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URBAN PRINCIPALS' SECOND ORDER CHANGE LEADERSHIP

Urban school leaders have challenges in continually improving student achievement and making change as quickly as needed. To address this problem 37 non-Title I principals completed an on-line survey, Principal's Actions Survey (PAS), based on the seven responsibilities for second order change identified by Marzano, Waters, and McNulty (2005). Principals were also asked what actions they took to improve student achievement and to which actions they attributed improvement in Adequate Yearly Progress (AYP) subgroups. While principals indicated that they implemented the seven responsibilities, there was not a significant relationship between their overall PAS score and student achievement. The principals' responses were compared to results in an earlier study (La Cava, 2009) using the PAS scores of Title I urban elementary principals in the same geographic area and the comparison revealed that the Title I principals had a significantly higher PAS score and reported a significantly higher implementation of ideals/beliefs and monitoring/evaluating. Principals identified actions to which they attributed change in AYP subgroup performance aligned with principal action themes (Taylor, 2010a) of focusing the culture on learning, using data-based decision-making, personally investing in the change, and making decisions for student learning.

Leadership to improve student achievement has increased in importance since the approval of the No Child Left Behind Act (NCLB) of 2001. Annual accountability for students' continual gains in achievement is a focus of leaders in districts and schools, particularly in urban areas. Urban principals often have the goal of making dramatic changes in schools for students to reach learning goals. Such change, which is dramatic rather than incremental, is called second order change (Marzano, Waters, & McNulty, 2005; Taylor, 2010a, 2010b).

Through meta-analysis of over 5000 studies from 1978–2001 (Marzano et al., 2005), twenty-one leadership responsibilities of effective principals, of which seven were linked to second order change and improved learning were identified. These seven leadership responsibilities follow with clarifications in parentheses: (a) knowledge of curriculum, instruction, and assessment (versus involvement with curriculum, instruction, and assessment), (b) optimizer (motivator), (c) intellectual stimulation (professional learning for self and others), (d) change agent (challenges accepted practice), (e) monitoring/evaluating (monitors effectiveness), (f) flexibility (adapts to the situation), (g) ideals/beliefs (operates from communicated beliefs) (p. 70). To identify contemporary leadership behaviors that lead to successful second order change related to improving student achievement during the

era of accountability, the researcher used these seven leadership responsibilities as the foundation for data gathering and analysis in this study.

Purpose

The primary purpose was to determine actions that urban school leaders take which result in second order change and improvements in student achievement. Another purpose was to extend the findings of a national qualitative study on second order change (Taylor, 2010a), and to replicate a study (La Cava, 2009) of urban principals of Title I elementary schools. As in the La Cava study, principals were surveyed with the Principal Actions Survey (PAS). In addition, two forced choice items related to the seven leadership responsibilities of second order change, two open-ended items were added: "Please share your leadership actions to which you attribute your school's gains in student achievement," and "Which of your actions have impacted achievement of Adequate Yearly Progress (AYP) of student subgroups such as economically disadvantaged, special education, and English language learners?"

Conceptual Framework

Evidence confirms that principal leadership impacts student achievement (Hallinger & Heck, 1998; Kelley, Thornton, Daugherty, 2004; Leithwood, Louis, Anderson & Wahlstrom, 2004; Marzano et al., 2005). Studies on leadership and change often refer to transformational leadership, which focuses on organizational change by motivating others to exceed expectations (Bass, 1997). More recently transformational leadership has been described as empowering others to build capacity and commitment to accomplish goals (Bass & Riggio, 2006). Although widely accepted, transformational leaders may or may not bring about second order change since it is defined as being a significant departure from the norm and accompanied with a sense of urgency.

The No Child Left Behind Act (NCLB) of 2001 holds principals accountable for increases in student achievement by student subgroups and for all students to reach proficiency in reading and mathematics by 2014 (U.S. Department of Education, 2004). States define AYP and if schools do not meet AYP for three years then choice is an option for parents and punitive measures can be taken. With this ever present accountability, some principals have to make dramatic changes in organizational structures, school culture, curriculum, instruction, assessment, and expectations. These kinds of changes, referred to as second order changes, are dramatic and more intense than incremental change or first order change (Marzano et al, 2005; Taylor, 2010a).

Such change begs for leaders who are different from those of the past and are relentless in their focus on target changes for student achievement (Waters & Grubb, 2004). These leaders change the organizational

structures, build commitment, and build community to address the students' needs (Leithwood et al., 2004). Urban schools are particularly difficult to change due to multiple factors of high mobility of both students and teachers, requiring leaders who are uniquely skillful with second order change (Waters & Grubb, 2004).

Second order change has been found to positively affect student achievement (Gurr, Drysdale, & Mulford, 2006; Leithwood et al., 2004). The concept has been described as either deciding to do something different or being forced to, but once begun, second order change will continue and there is no returning to the status quo (National Academy for Academic Leadership, 2007).

In a national study on second order change of 62 leaders, Taylor (2010a) found nine Leader Action Themes consistent across the sample. The first, focusing the culture on all students achieving at a high level appeared to be critical for implementing high expectations for all learners and achieving these expectations. Consistently, these leaders identified six other action themes: make decisions for student learning, stimulate intellectual growth, personally invest in the change, expect collaboration and results for collaboration, strategize for consistency, and expect data-based instructional decisions (Taylor, 2010a). Two of the themes were not consistent across all of the research participants, but were with the majority and need continued study. The two inconsistent themes were engaging families in the learning process beyond casual participation to in-depth participation with accessible real time classroom data and influencing through the political environment. Participant demographics can be found in Table 1.

Table 1

Demographic Variables of National Qualitative Study Participants

	Elementary school principal	Middle school principal	K–8 school principal	High school principal	District leader	Total
# Participants	16	12	2	20	12	62
Gender						
Male	4	10	2	15	3	34
Female	12	2	0	5	9	28
Race						
White	14	12	2	14	10	52
Hispanic	1	0	0	2	0	3
Black	1	0	0	4	2	7
Doctorate						
Yes	6	4	0	8	5	23
In program	2	2	0	4	0	8
No	8	6	2	8	7	31

In a survey study of principals of urban elementary Title I schools La Cava (2009) found that the seven responsibilities of second order change (Marzano et al., 2005) were present. Responsibilities of change agent and ideals/beliefs were significant. In follow-up interviews the responsibility of flexibility was not found to be a perceived factor; principals were not flexible regarding the target change, but did invite input. Verbally, principals indicated that knowledge of curriculum and instruction, and monitoring/ evaluating were important leadership responsibilities related to the changes. There were no significant differences among principals of Title I schools' achievement based on Florida Department of Education (FLDOE) assigned school grades (achievement in reading, writing, mathematics on the Florida Comprehensive Assessment Test [FCAT]). However, those with school FLDOE assigned grades of A and B had higher Principals' Actions Survey (PAS) scores than those with D or F school grades. A comparison of participant demographics of the La Cava Study (2009) with both the Taylor (2010a) and the current study is in Table 2.

Table 2

Comparison of Principal Demographic Variables in 3 Studies

	Florida non-title I elementary principals	[a] Florida title I elementary principals	[b] National leaders k–district
# Participants	37	101	62
Gender			
% Male	21.6	21.0	54.8
% Female	78.4	80.0	44.2
Race			
% Black	13.5	—	11.2
% White	78.4	—	83.8
% Hispanic	8.1	—	4.8
% Doctorate	32.4	18.0	37.0

Note. Race was not available for the Florida Title I Elementary principals.
[a]La Cava, 2009. [b]Taylor, 2010.

Research Questions

Research questions addressed in the current study include the following:

1) What leader actions do non-Title I urban elementary principals believe have influenced positive change in student achievement in their schools from 2006–2007, 2007–2008 and 2008–2009 school years?
2) To what extent does the Principal Actions Score (PAS) of principals of non-Title I urban elementary schools differ from those of principals of Title I urban elementary schools? (La Cava, 2009)

3) What difference, if any, is there in use of each of the seven responsibilities of second order change of Title I urban elementary school principals and of non-Title I urban elementary school principals?
4) What relationship, if any, exists among professional demographics of the principals (years at the school, years as an educator, years as an administrator prior to becoming a principal, years as a principal, highest degree earned, age, gender) and the leader actions they believe influenced student achievement?

Methodology

Population

In April 2010, the Principal Actions Survey (PAS) was sent to 71 principals of urban non-Title I schools in the same Central Florida area as those in the La Cava (2009) study. Within four weeks, 37 participants completed surveys, for a 51% return rate.

The urban school district where the study took place has approximately 174,000 students with a poverty rate of 58%. The racial composition is 34% White, 27% Black, 4% Asian, 3% Multiracial, and 31% Hispanic. Other demographic factors of importance are that 19% are English language learners and 15% are identified as students with disabilities. Since the schools in this study were non-Title I schools the poverty rate for each was under 50% compared to the poverty rate of over 50% for the La Cava (2009) study of principals of Title I schools.

Instrumentation

Principals completed the on-line Principal Actions Survey (PAS) via email. PAS was developed by La Cava (2009) based on the seven responsibilities related to second order change identified by Marzano, Waters, and McNulty (2005) through meta-analysis research. This instrument was reviewed by knowledgeable education leaders and scholars for content validity, readability, and ease of use. Based on the item analysis by La Cava, the items have gone thorough minor revision and the factors were grouped. The neutral item was removed for this study to force a value for each item. Table 3 (La Cava, 2009) shows the relationship of each survey item to the seven factors of second order change identified by Marzano et al. (2005). Items 23–25 were added to strengthen the connection to achievement of student subgroups and to gather qualitative information.

Table 3

Principals' Actions Survey Factor Analysis

Second order change leadership factor	Survey items
1. Knowledge of curriculum, instruction, & assessment	10, 17, 21
2. Optimizer	4, 6, 8, 20
3. Intellectual stimulation	7, 12, 22
4. Change agent	2, 3, 9, 13
5. Monitoring & evaluating	16, 19
6. Flexibility	5, 11
7. Ideals & beliefs	14, 15, 18

Note. Overall score of 21 items mean value 97.26, range: 84 (actual range: 26). (La Cava, 2009, p. 70)

Data Analysis

Survey data were analyzed to determine the factors which principals perceived to influence their student achievement gains. These factors were compared with those found by La Cava (2009) to determine the relationship between responses of Title I urban principals and those who were not Title I principals. A confirmation item analysis was intended, but the small sample prevented the meaningfulness of either a confirmatory or exploratory item analysis. Multiple regression was used to determine the relationship among FLDOE assigned school grades and achievement of Adequate Yearly Progress (AYP), and leadership actions/seven responsibilities of second order change, and also between principal demographic variables and leader actions/seven responsibilities of second order change.

Qualitative data (item 24) were analyzed with the constant comparison method (Patton, 1990) to determine the attribution principals made regarding their use of Leader Action Themes identified by Taylor (2010a). Also, responses regarding actions that principals believe influenced positive change in AYP for subgroups were similarly analyzed.

Data preparation issues. Some of the research questions in this study utilized data collected from La Cava (2009) with permission from the author. However, the questions in the current study were given on a 4-point Likert-type scale (no neutral), while those in the La Cava study were given the option of "neither agree nor disagree." Therefore, the data in the La Cava study were re-coded to a 4-point scale; those responses with the neutral option were coded as missing. Respondents only received a scale score for a given factor if all items within that factor were answered. This coding scheme was utilized instead of converting the current study's scale to 5-point as it would prevent making any assumptions about a respondent's true feelings on a given item.

Findings

Research Question 1

What leader actions do non-Title I urban elementary principals believe have influenced positive change in student achievement in their schools from 2006–2007, 2007–2008 and 2008–2009 school years?

There were two items on the PAS which addressed this research question, PAS items 24 and 25. The first dealt with principal attributions of their actions related to improving student achievement and the second specifically addressed actions related to AYP subgroup improvements.

PAS item 24 was, "Please share your leadership practices that you attribute to improving student achievement at your school." This item was open ended to elicit from principals their actions related to improved student achievement. Responses were categorized by the nine Leader Action Themes identified by Taylor (2010a). Items were placed with the theme most closely aligned with the comments. The first seven Leader Action Themes were consistent in principal responses. Only one principal attributed changes in student achievement to parental engagement and none mentioned the last leader action theme, influencing through the political environment. Focusing the culture on learning, stimulating intellectual growth, personally investing in the change, expect collaboration and results, and data-based decision making were more often mentioned than were making decisions for student learning and strategizing for consistency. Although these two were not directly stated, they were implied in the responses. Table 4 represents the principals' responses.

Table 4

Leadership Practices That Principals Attribute to Improving Student Achievement (N=37)

Leader action theme	Non-title I elementary principal examples
Focus the culture on learning	Accountability for staff for student learning. Daily walkthroughs, boot camps. Hire well, high expectations, remove barriers, monitor data, listen, praise, effort, believe, pray! Create open and honest communication so teachers can change their schedule as needed. Share my high expectations for all students to learn through data-based decision-making with research-based instruction.
Make decisions for student learning	Leadership team pushing-in to intervene with students (in contrast to pull-out). Before, after, school and Saturday tutoring.

(continued)

Table 4 *(continued)*

Leader action theme	Non-title I elementary principal examples
Stimulate intellectual growth	Everyone is expected to question and grow. Weekly staff meeting from 8-8:50 I provide mini pd through book study, articles, research-based practices. Building better teachers.
Personally invest in the change	Principal conducts the data meetings, etc. Make changes in instruction and evaluate results. We read on what was not working and visited finding success. At the beginning of school I shared AYP data and we did not meet AYP.
Expect collaboration and results	PLC as a way of doing business. Involving all staff members in being responsible for student achievement. Sharing instructional strategies.
Strategize for consistency	Provide time to practice, get feedback and get better at implementing curriculum & instruction. Student engagement is monitored.
Data-based decision making	Raw data and perceptions are discussed and then goals set with appropriate strategies. Conduct mini data meetings. Frequent meetings with teachers regarding benchmark and writing simulation scores. Data talks with teachers/individuals. AYP subgroup targeting.
Engage families in learning	Promote parental involvement.
Influence through the political environment	None.

PAS item 25 addressed principal actions to improve AYP by improving performance of student subgroups: "Which of your actions have impacted achievement of Adequate Yearly Progress of subgroups such as economically disadvantaged, special education, and English language learners?" In the previous studies, which this one extends, nothing was specifically asked about achieving AYP or addressing improvement in achievement of student subgroups. These new data were compared to the Leader Action Themes. In the responses principals only mentioned two subgroups specifically—special education (ESE) and English Language Learners (ELL). One principal indicated that there were no subgroups in the school. Principals were specific in identifying tutoring, interventions, Response to Intervention (RtI), monitoring instruction and on-going assessments, research-based instruction, teachers sharing strategies, monitoring data, and focusing on inclusion (ESE). Data-based decision making is one of the Leader Action Themes (Taylor, 2010a) identified. Monitoring

represents the Leader Action Theme of personally investing in the change (Taylor, 2010a). The identification of interventions and research-based instruction are examples of the Leader Action Theme of making decisions for student learning (Taylor, 2010a). Responses were grouped into four categories related to improving AYP student subgroup achievement: intervention, research-based instruction, data-based decision-making, and monitoring. Table 5 represents the number of responses related to each of these categories.

Table 5

Categories and Leader Action Themes Specific to Improving Achievement of AYP Subgroups

Category	Number of responses	Leader action theme (All focus the culture on learning)
Intervention	11	Decisions for learning
Data-based decision making	7	Data-based decision making
Monitoring instruction and on-going assessments	8	Personally invest in change
Research-based instruction	9	Personally invest in change

Note. Comments were duplicated by principals so the total does not equal 37.

Research Question 2

To what extent do PAS scores of non-Title I urban elementary principals differ from Title I urban elementary principals found by La Cava (2009)?

To compare the total PAS scores of principals of Title I urban elementary schools (La Cava, 2009) with the principals of non-Title I urban elementary schools, the items on the original survey were converted from a 5-point scale to a 4-point scale and only those respondents who had a full set of responses without a neutral response were included. All respondents in the current study were included since the neutral response was removed from the survey. A total score was computed by summing the scores from all 21 items with a resulting possible score range of 21 to 84.

An independent *t*-test was run to compare this total score between those in the Title I and non-Title I groups. There was a significant difference between the two groups, $t(89) = 2.37$, $p = .02$. The 54 Title I principals reported significantly higher use of the seven responsibilities of second order change ($M = 78.87$, $SD = 4.45$) than the non-Title I principals ($M = 76.38$, $SD = 5.55$). Even with this significance, it is important to note that both groups of scores were extremely high as indicated by the reported use of the seven responsibilities of second order change by both sets of principals.

Research Question 3

What difference, if any, is there in use of each of the seven responsibilities of second order change of Title I urban elementary school principals and of non-Title 1 urban elementary school principals?

To accurately compare the differences of use of the seven responsibilities of second order change between the La Cava (2009) study and the current one, *t*-tests were run between the two groups using the factor groupings from both studies. Table 6 provides the comparison of results from both studies using the factors identified in the La Cava study. Only the Flexibility responsibility had significant difference—$t(130) = 4.11$, $p < .01$. The principals in the La Cava (2009) study showed a greater degree of Flexibility ($M = 7.42$, $SD = 0.75$) than those in the current study ($M = 6.78$, $SD = 0.92$).

Using the factors obtained from RQ 3 of the current study, the significant factors differ. Table 6 displays the results of these *t*-tests. Here, the Ideals/Beliefs factor, $t(129) = 2.01$, $p < .05$, showed significantly different results; those principals in the La Cava (2009) study had significantly higher scores in this area ($M = 11.45$, $SD = 0.90$) than those in the current study ($M = 11.08$, $SD = 1.04$). The Monitoring/Evaluating factor was significant as well, $t(52.45) = 2.36$, $p = .02$; those principals in the La Cava study had significantly higher scores in this area ($M = 10.96$, $SD = 1.06$) than those in the current study ($M = 10.35$, $SD = 1.42$). While significant under the previous grouping, flexibility is now the second-least significant factor, $t(134) = 0.52$, $p = .60$. This result demonstrates the volatility of factor grouping and its importance.

Table 6

T-Test Comparison Utilizing La Cava Factors

	La Cava[a]		Current study			
Factor	*M*	*SD*	*M*	*SD*	*Df*	*t*
Knowledge of curriculum, instruction & assessment	10.84	1.00	10.70	1.00	122.00	0.70
Optimizer	15.07	1.11	14.89	0.94	126.00	0.84
Intellectual stimulation	10.62	1.12	10.59	1.17	117.00	0.12
Change agent	14.99	1.08	14.78	1.27	58.24	0.86
Monitoring & evaluating	7.66	0.55	7.62	0.72	136.00	0.36
Flexibility	7.42	0.75	6.78	0.92	130.00	4.11**
Ideals & beliefs	11.28	0.75	11.00	1.05	51.15	1.72

Note. Change Agent and Ideals & Beliefs have significant Levene's Test results, therefore, equal variance was not assumed.

[a]La Cava, 2009.

Research Question 4

What relationship, if any, exists among professional demographics of the principals (years at the school, years as an educator, years as an administrator prior to becoming a principal, years as a principal, highest degree earned, age, gender) and the leader actions they believe influenced student achievement?

Table 2 displays the demographics of participants to those in the two previous studies, but only the La Cava (2009) data are used to answer this question. They were similar in race and percent with doctorates, but different in gender. To address the research question, one multiple linear regression model was created for each of the seven current study factors to determine their predictability from the five demographic variables. The demographic variables were reduced to better accommodate the data and eliminate small groups for which there were risks of dangerous interpolation from small cell counts. Gender remained unchanged.

- Years as principal was reduced to these categories: less than 4 years, 4-6 years, and greater than 6 years.
- Age was reduced to under 50 and over 50 years of age.
- Ethnicity was reduced to "Non-White" and "White."
- Degree earned was reduced to Master's Degree and beyond Master's Degree.

All variables except Gender were dummy coded for the analysis, as they were categorical in nature. (Gender, as a dichotomous variable, was already in the proper format). Tables 7 through 10 display the regression results for each of the dependent variables. The tables were not arranged in any particular order; it was simply more user-friendly to break the results up among several tables than to put the results into one large table.

In Table 7, neither Change ($F(6, 30) = 1.14$, $p = .37$) nor Flexibility ($F(6, 30) = 0.57$, $p = .75$) yielded a significant model. The R^2 value for Change was .19 and was .10 for Flexibility, meaning the demographic variables accounted for 19% of the variability in Change and 10% of the variability in Flexibility. None of the individual predictors showed any significance like the lack of significance in the overall model.

Table 7

Multiple Regression for Factors by Demographics (N = 37)

	Change			Flexibility		
Factor	β	*SE* β	β	β	*SE* β	β
Constant	14.91	0.35		7.31	0.27	
Male	-0.70	0.44	-0.31	-0.34	0.34	-0.21

(continued)

Table 7 *(continued)*

	Change			Flexibility		
Factor	β	*SE* β	β	β	*SE* β	β
Years as principal						
< 4 years	0.13	0.45	0.06	0.20	0.35	0.14
4–6 years	0.27	0.41	0.14	-0.06	0.31	-0.04
< 50 years of age	0.23	0.36	0.12	0.37	0.27	0.27
Non-white	0.22	0.39	0.10	-0.03	0.30	-0.02
Master's degree	0.48	0.32	0.26	0.03	0.25	0.02
Overall *F*		1.14			0.57	
R^2 value		0.19			0.10	

* $p < .05$, ** $p < .01$

Neither Ideals/Beliefs ($F(6, 30) = 1.94$, $p = .11$) nor Intellectual Stimulation ($F(6, 30) = 1.74$, $p = .15$) yielded a significant model. The R^2 value for Ideals/Beliefs was .28 and .26 for Intellectual Stimulation, meaning the demographic variables accounted for 28% of the variability in Ideals/Beliefs and 26% of the variability in Intellectual Stimulation.

Despite both models being insignificant, the gender variable (indicated by "male" in the table) was significant ($p = .03$). The negative Beta value indicates that being male, when holding all other variables constant, is related to a lower value of the dependent variable (Intellectual Stimulation). Thus, despite the insignificance of the overall model the gender variable is still an important variable to consider.

Table 8

Multiple Regression for Factors by Demographics (N = 37)

	Ideals/Beliefs			Intellectual stimulation		
Factor	β	*SE* β	β	β	*SE* β	β
Constant	11.13	0.36		14.39	0.51	
Male	-0.85	0.45	-0.34	-1.44	0.64	-0.42*
Years as principal						
< 4 years	-0.08	0.47	-0.04	0.02	0.65	0.01
4–6 years	-0.64	0.42	-0.31	-0.56	0.59	-0.20
< 50 years of age	0.45	0.37	0.22	0.28	0.51	0.10
Non-white	0.49	0.41	0.20	0.72	0.57	0.21
Master's degree	0.25	0.33	0.12	-0.01	0.46	—
Overall *F*		1.94			1.74	
R^2 value		0.28			0.26	

* $p < .05$, ** $p < .01$

Table 9

Multiple Regression for Factors by Demographics (N = 37)

	KCIA			Monitoring/Evaluating		
Factor	β	*SE* β	β	β	*SE* β	β
Constant	3.81	0.18		10.20	0.52	
Male	-0.08	0.22	-0.07	-0.14	0.65	-0.04
Years as principal						
< 4 years	-0.03	0.23	-0.03	0.01	0.67	—
4–6 years	-0.23	0.21	-0.25	-0.59	0.60	-0.21
< 50 years of age	1.30	0.18	0.14	0.66	0.53	0.24
Non-white	0.26	0.20	0.23	1.13	0.58	0.33
Master's degree	-0.24	0.16	-0.25	-0.23	0.47	-0.08
Overall *F*		0.97			1.31	
R^2 value		0.16			0.21	

* $p < .05$, ** $p < .01$

Table 9 demonstrates that neither Knowledge of Curriculum, Instruction (KCIA), and Assessment ($F(6, 30) = 0.97$, $p = .46$) nor Monitoring/Evaluating ($F(6, 30) = 1.31$, $p = .28$) yielded a significant model. The R^2 value for Knowledge of Curriculum, Instruction, and Assessment was .16 and .21 for Monitoring/Evaluating, meaning the demographic variables accounted for 16% of the variability in Knowledge of Curriculum, Instruction, and Assessment and 21% of the variability in Monitoring/Evaluating. None of the individual predictors showed significance, paralleling the lack of significance in the overall model.

Table 10

Multiple Regression for Factors by Demographics (N = 37)

	Optimizer		
Factor	β	*SE* β	β
Constant	10.44	0.42	
Male	-0.83	0.52	-0.32
Years as principal			
< 4 years	0.31	0.54	0.13
4–6 years	0.26	0.48	0.12
< 50 years of age	0.70	0.42	0.33
Non-white	-0.01	0.47	—
Master's degree	-0.26	0.38	-0.12

(continued)

Table 10 *(continued)*

	Optimizer		
Factor	β	*SE* β	β
Overall *F*		0.70	
R^2 value		0.12	

* $p < .05$, ** $p < .01$

Similar to the other responsibilities of second order change, Optimizer ($F(6, 30) = 0.70$, $p = .65$) did not yield a significant model. The R^2 value for Optimizer was .12, meaning the demographic variables accounted for 12% of the variability in Optimizer. None of the individual predictors showed any significance confirming the lack of significance in the overall model.

Discussion

The pressure on school leaders to improve learning as measured by high stakes assessment has created a context of accountability for student learning quite different than before NCLB was implemented in 2002. The researcher undertook the study to identify behaviors of leaders who successfully implement second order change and whose student achievement improves as measured by such assessments. The background of the research was grounded in second order leadership responsibilities related to improving learning as identified by Marzano, Waters, and McNulty (2005). The researcher questioned these responsibilities since the studies in the aforementioned meta-analysis research were conducted before accountability was implemented. There are two recent studies (La Cava, 2009; Taylor 2010a) upon which the current one was based, both of which confirmed the use of the seven responsibilities of second order change. This study sample of principals leading non-Title I urban elementary schools are in one of the same Central Florida school districts as the principals of urban Title I elementary schools previously studied and yielded similar findings. Principals do use the seven responsibilities, but also note specific actions to which they attribute improvement in learning, particularly for AYP student subgroups. The principals of Title I schools report significantly greater use of the 7 responsibilities, indicating a clear focus on second order change which may be driven by the greater sense of urgency to change student achievement.

When analyzing the seven responsibilities individually to determine significance, different findings emerged based on the factor analyses of the two survey administrations. This variation in findings reflects the volatility of factor analysis and the need to continue to refine PAS with a larger sample and perhaps principals of middle and high schools. In La Cava's (2009) study, factor analysis of flexibility was significant, but in the second

factor analysis (conceptual factors) flexibility fell to the second least significant factor, which may be because principals are flexible with input, but not flexible with the change itself, as Bristo (2010) also discovered. The factor analysis and grouping of items by the seven responsibilities of second order change need to continue to be tested or perhaps aligned with the Leader Action Themes of Taylor (2010a).

What may be most important is that in La Cava's (2009) study ideals and beliefs and monitoring/evaluating were significant, but not in the current study of principals of urban non-Title I schools. This finding leads the researcher to conclude that the principals of Title I schools implemented these responsibilities at a higher level than the principals of non-Title I schools. Again, the urban Title I principals have clear focus on the target change and continual monitoring is practiced in these schools, which they believe to be critical for improvement of student achievement.

Principal demographics may need further study, as little significance was found in the current study aligned with the findings of Taylor (2010a). The principal demographic of gender was significant, identifying that male principals in non-Title I urban elementary schools reported less emphasis on intellectual stimulation or professional learning for themselves and their faculties than did females. This finding may be important for those who select, develop, and work with principals to consider as an emphasis.

Principals whose schools were Title I reported a significantly higher use of the seven responsibilities of second order change. Although both sets of principals had very high PAS scores, it can be concluded that the principals of Title I schools practice second order change behaviors more frequently or more purposefully than do principals of non-Title I elementary schools represented in these studies.

From the outset, the researcher sought to find specific actions of leaders whose schools successfully implemented second order change that resulted in higher student achievement. The examples provided by principals of non-Title I schools confirmed the first seven Leader Action Themes (Taylor, 2010a). They focus the culture on learning, make decisions for student learning, stimulate intellectual growth of themselves and others, personally invest in the target change, expect collaboration and results, strategize for consistency, and implement data-based decision making. The last two Leader Action Themes (engage families in learning, influence through the political environment) were not identified as leader actions to which principals of non-Title I elementary schools attributed positive change in student learning. Only one principal made the attribution of parent engagement to be related to changes in student achievement. These two Leader Action Themes were also the least identified by the national study, leading to the conclusion that these two themes may not be important to second order change.

When the responses focused on improving performance of student subgroups to meet AYP, principals confirmed the importance of the

Leader Action Themes (Taylor, 2010a) of focusing the school's culture on all students achieving at a high level, making decisions for student learning, data-based decision making, and personally investing in the change. Monitoring of instruction and assessments within the school year leading to the annual accountability assessment represents personally investing in the change. Furthermore, principals specifically identified curricular and instructional foci of intervention and research-based instruction particularly for student subgroups, both of which are represented by the Leader Action Theme of make decisions for student learning.

Conclusions

The context of accountability for improving learning, as measured by annual accountability assessments, requires more specificity in leader actions than the seven responsibilities of second order change identified by Marzano, et al. (2005) and has changed the role of principals. These leader behaviors are represented by the Leader Action Themes (Taylor, 2010a) and the examples provided by leaders in the other two studies represented herein. Principals who are interested in improving student achievement should review their daily leadership practices while reflecting on the Leader Action Themes and the categories that principals identified as assisting with improving performance of AYP student subgroups.

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