaviors and student outcomes in terms of cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction within distance education.

Theoretical Underpinnings

This study is based on transformational leadership theory, transactional leadership theory, and social learning theory to understand how instructor leadership behaviors affect student cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction. The theoretical rationale supporting the proposed research design is based on transformational leadership theory research that has tested the relationship between transformational leadership behaviors (intellectual stimulation, individualized consideration, idealized influence, and inspirational motivation) and follower outcomes of increased performance and satisfaction, specifically in virtual environments (Eom, 2009; Hoyt & Blascovich, 2003; Purvanova & Bono, 2009; Ruggieri, 2009). These variables have been empirically tested in educational settings and linked to positive student outcomes (Bolkan & Goodboy, 2009; Goodboy & Myers, 2008; Hoehl, 2008; Pounder, 2008; Walumbwa et al., 2004). Kolb (1984) posited

that learning is the process whereby knowledge results from the combination of grasping and transforming experience. Bandura's (1977) social learning theory states that people can learn by observing the behaviors of others. He posited that most human behavior is learned observationally through modeling. Through observing others, one forms an idea of how new behaviors are performed, and on later occasions this information serves as a guide for action (Bandura). Ormrod (1999) described social learning theory as a bridge between behaviorist learning theories and cognitive learning theories. Social learning theory encompasses motivation, emotion, cognitions, social re-enforcers, and self re-enforcers (Ormrod). Social learning theory ties to transformational leadership behaviors in the form of motivation (idealized influence), observation (individualized consideration: mentoring and coaching), and modeling (inspirational motivation: modeling appropriate behaviors). Students who perceive instructors as demonstrating encouragement, support, appreciation, charisma, and intellectual stimulation may demonstrate extra effort, participation, and trust in the instructor (Bolkan & Goodboy, 2009).

Stemming from social learning theory, which indicates that individuals learn through observations and modeling, consequently leading to learner motivation, cognition, and affect toward the subject matter, the stated student perceptions in turn lead to increases in student retention and synthesis of material (cognitive learning). In addition to increases in cognitive learning, the stated perceptions lead to increases in student feelings, emotions, and degrees of acceptance toward the subject matter (affective learning); increased perceptions of instructor trustworthiness, competence, and goodwill (instructor credibility); and increases in student affective responses to the accomplishment of communication goals and expectations (communication satisfaction) (Bloom et al., 1971; Bolkan & Goodboy, 2009; Hecht, 1978; Krathwohl et al., 1964; McCroskey & Young, 1981). Additionally, perceived instructor credibility is achieved through effective instruction based on student perceptions of positive interactions with the instructor, which in turn leads to increased student intent to take future courses from credible instructors and increased overall ratings of the instructor (Hoehl, 2008; Martin, Chesebro, & Mottet, 1997; McCroskey, Richmond, Plax, & Kearney, 1985; Schrodt & Witt, 2006). These variables are selected because they have each been associated with effective teaching behavior and increased effort and satisfaction on the part of the student (Goodboy & Myers, 2008; Pounder, 2008; Walumbwa et al., 2004). Given that instructors who display individualized consideration, intellectual stimulation, idealized influence, and inspirational motivation are perceived as more effective (Walumbwa et al.) and that students are more satisfied with instructors displaying these behaviors (Pounder, 2008), students should report increased learning outcomes compared to students viewing instructors as displaying transactional behaviors.

Research Hypotheses

The first hypothesis is derived from studies indicating that students report higher cognitive outcomes when taking courses from instructors who employ transformational leadership behaviors such as charisma, intellectual stimulation, inspirational motivation, and individualized consideration, compared to those who employ transactional behaviors (Bolkan & Goodboy, 2009; Goodboy & Myers, 2008; Pounder, 2008; Walumbwa et al., 2004).

H_1: Instructor transformational leadership behaviors will have a stronger relationship with student cognitive learning than transactional leadership behaviors in online courses.

The second hypothesis is derived from the findings of Bolkan and Goodboy (2009), Griffith (2004), Hoehl, (2008), and Politis (2004), which all indicate a positive correlation between instructor transformational leadership behaviors and student affective learning outcomes of emotion and attitude toward the subject matter.

H_2: Instructor transformational leadership behaviors will have a stronger relationship with student affective learning than transactional leadership behaviors in online courses.

The third hypothesis stems from literature contending that students have increased perceptions of instructor credibility toward instructors displaying transformational leadership behaviors compared to instructors displaying transactional leadership behaviors (Griffith, 2004; Harvey et al., 2003; Hoehl, 2008; McCroskey & Teven, 1999; Pounder, 2008; Walumbwa et al., 2004).

H_3: Instructor transformational leadership behaviors will have a stronger relationship with student perceptions of instructor credibility than transactional leadership behaviors in online courses.

The fourth hypothesis is derived from previous research that indicates a positive correlation between instructor transformational leadership behaviors and student communication satisfaction (Bolkan & Goodboy, 2009; Goodboy et al., 2009; Harvey et al., 2003; Pounder, 2008; Walumbwa et al., 2004).

H_4: Instructor transformational leadership behaviors will have a stronger relationship with student communication satisfaction than transactional leadership behaviors in online courses.

Method

Sample and Procedure

Due to time constraints in completing this research design, convenience sampling was used to select participants. Convenience sampling allows the researcher to draw a sample from the larger population, which is readily available and convenient (Bartlett, Kotrlik, & Higgins, 2001). Participants were graduate students enrolled in online Leadership programs at both Gonzaga University in Spokane, Washington and Regent University in Virginia Beach, Virginia. Program directors for each Master's program were sent a letter explaining the study and requesting permission to contact enrolled students for participation. Once permission was granted, the questionnaire along with an e-mail explaining the research and a statement of informed consent were electronically delivered to potential participants. All instruments were combined in Survey Monkey to create one. In order to maintain participant confidentiality, the questionnaires were automatically and electronically returned via Survey Monkey services. The questionnaire was open for three weeks; from May 28, 2010 until June 21, 2010. The questionnaire was sent to 167 students; 112 students completed the survey, yielding a response rate of approximately 67 percent.

Bass and Avolio's (1995) Multi-factor Leadership Questionnaire was used to measure student perceptions of transformational and transactional leadership; Frymier and Houser's (1999) Revised Cognitive Learning Indicators Scale measured cognitive learning; McCroskey's (1994) Affective Learning Scale measured affective learning; McCroskey and Young's (1981) Teacher Credibility Scale measured student perceptions of instructor credibility; and Goodboy et al.'s (2009) Student Communication Satisfaction Scale measured student overall satisfaction with instructor communication. Strahan and Gerbasi's (2006) Social Desirability Scale was also implemented to control for social desirability bias. In addition to the five existing instruments, participants were asked for basic information such as: (a) the number of semesters they had been enrolled in their graduate program, (b) the number of courses that they had previously taken from the specified instructor, and (c) their overall grade, up to that point, in the particular class.

Multi-Factor Leadership Questionnaire. Each participating student was given the transformational leadership and transactional leadership portion of Bass and Avolio's (1997) Multi-factor Leadership Questionnaire (MLQ) to determine student perceptions of instructor transformational and transactional leadership. Originally developed by Bass (1985), the MLQ is the most widely used measure of transformational leadership behaviors (Carless, 1998). The MLQ measures a full range of leadership behaviors; however, for the purpose of this study, transformational and transactional characteristics were the only leadership behaviors measured. Transformational

assessment scales measure idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized consideration (Bass). In addition, the MLQ allows the researcher to assess transformational leadership outcomes such as follower effort, effectiveness, and satisfaction (Bass & Avolio, 1995). Transactional assessment scales measure contingent reward and management-by-exception (Bass). Individual reliability analyses were conducted for the transformational and transactional components of the MLQ, with the transactional measurement yielding a Cronbach's alpha of .67 and the transformational measurement yielding a Cronbach's alpha of .97. The MLQ uses a 5-point Likert scale, with 0 representing "not at all" and 4 representing "frequently if not always."

Revised Cognitive Learning Indicators Scale. Each of the 112 participating students was given the Revised Cognitive Learning Indicators Scale (RCLIS). Frymier and Houser's (1999) RCLIS is designed to measure student cognitive learning. It consists of seven items that ask participants to report on behaviors or activities associated with learning the course content. The RCLIS solicits responses using a 5-point Likert scale ranging from "never" (0) to "very often" (4) (Bolkan & Goodboy, 2009). Reliability analysis was conducted, resulting in a Cronbach's alpha of .82, which is consistent with existing reliability scores in other samples of between .84 and .91 (Bolkan & Goodboy; Frymier & Houser).

Affective Learning Scale. To measure affective learning, McCroskey's (1994) Affective Learning Scale (ALS) was completed by each participating student. The ALS is the most frequently used assessment for measuring student affect in terms of willingness to learn, use, and generalize information and skills learned in the classroom (Rubin et al., 2004). The ALS consists of two sets of measures, each with four bipolar adjective scales. Reliability analysis was conducted, resulting in a Cronbach's alpha of .90, which is consistent with existing reliabilities in other samples of .85 to .90 (Rubin et al.).

Teacher Credibility Scale. All participants completed McCroskey and Young's (1981) Teacher Credibility Scale, which serves as an assessment of student perceptions of instructors. McCroskey and Young use a two-dimensional approach to credibility that includes competence and character. The Teacher Credibility Scale is a 12-item semantic differential scale, with each item listing bipolar adjectives that can be used to describe a given instructor, on a seven-point scale (Hoehl, 2008). Student responses are recoded so that higher scores serve as indicators of teacher credibility (Rubin, Palmgreen, & Sypher, 2004). Reliability analysis was conducted resulting in a Cronbach's alpha of .95, which is consistent with existing reliabilities of The Teacher Credibility Scale in other samples, of between .84 and .93 (Hoehl, 2008; McCroskey & Young, 1981; Rubin et al., 2004).

The Student Communication Satisfaction Scale. Participating students completed Goodboy, Martin, and Bolkan's (2009) Student Communication Satisfaction Scale (SCSS), which serves as a global assessment of student satisfaction resulting from communication encounters with an instructor. More specifically, the SCSS assesses student attributional confidence in the instructor, affect for the course and instructor, and relational, functional, participatory, and sycophancy motives affecting student communication satisfaction. The SCSS is a 10-item scale that uses a 7-point Likert response format, ranging from "strongly disagree" (1) to "strongly agree" (7) (Goodboy et al.). Reliability analysis was conducted, resulting in a Cronbach's alpha of .82, which is slightly lower than existing reliabilities in other samples of around .97 (Bolkan & Goodboy, 2009; Goodboy et al.).

Social Desirability Scale. Participating students also completed Strahan and Gerbasi's (2006) Social Desirability Scale. The Social Desirability Scale is a 20-item True/False measurement which serves as an assessment of the tendency of respondents to reply in a manner that might be viewed favorably by others (Strahan & Gerbasi). The Social Desirability Scale is implemented in this study as a method of minimizing social desirability bias. Reliability of the Social Desirability Scale resulted in Cronbach's alpha of .82, which is consistent with existing reliabilities in other samples of around .85 (Strahan & Gerbasi).

Analysis

Inferential statistics, specifically multiple linear regression analyses, were used to determine the level of support for each hypothesis. Prior to conducting the regression analyses, correlations between each variable were examined (see Table 1). The predictor variable, number of courses taken previously from the instructor, was found to be positively correlated with transformational leadership behaviors (p < .05). Variables correlated at p < .001 included cognitive learning with affective learning, instructor credibility, communication satisfaction, transformational leadership and transactional leadership. In addition, affective learning was positively correlated with instructor credibility, communication satisfaction, and transformational leadership (p < .001). Instructor credibility was positively correlated with communication satisfaction and transformational leadership (p < .001). Communication satisfaction was positively correlated with transformational leadership and transactional leadership, and transformational leadership is positively correlated with transactional leadership (p < .001).

Table 1
Means, Standard Deviations, and Correlations[a]

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
SIP[b]	4.08	2.97										
NCI[c]	1.45	1.66	.14									
Grade	1.11	.31	-.05	.08								
Social Desire.	1.39	.10	.06	.02	.02							
Cognitive learning	4.15	.57	.05	-.13	.00	.17						
Affective learning	5.72	1.22	-.06	.07	-.01	.02	.51***					
Instructor Cred.[d]	6.17	.96	.10	.13	-.07	-.05	.40***	.64***				
Comm. Sat.[e]	5.07	.99	.11	.14	-.05	.06	.52***	.57***	.79***			
Transform. Lead.[f]	3.70	1.03	.02	.21*	-.03	.07	.52***	.56***	.77***	.82***		
Transact. Lead.[g]	2.60	.56	-.07	.10	.14	.07	.34***	.09	.13	.34***	.42***	

[a] *n=112*

[b] *SIP= total number of semesters enrolled in the graduate program*

[c] *NCI= total number of courses taken from the specified instructor*

[d] *Instructor Cred.= student perceptions of instructor credibility*

[e] *Comm. Sat.= student communication satisfaction*

[f] *Transform. Lead.= Transformational Leadership*

[g] *Transact. Lead.= Transactional Leadership*
*Correlation is significant at the .05 level (2-tailed).
**Correlation is significant at the .01 level (2-tailed).
***Correlation is significant at the .001 level (2-tailed).*

The first hypothesis suggests that instructor transformational leadership behaviors will have a stronger relationship with student cognitive learning than transactional leadership behaviors in online courses. During the first regression analysis, cognitive learning was entered as the dependent variable within the SPSS linear regression function. All control variables (grade, number of courses taken previously from the instructor, number of semesters enrolled in the graduate program, and social desirability) were entered into block 1 of 1, and transformational leadership and transactional leadership were entered into block 2 of 2 (see Table 2 for detailed beta values).

Table 2
Multiple Linear Regression for H_1[a]

Variable	Model 1 β	Model 2 β
SIP[b]	.06	.08
NCI[c]	-.14	-.26**
Grade	.01	.01
Social Desirability	.17	.13
Transformational Leadership		.50***
Transactional Leadership		.15
R^2	.05	.37
ΔR^2		.32
F	1.41	10.20***
F for change		26.44***

[a] n=112; Dependent variable: Cognitive Learning

[b] SIP=total number of semesters enrolled in the graduate program

[c] NCI= total number of courses taken from the specified instructor

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

The regression model was significant (F(6,105) = 10.20, p < .001). The model accounted for 37% of variance in cognitive learning. The R2 change was also significant (ΔR2 = .32, F(2,105) = 26.4, p < .001). The standardized coefficient for transactional leadership was not significant (β= .15, p = .08). The standardized coefficient for transformational leadership was significant (β = .50, p < .001); therefore H1 is supported.

The second hypothesis states that instructor transformational leadership behaviors will have a stronger relationship with student affective learning than transactional leadership behaviors in online courses. During this regression analysis, affective learning was entered as the dependent variable within the SPSS linear regression function. All control variables were entered into block 1 of 1, and transformational leadership and transactional leadership were entered into block 2 of 2 (see Table 3 for detailed beta values).

The regression model is significant ($F(6,105) = 9.35$, $p < .001$). The model accounted for 35% of variance in affective learning. The R^2 change was also significant ($\Delta R2 = .34$, $F(2,105) = 27.14$, $p < .001$). The standardized coefficient for transactional leadership was not significant ($\beta = -.18$, $p = .07$). The standardized coefficient for transformational leadership was significant ($\beta = .65$, $p < .001$); therefore, H[2] is supported.

Table 3
Multiple Linear Regression for H$_2$^{a}

Variable	Model 1 β	Model 2 β
SIP^b	-.07	-.08
NCI^c	.09	-.03
Grade	-.02	.03
Social Desirability	.09	-.01
Transformational Leadership		.65***
Transactional Leadership		-.19
R²	.01	.35
Δ*R²*		.38
F	.30	9.35***
F for change		27.14***

^{a} *n=112; Dependent variable: Affective Learning*

^{b} *SIP=total number of semesters enrolled in the graduate program*

^{c} *NCI= total number of courses taken from the specified instructor*

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

Table 4
Multiple Linear Regression for H$_3$^{a}

Variable	Model 1 β	Model 2 β
SIP^b	.08	.08
NCI^c	.13	-.03
Grade	-.07	-.01
Social Desirability	-.06	-.09
Transformational Leadership		.87***
Transactional Leadership		-.22**
R²	.03	.65
Δ*R²*		.62
F	.91	32.48***
F for change		92.52***

^{a} *n=112; Dependent variable: Instructor Credibility*

The third hypothesis states that instructor transformational leadership behaviors will have a stronger relationship with student perceptions of instructor credibility than will transactional leadership behaviors in online courses. During this regression analysis, instructor credibility was entered as the dependent variable within the SPSS linear regression function. All control variables were entered into block 1 of 1, and transformational leadership and transactional leadership were entered into block 2 of 2 (see Table 4 for detailed beta values).

The regression model is significant $F(6,105) = 32.48$, $p < .001$). The model accounted for 65% of variance in instructor credibility. The R^2 change was also significant ($\Delta R^2 = .62$, $F(2,105) = 92.52$, $p < .001$). The standardized coefficient for transformational leadership was significant ($\beta = .87$, $p < .001$), as was the standardized coefficient for transactional leadership ($\beta = -.22$, $p < .01$). Though both transformational and transactional leadership are significant predictors of perceptions of instructor credibility, H_3 is supported since transformational leadership is a greater predictor of perceptions of instructor credibility.

The fourth hypothesis states that instructor transformational leadership behaviors will have a stronger relationship with student communication satisfaction than transactional leadership behaviors in online courses. During this regression analysis, communication satisfaction was entered as the dependent variable within the SPSS linear regression function. All control variables were entered into block 1 of 1, and transformational leadership and transactional leadership were entered into block 2 of 2 (see Table 5 for detailed beta values).

Table 5
Multiple Linear Regression for H_4[a]

Variable	Model 1 β	Model 2 β
SIP[b]	.08	.10
NCI[c]	.14	-.04
Grade	-.06	-.02
Social Desirability	.06	.01
Transformational Leadership		.82***
Transactional Leadership		.01
R^2	.03	.69
ΔR^2		.65
F	.95	38.37***

F for change   109.34***

[a] *n=112; Dependent variable: Communication Satisfaction*

[b] *SIP=total number of semesters enrolled in the graduate program*

[c] *NCI= total number of courses taken from the specified instructor*

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

The regression model is significant ($F(6,105)$ = 38.37, p < .001). The model accounted for 69% of variance in communication satisfaction. The R^2 change was also significant (ΔR^2 = .65, $F(2,105)$ = 109.34, p < .001). The standardized coefficient for transactional leadership was not significant (β= .01, p = .86). The standardized coefficient for transformational leadership was significant (β = .82, p < .001); therefore, H_4 is supported.

Discussion

This study used regression analysis to determine the relationships of instructor transformational leadership and transactional leadership with student cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction. The primary research goal was to determine the nature of these relationships and which type of instructor behaviors serve as the most significant predictors of student educational outcomes. It should be noted that all regression analyses controlled for grade, the number of courses taken thus far in the program, the number of total courses taken from the specified instructor, and social desirability. This study posited that instructor transformational leadership behaviors would have a greater affect on each of the four student outcomes than transactional leadership behaviors.

The first regression analysis, which represents the hypothesized relationship between instructor transformational leadership behaviors and student cognitive learning, revealed that instructor transformational behaviors are a significant predictor of student cognitive learning in online courses; thus H_1 is supported (see Table 2). These findings are consistent with the literature addressing the relationship between the specified variables in traditional classrooms (Bolkan & Goodboy, 2009; Goodboy & Myers, 2008; Pounder, 2008; Walumbwa et al., 2004). These results also align with the intellectual stimulation component of transformational leadership behaviors of challenging problem solving skills and promoting innovation (Bass, 1999).

The next analysis addressed the hypothesized relationship between instructor transformational leadership behaviors and student affective learning. Findings indicate that instructor transformational behaviors are a significant predictor of student affective learning in online courses therefore; H_2 is supported (see Table 3). This is consistent with existing literature examining this relationship in traditional classrooms (Bolkan & Goodboy, 2009; Griffith, 2004; Hoehl, 2008; Politis, 2004). These findings encompass the individualized consideration component of transformational leadership in which

leaders develop interpersonal relationships with followers, creating a mentoring relationship where the leader is able to establish goals for each follower based in their needs (Barnett et al., 2001). Behaviors of personal regard for students and concern are well supported in the literature in terms of their ability to improve student affective learning (Hoehl). The findings of this study are also consistent with Banjeri and Krishnan (2000), who found that followers describe their charismatic leaders as those who make everyone enthusiastic about assignments, command respect, have a gift of seeing what is important, and transmitting a sense of mission to followers, which aligns with Krathwohl et al.'s (1964) definition of affective learning as positive feelings towards the subject matter, instructor, and coursework. Therefore, teachers who make students feel enthusiastic about coursework and assignments are more likely to have students who enjoy the course and have higher levels of affective learning (Hoehl).

The third analysis represented the hypothesized relationship between instructor transformational leadership behaviors and student perceptions of instructor credibility. Results reveal that instructor transformational behaviors are a significant predictor of student perceptions of instructor credibility in online courses ($p < .001$); however, transactional leadership also has a (lower) significant effect on perceptions of instructor credibility ($p < .01$) (see Table 3). Since it was proposed that students perceiving instructors as displaying more transformational leadership behaviors than transactional behaviors would have higher perceptions of instructor credibility, H_3 is supported. The positive relationship between instructor transformational leadership behaviors and student perceptions of instructor credibility is consistent with existing literature examining the constructs in traditional classrooms (Griffith, 2004; Harvey et al., 2003; Hoehl, 2008; McCroskey & Teven, 1999; Pounder, 2008; Walumbwa et al., 2004). In addition, these findings are aligned with the idealized influence and inspirational motivation components of transformational leadership. Specifically, Banjeri and Krishnan (2000) found that the extent to which instructors command respect, articulate expectations, and demonstrate commitment to shared goals is an indicator of the instructor's perceived credibility.

The fourth analysis, which represented the hypothesized relationship between instructor transformational leadership behaviors and student communication satisfaction, reveals that instructor transformational behaviors are a significant predictor of student communication satisfaction in online courses; therefore, H_4 is supported (see Table 4). These findings are consistent with literature examining the stated variables in traditional classroom settings (Bolkan & Goodboy, 2009; Goodboy et al., 2009; Harvey et al., 2003; Pounder, 2008; Walumbwa et al., 2004). Specifically, the idealized influence component of transformational leadership involves communicating a vision, using motivational language, and articulating the means to carry out the vision (Bass, 1999), which has been positively related to communication satisfaction from student to instructor (Bolkan & Goodboy).

Summary of the Study

The outcomes of transformational leadership and transactional leadership have been well researched in leadership literature and have received some attention in educational literature. However, these concepts have not been researched in online courses to determine the potential impact of these behaviors with respect to student outcomes (Hoehl, 2008). The analyses of this study revealed that instructor transformational leadership behaviors are greater predictors of student cognitive learning, affective learning, perceptions of teacher credibility, and communication satisfaction than transactional behaviors.

Implications

The results of this study have significant implications for the application of transformational leadership in online courses. Transformational behaviors that are associated with idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation can be implemented and evaluated within online courses, thus leading to increased student outcomes. Instructors have the opportunity to exhibit these behaviors in their course syllabi, assignment structure, online dialogues, assignment feedback, and e-mail communication with students. Educators can integrate the idealized influence, inspirational motivation, and intellectual stimulation components of transformational behaviors by using motivational language in the syllabus to describe course content, dialogue topics, and assignments. In addition, instructors can use these aspects of the course to clearly articulate a vision of the learning outcomes students can expect. Online curriculum developers should consider creating assignments and dialogue topics reflective of intellectual stimulation that allows students to express their creativity and to be innovative in problem solving. Beyond the course design and curriculum, instructors have the opportunity to display idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration in all of their interactions with students. Specifically, instructors are able to demonstrate individualized consideration by treating each student as an individual and assisting them in their personal growth and development so they are able to reach their full potential. This can be communicated through dialogue interactions, personal e-mails, and phone conversations with students. In summation, these strategies offer instructors the opportunity to improve the cognitive and affective learning outcomes of students in addition to increasing student communication satisfaction and student perceptions of instructor credibility.

Limitations

As with any research design, there are potential weaknesses to this study. Convenience sampling was used from two private, mid-sized universities in the United States. Creswell (2009) noted that the use of convenience sampling can limit the generalizability of a study's findings and can compromise the representativeness of the

sample to the population. Future research should consider broadening the scope of the sample to include a variety of universities of varying sizes and affiliations. In addition, varying geographic and cultural regions were not considered in the present study. Goodboy and Bolkan (2009) posited that students from different geographic or cultural regions might respond to transformational and transactional behaviors from instructors in a variety of ways. Pounder (2008) noted that insufficient work has been done to examine how transformational leadership can be replicated across cultural settings. Therefore, while it may be true that instructor transformational behaviors are valued in North America, the same may not be true in other cultures. An additional limitation of this design is the use of survey data collection. Kerlinger and Lee (2000) stated that typically, survey research does not penetrate as deeply below the surface of an issue as other research methodologies, and is also subject to sampling error. Furthermore, Hair et al. (2006) stated that multiple regression allows the researcher to ascertain relationships, but cannot guarantee the underlying causal mechanism. Lastly, there are potential extraneous variables, such as the structure of the online course and the course materials, which could potentially affect student perceptions of instructor behaviors and the resulting outcomes.

Recommendations for Future Research

Given the limitations of this design, there are several areas that should be explored by future researchers. To increase the generalizability of the findings, future research should focus on using a larger sample from a variety of institutions. Cross-cultural examinations of the constructs explored in this study would also benefit from further study. In addition, it would be beneficial for future research to examine the specific components of transformational leadership, idealized influence, intellectual stimulation, inspirational motivation, and individualized consideration in respect to specific student outcomes in online courses. This would allow educators to identify the extent to which specific transformational behaviors influence specific student outcomes. An examination of additional student outcomes such as motivation, grades, and overall satisfaction would aid in creating a more comprehensive picture of the effects of instructor transformational behaviors on overall student outcomes. Further research on how to promote instructor transformational leadership behaviors within online courses would be useful to higher education institutions. Additional qualitative studies would be beneficial in offering insights into the actual experiences of students and the impact of specific instructor behaviors on student attitudes and outcomes in online courses.

The outcome of this study is intended to provide a starting point for understanding the impact of instructor transformational behaviors on student outcomes in online courses. Based on the results, it is evident that transformational behaviors, more so than transactional behaviors, lead to increased student cognitive learning, affective learning, perceptions of instructor credibility, and communication satisfaction within online courses. It is hoped that instructors, educational leaders, and curriculum designers can

integrate transformational behaviors into online courses; thus increasing student outcomes.

About the Author

Janelle Harrison is an adjunct faculty member in the Master's of Management program at Spring Arbor University and is presently working toward a doctorate in organizational leadership with emphasis in human resource development at Regent University. She holds a Bachelor of Science in Psychology from Lewis-Clark State College, and a Master of Arts in Communication and Leadership Studies from Gonzaga University. Her primary research interests lie in distance education, autonomous learning, and online instructional leadership.

References

Adams, K., & Hambright, G. (2005). Helping teachers become transformational leaders. *Academic Exchange Quarterly, 9*(2), 90-94. Retrieved March 1, 2010, from ProQuest Education Journals.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 72*(4), 441-462.

Baba, V. V., & Ace, M. E. (1989). Serendipity in leadership: Initiating structure and consideration in the college classroom. *Human Relations, 42,* 509-525.

Bandura, A. (1977). *Social learning theory*. New York: General Learning Press.

Banjeri, P., & Krishnan, V. R. (2000). Ethical preferences of transformational leaders: An empirical investigation. *Leadership & Organization Development Journal, 21*(8), 405-413.

Barbuto, J. E. (2005). Motivation and transactional, charismatic, and transformational leadership: A test of antecedents. *Journal of Leadership & Organizational Studies, 11*(4), 26-41. Retrieved March 30, 2010, from Academic Search Complete.

Barnard, C. I. (1938). *The functions of the executive*. Cambridge, MA: Harvard University.

Barnett, K., McCormick, J., & Conners, R. (2001). Transformational leadership in schools—panacea, placebo, or problem? *Journal of Educational Administration, 39*(1), 24-46. Retrieved March 1, 2010, from ProQuest Education Journals.

Bartlett, J. E., II, Kotrlik, J. W., & Higgins, C. (2001). Organizational research: Determining appropriate sample size for survey research. *Information Technology, Learning, and Performance Journal, 19*(1) 43–50.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology, 8*(1).

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks, CA: Sage.

Bass, B. M., & Avolio, B. J. (1995). *Multifactor Leadership Questionnaire*. Redwood City, CA: Mind Garden.

Bass, B. M., & Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *Leadership Quarterly, 10*(2), 181-217. Retrieved March 30, 2010, from ABI/Inform.

Bloom, B. S., Hastings, J. T., & Madaus, G. F. (1971). *Handbook on formative and summative evaluation of student learning*. New York: McGraw-Hill.

Bolkan, S., & Goodboy, A. (2009). Transformational leadership in the classroom: Fostering student learning, student participation, and teacher credibility. *Journal of Instructional Psychology, 36*(4), 296-306. Retrieved March 1, 2010, from ProQuest Education Journals.

Brown, L. M., & Posner, B. Z. (2001). Exploring the relationship between learning and leadership. *Leadership & Organization Development Journal, 22*(6), 274-280. Retrieved March 30, 2010, from ABI/Inform.

Burns, J. M. (1978). *Leadership*. New York: Harper & Row.

Carless, S. A. (1998). Assessing the discriminant validity of transformational leadership behavior as measured by the MLQ. *Journal of Occupational and Organizational Psychology, 71*(4). Retrieved March 30, 2010, from ABI/Inform.

Catt, S., Miller, D., & Schallenkamp, K. (2007).You are the key: Communicate for learning effectiveness. *Education, 127*, 369-377. Retrieved March 1, 2010, from Academic Search Complete.

Cheng, Y. C. (1994). Teacher leadership style: A classroom-level study. *Journal of Education Administration, 32*, 54-71. Retrieved March 30, 2010, from ProQuest Education Journals.

Conger, J. A. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. *Leadership Quarterly, 10*, 145-179. Retrieved March 30, 2010, from ABI/Inform.

Corrigan, P. W., & Garman, A. N. (1999). Transformational and transactional leadership skills for mental health teams. *Community Mental Health Journal, 35*(4), 301. Retrieved March 1, 2010, from ABI/Inform.

Darling, J., Darling, P., & Elliott, J. (1999). *The changing role of the trainer*. London: Institute of Personnel and Development.

Eom, M. (2009). Cross-cultural virtual team and its key antecedents to success. *The Journal of Applied Business and Economics, 10*(1), 1-14. Retrieved April 5, 2010, from ABI/INFORM Global.

Frymier, A. B., & Houser, M. L. (1999). The revised learning indicators scale. *Communication Studies, 50*, 1-12. Retrieved March 30, 2010, from ProQuest Education Journals.

Goodboy, A. K., Martin, M. M., & Bolkan, S. (2009). The development and validation of the student communication satisfaction scale. *Communication Education, 58*(3), 372-396. Retrieved March 30, 2010, from ABI/Inform.

Goodboy, A. K., & Myers, S. A. (2008). The effect of teacher confirmation on student communication and learning outcomes. *Communication Education, 57*, 153-179. Retrieved March 30, 2010, from ProQuest Education Journals.

Goodwin, V. L., Wofford, J. C., & Whittington, J. L. (2001). A theoretical and empirical extension to the transformational leadership construct. *Journal of Organizational Behavior, 22*, 759-774. Retrieved March 30, 2010, from Academic Search Complete.

Gooty, J., Gavin, M., Johnson, P., Frazier, M., & Snow, D. (2009). In the eyes of the beholder: Transformational leadership, positive psychological capital, and performance. *Journal of Leadership & Organizational Studies, 15*(4), 353. Retrieved March 30, 2010, from ABI/INFORM Global.

Griffith, J. (2004). Relation of principal transformational leadership to school staff job satisfaction, staff turnover, and school performance. *Journal of Educational Administration, 42*(3), 333-356. Retrieved March 30, 2010, from ProQuest Education Journals.

Hackman, M. Z., & Johnson, C. E. (2004). *Leadership: A communication perspective* (4th ed.). Prospect Heights, IL: Waveland Press.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Pearsons Prentice Hall.

Hardy, L., Arthur, C., Jones, G., Shariff, A., Munnoch, K., Isaacs, I., & Allsopp, A. (2010). The relationship between transformational leadership behaviors, psychological, and training outcomes in elite military recruits. *Leadership Quarterly, 21*(1), 20. Retrieved March 30, 2010, from ABI/INFORM Global.

Harvey, S., Royal, M., & Stout, D. (2003). Instructor's transformational leadership: University student attitude and ratings. *Psychological Reports, 92*, 395-402.

Hecht, M. L. (1978). The conceptualization and measurement of interpersonal communication satisfaction. *Human Communication Research, 4*, 253-264. Retrieved March 1, 2010, from Academic Search Complete.

Hoehl, S. (2008). The relationship between transformational leadership and student educational outcomes as moderated by verbal and nonverbal immediacy. (Unpublished doctoral dissertation) Regent University, Virginia Beach, VA. Retrieved March 22, 2010, from Dissertations & Theses @ Regent University. (Publication No. AAT 3309288).

House, R. J., & Podsakoff, P. M. (1994). Leadership effectiveness: Past perspectives and future directions for research. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (pp. 45-82). Hillsdale, NJ: Erlbaum.

Hoyt, C. L., & Blascovich, J. (2003). Transformational and transactional leadership in virtual and physical environments. *Small Group Research, 34*, 678-715.

Ingram, P. (1997). Leadership behaviors of principals in inclusive educational settings. *Journal of Educational Administration, 35*(5), 411-427. Retrieved March 1, 2010, from ProQuest Education Journals.

Jason, M. H. (2000). The role of principal as transformational leader in a multicultural learning community. *High School Journal, 83*(3), 1-9. Retrieved March 1, 2010, from ProQuest Education Journals.

Jung, D. I., & Avolio, B. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of Organizational Behavior, 21*, 949-964. Retrieved March 1, 2010, from Academic Search Complete.

Kent, T. W., Crotts, J. C., & Azziz, A. (2001). Four factors of transformational leadership behavior. *Leadership & Organization Development Journal, 22*(5), 221-229. Retrieved March 1, 2010, from ABI/Inform.

Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). Harcourt College Publishers.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Prentice-Hall, Inc., Englewood Cliffs, N.J.

Kramer, M. W., & Pier, P. M. (1999). Students' perceptions of effective and ineffective communication by college teachers. *Southern Communication Journal, 65*, 16-33. Retrieved March 30, 2010, from ProQuest Education Journals.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of education objectives: The classification of educational goals. Handbook 2: Affective domain.* New York: McKay.

Kuchinke, K. (1999). Workforce education faculty as leaders: do graduate-level university instructors exhibit transformational leadership behaviors? *Journal of Vocational Education Research, 24*(4), 209-25. Retrieved April 5, 2010, from Education Full Text database.

Lee, J. (2001). Instructional support for distance education and faculty motivation, commitment, satisfaction. *British Journal of Educational Technology 32*(2), 153-160. Retrieved March 30, 2010, from ProQuest Education Journals.

Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement, 17*, 201-227. Retrieved March 1, 2010, from ProQuest Education Journals.

Marcus, S. (2004). Leadership in distance education: Is it a unique type of leadership? *Online Journal of Distance Learning Administration, 7*(1). Retrieved March 1, 2010, from ProQuest Education Journals.

Martin, M. M., Chesebro, J. L., & Mottet, T. P. (1997). Students' perceptions of instructors' socio-communicative style and the influence on instructor credibility and situational motivation. *Communication Research Reports, 14*, 431-440.

McCroskey, J. C. (1994). Assessment of affect toward communication and affect toward instruction in communication. In S. Morreale & M. Brooks (Eds.), *1994 SCA summer conference proceedings and prepared remarks: Assessing college student competence in speech communication.* Annandale, VA: Speech Communication Association.

McCroskey, J. C., Richmond, V. P., Plax, T. G., & Kearney, P. (1985). Power in the classroom: Behavior alteration techniques, communication training and learning. *Communication Education, 34*, 214-226.

McCroskey, J. C., & Young, T. J. (1981). Ethos and credibility: The construct and its measurement after decades. *Central States Speech Journal, 32*, 24-34. Retrieved March 1, 2010, from Academic Search Complete.

Ormrod, J.E. (1999). *Human learning* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.

Politis, J. D. (2001). The relationship of various leadership styles to knowledge management. *Leadership & Organization Development Journal, 22*(8), 354-364. Retrieved March 1, 2010, from Academic Search Complete.

Pounder, J. S. (2003). Employing transformational leadership to enhance the quality of management development instruction. *The Journal of Management Development, 22*, 6-13. Retrieved March 1, 2010, from ABI/Inform.

Pounder, J. S. (2008). Transformational classroom leadership: A novel approach to evaluating classroom performance. *Assessment & Evaluation in Higher Education, 33*, 233-243. Retrieved March 1, 2010, from ABI/Inform.

Purvanova, R., & Bono, J. (2009). Transformational leadership in context: Face-to-face and virtual teams. *Leadership Quarterly, 20*(3), 343. Retrieved April 1, 2010, from ABI/INFORM Global.

Raven, B. H., & French, J. (1958). Legitimate power coercive power, and observability in social influence. *Sociometry, 21*, 83-97. Retrieved from Academic Search Complete database.

Ravlin, E. C., & Meglino, B. M. (1989). The transitivity of work values: Hierarchical preference ordering of socially desirable stimuli. *Organizational Behavior & Human Decision Processes, 44*(3), 494-509.

Rubin, R. B., Palmgreen, P., & Sypher, H. E. (Eds.). (2004). *Communication research measures: A sourcebook*. Mahwah, NJ: Lawrence Erlbaum.

Ruggieri, S. (2009). Leadership in virtual teams: A comparison of transformational and transactional leaders. *Social Behavior & Personality: An International Journal, 37*(8), 1017-1021. Retrieved from Academic Search Complete database.

Schrodt, P., & Witt, P. L. (2006). Students' attributions of instructor credibility as a function of students' expectations of instructional technology use and nonverbal immediacy. *Communication Education, 55*, 1-20.

Strahan, R., & Gerbasi, K. C. (2006). Short, homogeneous versions of the Marlow-Crowne social desirability scale. *Journal of Clinical Psychology, 28*(2), 191-193.

Walumbwa, F. O., Wu, C., & Ojode, L. A. (2004). Gender and instructional outcomes: The mediating role of leadership style. *The Journal of Management Development, 23*, 124-140. Retrieved March 1, 2010, from ProQuest Education Journals.

Yuen, P. Y., & Cheng, Y. C. (2000). Leadership for teachers' action learning. *International Journal of Educational Management, 14*(5), 198-209. Retrieved March 1, 2010, from ProQuest Education Journals.

Yukl, G. (2006). *Leadership in Organizations* (6th ed.). Upper Saddle River, NJ: Pearson Education, Inc.