# *Examining the Effect of Mentor Teachers' Leadership Practices and Interaction on Student Teaching Interns' Efficacy in Professional Development Schools*

Ron Siers, Jr.
Salisbury University

Tao Gong
University of Maryland Eastern Shore

**ABSTRACT:** The purpose of this study was to empirically investigate the effect of mentor teachers' leadership practices on student interns' efficacious beliefs in Professional Development Schools (PDSs) during the internship practicum. The study employed the Leadership Practices Inventory (Kouzes & Posner, 2003) to measure the transformational leadership practices of mentor teachers. Tschannen-Moran and Hoy's Teacher Sense of Efficacy Scale (2001) was utilized to evaluate student interns' efficacious beliefs. Data were collected via survey questionnaires. The sample included 154 student interns from a mid-sized Mid-Atlantic university who were participating in their internship practicum within 33 Professional Development Schools during the spring of 2009. This study found that teachers' efficacy beliefs in student engagement, instructional strategies, and classroom management are positively related to the total scale of the leadership practice of mentor teachers and each of the five subscales (modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart), except for the insignificant relationship between modeling the way and teacher's efficacy of student engagement.

*NAPDS Essential(s) Addressed: #2/A school–university culture committed to the preparation of future educators that embraces their active engagement in the school community; #4/A shared commitment to innovative and reflective practice by all participants; #5/Engagement in and public sharing of the results of deliberate investigations of practice by respective participants*

In the next decade, the United States will need 2.2 million new teachers (Anderson, 2007). Nearly all of the 4.5 million K-12 teachers in the U.S. had to pass student teaching in order to complete their licensure or certification (Anderson, 2007). The student teaching practicum in the United States serves as the capstone experience of a new educator's formal educational training and molds the start of a teacher's journey into the teaching community

(Anderson, 2007). Student teaching is "eagerly and anxiously anticipated" by pre-service interns and subsequently remembered as a significant benchmark by in-service educators (Graham, 2006, p. 1118).

Critical to student interns' future success as teacher leaders are their efficacious beliefs about their teaching pedagogies. An educator's sense of efficacy has been defined as "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran & Woolfolk Hoy, 1998, p. 233). Teacher efficacy has been tied to student outcomes in motivation (Midgley, Feldlaufer, & Eccles, 1989), academic achievement (Ashton & Webb, 1986; Muijs & Reynolds, 2002; Moore & Esselman, 1992; Ross, 1992), education innovations (Cousins & Walker, 2000), classroom management (Woolfolk, Rosoff, & Hoy, 1990), classroom behavior (Tschannen-Moran & Woolfolk Hoy, 2001), and effort (Allinder, 1994). Yet, the research literature rarely reports on the known antecedents of teachers' efficacious beliefs (Labone, 2004). This article is intended to help fill this gap by empirically examining the effects of mentor teachers' leadership practices on student interns' efficacy beliefs in Professional Development Schools (PDS) during the internship practicum.

According to Graham (2006), mentor teachers have been proven to be crucial to the eventual success of student teachers. However, the role of the mentor teacher is not well defined in existing research literature. In a meta-analysis of teacher preparation programs, Wideen, Mayer-Smith, and Moon (1998) found that the role and effects of mentor teachers were often absent in published scholarship. We know that during the internship practicum mentor teachers share their expertise with student interns in order to scaffold their growth and development and offer insights into their own pedagogies (Yendol-Hoppey, Dana, & Delane, 2009; York-Barr & Duke, 2004). Ideally mentor teachers provide support, ideas, advice, and understanding for student interns for the duration of their internship experiences.

Mentor teachers generally are tenured faculty within school sites who consistently provide feedback to student interns while remaining engaged in all aspects of instruction throughout the experience. Mentor teachers are also referred to as "cooperating" teachers in some Professional Development Schools. In the collaborative partnerships with K-16 faculty represented by the PDS model mentor teachers have often been uniquely utilized to both support student interns and engage in professional development activities (Book, 1996; Yendol-Hoppey, Dana, & Delane, 2009).

During the internship practicum, mentor teachers often find themselves in positions of leadership (Borko & Mayfield, 1995). However, the research literature reveals that few empirical studies have considered mentor teachers' leadership practices and roles through the lens of leadership theories (Pounder, 2006). Many of the leadership roles that teachers now play in education have their genesis in the teacher educational reform movements that began in the 1980s (York-Barr & Duke, 2004). According to York-Barr and Duke (2004), educators have unique positions of leadership within the school system that are often tied to their individual "signature" pedagogies. Childs-Bowen, Moller, and Scrivner (2000) have argued that teachers become leaders in their classrooms when they focus on both impacting student outcomes and fostering their own and others' pedagogical excellence.

Leadership practices and behaviors are important for mentor teachers. Northouse (2013) defines leadership as the process of influencing individuals in order to accomplish a specific goal or outcome. Yarger and Lee (1994) posited that successful teacher leadership within the classroom results from

the positive dyadic interactions between teachers. Kouzes and Posner's (2007) research on leadership has discovered myriad examples of individuals who are able to achieve extraordinary results in nearly all areas of organizational contexts. Five common practices of leadership were discovered by Kouzes and Posner (2007); these form the basis of a common model of behavior for future leaders across fields to follow. Leaders who want to accomplish the extraordinary and impact the efficacious beliefs of followers engage in five leadership practices (Kouzes & Posner, 2007). These five unique practices are available to any potential leader who is willing to guide followers toward extraordinary outcomes. Since leadership is inherent in the roles and responsibilities of mentor teachers, this article begins with the idea that understanding their leadership practices and subsequent effects on student interns is needed for all of schools' constituents, but perhaps especially for PDS players (Anderson, 2007; Borko & Mayfield, 1995; McIntyre, Byrd, & Foxx, 1996).

The study on which this article reports attempted to document the effect of mentor teachers' leadership practices on student interns' efficacious beliefs in Professional Development Schools, thus providing empirical data for educational administrators, leaders, and other stakeholders regarding how to improve the quality of teacher preparation programs. A richer understanding of the leadership roles that mentor teachers play during the internship practicum will add to our knowledge about how to best prepare efficacious future teachers and to guide the teacher leaders who will serve them.

## Theoretical Framework and Hypothesis

### Transformational Leadership Theory

This study is grounded in "transformational leadership theory." Transformational leadership practices inspire and empower followers to accomplish extraordinary outcomes (Northouse, 2013). The concept of transformational leadership was first introduced by James McGregor Burns in 1978 as a "new paradigm of leadership" (as cited in Bass & Riggio, 2006, p. 3). Kouzes and Posner's research on transformational leadership (1995, 2003, 2007) suggests that to facilitate the achievement of "extraordinary" things in their organizations, transformational leaders engage in the five practices of "modeling the way," "inspiring a shared vision," "challenging the process," "enabling others to act," and "encouraging the heart" (Kouzes & Posner, 2007).

The first of these traits, modeling the way, is achieved when leaders consistently model the behavior they expect of each of their followers through their values and actions (Kouzes & Posner, 2007). Leaders must consistently be great examples by ensuring that their actions are congruent with their words. The second practice, inspiring a shared vision, is accomplished by leaders who are able to foster belief in the dreams and desires of followers by enabling them to see the extraordinary possibilities that the future will bring. Leaders' individual beliefs and passions for the vision ignite a common flame of inspiration for followers. "Challenging the process" involves doing things differently from the status quo (Kouzes & Posner, 2007). Leaders who challenge the process are consistently searching for new opportunities to improve and grow. Challenging the process requires a commitment to take risks and experiment with new ideas and concepts and learn from failures and successes.

The practice of "enabling others to act" is accomplished by leaders who build confidence and competence through collaboration and accountability (Kouzes & Posner, 2007). Leaders who enable others to act help followers feel capable, empowered, and trusted to perform at their best while achieving more than what each thought was possible. Finally, "encouraging the heart" requires the leader to demonstrate genuine appreciation of follower contributions by establishing a culture of celebrating success and values (Kouzes & Posner, 2007). Leaders who encourage the heart help to build a collective identity and

develop resilient attitudes that help followers to persist through difficult times.

These scholars suggest that these five foundational practices of exemplary leaders allow for the achievement of extraordinary outcomes (Kouzes & Posner, 2007). Each of these practices should not be the exclusive property of a select few individuals. Instead, these practices are and should be available to any leader–in any organization or context–who accepts the challenge of leadership. Thus, we posited in this study that viewing mentor teachers as leaders and focusing on these particular practices might help us to understand how mentor teachers influence the efficacious beliefs of student interns. Our professional focus is on PDS settings, so our study was conducted in PDS contexts. Thus, our study was based on the following premises:

- Hypothesis 1: The student teacher's efficacy belief in her/his ability to promote student engagement is positively related to the total scale of the leadership practice of mentor teachers and each of the five subscales (modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart).
- Hypothesis 2: The student teacher's efficacy belief in her/his instructional strategies is positively related to the total scale of the leadership practices of mentor teachers and each of the five subscales (modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart).
- Hypothesis 3: The student teacher's efficacy belief in her/his ability to manage a classroom is positively related to the total scale of the leadership practices of mentor teachers and each of the five subscales (modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart).

# Methods

## Data Collection

Data in this study were collected via self-administered questionnaires. The respondents included 154 student interns from a mid-sized Mid-Atlantic university who were participating in their internship practicum within 33 schools in PDS partnerships during the spring of 2009. The sample represented 100% of the student intern and mentor teacher population that engaged in the first eight weeks of the internship practicum during that semester at our university. Student interns assessed their mentor teachers' efficacy beliefs prior to the beginning of their internships and at the conclusion of their first eight-week internship practicum experiences. They also reported their anecdotal perceptions of their mentor teachers' leadership practices at both of these points by answering open-ended questions. All survey instruments were made available to student interns in a paper format. Two survey instruments were used to measure mentor teachers' beliefs–one evaluating their impressions of interns' senses of professional efficacy and a second assessing their impressions of their own leadership practices.

## Measurements

The efficacious beliefs of student interns were measured with Tschannen-Moran and Hoy's (2001) Teachers' Sense of Efficacy Scale (TSES). The TSES measures a teacher's efficacy belief or judgment "of his or her capabilities to bring about desired outcomes" (Tschannen-Moran & Hoy, 2001, p. 783). The TSES consists of 12 items, which measure three subscales: Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management (Tschannen-Moran & Hoy, 2001). Student interns rated their full scale and three subscales of efficacious beliefs (1 = none at all, 5 = some degree, 9 = a great deal). An example of a question from the efficacy in student engagement subscale is "How much can you do to motivate students who show low interest in school work?" An example of a inquiry from

the efficacy in instructional strategies subscale is "How well can you implement alternative teaching strategies in your classroom?" An example of a questions from the efficacy in classroom management subscale is "How much can you do to control disruptive behavior in the classroom?".

The TSES is reliable with high internal consistency. Tschannen-Moran and Hoy (2007) reported that the Cronbach alpha coefficients for the full scale ranged from .92 to .95 and from .86 to .90 for the subscales. According to Tschannen-Moran and Hoy (2001), the TSES scale is a very useful empirical tool for researchers who are interested in studying the construct of teacher efficacy.

The transformational leadership behaviors of mentor teachers were measured with Kouzes and Posner's (2003) Leadership Practices Inventory (LPI). The LPI was developed via a triangulation of quantitative and qualitative data to measure transformational behaviors (Kouzes & Posner, 2003). According to Kouzes and Posner (2003), the LPI is consistently rated among the best transformational leadership instruments. The LPI scale is grounded in transformational theory, which posits that transformational leaders are able to impact the beliefs and outcomes of followers in order to achieve exceptional outcomes. The LPI scale aligns with the Transformational Leadership Theory by providing empirical evidence of the impact of mentor teacher transformational leadership on student interns' efficacy beliefs during the internship practicum. Reliabilities for the LPI are consistently high. Kouzes and Posner (2003) reported that the Cronbach alpha coefficients for the five practices of exemplary leaders range from .75 to .92.

The LPI consists of 30 statements which are categorized into the five leadership practices described above: modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart (Kouzes & Posner, 2003). Interns rated how frequently their mentor teachers engaged in these leadership practices using a ten-item scale, with one representing "almost never" and ten representing "almost always." These ratings were completed by interns at the beginning and at the end of the eight-week practicum. Sample items included statements such as "[My mentor teacher] sets a personal example of what he/she expects of others" (modeling), "[my mentor teacher] paints the 'big picture' of what we aspire to accomplish" (shared vision), "[My mentor teacher] seeks out challenging opportunities that test his/her own skill & abilities" (challenging the process), "[My mentor teacher] treats others with dignity and respect" (enabling others to act), and "[My mentor teacher] praises people for a job well done" (encouraging the heart).

## Results

The descriptive statistics of the variables used in the estimation are presented in Table 1 (see Appendix A). The means on the three efficacy subscales before and after the internship practicum were 23.94 vs. 26.88 for student engagement, 27.12 vs. 30.35 for instructional strategies, and 26.36 vs. 29.49 for classroom management. A paired samples t-test was conducted to compare the mean efficacy scores before and after the intern practicum. The test results ($t = 7.700$, $p = 0.000$) indicated there was a significant difference between pre- and post-test scores, suggesting that the intern practicum significantly improved the student intern's efficacy beliefs related to engaging students in school-related activities, using instructional strategies, and managing a classroom.

Table 2 (see Appendix B) summarizes the estimation results of Hypotheses 1–3. Hypothesis 1 posited that the teacher's efficacy belief in student engagement is positively related to the total scale of the leadership practice of mentor teachers and each of the five subscales (modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart). The results in the top portion of Column 2 support Hypothesis 1, confirming that student teachers' efficacy in promoting student engagement is positively

related to the total scale of leadership practice, $\beta = .199$, $p < .01$.

To examine the relationship that each of the five leadership behaviors has to pre-service teachers' efficacy with engagement, the total scale of leadership practice was replaced with each of the five subscales of transformational leadership behaviors, controlling for the prior difference in the teacher efficacy related to student engagement. Results in the top portion of Columns 3-7 indicated that student teacher's efficacy in student engagement is positively related to four of the five subscales, inspiring a shared vision ($\beta = .181$, $p < .05$), challenging the process ($\beta = .248$, $p < .001$), enabling others to act ($\beta = .180$, $p < .01$), encouraging the heart ($\beta = .189$, $p < .01$), with the exception of modeling the way ($\beta = .124$, $p > .05$). The standardized beta values suggested that the mentor teachers' leadership behavior of "challenging the process" had the greatest impact compared to the other three significant leadership behavior variables, whereas mentor teachers' leadership behavior of "modeling the way" had no impact on improving student teachers' efficacy related to student engagement at the end of the internship.

The results in the middle portion of Table 2 support the Hypothesis 2 that student teachers efficacy beliefs related to their instructional strategies are positively related to the total scale of the leadership practice of mentor teachers and each of the five subscales, controlling for the prior difference in the teacher efficacy related to instructional strategies. The standardized coefficients suggest that the leadership behavior of "challenging the process" had the greatest impact on the teacher efficacy in instructional strategies at the end of the internship practicum.

The bottom portion of Table 2 presents the estimation results for Hypothesis 3, which supports the positive relationship between student teachers' efficacy beliefs related to classroom management and the total scale of the leadership practices of mentor teachers and each of the five subscales, controlling for the prior difference in the teacher efficacy of classroom management. From the standardized beta values, mentor teachers who demonstrated the leadership behavior of "challenging the process" had the greatest impact, whereas the behavior of "modeling the way" had the least impact on student teachers' senses of classroom management efficacy.

## Conclusions and Discussions

The purpose of this study was to examine the effect of PDS mentor teachers' leadership practices on student interns' efficacious beliefs during the internship practicum. York-Barr and Duke (2004) examined over two decades of research on teachers' leadership roles. While their review was comprehensive, their meta-analysis did not uncover any empirical data supporting or refuting the questions addressed by this research study.

The findings of this study support the hypotheses posed, suggesting that teachers' efficacy beliefs in student engagement, instructional strategies, and classroom management are positively related to the total scale of the leadership practices of mentor teachers and each of the five subscales considered. Transformational leaders are able to inspire and stimulate others to achieve "extraordinary outcomes and, in the process, develop their own leadership capacity" (Bass & Riggio, 2006, p. 3). The results of this study also suggest that mentor teachers who display transformational behaviors can positively impact student teachers' efficacious beliefs by providing opportunities for interns to achieve mastery on specific challenges or tasks.

Leaders provide incremental training and mental rehearsal for subordinates in order to foster initiative and efficacy (Kouzes & Posner, 2007). Transformational leadership has the potential to "motivate others to do more than they originally intended and often more than they thought possible" (Bass & Raggio, 2006,

p. 4). The findings of our study suggest that mentor teachers can support interns with transformational leadership by appropriately modeling effective pedagogies. Our findings also reveal that mentor teachers who use these leadership skills can construct positive future visions for intern success, search for new opportunities and experiments through which they and the pre-service teachers they are guiding can challenge the status quo, and can scaffold instruction and foster collaboration by recognizing and celebrating interns' achievements. In summary, mentor teachers' transformational behaviors can positively impact the aggregate beliefs of student interns regarding their pedagogical practices.

This study found that the leadership behavior of "challenging the process" had the greatest impact among the significant independent variables on student teachers' efficacy beliefs related to student engagement, instructional strategies, and classroom management. According to Kouzes and Posner (2007), leaders challenge the process "by seizing the initiative, looking outward for innovative ways to improve, experimenting and taking risks by constantly generating small wins and learning from experience" (p. 26). Mentor teachers can seize the initiative of the internship experience by treating the assignment as if it were the student interns' first day on their actual job, as teachers of record.

Mentor teachers can also question the status quo of their schools–and even their PDS partnerships–even through their work with interns during the internship practicum. They can question policies and procedures to determine which ones are essential and which ones are stifling to innovation and are preventing the partnership from becoming the best it can be. "Challenging the process" also involves establishing a climate where experimentation and taking risks are encouraged by incrementally generating small wins and learning from the overall experience (Kouzes & Posner, 2007). Mentor teachers who provide opportunities for student interns to learn in these ways will positively impact student interns' beliefs in their own efficacy. Mentor teachers can generate small wins with student interns by breaking down the nuances of teaching into small, manageable parts.

Leaders improve "the overall quality of work when people have a chance to fail" (Kouzes & Posner, 2007, p. 200). Creating a climate where individuals feel comfortable talking about the good and the bad of their professional efforts and their failures and successes enhances learning (Kouzes & Posner, 2007). Mentor teachers can create such a climate for learning by asking student interns, "What can we learn from this experience?" as opposed to assigning blame when mistakes or failures happen. Transformational leaders are able to foster growth by empowering others while simultaneously clarifying objectives and allowing others to help establish purposes in order to obtain a true commitment to and involvement with the stated objective (Burns, 1978). Interns and mentor teachers learn by working collaboratively during the internship practicum in order to achieve a common objective, thus achieving ends that would not have been possible previously or if they worked independently.

The results in this study found that student interns' efficacious beliefs related to student engagement, instructional strategies, and classroom management are tied to their efficacious beliefs prior to the internship practicum. We suggest that student interns be given more mastery experiences prior to the internship in order to foster positive efficacious beliefs. We also advocate for teacher educators, mentor teachers, and other PDS leaders to focus more on providing interns with the necessary scaffolding and pedagogies to help foster their efficacious beliefs.

## Implications for Future Research

The primary focus of this research study was a consideration of the impact of mentor teachers' leadership practices on student

teaching interns' efficacious beliefs during the capstone experience of the internship practicum in PDS contexts. More research on teacher leadership through the lens of current leadership theories and research on the antecedents of teacher efficacy is needed (Little, 2003; Pounder, 2006; Tschannen-Moran & Hoy, 2007). Research literature linking leadership to mentor teachers is still scarce. Leadership studies in education have primarily focused on traditional leaders such as administrators, building principals, and superintendents (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Future research might focus on any or all of the following questions:

1. Do mentor teachers in different types of PDSs in other geographical areas impact student interns' efficacious beliefs differently? Do the size, climate, and socio-economic status of the PDSs make a difference in the leadership practices of mentor teachers?
2. What might different measurement scales for the independent variables add to the data of this study? What might the Multifactor Leadership Questionnaire (MLQ) or the Authentic Leadership Questionnaire (ALQ) add to the data in this study?
3. How do the leadership practices of mentor teachers and interns during the internship practicum in PDSs affect student outcomes, behavior, motivation, or efficacious beliefs?

All of these questions seem important to consider in light of the findings of our study and given schools' increasing focus on common standards and high stakes assessments.

## Practical Implications

Teacher education programs within Institutions of Higher Education (IHE) are entrusted with the responsibility to help produce quality teacher candidates for the nation's public schools. IHEs have developed collaborative partnerships with school districts in the form of PDSs, in part to allow student teaching interns to practice their pedagogical skills prior to their entrance into the teaching profession (Metcalf-Turner, 1999). The internship practicum represents the capstone experience of a new teacher's formal educational training and shapes these educators' journeys into the professional teaching community (Anderson, 2007). Crucial to student intern success during the internship practicum are their efficacious beliefs about their teaching pedagogies (Gibson & Dembo, 1984).

The findings of this study help to define some of the sources of student interns' efficacious beliefs during the internship practicum. Such beliefs are critical considering the existing empirical evidence related to the powerful influence of teachers' efficacious beliefs on their overall teaching effectiveness (Knoblauch & Hoy, 2008). Kouzes and Posner (2007) posited that transformational leaders can positively impact the efficacious beliefs of their followers. This hypothesis is consistent with the findings in this study. Our findings suggest that PDSs can support student interns with mentor teacher leaders who possess and exhibit transformational leadership practices. As a learning organization, the PDS may be the perfect venue for providing professional development to mentor teachers related to transformational leadership practices. Such professional development would foster mentor teachers' abilities to provide future student teaching interns with appropriate pedagogical modeling, positive shared visions for success, scaffolding of instruction and collaboration, as well as appropriate recognitions and celebrations of student intern achievement.

The findings of this study also suggest that the transformational leadership behavior of "challenging the process" has the greatest impact on student interns' efficacious beliefs.

This is consistent with Kouzes and Posner's (2007) findings related to leaders who are willing to challenge the status quo. Based on the findings of this study, we suggest that mentor teachers might attempt more often to create climates through which both they and interns might question the status quo of school policies and teaching practices. Mentor teachers might continue to "challenge the process" by seeking new and innovative ideas for the internship practicum utilizing the transformational leadership practice of "outsighting." Mentor teachers might look outside of their own PDSs for new and innovative ideas. They might be better able to identify innovative pedagogies by attending regional, state, and national conferences or by researching and visiting the classrooms of other mentor teachers or former interns. Collaborative conferences with other student interns and mentor teachers might be established within PDSs to provide opportunities for in-service mentor teachers and pre-service teachers to seek suggestions and initiatives for continuous improvement.

"Challenging the process" within the construct of the internship practicum also fosters what other scholars have termed resiliency and psychological "hardiness" (Kouzes & Posner, 2007). Mentor teachers need to foster learning climates that recognize that learning often involves making mistakes. Such environments might result in mentor teachers and student interns growing more comfortable with the construction of new pedagogical strategies.

The importance of placing student interns with mentor teachers who provide appropriate levels of pedagogical modeling and guidance is confirmed by the findings of our study. PDS leaders might more carefully monitor the placement policies and protocols within their PDSs to help ensure proper placements. PDS leaders responsible for student intern placement might conduct collaborative workshops prior to the beginning of the internship practicum experiences. The workshops might enable student interns and mentor teachers to discuss expectations and experiences before the internship begins.

The findings of this study also suggest that PDS leaders might provide student interns with more mastery experiences throughout their professional programs. Accordingly, professional development might be provided to mentor teachers and student interns on the salient tenets of "mastery experiences." These concepts might be shared at PDS workshops prior to the internship practicum in order to construct a foundation for positively affecting student interns' efficacious beliefs.

Based on the finding of this study, the authors advocate for the following practices for PDS administrators:

- Provide student interns with more mastery experiences prior to the internship practicum
- Progressively increase mastery experiences as the intern progresses through the professional teacher education program
- Provide additional scaffolding and support for those interns who perceive their experiences as unsuccessful
- Exercised precision and care when placing student interns with mentor teachers

Based on the finding of this research study, the authors advocate the following practices for PDS mentors:

- Seize the initiative by treating each new student teaching intern as a unique individual
- Question policies and procedures within the PDS to identify those that are essential and those that are preventing innovation and effective teamwork
- Create a climate of questioning the status quo in order to foster student interns' abilities to do the same
- Find innovative ways to improve your pedagogy by attending regional, state,

or national conferences for professional development
- Seek advice from other mentors or interns outside of your own PDS
- Create a climate and culture for student interns to experiment and task risks

Tschannen-Moran and Hoy (2007) stated that efficacious beliefs of teachers "are a little idea with a big impact" (p. 954). PDSs provide opportunities for mentor teachers and student interns to learn to believe that they can achieve success with their P-12 students. Mentor teachers who demonstrate exemplary leadership practices will contribute to the development of significant efficacious beliefs in our future educators. SUP

## Appendix A

**Table 1. Descriptive Statistics**

| | *Mean* | *Std. Deviation* |
|---|---|---|
| ***Dependent Variables:*** | | |
| 1. Efficacy in Student Engagement | 26.88 | 4.374 |
| 2. Efficacy in Instructional Strategies | 30.35 | 4.033 |
| 3. Efficacy in Classroom Management | 29.49 | 3.915 |
| ***Independent Variables:*** | | |
| 4. Leadership Practice Inventory | 240.97 | 46.005 |
| 5. Model the Way | 49.61 | 8.349 |
| 6. Inspire a Shared Vision | 45.43 | 11.312 |
| 7. Challenge the Process | 46.86 | 10.443 |
| 8. Enable Others to Act | 49.71 | 9.540 |
| 9. Encourage the Heart Intern | 49.35 | 9.225 |
| ***Control Variables:*** | | |
| 10. Pre-intern Efficacy in Student Engagement | 23.94 | 5.093 |
| 11. Pre-intern Efficacy in Instructional Strategies | 27.12 | 4.673 |
| 12. Pre-intern Efficacy in Classroom Management | 26.36 | 5.176 |

*Note:* Number of participants is 154.

## Appendix B

TABLE 2. ESTIMATION RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: 1. Efficacy in Student Engagement | | | | | | |
| 4.Leadership practice scale | .199** | | | | | |
| 5.Modeling the way | | .124 | | | | |
| 6.Inspiring a shared vision | | | .181* | | | |
| 7.Challenging the process | | | | .248*** | | |
| 8.Enabling others to act | | | | | .180** | |
| 9.Encouraging the heart | | | | | | .189** |
| 10.Pre-intern efficacy in student engagement | .471*** | .487*** | .466*** | .459*** | .487** | .481*** |
| $R^2$ | .295 | .272 | .288 | .316 | .289 | .292 |
| Dependent Variable: 2. Efficacy in Instructional Strategies | | | | | | |
| 4.Leadership practice scale | .275*** | | | | | |
| 5.Modeling the way | | .23*** | | | | |
| 6.Inspiring a shared vision | | | .242*** | | | |
| 7.Challenging the process | | | | .292*** | | |
| 8.Enabling others to act | | | | | .238*** | |
| 9.Encouraging the heart | | | | | | .280*** |
| 11.Pre-intern efficacy in classroom strategies | .463*** | .476*** | .462*** | .459*** | .485*** | .477*** |
| $R^2$ | .351 | .33 | .334 | .36 | .335 | .356 |
| Dependent Variable: 3. Efficacy in Classroom Management | | | | | | |
| 4.Leadership practice scale | .240*** | | | | | |
| 5.Modeling the way | | .193*** | | | | |
| 6.Inspiring a shared vision | | | .231*** | | | |
| 7.Challenging the process | | | | .252*** | | |
| 8.Enabling others to act | | | | | .217*** | |
| 9.Encouraging the heart | | | | | | .223*** |
| 12.Pre-intern efficacy in classroom management | .499*** | .507*** | .492*** | .495*** | .520*** | .514*** |
| $R^2$ | .36 | .34 | .355 | .366 | .352 | .354 |

* is significant at the 0.05 level; ** is significant at 0.01 level; *** is significant at 0.001 level.

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**Ron Siers, Jr.** is an assistant professor in the Department of Education Specialties at Salisbury University. He teaches courses in educational foundations, classroom management, educational psychology, and organizational leadership. He is also a Professional Development Schools' Liaison and University Supervisor for student interns. His primary research interests include teacher education, leadership behaviors, and student intern efficacy.

**Tao Gong** is an assistant professor of economics at University of Maryland Eastern Shore, where he teaches economics, multivariate statistics, and quantitative research methods. His research interests include economics of education, leadership behaviors, and assessment of student learning outcomes.