

Predicting the Self-Efficacy of School Leaders: Trust Matters

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Given the current educational climate as promoted by policies such as Race to the Top and No Child Left Behind legislation, researchers and policymakers are investigating and investing in new ways of improving student achievement. One promising construct that has emerged in the literature is that of a sense of self-efficacy. As defined by Bandura (1997, p.3), self-efficacy is the belief—in one's capabilities to organize and execute a course of action required to produce a given attainment. Several decades of research have established the importance of a sense of self-efficacy for teachers (e.g., Tschannen-Moran, Woolfolk-Hoy & Hoy, 1998) and as a predictor of student achievement and job satisfaction (e.g., Caprara, Barbaranelli, Steca, & Malone, 2006). However, given the embedded nature of teachers within a school system that may either facilitate or impede their ability to carry out behaviors necessary to improve student learning (e.g., effective teaching), researchers have moved towards higher levels of analysis. For example, Hoy, Sweetland, and Smith (2002) argued for the importance of studying collective efficacy, or the perceptions of teachers in a specific school—that the faculty as a whole can execute courses of action required to positively affect student achievement.

Despite this shift towards an interest in efficacy at the collective level, relatively little research has addressed the concept of administrator or school leader efficacy. In a seminal study, Tschannen-Moran and Gareis (2004) sought to define and to measure the construct of principal self-efficacy. They state they research on the efficacy beliefs of principals may be limited by the absence of a reliable and valid instrument. As a result, they

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created an 18-item measure of principal self-efficacy called the Principal Self Efficacy Scale (PSES). This measure, though modified, was then used in a 2008 study by Leithwood and Jantzi (2008) to demonstrate that perceptions of self-efficacy among a group of principals was a positive predictor of student achievement, although it was moderated by school and district variables. In sum, the relationship between leadership efficacy and desired educational outcomes such as student achievement is as of yet unclear and warrants further research.

Furthermore, apparently no studies to date have examined the efficacy beliefs of higher-level school administrators. Thus, in the present study, we would like to expand the level of analysis even further from the level of teachers and principals to include district-level administrators such as superintendents and directors who play an important role in making day-to-day decisions about educational programs, spending, staff, and facilities.

In addition to exploring self-efficacy at a higher organizational level, we are interested in trust and its relationship to self-efficacy. Much like self-efficacy, trust has received significant attention in the educational literature. There are at least two prominent models of trust which have been explored. The first was proposed by Hoy & Tschannen-Moran (1999) based on an extensive review of the literature and includes five facets: benevolence, reliability, competence, honesty, and openness. In their 1999 study, they piloted and tested a set of trust scales which included trust at three organizational levels: trust in principal, trust in colleagues, and trust in clients. The second model was proposed by Bryk and Schneider (2002) and labeled “relational trust,” or the interpersonal social exchanges that take place in a school community. Relational trust includes four components: respect, competence, personal regard for others, and integrity. Despite some of the differences in defining the construct, trust has been shown by both

research teams to be a school level characteristic that has an effect on student achievement, even when SES is controlled for (Bryk & Schneider, 2002; Goddard, Tschannen-Moran & Hoy, 2001).

Given the demonstrated association of both trust and self-efficacy with improving student achievement, we set out to examine the relationship between individually reported levels of trust and their association with a sense of individual efficacy for a sample of school leaders from a northeastern state.

Methods

The participants in this study are a group of 297 school leaders sampled from twenty-five school districts participating in a pilot teacher evaluation program in a northeastern state. 256 completed a sufficient number of items in order to calculate scales for regression analyses. The sample was comprised of approximately 9% superintendents, 30% principals, 25% assistant principals, 20% supervisors of instruction and 17% percent other district level positions including directors. The majority of respondents had earned a master's degree (83%) and had worked in the field of education for 16 or more years (65%).

As part of an evaluation of the pilot teacher evaluation system, we distributed surveys via email to all school leaders in these districts between March and April 2013 which assessed perceptions of pilot implementation in addition to asking about district and school-level factors detailed below. The survey response rate was 62%.

Measures

Demographics. Participants were asked to respond to a number of demographic questions including their school district, highest degree earned, their position in the school, and years of working in education.

Social Economic Status (SES). In order to control for the effect of school-district SES on efficacy beliefs, we coded the SES of school leaders' districts based on data provided by the department of education in our sample's state. These data comprise an eight-point scale and take into account factors such as unemployment rate, percent of individuals in poverty, median family income, and percent of adults with no high school diploma. The data

for the current study are based on the 2000 census which was when these data were last updated.

Self-Efficacy. Efficacy beliefs for the administrators in the study were evaluated by constructing a self-efficacy scale that asked administrators to rate their agreement with seven statements such as, "I can get things done in my district when I need to" and reverse-coded statements such as, "When I offer ideas for improvement in my district, I get criticized or punished." Administrators were asked to rate their agreement to these statements on a five-point Likert scale ranging from "strongly agree" (5) to "strongly disagree" (1), $M=3.70$, $SD=0.65$. Statements were generated based on a literature review of existing scales which were used to assess teacher and principal efficacy but modified to be broad enough to be applicable to different individuals in the school system. The seven-item scale was found to be highly reliable with a Cronbach's alpha of .83.

Trust. Faculty trust was assessed by asking school leaders to rate their level of agreement ranging from "strongly agree" (5) to "strongly disagree" (1) to eight statements such as, "administrators tend to trust other administrators in the district," and "there is good communication between teachers and administrators." Survey items were created based on existing trust scales but adapted to investigate trust between administrators and teachers as well as trust between administrators. Factor analysis confirmed the presence of two factors and two scales were generated with a Cronbach's alphas of .826 and .841 for the administrator-teacher trust scale ($M=3.52$, $SD=.67$) and the administrator-administrator trust scales ($M=3.74$, $SD=.65$) respectively, suggesting scales with high internal consistency.

Results

We conducted a hierarchical multiple regression analysis to evaluate whether the self-efficacy beliefs of administrators could be predicted by reported levels of administrator-administrator (AA Trust) and administrator-teacher (AT Trust). We began by controlling for factors that could account for school leader self-reported efficacy by entering highest degree earned, current position within school system, years taught, and district SES into the regression equation. In step 1 of the analysis, we found that the SES of the district ($\beta=0.225$, $p<.001$) and

Table 1. Hierarchical Regression Analysis for Variables Predicting School Leader Efficacy ($n=256$)

Variable	Model 1			Model 2		
	B	SE B	β	B	SE B	β
SES of District	0.64	0.018	.225**	.054	.015	.187**
Highest Degree Earned	0.190	0.089	.133*	.266	.074	.186**
Position in School	0.032	0.027	.074	.061	.023	.140**
Years in Education	0.013	0.066	.013	-.007	.055	-.007
Admin-Teacher Trust				.164	.062	.175**
Admin-Admin Trust				.407	.064	.423**
R^2			.079**			.376**

* $p < 0.05$ ** $p < 0.01$

the highest degree earned ($\beta=0.133$, $p=0.034$) were both significant predictors of reported self-efficacy (see Table 1). The current position within the school system ($p=.237$) and the number of years worked in education ($p=0.839$) were not significantly associated with reported self-efficacy. The overall model was significant and explained approximately 8% of the variance in the self-efficacy scale ($R^2=.079$, $p<0.01$). In step 2 of the analysis, we added the AA trust scale and the AT trust scale which increased the model's R^2 to .37. To test for multicollinearity, we calculated VIF values and found that they were less than 1.8 for all variables in the equation, indicating a low degree of multicollinearity. Thus, we conclude that both AA trust ($\beta=0.423$, $p<.001$) and AT trust ($\beta=0.175$, $p<.001$) are significant predictors of school leader self-efficacy beliefs, even after controlling for years of teaching, highest degree earned, SES, and current school position.

Discussion

Given recent research interest into the importance of self-efficacy beliefs for both teachers and principals, we wanted to expand on this growing body of literature by examining self-efficacy beliefs in school leaders ranging from superintendents to principals and supervisors of instruction. In constructing a regression model to predict individual self-efficacy, we found that reported levels of trust among teachers and administrators were a significant predictor of a sense of individual self-efficacy. These findings suggest that there is a large and positive relationship between trust and self-efficacy for school leaders across positions within the school system, even after controlling for other relevant variables. Interestingly, the relationship was strongest for trust

between administrators rather than trust between teachers and administrators. We believe that this suggests that targeting trust between administrators may promote increased levels of perceived self-efficacy within the school system. However, given the current research design which uses cross-sectional data, we cannot determine the causal direction and there is a possibility that in fact higher levels of self-efficacy lead to higher level of trust between administrators and teachers rather than vice-versa.

Although we cannot speculate whether there is a causal relationship between perceived trust within a school system and individual self-efficacy, we believe that this finding could still be of use to both school administrators and policymakers. Since there is a demonstrated relationship between collective self-efficacy and student achievement as well as a relationship between trust and student achievement, it is likely that increasing both could lead to improved student achievement. The current study suggests the need for interventions which specifically target trust between administrators as a means of increasing efficacy and potentially student achievement.

Although this hypothesis requires further research, we are encouraged by the results of the present study which show a positive and robust association between trust and self-efficacy.

Study Limitations

It is worth mentioning a number of limitations in the current study. Due to the paucity of research in this area, we created new scales for the present study, and these have not been subjected to rigorous examinations of

their reliability and external validity. However, we are encouraged by strong internal reliability for all scales used in the study and their content being based on existing scales in the literature. In addition, given the positive associations observed between SES and the highest degree earned with the self-efficacy scale, as would be expected, we are encouraged that we have developed a valid measure of general self-efficacy that is short and reliable. Finally, we were not able to include measures of student achievement in the current study which would demonstrate an association between self-efficacy, trust, and student achievement in the current sample of administrators.

Implications for Future Work

Future research would benefit from exploring the complex relationships between trust, self-efficacy, and other school and district-level factors as they relate to student achievement. In particular, we believe that this area of research could benefit from more mediation studies intended to understand the mechanisms between the variables and their effect on student achievement (for example, Leithwood & Jantzi, 2008). Finally, we would like to see studies that investigate school and district level interventions that seek to improve self-efficacy and trust amongst teachers and administrators and to see if they are able to improve student outcomes as a result. In the context of increased pressure on teachers and administrators to improve outcomes within their schools, we need to ensure that they have the social and cognitive resources to meet this increased demand. Trust is one such social resource that can benefit both teachers and administrators and may lead to another, more cognitive resource—that of self-efficacy beliefs.

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