Examining the Relationship between Principal Leadership, Teacher Motivation, and the Classroom Environment

by

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Abstract

One purpose of this study was to examine the different aspects of a school environment including leadership, motivation, and instruction. Specifically, the following relationships were investigated: (a) principal leadership styles and teachers' motivation at work, (b) teachers' motivation to work and the conditions in which they motivate their students, and (c) teachers' motivation to work and the learning experiences they provide their students. Moreover, another prevailing purpose was also to determine the implications of the findings for school leaders seeking to support teacher motivation, student autonomy, and authentic intellectual work in the classroom. Previous research has not examined these relationships through the theoretical lenses provided by the two fields of educational leadership and educational psychology. Moreover, related research has not explored these relationships by collecting data from both teachers and administrators within the same school system populations. Also unlike extant literature, the research design of this study called for the collection of quantitative and qualitative data in order to triangulate findings and provide richer data to explain these complex constructs inherent to a learning organization.

The results from surveys completed by 141 K-12 educators and interviews conducted with six administrators in two southeastern participating school systems were analyzed. The survey consisted of three scales designed to measure teachers' perceptions of their principal's leadership style, psychological need satisfaction at work, and motivational orientation. The survey also asked teachers to upload an original activity that incorporated challenging learning

experiences for students which was then evaluated based on rigor and relevance. These survey results were analyzed using statistical methods such as a one-way multivariate analysis of variance (MANOVA) and multiple regression. The findings were then shared with participating administrators during an interview in order to determine implications for educational leadership practices.

Results from the multivariate analysis of variance (MANOVA) indicated principals' leadership styles significantly affected teachers' motivation, and post hoc tests revealed that the facets of their motivation that were significantly affected included their feelings of autonomy, relatedness, and competence at work. Specifically, teachers reported significantly greater psychological need satisfaction when their principal held a democratic leadership style. Based on the responses from interviews, participating administrators appeared to lead with a democratic style and their support of teachers' autonomy, competence, and relatedness also emerged along with other motivational strategies. Furthermore, results from multiple regression analyses suggested that teachers' motivation did not significantly predict their support of students' autonomy nor their implementation of authentic intellectual work. The administrator participants were the most surprised by these findings and stated that based on their experiences, highly motivated teachers did effectively implement these motivational and instructional strategies. However, the administrators infrequently mentioned student autonomy, rigor, or relevance when discussing highly motivated teachers before these survey results were revealed in the interview, reflecting the insignificant results from the survey.

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List of Abbreviations

AIW	Authentic Intellectual Work
ANOVA	Analysis of Variance
AYP	Adequate Yearly Progress
BLOSC	Basic Level of School Contexts
BPNT	Basic Psychological Needs Theory
CET	Cognitive Evaluation Theory
EFA	Exploratory Factor Analysis
MANOVA	Multivariate Analysis of Variance
NCLB	No Child Left Behind
OIT	Organismic Integration Theory
PIS	Problems in Schools
SDT	Self-determination Theory

CHAPTER I. INTRODUCTION

The call for a free appropriate public education is a notion embedded in our national

identity; therefore, great efforts are made to ensure a sufficient Kindergarten-12th grade

education to all children. Without an adequate education, today's young adults may not be

equipped with the skills needed for them to become contributors to society. As stated best by

Swanson (2009)**,** earning a high school diploma is not only advantageous for overall

improvement of quality of life, it is vital to ensure that America maintains its competitive edge in

a rapidly globalizing world economy. In order to compete in the international market, President

Barack Obama argued that "maintaining our leadership in research and technology is crucial to

America's success. But if we want to win the future – if we want innovation to produce jobs in

America and not overseas – then we also have to win the race to educate our kids" (U.S.

Department of Education, 2011). The race to student learning is marked by educators such as

school administrators and classroom teachers who influence this journey through motivational

and educational practices.

Statement of the Problem

The field of education is comprised of research that offers suggestions for improving

student performance and promoting curriculum initiatives; however, the influence of educators is

largely the impetus for such change to occur. Since teachers facilitate student learning and

implement instructional practices, they serve as a vital factor in the educational process.

Therefore, the teacher-student relationship is a crucial facilitative factor in students' learning

experiences (Wentzel, 2009). However, the impact of school leaders must be taken into consideration as it is also a highly influential factor on student learning, second only to teacher-related effects (Leithwood et al., 2004; Louis et al., 2010). Further, Lezotte and McKee (2006) asserted that school leaders indirectly affect student learning through the practices in which they lead teachers and create the organizational climate of the school.   Thus, the need to retain quality teachers in the classroom and ensure teacher-supportive leadership practices are paramount to the success of children's learning and must remain as an imperative concern of instructional leaders.

However, retaining a highly qualified workforce is challenged by the trend of teachers who transfer among schools, move to another position within education, or leave the profession altogether at alarmingly high rates. According to Ingersoll (2003), almost 40 percent of teachers who enter the classroom for the first time will leave within their first five years of teaching. A report prepared for the National Commission on Teaching and America's Future (2007) claimed that "teacher attrition has grown by 50 percent over the past 15 years" and "the national teacher turnover rate has risen to 16.8 percent" (p. 1). Further, the significant teacher turnover trend is not without costs which include substantial financial resources, school effectiveness, student development and attainment, staff morale, and the creation of an inexperienced teaching workforce (Rinke, 2008). Given the negative consequences of teacher attrition, research on this issue abounds. Several of the reasons for teacher attrition that Rinke (2008) highlighted were beyond the control of an instructional leader (i.e., marital status change, having children, student population); however, many contextual reasons supported by the literature are within a school leader's purview (i.e., support systems, administration, ability to exercise autonomy and making decisions).

Overview of Areas Studied and Proposed Interventions

Research findings regarding the effects of school administrators' leadership styles suggest that leaders who work collaboratively with teachers, solicit their input, include them in decision-making processes, encourage open communication, and create a positive school culture result in supportive relationships with teachers and, in turn, greater student achievement (Hallinger & Heck, 1998; Marzano, Waters, & McNulty; 2005; McKinley, 2006). However, these practices which support teachers' feelings of autonomy, competence, and relatedness in their work environment are not exercised by all school leaders. Moreover, there is a paucity of research regarding the impact of principal leadership styles on teachers' motivation, specifically their needs for autonomy, competence, and relatedness (Collie et al., 2013; Eyal & Roth, 2010).

Another important topic in need of further elucidation is the relationship between teachers' motivation at work and the type of motivational and instructional environment they create for students, both of which are teacher-dependent elements that contribute to student learning. With regard to student motivation, Roeser, Urdan, and Stephens (2009) found that elementary and middle school teachers implemented motivational features from their work experiences (e.g., competition, social comparison, differential treatment) into the structure of their classroom environment. Further, Roth, Assor, Kanat-Maymon, and Kaplan (2007) theorized and empirically supported that teachers who reported feelings of autonomy at work fostered an environment within which students could experience autonomous motivation. Regarding the quality of instruction, Niemiec and Ryan (2009) stated, "…the more that teachers' satisfaction of autonomy is undermined, the less enthusiasm and creative energy they can bring to their teaching endeavors" (p. 140). The authors continued to assert that many teachers

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experience a controlling work environment due to accountability initiatives which, in turn, "promotes teachers' reliance on extrinsically focused strategies that crowd out more effective, interesting, and inspiring teaching practices that would otherwise be implemented" (Deci & Ryan, 2002 as cited in Niemiec & Ryan, 2009, p. 140). Although these insights are valuable, there is still a call for further investigation into how teacher motivation impacts their classroom environment, specifically motivational and instructional factors (Filak & Sheldon, 2008; Roth et al., 2007).

Purpose of the Study

In addition to the need for further research into these two relationships—(1) leadership styles and teachers' feelings of autonomy, support, and competence and (2) teacher motivation and the motivational and instructional environment of their classroom, a holistic investigation which explores the effects between all variables can significantly contribute to educational scholarship and practice. Therefore, the purpose of this study was to examine the relationships between principal leadership styles, teacher motivation, and classroom environments in two southeastern school systems as well as to elucidate the implications of these findings for school leaders seeking to support teacher motivation and see autonomy support, rigor, and relevance fostered in the classroom.

Research Questions and Hypotheses

The research questions of this study included:

1. How do principals' leadership styles affect teachers' motivation at work?

2. How does teachers' motivation to work affect the conditions in which they motivate their students?

3. How does teachers' motivation to work affect the learning experiences they provide for their students?

4. What are the implications of this study for school leaders seeking to support teacher motivation, student autonomy, and authentic intellectual work in the classroom?

It was hypothesized that:

1. Principals with a democratic leadership style would support teachers' psychological need satisfaction for competence, autonomy, and relatedness at work more than principals with an authoritarian or laissez-faire leadership style.

2. Teachers who reported greater psychological need satisfaction at work would demonstrate a higher autonomy-supportive motivational orientation.

3. Teachers who reported greater psychological need satisfaction at work would provide their students with more challenging and relevant learning experiences for their students.

Definitions

Principal Leadership Style

Principal leadership is defined as the actions and behaviors initiated by principals to exercise influence over school personnel. School principals' overall actions, behaviors, and beliefs are characterized as different leadership styles which include democratic, laissez-faire, and authoritarian. These styles exist along a continuum of leader influence that ranges from high influence with authoritarian leadership to low influence with laissez-faire leadership whereas democratic leadership resides in the middle with moderate leader influence (Northouse, 2012). The reason they differ in degree of influence is due to the leadership characteristics that make up each style.

Authoritarian leaders limit collaborative efforts with teachers and make unilateral

decisions which are communicated through directives and monitored for fidelity in a

micromanagement manner. This top-down approach allows principals with authoritarian

leadership styles to maintain power and control over individuals in their work environment.

Alternatively, laissez-faire principals abdicate all control and responsibility to their staff who, in

turn, are left without any leader or guidance. In contrast, a democratic leader extends moderate

influence because he/she shares the decision-making power with teachers by creating a work

environment based on open communication, collaboration, and valued input. Northouse (2012)

asserted that individuals are not beholden to one style of leadership as it can change by

circumstance; however, leaders do tend to favor one style over the others.

Psychological Need Satisfaction

According to Self-Determination Theory (SDT), individuals are intrinsically motivated

when their environment is conducive to satisfying their basic psychological needs for autonomy,

competence, and relatedness (Deci & Ryan, 2000; Niemiec & Ryan, 2009). These needs are

essential to our psychological well-being just as nourishing food and physical activity are

important to maintaining a healthy physical well-being (Ryan & Deci, 2002). Specifically, the

need for autonomy is satisfied when an individual's behavior within an environment has an

internal perceived locus of causality and is initiated through personal volition. Further, an

individual feels a sense of competence when he/she effectively engages in the surrounding

environment through behavioral accomplishments. Lastly, an individual's need for relatedness is

fulfilled when he/she feels valued by others and belongingness to one's social milieu.

Orientation as a Motivator

A person who holds positional authority has, in part, the responsibility to create the conditions in which others are motivated. Furthermore, people of authority tend to be oriented as a motivator who control the behavior of individuals or support individuals' autonomy (Deci, Schwartz, Sheinman, & Ryan, 1981). Within the context of this study, orientation as a motivator refers to the manner in which teachers are highly controlling versus highly autonomy-supportive when motivating their students.

Authentic Intellectual Work

Authentic intellectual work "involves original application of knowledge and skills, rather than just routine use of facts and procedures" and "entails careful study of the details of a particular problem and results in a product or presentation that has meaning beyond success in school" (Newmann, King, & Carmichael, 2007). Further, Newmann et al. (2007) stated that students construct knowledge through disciplined inquiry or, using prior knowledge, creating an in-depth understanding, and expressing their ideas through complex forms of communication (e.g., verbal, symbolic, graphic, visual), for the purpose of producing an artifact that has value beyond school.

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Assumptions

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1. All participants understood the meaning of each question and survey item.

2. All participants reported accurate information regarding their feelings, opinions, and submitted artifacts.

3. The principals of the participating teachers tended to favor one of the following styles of leadership—democratic, laissez-faire, and authoritarian.

4. Teachers who reported psychological satisfaction for autonomy, competence, and relatedness at work were intrinsically motivated.

5. Elements of the different leadership styles align with each basic psychological need.

6. Teachers were either controlling or autonomy-supportive motivators when interacting with children.

7. The criteria for authentic intellectual work included construction of knowledge, disciplined inquiry, and value beyond school.

8. Latent variables cannot be directly measured; therefore, the survey items accurately represented each construct.

Limitations

1. The generalizability of findings is limited by the non-experimental research design and non-random sampling procedure.

2. The criterion for purposefully sampling teachers is broad in that the only condition to participate was being a public school teacher in a participating school system; therefore, the sample may not accurately represent the population of potential participants.

3. The survey items and interview questions relied on self-report methods which could be biased by participants' social desirability to respond in a manner which they thought would please the researcher.

Organizational Overview

This concludes Chapter One, or the introduction which established the context for the current study. The following chapters include Chapter Two which describes extant literature as it relates to the pertinent elements of the study, Chapter Three which outlines the study's

methodology, Chapter Four which reveals the findings rendered from the study, and Chapter

Five which discusses the findings, conclusions, and recommendations.

CHAPTER II. LITERATURE REVIEW

The fundamental purposes of leadership include "providing direction" and "exercising influence" (Leithwood, Louis, Anderson, & Wahlstrom, 2004; Louis, Leithwood, Wahlstrom, & Anderson, 2010). However, these qualities can seem deceivingly basic if they are not contextualized within the complex nature of learning organizations such as schools. Education is a powerful apparatus for providing new generations the opportunity to reach their fullest potential and contribute to the welfare of society; therefore, school leaders charged with this responsibility are obligated to the children within their community and society at large to make the success of education realized. When schools are not successful or are in need of improvement, the issues need to be identified and rectified by its leaders.

Murphy (2002) advocated viewing school leadership from a new perspective by "recasting a dilemma that by definition is not solvable into a problem that is, or at least may be, successfully attacked" (p. 184). The unresolvable dilemma which concerned Murphy (2002) was the traditional practice of choosing between ineffective alternatives such as theoretical concepts developed by academics that build "the bridge to nowhere" because they did not connect to practicing professionals. Therefore, an overarching goal of this research study was to build a bridge between academic research and educational leaders by calling upon their expertise to elucidate practical implications of teacher-reported findings rendered from this research study.

Another undesirable alternative, according to Murphy (2002), was selecting a collection of fragmented ideas from which we could not extrapolate synergistic beliefs. In an effort to take heed Murphy's (2002) suggestions regarding what was essential to a breakthrough in school leadership reform, the intent of the this section was to "help organize the labor and the ideas

from the current era of ferment" from both the fields of educational leadership and educational psychology in addition to "provid[ing] the vehicle for linking the profession to valued outcomes" such as increased teacher motivation and student learning (p 184). Therefore, the structural goal of the following section was to merge theoretical and empirical research focused on teacher motivation and classroom environments from both educational leadership and educational psychology disciplines. In order to place the current study in an appropriate framework, this review of literature examined research focused on the following topics:

- Educational Leadership Styles and Effects on Student Learning

- The Relationship between Educational Leadership Styles and Teacher Motivation

- The Relationship between Teacher Motivation and the Classroom Environment

- Relevant Research Studies

Educational Leadership Styles and Effects on Student Learning

Leadership Styles

In a landmark study of the relationship between leadership styles and group behavior, Lewin, Lippitt, and White (1939) designed an experiment in which 10-year-old boys were grouped together to complete activities (e.g., mask-making, mural painting, airplane construction) during a summer camp. Further, each group was purposefully selected based on their personality traits, intellect, physical ability, interpersonal skills, and socioeconomic status to control for a consistent social pattern within the group. During their participation in the varying activities, the boys experienced three different leadership styles from the supervisory adult. The researchers labeled the distinct leader styles as authoritarian, democratic, and laissez-faire which are characterized in Table 1 (Lewin et al.,1939, p. 273). They found qualitatively different trends among the participants' behavior for each leadership style. When the boys were led by

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authoritarian adults, they were productive only when the leader was present, demonstrated

submissive behavior, and demanded the leaders' attention and approval. Under a democratic

leader, the participants were equally productive without the requirement of their leaders'

presence, demonstrated less aggression among each other, and acted more collaboratively to

accomplish a task. However, the laissez-faire leader inspired less productivity, satisfaction, and

unity among the boys.

Table 1

Leader Characteristics

Authoritarian	Democratic	Laissez-faire
All determination of policy by the leader.	All policies a matter of group discussion and decision, encouraged and assisted by the leader.	Complete freedom for group or individual decision, without any leader participation.
Techniques and activity steps dictated by the authority, one at a time, so that future steps were always uncertain to a large degree.	Activity perspective gained during first discussion period. General steps to group goal sketched, and where technical advice was needed the leaders suggested two or three alternative procedures from which choice could be made.	Various materials supplied by the leader, who made it clear that he would supply information when asked. He took no other part in work discussion.
The leader usually dictated the particular work companions of each member.	The members were free to work with whomever they chose, and the division of tasks was left up to the group.	Complete nonparticipation by leader.
The dominator was "personal" in his praise and criticism of the work of each member, but remained aloof from active group participation except when demonstrating. He was friendly or impersonal rather than openly hostile.	The leader was "objective" or "fact-minded" in his praise and criticism, and tried to be a regular group member in spirit without doing too much of the work.	Very infrequent comments on member activities, unless questioned, and no attempt to participate or interfere with the course of events.

Within the context of different school leadership styles, authoritarian leaders protect their decision-making power and do not solicit input or delegate responsibility to teachers. Further, this type of school leader assumes that teachers are in need of directives which manifests in the form of ultimate, centralized control within the work environment, void of collaboration and open communication. According to Northouse (2012), the advantages to this style of leadership included efficiency, productivity, and established work standards (e.g., more work is accomplished in a shorter amount of time because employees are given clear, direct orders). The author stated, however, that authoritarian leaders also encourage a work environment lacking in independence, uniqueness, creativity, and professional growth.

Inversely, the democratic school leader collaboratively works with teachers to meet the shared goals of the learning organization while providing guidance and support of the teachers' individual development and self-determination. Moreover, democratic leaders make efforts to foster open communication and ensure that all voices are heard. Northouse (2012) acknowledged that this approach does demand more time and dedication from the leader; however, he also outlined an extensive list of positive outcomes which included "greater group member satisfaction, commitment, cohesiveness…friendliness, mutual praise, group mindedness…stronger worker motivation and creativity…[and] group members participate more and are more committed to group decisions" (p. 56-57). However, Northouse (2012) also noted that different situations may require greater authoritarian leadership in order to be effective (e.g., hospital emergency room, middle school dance).

Lastly, the school leader with a laissez-faire style makes minimal effort to engage in a leadership role, leaving teachers to determine their own actions without any cohesiveness or guidance. Although teachers are not controlled, they are also not provided the opportunity for

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improvement through nurturance and feedback. Northouse (2012) contended that the resulting

outcomes from this leadership style were primarily negative because a chaotic work environment

was created from which less productivity occurred and employee motivation decreased.

There were two essential assumptions of this school leadership theory: (a) leaders tend to

favor one style, however, styles are not stable and can fluctuate with different situations and (b)

the leadership styles are not distinct categories, but exist along a continuum of influence (see

Figure 1).

Authoritarian Leadership   Democratic Leadership   Laissez-Faire Leadership

High   Moderate   Low
                                                            Leader Influence
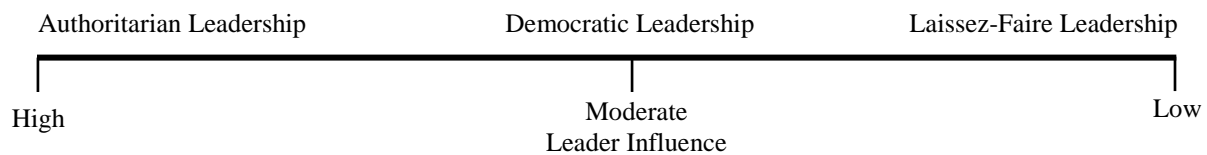
Figure 1. Styles of leadership. (Northhouse, 2012, p. 58)

Another prevalent theoretical perspective of school leadership styles was termed the full

range model of leadership which involves transactional and transformational leadership styles.

Similar to the authoritarian, democratic, and laissez-faire styles, this model of leadership directs

attention toward leaders' type of influential control over followers and the relational dynamics

that are formed. Bass (1985) spearheaded this theory and described transactional leadership as a

mutual understanding that followers comply with the demands of the leader in exchange for

recognition, rewards, and evading punishment. Followers also experience close monitoring and

regulation to ensure their efficiency, productivity, and accuracy. Contrary to these conditions,

Avolio, Bass, and Jung (1999) characterized transformational leadership as encompassing

different dimensions including idealized influence (i.e., venerated role model who acts upon the

best interests of the organization; charisma), inspirational motivation (i.e., enthusiastic

supporter), intellectual stimulation (i.e., fosters critical thinking), and individualized consideration (i.e., helping others to improve).

Although transactional and transformational leadership styles are commonly used by researchers as a theoretical framework and measureable constructs, Yukl (1999) cautioned researchers to consider its conceptual weaknesses. For example, inconsistent factor loadings among constructs have been found in some studies (i.e., rewards loading on transformational rather than transactional leadership) (Den Hartog, Van Muijen, & Koopman, 1997; Lievens, Van Geit, & Coetsier, 1997; Yammarino & Bass, 1990 as cited in Yukl, 1999). Moreover, transformational actions encompass a wide variety of dimensions which increases the construct's ambiguity and decreases evidence of validity. In further support of this claim, several components of transformational leadership overlap with one another (e.g., idealized influence is not always distinguishable from inspirational motivation). Transactional leadership also conjures vagueness because it "includes a diverse collection of (mostly ineffective) leader behaviors that lack any clear common denominator" (Yukl, 1999, p. 7). Lastly, the theory does not allow for the consideration that transformational leadership may not adequately fit all circumstances whereas Northouse (2012) acknowledged this possibility in the democratic leadership style.

In addition to these reasons, the authoritarian, democratic, and laissez-faire leadership styles also closely aligned with the theoretical framework of teacher motivation in this study, which is fully explained in the following section. Therefore, this research study will proceed within the framework of authoritarian, democratic, and laissez-faire educational leadership styles.

Effects on Student Learning

When asked in a Public Agenda survey what they would think if they learned that a large percentage of students performed poorly on a standardized test, the majority of school principals reported that they would assume responsibility for not sufficiently preparing the students (Johnson, 2008). As illustrated in these results, a primary focus for educational leaders is student learning and achievement. The powerful effect of school leadership on student learning has been well established in the literature (Leithwood, 2011; Leithwood et al., 2004; Louis et al., 2010). In a series of reports that extensively reviewed how leadership impacted student learning, prominent researchers in the field asserted that leadership was the second most contributing factor to student learning, with classroom instruction being the greatest influence (Leithwood et al., 2004; Louis et al., 2010). Leithwood et al. (2004) highlighted the importance of effective leadership within the context of school reform in that "the chance of any reform improving student learning is remote unless district and school leaders agree with its purpose and appreciate what is required to make it work" (p. 4). Lezotte and McKee (2002) agreed that strong leadership was a key component to creating a system that fostered continuous school improvement characterized by moving toward excellence, long-term sustainability, and greater student achievement.

Research studies that have explored the effects of educational leadership on student learning have typically fallen into one of three research designs: (a) qualitative case studies of high-achieving schools, (b) large-scale quantitative investigations, and (c) large-scale quantitative studies that explored specific practices of educational leaders (Leithwood et al., 2004). Illustrative examples of each research design ensue.

McKinley (2006) investigated the qualities of learning environments, teachers, and principals who helped to close the achievement gap between black and white students in Seattle Public Schools by collecting data through interviews, surveys, and observations of highly successful educators. He learned that the effective teachers and principals maintained cultural understanding of the students and their learning environment (e.g., integrated multicultural approaches in instruction, focused on social context of learning, established positive student-educator relationships). Further, teams of teachers and administrators singled out one area of weakness at a time and co-created a deep understanding of the issue by observing colleagues, reviewing lesson plans, facilitating discussions, jointly deciding upon strategies, and sharing the responsibility of evaluating the effectiveness of the strategies.

Hallinger and Heck (1998) set out to review large-scale quantitative research studies conducted within a 15-year timeframe and were guided by the following criteria: (a) principal's values and actions were analyzed as the independent variable, (b) student achievement or school effectiveness was the dependent variable, and (c) the inclusion of international studies. The authors analyzed approximately 40 research studies which were categorized into three research designs that included direct-effects models (e.g., principal leadership directly affected student achievement), mediated effects models (e.g., principal leadership indirectly affected student achievement by way of other variables), and reciprocal effects models (e.g., student achievement outcomes emerged from mutual effects between principals and teachers). Statistically significant results were typically found within the mediated effects research models; therefore, these studies framed the majority of their meta-analytical findings. They found that principals most indirectly affected student achievement through "the organizational system in which individuals (e.g., teachers, students, parents) work" by setting purposes and goals, structure and social networks,

organizational culture, and influencing people (p. 171). Although the effects were small, Hallinger and Heck (1998) concluded that this knowledge significantly contributed to the educational community.

In a meta-analysis that spanned decades of scholarship, Marzano, Waters, and McNulty (2005) focused on the effects of specific leadership behaviors on student achievement. From their findings, the authors constructed a list of 21 "responsibilities of school leaders" which are listed in the following table along with a description, average correlation between each responsibility and the studies' measure of student achievement, confidence interval, number of studies from which data were collected, and number of schools that were studied (Marzano et al., 2005, p. 42-43).

Table 2

The 21 Responsibilities and Their Correlations with Student Academic Achievement

Responsibility	The Extent to Which the Principal…	Average r	95% CI	No. of Studies	No. of Schools
Affirmation	Recognizes and celebrates accomplishments and acknowledges failures	.19	.08 to .29	6	332
Change Agent	Is willing to challenge and actively challenges the status quo	.25	.16 to .34	6	466
Contingent Rewards	Recognizes and rewards individual accomplishments	.24	.15 to .32	9	465
Communication	Establishes strong lines of communication with and among teachers and students	.23	.12 to .33	11	299

Culture	Fosters shared beliefs and a sense of community and cooperation	.25	.18 to .31	15	819
Discipline	Protects teachers from issues and influences that would detract from their teaching time or focus	.27	.18 to .35	12	437
Flexibility	Adapts his or her leadership behavior to the needs of the current situation and is comfortable with dissent	.28	.16 to .39	6	277
Focus	Establishes clear goals and keeps those goals in the forefront of the school's attention	.24	.19 to .29	44	1,619
Ideals/Beliefs	Communicates and operates from strong ideals and beliefs about schooling	.22	.14 to .30	7	513
Input	Involves teachers in the design and implementation of important decisions and policies	.25	.18 to .32	16	669
Intellectual Stimulation	Ensures faculty and staff are aware of the most current theories and practices and makes the discussion of these a regular aspect of the school's culture	.24	.13 to .34	4	302
Involvement in Curriculum, Instruction, and Assessment	Is directly involved in the design and implementation of curriculum, instruction, and assessment practices	.20	.14 to .27	23	826
Knowledge of Curriculum, Instruction, and Assessment	Is knowledgeable about current curriculum, instruction, and assessment practices	.25	.15 to .34	10	368
Monitoring/ Evaluating	Monitors the effectiveness of school practices and their impact on student learning	.27	.22 to .32	31	1,129

Optimizer	Inspires and leads new and challenging innovations	.20	.13 to .27	17	724
Order	Establishes a set of standard operating procedures and routines	.25	.16 to .33	17	456
Outreach	Is an advocate and spokesperson for the school to all stakeholders	.27	.18 to .35	14	478
Relationships	Demonstrates an awareness of the personal aspects of teachers and staff	.18	.09 to .26	11	505
Resources	Provides teachers with materials and professional development necessary for the successful execution of their job	.25	.17 to .32	17	571
Situational Awareness	Is aware of the details and undercurrents in the running of the school and uses this information to address current and potential problems	.33	.11 to .51	5	91
Visibility	Has quality contact and interactions with teachers and students	.20	.11 to .28	13	477

The effective practices outlined in the aforementioned research studies can be subsumed by the democratic style of leadership. For example, democratic leaders work collaboratively with teachers which was a critical component to solving challenging problems in high-achieving schools in Seattle (McKinley, 2006) and was described as "input" in reference to a key responsibility of school leaders (Marzano et al., 2005). Hallinger and Heck (1998) also acknowledged the impact on student achievement when principals engaged teachers and other stakeholders in the decision–making process. Further, Marzano et al. (2005) acknowledged the

significant relationship between student achievement and communication (r = .23) and culture (r = .25), other prioritized actions of democratic leaders. Stated differently, "social interaction among people within the school community is a primary building block of leadership (Hallinger & Heck, 1998).

The importance of educational leadership and how effective practices impact student achievement has been established thus far; therefore, attention will now turn toward ways in which this relationship comes to fruition. In reference to Leithwood et al. (2004), Lezotte and McKee (2006) stated, "Leaders contribute to student learning most significantly in an indirect way. Specifically, leaders exert a positive or negative influence on individuals who in turn directly influence student learning (teachers) and on the relevant features of their organizations (schools)" (p. 265). This claim echoed the findings of Hallinger and Heck (1998) and provided the foundational research of Leithwood (2011) who suggested that leadership practices impacted student learning through four paths. First, the rational path encompasses a school leader's knowledge and skills regarding curriculum, teaching, and learning at the classroom level and school level. Second, effective leaders operate under emotional intelligence, or the ability to accurately detect and respond to others' emotions. The emotional path includes teacher-related mediating variables such as job satisfaction, stress level, engagement, trust, morale, and organizational commitment. Third, the organizational path significantly affects student learning and is made up of policies, procedures, culture, and structure (i.e., collaborative versus controlling). Lastly, students' home environments have a powerful effect on their achievement; however, school leadership can also indirectly affect their achievement through the family path by involving parents and making home visits (see Figure 2).
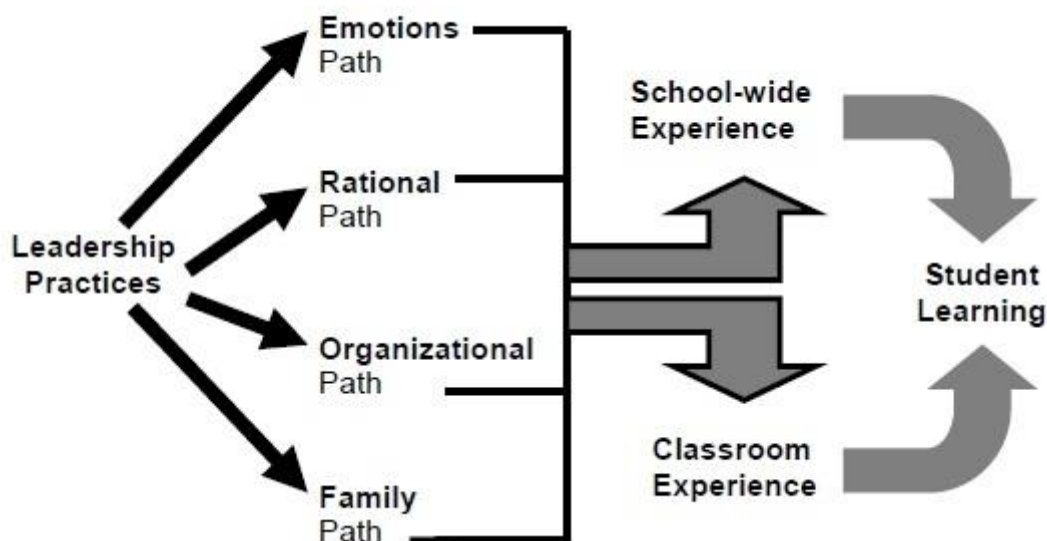
Figure 2. Leadership and student learning. (Leithwood, 2011, p. 42)

Although the relationship between educational leadership and student learning is largely indirect in nature, the effects of leadership remain profound. Even though this study did not measure the effects of educational leadership styles on student learning, it did focus on the emotional and organizational paths outlined by Leithwood (2011) in that attention was narrowed to teachers' motivation and their work environment. Furthermore, this study also focused on how these variables affected the classroom environment. The narrowed focus was primarily based on the need to retain quality teachers in the classroom which, in turn, is paramount to the success of children's learning and must remain as an imperative concern of instructional leaders.

The Relationship between Educational Leadership Styles and Teacher Motivation

The emergence of educational leadership as a field and its influence on teacher motivation was initially inspired by business management theory. For example, educational leadership styles can be traced back to Douglas McGregor's concept of workers' motivational orientations (Northouse, 2012). In his book titled *The Human Side of Enterprise*, McGregor (1960) demarcated and labeled the motivation of employees as "Theory X" and "Theory Y."

Under the assumptions of Theory X, individuals approach work with a hostile and indolent attitude, need to be given directions, do not aspire to advance their careers, and prefer being led over given responsibility (McGregor, 1960; Northouse, 2012; Sharp, Walter, & Sharp, 2005). Rather than the externally regulated form of motivation inherent in Theory X, Theory Y is grounded in the assumptions that workers are self-determined in that they enjoy work, personally initiate their actions, desire responsibility, and are capable of contributing meaningful ideas to an organizational system (McGregor, 1960; Northouse, 2012; Sharp et al., 2005). Although this theory is anachronistic in the field of educational leadership, the belief that leadership greatly impacts teacher motivation persists.

Approximately within the same timeframe of McGregor's work, the field of educational psychology was undergoing a significant change in motivational research from behaviorism to cognitive processing. In other words, researchers began to explore internal motivational drives rather than focusing only on environmental conditions. Several contemporary motivational theories of this nature were founded on individuals' competence and control beliefs, which are outlined below.

Social Cognitive Theory

Social cognitive theory provided a learning paradigm that acknowledges the internal mental states of the individual such as beliefs and expectations. Unlike behaviorist theories, the catalyst for learning does not reside solely with environmental stimuli nor is learning only measurable by overt behavior. The theory can be illustrated in a triadic-directional model which includes the factors already presented in traditional views of behaviorism (behavior and environment) in addition to cognitive, affective, and biological factors that are personal in nature (Schunk & Pajares, 2009). Based on this design of reciprocal causation, learning emerges

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through the two-way interactions among the factors even though the indication of learning may not be immediate. Therefore, the nature of the learner is best characterized as a complex and multifaceted framework fashioned within a reciprocative environmental, personal, and behavioral context.

Bandura (1986) introduced his social cognitive theory which postulated that the nature of the learner is determined by the interplay between his/her personal, environmental, and behavioral factors. He researched this theory of triadic reciprocal determinism in terms of self-efficacy. The continuously cyclical nature of reciprocal determinism explains the symbiotic nature of the learner within the context of his/her environment.

A person may develop, maintain, or augment his/her self-efficacy with regard to a belief in his/her ability to effectively engage in a particular task. A person's self-efficacy may be characterized as future-oriented, focusing on personal ability rather than social comparison, and a strong predictor of behavior, especially if the performance is successful. Other sources of self-efficacy include vicarious experience (i.e. observing the success/failure of others), social persuasion (i.e. positive/negative feedback), and physiological influences (i.e. emotional reaction). Furthermore, research regarding self-efficacy shows that it has significant effects on learning, motivation, achievement, and self-regulation (Schunk & Pajares, 2009).

Attribution Theory

Another cognitive approach to motivation and learning is attribution theory which states that individuals explain their personal successes and failures through varying causal reasons. Pressley and McCormick (2007) described Bernard Weiner's theory of attribution as being comprised of four types which included efforts, abilities, task factors, and luck. Each attribution type affects an individual's propensity toward motivation. McDevitt and Ormrod (2007) further

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explained that the underlying ascribed causes for accomplishments or failures are distinguished by "…locus (location of the cause—internal or external to the person), stability (whether the cause is likely to stay the same in the near future or can change), and controllability (whether the person can control the cause)" (p. 337). In "An Attributional Theory of Achievement Motivation and Emotion," Weiner (1985) offered empirical evidence to support his claim that the attributed causes affect one's emotional state and expectancy of future experiences which, in turn, direct one's motivation.

Expectancy-Value Theory

A related concept to attribution theory is expectancy-value theory which derived from a blended behaviorist and cognitive approach to motivation. This theoretical model is heralded by Eccles and Wigfield (Eccles, 1983, 1993; Wigfield, 1994; Wigfield & Edwards, 2000 as cited in Schunk & Zimmerman, 2006) who postulated that when individuals maintain high expectations for their attainment of a goal and highly value the achievement target, then motivation ensues. In other words, the individual must expect to succeed as well as value the success. From this comprehensive model, the theorists defined values "with respect to the qualities of different tasks and how those qualities influence the individual's desire to do the task" (Wigfield, Tonks, & Klauda, 2009, p. 57). Task value can take one of four forms which include attainment value ("the importance of doing well on a given task"), intrinsic value ("the enjoyment one gains from doing the task"), utility value ("how a task fits into an individual's future plans"), and cost ("what the individual has to give up to do a task…as well as the anticipated effort one will need to put into task completion") (Wigfield et al., 2009, p. 57-58).

An individual's expectancy-related beliefs may also be influenced by his/her mastery experiences, feedback, evaluation, and social comparison whereas influences on value-related

beliefs may include many of the same factors; however, further research is needed (Wigfield et al., 2009). Yet, the sources from which values are developed have been researched at a greater extent and included need satisfaction, shared beliefs about what is desirable, one's comparison between self and the desires projected by others, evaluative inference, and experiences (i.e. pleasurable experience preferred over painful experience, moral or ethical experience, regulatory fit experience, understanding experience, agentic experience) (Wigfield et al., 2009).

Achievement Goal Theory

Achievement goal theory, also known as goal orientation theory, has been a great focus for motivational theorists. The literature suggests that one's motivation directs, initiates, and maintains behavior whereas goal theory postulates that the activity in which one participates is given meaning through goals. Achievement goal theory serves as a theoretical structure to explain why people make attempts of achievement and subsumes the different types of goals with regard to their origins, purpose, reason, and hierarchy.

Motivation, according to goal theory, is a learning process which influences how one approaches a situation. In other words, motivation is not a personality trait; therefore, individuals cannot be accurately characterized as having "more" or "less" motivation. Being largely influenced by social cognitive theory, some scholars of achievement goal theory acknowledged the reciprocal influence between personal, environmental, and perceptual factors on motivation. Another underlining assumption of goal theory is that competence is a focal aspect of goals whether the goal is directed by the development of competence (mastery goal) or demonstration of competence (performance goal). Furthermore, goals act as schemas for cognition, affect, and behavior in addition to being a means for self- or task-relatedness (performance goals encourage ego-involvement; mastery goals encourage task-involvement) and

self-representations (performance goals are associated with interpersonal values; mastery goals are associated with intrapersonal values).

However, consistency is not maintained across achievement goal theorists who have diverged on the origins of goal theory (person, environment, both); motivational equity (significance of mastery and performance goal); the role of performance goals (normative perspective of adverse effects on learning and multiple goals perspective of positive associations with achievement); and multiple-goal theoretical models (approach and avoidance goals). Despite the amount of extant literature dedicated to achievement goal theory, several of the differing opinions have yet to be reconciled in order to be effectively applicable to the learning environment (Maehr & Zusho, 2009).

Self-Determination Theory

Researchers have applied Self-Determination Theory (SDT) to many fields including education, sports, religion, medicine, parenting, relationships, and psychotherapy. Therefore, this approach to human motivation and personality has served as a well-established framework for many research studies in varying domains. In addition to the great presence of SDT in the realm of scholarship, the founding theorists host a website (www.selfdeterminationtheory.org) and international conference dedicated to disseminating SDT research.

Moreover, SDT is designed as an overarching theory which encompasses several sub-theories. Some of the sub-theories maintain similar epistemological underpinnings as the aforementioned motivational theories (i.e., cognitive information processing, consideration of contextual factors) (Schunk & Zimmerman, 2006). However, other elements differentiate SDT from the alternative motivational theories and provide greater alignment with the purposes of the present study. In example, social cognitive theory draws upon the concepts of self-efficacy and

outcome expectations to explain individuals' competence and control beliefs, respectively

(Schunk & Zimmerman, 2006). These concepts are future-oriented in nature as they

theoretically measure how one expects to perform on a particular task and predicts the resulting

outcomes that ensue from certain actions. Similarly, expectancy-value theory grounds people's

motivational drives in how well they expect to perform. Yet, the purpose of this study is to

capture the correlational relationship between present conditions of leadership styles and

teachers' motivation which is made possible by SDT. Moreover, social cognitive theories and

expectancy-value theory consider motivation in terms of amount rather than motivational types

which does not address implications of specific leadership styles (Ryan & Deci, 2009). Further,

the purpose of attribution theory is to understand how people perceive the reasons for particular

outcomes which also theoretically misaligns with the purpose of the present study in that the

onus of external control is only taken within the consideration of leadership styles rather than

other variables such as luck. Achievement goal theory was largely influenced by attribution

theory and also does not theoretically support the purposes of the current study (Maehr & Zusho,

2009). Much like SDT, achievement goal theories are structured to explain the "why" behind

people's motivation and actions; however, the reasons are fundamentally categorized as either

mastery- or performance-oriented. The purpose of this study is not to categorize teachers'

motivation based on the type of leadership styles but to measure elements influenced by their

perceived work environment.

The most appropriate theoretical framework for studying the relationship between school

leader styles and the motivation of teachers is SDT. Therefore, this section will synthesize

literature regarding SDT as a comprehensive concept as well as several sub-theories that relate to

education at large and research that has been theoretically supported within a school context.

Conceptualized by Deci, Ryan, and colleagues, SDT is founded on the principle of human development that individuals are innately driven to grow psychologically while also integrating experiences and personality to form a sense of self (Deci, 1980; Grolnick, Gurland, Jacob, & Decourcey, 2002; Ryan, Connell, & Deci, 1985 as cited in Schunk & Zimmerman, 2006). SDT ascribes a self-motivated constitution to the human character which seeks inherently rewarding experiences that align with personal interests. While in pursuit of intrinsic satisfaction, "individuals tend naturally to seek challenges, to discover new perspectives, and to actively internalize and transform cultural practices" (Ryan & Deci, 2002, p. 3). In other words, people naturally undergo psychological growth through the actions they initiate (e.g., seeking challenges) in an effort to fulfill their interests. Through these behaviors, self-actualization, or meeting one's potential, can be reached (Ryan & Deci, 2002).

Although the concepts of striving for self-development through psychological growth and integrative processes are sine qua non to this theory, the SDT theorists have also acknowledged that people do not act within a vacuum void of human interaction. Ryan (1995) described SDT as "a dialectical view that involves acceptance of natural integrative tendencies and yet acknowledges the power of social contexts to fragment or 'overchallenge' them stands as an alternative…" (p. 403). Given the interpersonal nexus of the teaching profession, SDT aligns accordingly as it recognizes our innate desire to meet basic psychological needs through a social medium. Individuals' drive, or intrinsic motivation, produces internal satisfaction because our needs for autonomy and competence are fulfilled (Ryan & Deci, 2000, 2009).

Cognitive Evaluation Theory

According to Cognitive Evaluation Theory (CET), a sub-theory of SDT, one's social experiences affect intrinsic motivation through external structures that either support or stymie

one's sense of competence which is mediated by autonomous choices (Ryan & Deci, 2000).

Therefore, an individual who perceives his/her decision to engage in an activity as self-directed

and gains competence through his/her participation will also maintain or increase intrinsic

satisfaction for the activity.

Furthermore, Ryan and Deci (2000) cited research that suggested "threats (Deci &

Cascio, 1972), deadlines (Amabile, DeJong, & Lepper, 1976), directives (Koestner, Ryan,

Bernieri, & Holt, 1984), and competition pressure (Reeve & Deci, 1996) diminish intrinsic

motivation because, according to CET, people experience them as controllers of their behavior.

On the other hand, choice and the opportunity for self-direction (e.g., Zuckerman, Porac, Lathin,

Smith, & Deci, 1978) appear to enhance intrinsic motivation, as they afford a greater sense of

autonomy" (p. 59). People in countless other professions experience inherently controlling

responsibilities; yet, the teaching profession undergoes greater turnover rates than several

"higher-status professions" (e.g. professors, technology and scientific professionals) according to

Ingersoll (2003). While Ingersoll (2003) admitted that occupational turnover rates were difficult

to accurately compare, he maintained that the most important concern was to determine if

"teacher turnover [is] a problem for schools themselves" and "the data indicate it is" (p. 9).

Therefore, an examination is required of the leadership styles, organizational structures, and

responsibilities germane to the teaching profession that foster a controlling work environment

and thwart personal feelings of autonomy and competence.

Within his value-focused paradigm of defining a democratic community, Murphy (2002)

described a school leader as a "community builder" who "must learn to lead by empowering

rather than controlling others" (p. 188). Further, Huber (2004) suggested that one of the primary

principles of school leadership was the support of autonomy. Originally referenced in social

psychology theory, the oft-cited terminology in the field of educational leadership to describe the concept and practice of relinquishing authority to other members within a learning organization (e.g., teachers) is "distributed leadership" which, when implemented, can result in an improved work environment due to increased self-determination (Gronn, 2002; Harris & Spillane, 2008; Leithwood, 2011; Leithwood et al., 2004; Leithwood, Patten, & Jantzi, 2010; Louis et al., 2010).

In an extensive investigation into teacher shortages, Ingersoll (2003) utilized the Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS) to gather data on "movers" (teachers who transfer to a different school) and "leavers" (teachers who completely leave the profession). Among the movers and leavers, 29% reported reasons of job dissatisfaction. When the reason for dissatisfaction was disaggregated, 17% of all the individuals who reported job dissatisfaction claimed "lack of faculty influence and autonomy" as a cause for their career change. Kersaint (2005) used data gathered by the U.S. Department of Education and concluded that 52% of teachers who transferred schools attributed the reason to "a lack of influence over school policy." Additionally, 6% reported "no opportunity for professional advancement" as reason for their lack of satisfaction with teaching which implies that their choices were limited by organizational structures beyond their autonomous control.

Many educational systems are structured in a way that limit teachers' autonomy and, in turn, competence. Lortie (1975) discussed the "pyramid of authority" in which the subordinate members are educators and the superordinate hierarchical ranks consist of school board members who "do not belong to their occupation" and school administrators "acting on authority delegated by school boards" (p. 4; 6). Further, school district officials have the authority to take curriculum or instructional decision-making power away from teachers. When recounting stories from her qualitative study of elementary teachers, Smith (1991) referenced an example of third

grade teachers who were told by district leaders (e.g., school board members) to implement more test-like teaching after standardized test results revealed a lag in their students' scores. Although the score discrepancies were statistically insignificant, Smith (1991) stated that the teachers "neither questioned the edict nor offered alternatives from their own expertise and experience" (p. 11). As a result of this power structure, educators often succumb to decisions made by others that affect their teaching practices.

Beyond limited positions and input, teachers are even restricted from the decision as to the students they teach which is a task typically controlled by administration. Lortie (1975) suggested that "the hierarchization of schools and the diffusion of compulsory attendance produced dual 'captivity' in the relationship between teachers and students" (Lortie, 1975, p. 4). Another controlling factor that binds teachers and students together in an effort to ensure adequate performance from both has been the national adoption of high-stakes testing.

Equipped with experience from working within the U.S. Department of Education in efforts to create national curriculum standards, Ravitch (2010) called attention to flaws of the accountability movement. Ravitch (2010) acknowledged her initial support for the No Child Left Behind (NCLB) legislation because it seemed to support the standards movement which she promoted. However, the momentum for educational reform warped into a performance-driven focus rather than being learner-centered, which would sustain achievement. Ravitch (2010) reflected that "what once was an effort to improve the quality of education turned into an accounting strategy: Measure, then punish or reward" (p. 16).

Ryan and Deci (2009) claimed that the implementation of consequences, such as punishment and reinforcement, would likely ebb individuals' feelings of autonomy and satisfaction. Citing the qualitative research conducted by Smethem (2007) in England, Brill and

McCartney (2008) applied Smethem's research to our national trend and wrote that an "increased emphasis on teacher performance in the wake of No Child Left Behind has created a 'pressure on result': teachers must increase their students' test scores or risk missing out on valued benefits or even being terminated" (p. 756). Smethem (2008) found that most of the new teachers who participated in her study recounted testing stress as being one of the "most significant events" in their teaching experiences. Even though the legislation in the United Kingdom differs from the mandates of the United States, the experiences relayed by both groups of teachers seem closely similar.

To conclude the analysis of teacher attrition through Cognitive Evaluation Theory (CET), one question still remains—in what way does the need for competence accompany the limited autonomy of teachers? For one, an oft-cited reason for job dissatisfaction has been the inability to contribute to policy decisions (Ingersoll, 2003; Kersaint, 2005). This lack of consideration for the opinion and expertise of teaching professionals may implicitly lead to teachers' feelings of distrust from others in their ability to make competent suggestions.

Tschannen-Moran (2009) conducted research under the belief that school leaders who governed with guarded authority and rigidity could experience repercussions such as "reductions in worker satisfaction, motivation, commitment, and creativity" (Cloke & Goldsmith, 2002 as cited by Tschannen-Moran, 2009, 219). The events that culminated into these consequences included teachers' feelings of distrust in school leaders who demonstrated distrust in their employees' competency to work effectively which, in turn, led to their teachers' decreased feelings of autonomy. The researcher found that teachers' professionalism increased when trust was apparent and instructional leaders were guided by a professional orientation in which "rules

are applied flexibly, control is shared, and work processes are open to joint deliberation" (p. 220).

Additionally, the evaluative nature of holding teachers accountable to their students' performance can make the public's perception of their competency as an effective teacher beholden to students' scores on standardized tests (Smith, 1991). This belief system is inherently flawed because it typically does not allow consideration for students' differing abilities, motivation to learn or perform well during the examination, and available resources at school or home. These are only but a few confounding variables that affect student achievement other than a teacher's influence. Moreover, this view of self-perception or public perception of competency is unsustainable as it is contingent on different students with test scores which vary by school year.

Conversely, teachers may be rewarded based on high student scores from high-stakes assessments. Ryan, Mims, and Koestner (1983) referred to this type of reward as performance-contingent, or "a reward that is given for a specified level of performance, that is, for meeting a set criterion, norm, or level of competence" (p. 737). The results have been mixed regarding individuals who received performance-based incentives because of the different ways in which intrinsic motivation has been operationalized. Intrinsic motivation has typically been measured by people exercising free choice to engage in a task or self-reporting their motivational intentions (Ryan, Mims, & Koestner, 1983; Deci, Ryan, & Koestner, 1999). In a meta-analytic review of studies investigating extrinsic rewards, Deci, Koestner, and Ryan (1999) determined that performance-contingent rewards negatively affected intrinsic motivation when measured as free choice; however, the rewards did not negatively affect self-reported measures of interest and enjoyment.

Also, the high-stakes testing movement has driven a wedge of competition for higher student scores between states with the current Race to the Top initiative, school systems with slogans for being "data driven" for excellence (Ravitch, 2010), schools within a system when test scores are disaggregated by school performance and published in local newspapers (Smith, 1991), and even teachers within a school when student scores are posted for everyone's viewing. Ryan and Deci (2000) warned against the undermining effect of competition on intrinsic motivation. In this case, teachers may compare the score results of their students to other students' performance to determine their instructional competence in relation to other teachers. Ryan, Mims, and Koestner (1983) termed rewards that are incentivized by competition as competitively contingent rewards, or "situations in which people compete directly with others for a limited number of rewards that are fewer than the number of competitors" (p. 737).

Because state agencies use accreditation measures (e.g., student outcomes) to demand compliance from local school districts, standardized assessments will likely remain a reality (Thomas, Cambron-McCabe, & McCarthy, 2009). Although the implementation of standardized assessments are not likely to alter, the manner in which results are relayed and used can potentially abate teachers' loss of autonomy and competence. This implication is rooted in another important axiom of CET—perceived locus of causality.

Within the context of this theory, an external perceived locus of causality is produced by external events that are "*controlling* and are defined in terms of pressures to behave, think, or feel in particular ways" whereas external events that are "*informational* and are defined in terms of providing effectance-relevant information in the context of experienced choice" promote an internal locus of causality (Plant & Ryan, 1985, p. 437). In other words, an internal locus of causality is supported and, in turn, increases intrinsic motivation when communication is

delivered in an informational manner by providing meaningful feedback regarding one's competence and ways to increase competency within a self-determined context (Ryan et al., 1983). When conducting a research study, Ryan et al. (1983) found that positive feedback affected intrinsic motivation (as measured by free choice to participate in a task) differently when administered in an informational way (e.g., "You did fairly well on that puzzle") versus a controlling manner (e.g., "You did very well on that one, just as you should") (p. 745). When applied within the context of teacher motivation, teachers who experience choice in their environment and receive students' standardized assessment scores as a means of meaningful feedback will theoretically harbor more intrinsic motivation. To further extend this aspect of CET into the discussion of rewards, rewards do not decrease motivation if the informational aspect of the event is viewed as more salient to the recipient rather than the receiver feeling that the intent of the reward is to control their behavior in order to produce desirable outcomes (Deci, Schwartz, Sheinman, & Ryan, 1981).

Although standardized test scores can provide meaningful feedback, they are released at the end of the school year which prevents teachers from directly helping their current students by using the information as a guide for modifying instruction. Lezotte and McKee (2002) termed this information as "trailing indicators of learning" and encouraged the use of "leading indicators of learning" in order to determine students' needs and maintain continuous school improvement (p. 39). The authors further suggested that feedback in the form of student achievement data should be objective-specific, frequent, and timely. Marzano, Pickering, and Pollock (2001) endorsed similar suggestions regarding feedback within the context of a classroom in that teachers should include explanations with corrections, provide feedback to students soon after the task, and reference specific skills or knowledge. This type of feedback is listed as an

evidence-based strategy for teachers to use in order to increase student achievement; however, the same recommendations could be applied to how teachers receive feedback in order to decrease elements conducive to control-oriented working environments.

A further implication for increasing teachers' sense of competency during a time of student-achievement-based accountability is to integrate the spirit of observable improvement throughout the school year by providing teachers with informative feedback. This would shift the focus away from primarily monitoring for the sake of teacher measurement and move toward teacher improvement. Marzano (2012) wrote that there were two purposes for teacher evaluation—measurement of competence and support for development. He maintained that both reasons were essential, but "*measuring* teachers and *developing* teachers are different purposes with different implications" (p. 15). Evaluative systems structured to assist teachers with professional growth should be comprehensive and specific in nature, include a development scale, and recognize and reward growth. These suggestions align with other descriptions of constructive feedback characterized as informational, meaningful, explanatory, and specific (Ryan et al., 1983; Marzano et al., 2001). Marzano (2012) did not specify how growth should be rewarded, but Ryan and Deci (2009) suggested from their findings in a laboratory setting that "tangible rewards tend to diminish intrinsic motivation, while, positive, performance-relevant feedback tends to either maintain or enhance it" (p. 173).

Perhaps elements of the accountability movement could benefit teachers if handled in autonomy-supportive and competence-supportive ways. For example, Zavadsky (2006) recounted ways in which some high-poverty urban schools demonstrated significant gain in student achievement scores because of NCLB-driven initiatives. In response to the requirement for disaggregated data, the schools reviewed data by student groups to determine trends,

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formatted data in a teacher-friendly way, and guided teacher discussions about underperforming subgroups throughout the school year. However, instructional leaders provided feedback other than student scores. The administrators often conducted classroom observations, or "walkthroughs," to formulate a mental "snapshot" of the activities that transpired and the learning climate that was established. This activity is nested in the school leadership responsibility titled "monitoring/evaluating" by Marzano et al. (2005). They characterized this responsibility as "continually monitoring the effectiveness of the school's curricular, instructional, and assessment practices" and "being continually aware of the impact of the school's practices on student achievement" (p. 56). In these districts, administrators conducted walkthroughs to provide teachers feedback for improvement and not for evaluative purposes because "this policy helps build trust and focuses walkthroughs on giving teachers support and guidance" (p. 71). Through such meaningful feedback, teachers can gain feelings of competency.

As demonstrated by the aforementioned examples, both basic needs for autonomy and competence converge to form the foundation or our intrinsic motivation. Nonetheless, individuals must also perform tasks which require greater effort that extends their internal interests, thus, relying on extrinsic motivation to guide behavior. Ryan and Deci (2000) purported that "this is especially the case after early childhood, as the freedom to be intrinsically motivated becomes increasingly curtailed by social demands and roles that require individuals to assume responsibility for nonintrinsically interesting tasks" (p. 60). However, our natural inclination is to internalize these exogenous requirements due to cultural expectations (i.e., career success). The resulting state formulates into extrinsic motivation, or the intention to engage in a task while under the influence of obtaining an external outcome. Therefore, we must

also turn our attention toward teachers' reactions to practices that encourage extrinsic motivation

if the current structure of power and accountability in education can thwart intrinsic motivation.

To examine the varying forms of extrinsic motivation confronted by educators, we can turn to

another sub-theory of SDT termed Organismic Integration Theory (OIT).

Organismic Integration Theory

SDT suggests that people not only have different amounts of motivation that vary from

very little to a lot, but people have different kinds of motivation. The theorists' distinctions

between intrinsic and extrinsic motivation were based upon the seminal work of deCharms

(1968), and unlike many other motivational theories, SDT sets out to explain the "why" of

actions rather than "how much" (Ryan & Deci, 2009). Organismic Integration Theory (OIT)

provides terminology and explanations regarding these concepts and is very applicable to work

environments because the theory acknowledges that most of the activities we do are not

intrinsically motivating. For example, we most likely do not pay bills or file taxes because we

enjoy these tasks or find them interesting. We perform the tasks to avoid undesirable

consequences that would occur if they were not completed. Within the conceptual framework of

OIT, extrinsic motivation exists along a continuum of self-determination created from an

external event (see Figure 3). This same understanding of the continuum can apply to the

motivation of teachers, an important responsibility entrusted in school leaders.

Type of Motivation	Amotivation		Extrinsic Motivation				Intrinsic Motivation
Type of Regulation	Non-Regulation		External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Intrinsic Regulation
Quality of Behavior	Control						Self-determination

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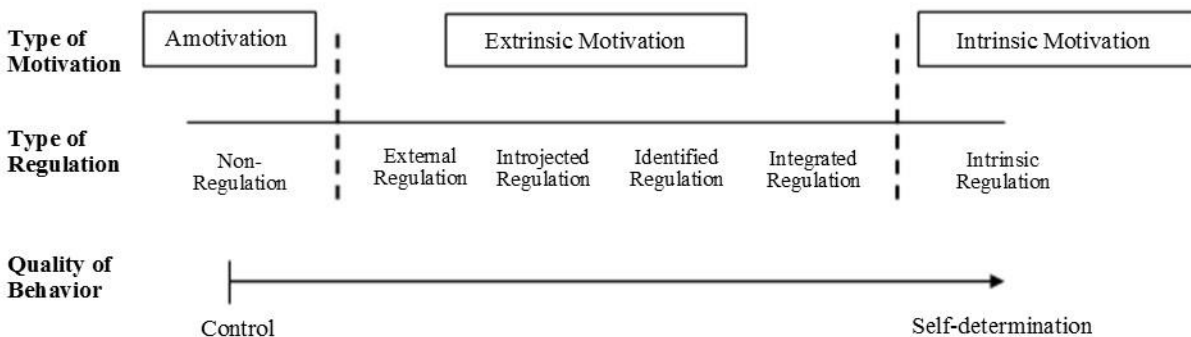
Figure 3. The Self-Determination Continuum, with Types of Motivation and Types of

Regulation. (Ryan & Deci, 2002, p. 16)

External Regulation

Externally regulated motivation is the only form of motivation acknowledged by

behavioral theorists, who upheld the study of overt behavior. Through the behavioral lens,

learning transpires after an extrinsic event is experienced or observed which, in turn, alters the

behavior of the individual (McDevitt & Ormrod, 2007). Pressley and McCormick (2007)

contended that "the expectancy of reinforcement influences motivation in that people are more

likely to be motivated to do something if they expect that the activity will be rewarding and

rewarded" (p. 261). B.F. Skinner (1945) was a behaviorist who spearheaded operant

conditioning, a theory grounding in E.L. Thorndike's (1911) law of effect, and postulated that

learning is strengthened by reinforcement and reduced by punishment. Furthermore, he believed

thoughts and feelings to be principles of conditioning but that these internal forces do not cause

behavior. Skinner has received criticism for limiting motivation to the power of external rewards

and punishments (Morris, 2003). Despite the theoretical disagreements, controlling systems of

rewards are pervasive and heralded in schools.

According to Ryan and Deci (2009), the type of extrinsic motivation that harbors the least

amount of autonomy is external regulation, or motivation determined by the desire to be

rewarded or to escape punishment. For example, teachers may be motivated to change their

behavior in ways that could increase their students' chances of performing better on high-stakes

tests in order to receive rewards such as merit-based pay or avoid penalties such as termination

(Brill and McCartney, 2008). Instead of spurring motivation to improve students' test scores,

teachers who hold this form of extrinsic motivation may alter their practices in detrimental ways

which are outlined in the predication of Ryan and Deci (2009) "that HST [high-stakes testing] policies would foster teaching to the test, the narrowing of curricula, more drill and redundancy, less hands-on practice, lower intrinsic motivation, [and] more cheating at the level of the teachers" (p. 185).

Unfortunately, Ryan and Deci's (2009) predictions have come to fruition and allegations regarding teacher cheating have been made and confirmed. Dessoff (2011) interviewed notable members in the national education community about reasons that have led to high-stakes cheating. In his article, the director of the University of California, Los Angeles (UCLA)'s National Center for Research on Education was quoted as stating, "Certainly NCLB [No Child Left Behind] has raised the stakes on test results, and clearly teachers and principals feel tremendous pressure to raise their students' test scores and meet AYP [Adequate Yearly Progress] targets" (p. 50). A Texas superintendent also "cites incentives such as compensations and job security based on performance" for teacher motivation to cheat under value-added evaluative measures (p. 50).

Jacob and Levitt (2003) have also explored reasons for teacher cheating and the prevalence of its existence. They statistically analyzed students' scores on a standardized assessment in the Chicago public school system and estimated that cheating occurred in approximately 4-5% of elementary school classrooms at the hands of teachers and administrators. The authors blamed the recent use of accountability programs "that use student test scores to punish or reward schools" (p. 843). They further stated:

> As incentives for high test scores increase, unscrupulous teachers may be more likely to engage in a range of illicit activities, including changing student responses on answer sheets, providing correct answers to students, or obtaining copies of an exam

illegitimately prior to the test date and teaching students using knowledge of the precise

exam questions. (p. 844)

Levitt later collaborated with an author and journalist, Stephen J. Dubner, to write the

bestselling book *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything*. In

the book, Levitt and Dubner (2005) satirically discussed a commonality between educators and

sumo wrestlers—finding ways to dishonestly manipulate results in their favor. The authors

explained that the professionals from these drastically different careers also shared similar

pressure to perform in highly incentivized environments (Levitt & Dubner, 2005).

Although teacher cheating is not the norm, the purpose of highlighting this phenomenon

is to address negative consequences that can ensue if educational organizations encourage

teacher motivation through externally regulatory practices such as rewards and punishments.

Gratz (2009) brought an educational leadership viewpoint to the discussion by pragmatically

asking, "Does anyone really think that large numbers of teachers know what their students need

but are willfully withholding it? That they would help students more, if only someone offered

them a bonus to do so?" and further stated that "this is a highly cynical view of teachers, one that

teachers understandably find demeaning, not motivational" (p. 78).

Introjected Regulation

The next form of extrinsic motivation is still controlled by outward forces, but to a lesser

degree. Ryan and Deci (2009) referred to this type of motivation as introjected regulation which

is governed by avoiding feelings of embarrassment or blame when failure occurs and by seeking

ego-driven feelings of accomplishment upon success. For example, if an instructional leader

casts a performance-oriented climate over the school in which teachers are shamed when

expectations are not met, then teachers are likely to regulate their actions through introjection.

Therefore, their behavior is ruled by self-esteem derived from an external force (Ryan & Deci, 2000). Inversely, teachers can gain a sense of worthiness if they are a part of a school culture which publically praises good performance; however, this is at the cost of being motivated by ego-enhancing behaviors.

In a study of the effects of external testing on teachers, Smith (1991) collected data for 15 months from teachers through questionnaires, interviews, and observations which revealed negative psychological effects that occurred due to standardized testing. The elementary teachers reported feelings of shame, embarrassment, and pressure when their students' scores were publicized in the media. In order to avoid experiencing these feelings again, coupled with the fear of losing autonomy to teach, some were determined to take any necessary measures such as teaching more to the test. Interestingly, Smith (1991) found that teachers of high-scoring students were still vulnerable to feelings of anxiety and pressure because they were expected to maintain or increase high student scores each school year despite the differences in student cohorts and their varying characteristics that are out of teachers' control but still affect performance (i.e., prior knowledge, level of readiness).

Despite the current assessment-focused work environment, self-determination can be fostered through autonomy-supportive environments which is paramount to the last two forms of extrinsic motivation—identification and integration (Ryan & Deci, 2000).

Identified Regulation and Integrated Regulation

When one has acknowledged the importance of a task, then one is extrinsically motivated to perform the task through identified regulation (Ryan & Deci, 2000, 2009). For example, teachers who participate in professional development seminars will feel greater self-determined motivation to implement their training in the classroom if they recognize the value of the

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information and, in Piagetian terms, accommodate their knowledge (Piaget, 1960). Moreover, individuals are said to have internalized their extrinsic motivation when they identify with information and assimilate it into personal beliefs and selfhood (Ryan & Deci, 2000; 2009). This form of extrinsic motivation shares similar characteristics with its intrinsic counterpart, but the difference lies in the satisfaction from the outcomes rendered from the task which is derived from the former and the pure interest in the task which is derived from the latter.

Guskey (2007) provided a research-based example regarding the importance of alignment between educators' motivation and values. When investigating the perceptions of stakeholders regarding evidence of student learning, he found discrepancies between the assessment values held by administrators and teachers. Specifically, primary to secondary grade teachers and administrators (i.e., superintendents, program directors/coordinators, principals) were asked to rank order different indicators of student learning under the directive that their responses be "based on what you believe or trust to best show what students know and can do" (p. 21).

The results indicated that administrators statistically significantly selected evidence such as district assessments, state assessments, and nationally normed standardized assessments as more trustworthy ($p < .01$). However, teachers reported teacher classroom observations and homework completion as more reliable measures of student learning ($p < .01$). Guskey (2007) postulated several reasons that could account for the differing results such as highlighting "other research [which] has shown, for example, that individuals' perceptions of the meaningfulness and relevance of assessment results affect the motivation and effort they put forth to improve instruction and student learning outcomes" (Lane, Parke, & Stone, 1998 as cited in Guskey, 2007, p. 25). Even though the educators valued the importance of feedback regarding students'

progress, they did not fully assimilate the value of externally-created measures into their sense of self which could partially be described as a professional tasked with evaluating student learning.

In an environment created by teacher alacrity to perform in order to gain pride, teachers may also gain feelings of relatedness to their colleagues and administration. Their feeling of belongingness to a group who values them and their performance is another essential need in SDT that grows from a social context (Ryan & Deci, 2000, 2009). Although this introjected regulation leaves the teacher with satisfying feelings of relatedness and competence, their extrinsic motivation does not build upon feelings of complete autonomy.

To summarize Organismic Integration Theory (OIT), we strive to internalize external expectations and do so based on the degree in which we experience autonomy support from our environment. Investigations of the workforce setting have identified qualities in autonomously motivated individuals such as greater persistence, flexibility, interest/enjoyment, mental health, volition, problem-solving skills, and creativity (Deci, 2012). However, extrinsically motivated behaviors are not fully integrated until our essential needs for autonomy, competence, and relatedness are met according to another sub-theory, Basic Psychological Needs Theory (BPNT).

Basic Psychological Needs Theory

Ryan and Deci (2002) defined a need as "a motivating force [that] must have a direct relation to well-being" (p. 22). Similar in concept to how humans need nutrients such as food and water to physically grow, we also require autonomy, competence, and relatedness to psychologically grow according to SDT.

Humanist theories challenged that "to motivate means to encourage people's inner resources—their sense of competence, self-esteem, autonomy, and self-actualization" (McDevitt & Ormrod, 2007, p. 321). Maslow (1970) theorized that each individual operates based on a

hierarchy of needs; therefore, humans are motivated by the compulsion to fulfill these needs. Throughout the pyramidical structure that represents the hierarchy, human needs range from lower-levels encompassing survival, safety, belonging, and self-esteem. These prescribed needs are labeled as deficiency needs. Inversely, higher-level needs consume our need for intellectual achievement, aesthetic appreciation, and self-actualization which are referred to as our being needs. Pintrich and Schunk (1996) defined self-actualization as "growth through the realization of one's potential and capacities" and "the need for comprehension and insight" (p. 205). Maslow alleged that an individual is not motivated to satisfy a higher-level need until his or her lower-lever needs are met.

In the SDT perspective, autonomy refers to our need for choice and control, competence is the feeling of impacting one's environment and achieving valued outcomes, and relatedness is our sense of belongingness and feeling valued by others (Deci & Ryan, 2000; Niemiec & Ryan, 2009). Deci and Ryan (2002) suggested that "relatedness typically plays a more distal role in the promotion of intrinsic motivation than do competence and autonomy, although there are some interpersonal activities for which satisfaction of the need for relatedness is crucial for maintaining intrinsic motivation" (p. 14). Given the interpersonal nature of the teaching profession, the need for relatedness would theoretically be considered crucial.

Furthermore, Ryan and Deci (2002) affirmed that "much of [their] research has served to establish a clear empirical link between satisfaction of autonomy, competence, and relatedness needs, on the one hand, and eudaimonic well-being, on the other" (p. 23). In other words, the concept of well-being is defined through SDT as a state conducive to happiness, and a correlation has been established with basic psychological needs. Sheldon, Arndt, and Houser-Marko (2003) extended the implications of this research when they found that individuals

showed significant trends of moving toward intrinsic goals which support their well-being and

moving away from goals that could undermine their well-being. The authors proposed that this

trend was a result of our inherent skill to decipher tasks that are potentially advantageous since

we purposefully pursue goals that will meet our psychological needs.

If people are innately guided to fulfill these basic psychological needs and, in turn, tend

to seek intrinsic goals that support their well-being, then positive outcomes naturally ensue. For

example, Grant (2008) designed studies to explore how intrinsic motivation acted as a

contributing factor to employee persistence, performance, and productivity. In one study, he

collected data from firefighters by measuring their intrinsic motivation, prosocial motivation

("the desire to expend effort to benefit other people"), and persistence (measured as working

overtime) (Batson, 1987 as cited in Grant, 2008, p. 49). The results indicated that intrinsic

motivation was a mediating factor between prosocial motivation and persistence.

Grant's (2008) findings can provide insight into teacher motivation at the workplace.

Much like firefighters, teachers exhibit prosocial motivation by entering the profession with the

intent of helping others. After conducting numerous interviews, Lortie (1975) reported five

themes for becoming a teacher, two of which he labeled as interpersonal themes (e.g. wanting to

work with children) and service themes (e.g. wanting to make a difference). Smethem (2008)

also stated, "Those beginning teachers who sought satisfaction in their career appeared to value

intrinsic rewards more highly than the extrinsic rewards of career structures and incentives that

rest on accountability and performance" (p. 475). Although these oft cited reasons for entering

the teaching profession appear to stem from prosocial motivation, the implication of Grant's

(2008) research is that these reasons may not directly impact or maintain positive outcomes such

as persistence. This serves as a compelling argument that school leaders must also take measures

to stimulate intrinsic motivation by meeting the teachers' needs for autonomy, competence, and relatedness.

In further discussion of outcomes, the previously discussed theories focus on the involvement of control beliefs when attaining outcomes; however, SDT differentiates outcomes as intrinsically or extrinsically oriented. The SDT theorists stated:

…the pursuit of extrinsic rewards per se is neither positive nor negative; however, excessive concentration on external rewards can distract people from intrinsic endeavors and interfere with personal integration and actualization…Self-determination theory might assume, therefore, that persons who view money and wealth as central values are likely to be both more control oriented and less psychologically integrated. (Kasser & Ryan, 1993, p. 410)

Furthermore, Kasser and Ryan (1993) related different forms of aspirations with satisfying our psychological needs. The researchers found that individuals with intrinsically oriented aspirations experienced greater well-being whereas individuals who expressed extrinsically oriented aspirations (e.g., financial success) experienced the inverse. Specifically, they explored the following intrinsically oriented aspirations: self-acceptance ("aspirations for individual psychological growth, self-esteem, and autonomy"), affiliation ("aspirations [that] concern family life and good friends"), and community feeling ("aspirations [that] concern making the world a better place through one's actions") (p. 411). Rinke (2008) synthesized literature regarding reasons for teacher attrition and took into consideration the initial motivation of novice teachers for becoming an educator. The most common reasons for entering the profession were intrinsically orientated (Lyons, 2004; Wang, 2004; Weiner, 1990; LaTurner, 2002; Schutz, Crowder, & White, 2011; Olsen & Anderson, 2007 as cited in Rinke, 2008).

The importance of synthesizing SDT literature with teacher motivation is evident in the need to promote and maintain quality teachers in the classroom. Otherwise, student learning will be compromised and costs due to teacher turnover will continue to accrue. In an unfortunate example, Bouwma-Gearhart (2010) recounted the regretful loss of a talented pre-service teacher who decided to leave the classroom before she even graduated. Bouwma-Gearhart (2010) explored the student's decision through SDT and reflected upon her feelings of suppressed autonomy to choose the content and methods for teaching which was coupled with repressive high-stakes testing pressure. According to Bouwma-Gearhart (2010), the student also lamented her reduced feelings of relatedness since her "relationships [with other teachers] overwhelmingly fed her negative impression of the profession" (p. 35). Despite the student's increased competence in her pedagogy and content knowledge, her needs for autonomy and relatedness were not met; therefore, occupational goals shifted away from the classroom. Bouwma-Gearhart (2010) realized the following:

> While neither educator disillusionment during the transition from university-based training programs to actual classrooms, nor educator attrition from the profession, are newly identified phenomena, it is our contention that analysis of these through the lens of self-determination theory allowed new insight into these phenomena. (p. 36)

With the conclusion that teachers most likely enter the profession with intrinsically orientated motives (Rinke, 2008), they are likely to experience well-being (Kasser & Ryan, 1993). Moreover, a relationship between well-being and psychological needs has been established which, in turn, leads to intrinsic motivation (Ryan & Deci, 2002, 2009). An implication of these findings is that most teachers initially enter the workforce equipped with feeling psychologically satisfied; however, this feeling is not nurtured and maintained in the

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workforce for some educators, who report lack of autonomy and influential power, feeling

pressured from accountability initiatives to measure their competence and negative relationships

as reasons for leaving the profession. In further support of this argument, psychological needs

are either reinforced or thwarted by external factors in our social environments. However, our

psychological needs are extended differently in domain-specific contexts. For example, "people

who feel more controlled and disconnected in their work life than in their church will feel more

autonomy and greater well-being in the latter sphere than the former" (Ryan, 1995, p. 411).

Therefore, teachers will be more intrinsically motivated at school when their basic psychological

needs are met in this domain through the efforts made by school leaders.

SDT has the potential to refresh our perspective of school leadership styles and teacher

motivation. For example, teachers' sense of autonomy can increase by allowing teachers to

contribute more to school policies (Ingersoll, 2003; Kersaint, 2005). Also, teachers could choose

professional development opportunities to improve their pedagogical and content competency

which would concurrently increase their autonomy if the decision remains with them.

Relatedness could likewise be promoted in work environments that allow teachers to work

together in an effort to make decisions in addition to mentoring programs that partner a highly-

qualified teacher with a novice teacher (Brill & McCartney, 2008; Ingersoll, 2003; Kersaint,

2005; NCTAF, 2007; Smethem, 2007). Lastly, teachers may feel more valued if their salaries

were to increase, although this is a more controversial suggestion because research is

inconclusive about its effects on teacher retention (Brill & McCartney, 2008; Ingersoll, 2003;

Rinke, 2008).

The SDT approach to teacher motivation is not widespread among academic scholarship,

but this topic is promising for future research. Much attention has been devoted to exploring

student motivation and achievement through the lens of SDT (Ryan & Deci, 2009; SDT Featured Overviews and Articles of Education), but a need exists for this theory to expand and encompass teacher motivation as well. However, the investigation must not stop at theoretical explorations of teacher motivation without also directing attention toward practical implications for school leaders who can effect change. In order to address this challenge, the alignment between basic psychological needs and school leadership styles must be examined, a task I undertook for the purposes of this study and outlined in Table 3.

Table 3

Alignment between Basic Psychological Needs and School Leadership Styles

School Leadership Style	Autonomy	Competence	Relatedness
Authoritarian	controls teachers and their actions	gives praise and criticism based on personal standards	does not encourage communication among teachers
Democratic	guides teachers while working with them	believes teachers are capable of doing work on their own	encourages communication among teachers
Laissez-Faire	makes minimal or no effort to influence teachers and their actions	makes minimal or no effort to give feedback	makes minimal or no effort to establish relationships with others

The Relationship between Teacher Motivation and the Classroom Environment

Schools provide an important context in which students experience motivation and achievement; therefore, much research has been dedicated to exploring this environment. Roeser, Urdan, and Stephens (2009) viewed the school environment through the Basic Levels of School Contexts (BLOSC) model which takes different forms and levels of contexts into

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consideration. According to the authors, the school is comprised of an organizational context that impacts student learning and motivation which is characterized by overt attributes such as school size, resources (e.g., low-quality teachers), physical structures (e.g., metal detectors, graffiti), and curricular discrepancies (e.g., high and low tracks of learning), to name a few. Another important context embedded in schools that strongly influences student learning and motivation is subjective in nature and comprises the organizational culture, characterized by implicit factors derived from individuals' behavioral, social, and moral environments. Included within this context is the work culture that teachers experience in their school. Within the framework of achievement goal theory, Roeser et al. (2009) described teachers' work environments as either "emphasizing competition, social comparison, and differential treatment of teachers (e.g., a performance goal structure)" or prioritizing "cooperation, equity, and a spirit of innovation (e.g., a mastery goal structure" with the possibility of a blended degree of both (p. 394). However, the authors further discovered through their empirical research that teachers in middle and elementary schools incorporated the type of work environment they experienced into their classroom environments. In other words, teachers who perceived their school leaders to create a work environment that was competitive and unequal in terms of how personnel were treated actually transferred these practices into their classroom by fostering competition and underlining ability differences among students (Roeser, Marachi, & Gelhbach, 2002 as cited in Roeser et al., 2009).

In a similar research study, but framed within the perspective of SDT, Roth, Assor, Kanat-Maymon, and Kaplan (2007) explored the relationship between teachers' self-reported autonomous motivation and their students' self-reported autonomous motivation. They hypothesized that teachers who perceived their work environment to be autonomy-supportive

would foster autonomy-supportive classroom environments. They based their predictions on the theoretical conclusion that teachers with greater autonomous motivation would have a deeper understanding and appreciation for the content they taught and the instructional methods they employed which allowed them to offer multiple approaches toward students' learning and, in turn, enabled student choice. Further, they theorized that teachers with autonomous motivation valued their motivational orientation and the positive outcomes that ensued (i.e., strong engagement in learning); therefore, they would want to create the same learning environment for their students. Lastly, Roth et al. (2007) purported that autonomously motivated teachers were less pressured by achievement and more focused on developing their students' in-depth understanding; therefore, they were more likely to implement choice and dedicate instructional time to explaining the relevancy of content. Through these motivational factors within their learning environment, they believed that students would report autonomous motivation. Roth et al. (2007) found evidence to support their hypotheses and were able to conclude that autonomously motivated teaching positively correlated with students' autonomous motivation for learning in their study. Moreover, students also reported the level of their teachers' autonomy-supportive instruction and the results indicated that this variable acted as a mediator between teacher-reported autonomous motivation and student-reported autonomous motivation.

Leroy, Bressoux, Sarrazin, and Trouilloud (2007) also studied the relationships between teacher factors and their degree of cultivating autonomously-motivated learning environments. However, their research explored the causal structures between variables; therefore, they created a structural equation model that proposed an autonomy-supportive motivational climate in a natural classroom setting. Furthermore, the authors hypothesized that contributing factors which influenced how teachers established a classroom climate included teacher's self-efficacy, entity

theory/incremental theory, seniority, and perceived pressures coming from administration,

colleagues, and students' parents. It was initially hypothesized that implicit theories (entity,

incremental) would significantly predict autonomy-supportive climate; however the results did

not support this claim. After the researchers deleted this path, the model improved (CFI=.998, x^2

= 2.16, p=.34). The hypothesized relationship between teachers' self-efficacy and autonomy-

support classrooms was supported by the results. Moreover, an indirect relationship was

established between incremental theory and autonomy support through the mediating variable,

self-efficacy. The results also indicated that seniority had a direct positive impact on autonomy

support whereas self-efficacy only partially mediated the relationship between seniority and

autonomy support. Similarly, the perceived pressures directly impacted autonomy support;

however, self-efficacy was a stronger mediating variable between pressure and autonomy

support (see Figure 4 for the modified model). This final result theoretically aligns with SDT

and the findings of Roth et al. (2007) in that perceived pressure is a controlling exogenous

variable in one's environment which can indirectly and, in this case, directly affect the type of

autonomy-supportive classroom atmosphere that teachers cultivate (Bouwma-Gearhart, 2010;

Plant & Ryan, 1985; Ryan & Deci, 2000; Smith, 1991).
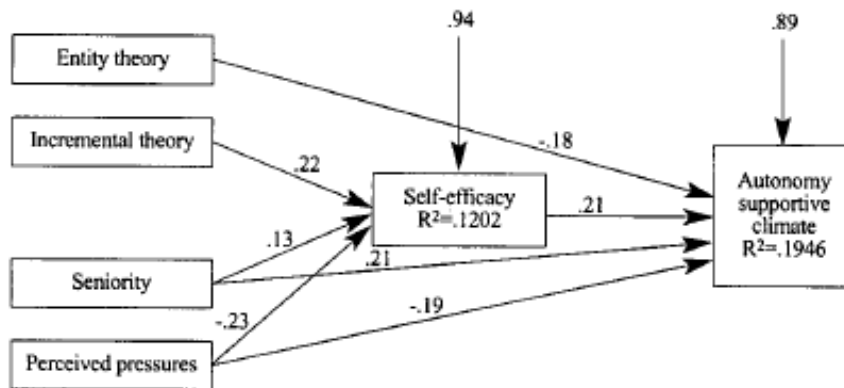
Figure 4. Modified model of the relationships between teachers' self-efficacy, implicit theories, seniority, perceived pressures, and establishment of an autonomy supportive climate. (Leroy et al., 2007, p. 537)

In this section thus far, empirical evidence has supported teacher-specific variables that influence their students' motivation; however, it is also important to describe autonomy-supportive practices in the classroom for pragmatic purposes. Reeve and Halusic (2009) responded to questions developed by teachers who were interested in how to apply elements of SDT in their classrooms. First, they explained that the goal of autonomy-supportive instruction is to "identify, nurture, and develop the inner motivational resources that already exist in students" (Reeve & Halusic, 2009, p. 146). In order to achieve this ultimate self-determined atmosphere, teachers must make efforts to take students' viewpoints into consideration, demonstrate patience while committing time for students to learn, explain rationales, avoid controlling language (e.g., "do this"), and encourage students' expressions of beliefs, emotions, goals, and behaviors.

Relevant Research Studies

Although implications can be made from the research findings in this review of literature to inform the present study, there exists a paucity of research that examines the relationships between school leadership, teacher motivation, and the classroom environment. To the best of the author's knowledge, this is the first investigation to explore the relationships between school leadership styles, teachers' psychological need satisfaction, and teachers' classroom environments for one population through the perspectives of both teachers and administrators. However, it is important to acknowledge studies that are relevant to the focus of this paper and how they differ in research design (see Table 4).

Table 4

Relevant Studies on Educational Leadership Styles, Teacher Motivation, and Classroom Environment

Study	Type of Study	Purpose	Sample	Findings Relevant to the Proposed Study
Baard, Deci, & Ryan (2004)	Quantitative-survey and work performance data	To examine the relationship between workers' psychological need satisfaction, performance ratings, and psychological well-being	528 associates from a major investment banking firm; 59 employees from a major U.S. banking corporation	SDT is relevant framework for investigating motivation in workplace; job performance and psychological well-being are influenced by people's needs for competence, autonomy, and relatedness at work; workers' need satisfaction is influenced by their perceptions of managers being autonomy-supportive
Collie, Shapka, & Perry (2013)	Quantitative-survey data	To examine the relationship between teachers' perceived autonomy support from principals, psychological need satisfaction, and motivation for teaching	603 teachers from western Canada	SDT is relevant framework for investigating teachers' motivation; teachers' perceived autonomy support from leaders positively related to psychological need satisfaction; greater need satisfaction predicted autonomous motivation
Eyal & Roth (2011)	Quantitative-survey data	To examine the relationship between educational leadership styles (transformational, transactional) and teachers' motivation (motivation type, burnout)	122 Israeli elementary school teachers who voluntarily enrolled in professional development	Significant and positive relationship between transformational leadership and autonomous motivation; significant and positive relationship between transactional leadership and controlled motivation; no relationship between transformational and controlled; no relationship between transactional and autonomous
Filak & Sheldon (2008)	Quantitative-survey and teacher course evaluation data	To examine the relationship between teacher autonomy support, student motivation, student need satisfaction, and teacher course	220 undergraduate students in an introduction to journalism course	Student motivation predicted by teacher autonomy support; student psychological need satisfaction predicted by teacher autonomy support and self-determined student motivation; higher expected

evaluations	course grades and higher teacher evaluations predicted by psychological need satisfaction

Roeser et al. (2009) spoke to the importance of gathering information from an "emic," or first person perspective, when investigating features of a school's culture because this context cannot easily be detectible by outsiders. Each of the relevant studies took this approach by either asking teachers or students to self-report their perceptions. The intent of this research study was to do the same. Moreover, two of the relevant studies attested to the legitimacy of examining work environments within the context of SDT which, in this study, has been used to theoretically explore teachers' motivation and was used as a conceptual measure for operationalizing teachers' motivation as well as their orientation as motivators (Baard, Deci, & Ryan, 2004; Collie, Shapka, & Perry, 2013).

Specifically, Baard et al. (2004) found workers' perceptions of their managers being autonomy-supportive in their work environment to significantly impact their psychological needs for competence, autonomy, and relatedness. Further, the researchers learned that workers' psychological needs significantly influenced their job performance and psychological well-being. However, the participants of this study were employees from banking companies, a different working environment from schools. The present study also measured leaders' influence on teachers' three psychological needs and the resulting outcomes of these needs being met; however, this study investigated specific leadership styles (which inherently include autonomy-supportive aspects) as antecedent variables and classroom environment as the outcome.

The study conducted by Collie et al. (2013) more closely aligns with the research objectives of the present study in that they investigated the causal structure between teachers'

perceived autonomy support from their principals, psychological needs, and motivation orientation; however, each variable was defined and measured differently. Similar to Baard et al. (2004), the authors measured leadership only in terms of autonomy support which excluded other elements of different leadership styles such as the implications for support of competence and relatedness. For example, democratic leaders not only offer autonomy-supportive guidance for teachers while working with them, but they also believe that teachers are capable of doing work on their own (i.e., competence) and encourage communication among teachers (i.e., relatedness). However, this information regarding teachers' relationships with leaders has not been accounted for in previous studies and supported the need for exploring it in the present study. Further, Collie et al. (2013) segmented the psychological need for relatedness into two separate variables—relatedness with students and relatedness with colleagues. The decision to divide relatedness by relationship type offered a unique way for exploring this need in a more refined manner; however, the traditional approach of only including relatedness with colleagues was more appropriate for the present study due to the nature of how the leadership style antecedent variables were defined (i.e., democratic leaders encourage collegiality). Moreover, the purpose of the study conducted by Collie et al. (2013) was to investigate teachers' type of motivation (e.g., intrinsic, identified, introjected, external); however, the present study limited the inquiry into this variable to a theoretical examination for the purpose of allowing the exploration into classroom-level outcomes experienced by students.

Using a different instrument, Eyal and Roth (2011) also measured teachers' type of motivation but analyzed the construct as a mediating variable between leadership styles and teacher burnout, or emotional exhaustion. The researchers defined leadership styles within the full range model of transformational and transactional types of leadership. However, the present

study defined and measured leadership styles as authoritarian, democratic, and laissez-faire because of its appropriate alignment with psychological needs (see Table 3) and the conceptual weaknesses of the full range model (Yukl, 1999).

Lastly, Filak and Sheldon (2008) examined the effects of teacher factors on student motivation, another relationship pertinent to the present study. However, the study was driven by an emphasis on student perceptions, not teacher perceptions which was a focus of the present study. Moreover, the intent of the present study was to analyze the motivational environment of K-12 classrooms, not higher education learning environments.

The study conducted by Filak and Sheldon (2008) was not the only relevant study with a different type of participant population from the present investigation as Baard et al. (2004) examined bankers, Collie et al. (2013) examined Canadian teachers, and Eyal and Roth (2011) examined Israeli teachers. This study examined the motivational factors of K-12 teachers in a southeastern region of the United States. Another important research design distinction between the present study and the relevant studies was that the authors only collected quantitative data; however, an environment as complex as a school requires more in-depth data and rich descriptions which is why I collected qualitative data from teachers' self-developed authentic activities and interviews with practicing school leaders. Furthermore, the present study included varying levels of a school's social context—ways in which principals lead, teachers' psychological need satisfaction, and the classroom environment experienced by students. Therefore, the current study was not limited by unilateral planes or only two levels of the school environment.

Summary

The theoretical approach to teacher motivation this study takes, Self-determination Theory, is not widespread among academic scholarship, but this topic is promising for future research. Much attention has been devoted to exploring student motivation and achievement through the study's theoretical lens (Ryan & Deci, 2009; SDT Featured Overviews and Articles of Education), but a need exists for this theory to expand and encompass teacher motivation as well. Furthermore, there exists a paucity of research that examines the relationships between teachers' perceptions of school leadership, motivation, and their classroom environments. To the best of my knowledge, this is the first investigation to explore the correlational and causal relationships among leadership styles, teachers' psychological need satisfaction, and their effects on the classroom environment. In addition to providing theoretical contributions to the fields of educational psychology and educational leadership, the findings rendered from interviews with administrators has the potential to provide greater understanding of the relationships within the context of administrators' perspectives and how the findings can pragmatically inform future practices of administrators seeking to support teacher motivation as well as the cultivation of student autonomy and authentic intellectual work in the classroom.

Based on the review of literature, it was hypothesized that:

1. Principals with a democratic leadership style would support teachers' psychological need satisfaction for competence, autonomy, and relatedness at work more than principals with an authoritarian or laissez-faire leadership style.

2. Teachers who reported greater psychological need satisfaction at work would demonstrate a higher autonomy-supportive motivational orientation.

3.   Teachers who reported greater psychological need satisfaction at work would provide

their students with more challenging and relevant learning experiences for their students.

Within the context of democratic, laissez-faire, and authoritarian leadership styles theory as well

as SDT, I conducted this study to answer the following research questions:

1.   How do principals' leadership styles affect teachers' motivation at work?

2. How does teachers' motivation to work affect the conditions in which they motivate their

students?

3. How does teachers' motivation to work affect the learning experiences they provide for

their students?

4.   What are the implications of this study for school leaders seeking to support teacher

motivation, student autonomy, and authentic intellectual work in the classroom?

CHAPTER III. METHODOLOGY

The purposes of this chapter are to (1) describe the research design, (2) describe participants and sampling approaches, (3) explain instrumentation and data collection procedures, and (4) provide explanations and rationales for analytical techniques. However, the purpose of the study is first reviewed.

Purpose of Study

An ultimate goal for school leaders is to foster a learning environment in which students develop a self-determined motivation to learn and are engaged in challenging, higher-order thinking experiences. This goal is most directly accomplished through teachers who create classroom environments conducive to nurturing students' motivation and learning (Leithwood, 2011; Lezotte & McKee, 2006). However, the same teachers who hold such a powerful impact on students' experience are vulnerable to work environments that either support or thwart their personal motivation which speaks to the importance of how principals lead (Gronn, 2002; Harris & Spillane, 2008; Leithwood, 2011; Leithwood et al., 2004; Leithwood et al., 2010; Louis et al., 2010; Ryan & Deci, 2000). Thus, the complexity of a school organization is rooted in the relationship between principal leadership styles, teacher motivation, and classroom environments; yet, extant empirical research has only examined the different dimensions of this social context in isolation. Further, there remains a paucity of research that investigates how principal leadership styles influence teacher motivation (Collie et al., 2013; Eyal & Roth, 2010) and the manner in which teacher motivation affects students' autonomy (Filak & Sheldon, 2008; Roth et al.,2007).

Therefore, the present study was conducted with the purpose of investigating the relationships between administrators' leadership styles, teachers' psychological need satisfaction, and the classroom environment. The following research questions guided this purpose of inquiry.

1. How do principals' leadership styles affect teachers' motivation at work?

2. How does teachers' motivation to work affect the conditions in which they motivate their students?

3. How does teachers' motivation to work affect the learning experiences they provide for their students?

4. What are the implications of this study for school leaders seeking to support teacher motivation, student autonomy, and authentic intellectual work in the classroom?

Research Design

This was a sequential mixed methods study in that findings rendered from a survey taken by teachers were discussed with administrators during an interview. Specifically, teachers in the participating school systems were asked through survey items to describe their principal's leadership style, their motivation at work, and their orientation as a motivator (see Appendix 1). Through the survey, teachers were also asked to submit a self-developed activity that was challenging and supportive of higher-order thinking. After the anonymous quantitative data (scale scores) and qualitative data (activity description) were analyzed, the results were shared in aggregate form with administrators in the participating school systems who were identified by school district leaders as "highly effective in supporting teacher motivation and student learning." The qualitative data which emerged from the administrator interviews were also

analyzed for the threefold purpose of structural corroboration, gaining richer data, and identifying implications of the survey findings.

The research design of this study provided a thorough, comprehensive, and better understanding of the complex relationships in a school setting and, most importantly, how the findings regarding the nature of these relationships could inform the practice of school leaders. Conversely, other researchers who similarly investigated these topics limited the design of their studies to only quantitative methods (Collie, Shapka, & Perry, 2013; Eyal & Roth, 2011; Filak & Sheldon, 2008). Qualitative methods merited inclusion as well because of how little research is available to fully understand the relationship between principal leadership, teacher motivation, and classroom environments. Another distinguishing feature of the present study's research design was calling upon the expertise of highly-regarded administrators to interpret the teacher survey results through their years of experience and provide suggestions for improving leadership practices.

Due to the non-experimental design of the study, there was limited evidence to support internal validity because variables could not be manipulated, controlled, randomized, or compared through control groups by the researcher. However, the introduction of qualitative strategies supported another form of validity, or standards of credibility as it is often referred to in qualitative research (Eisner, 1998). Further, structural corroboration provides credibility to a study that measures constructs through multiple data sources to either "support or contradict the interpretation and evaluation of the data" (Eisner, 1998, p. 110). In this study, teacher motivation was quantitatively measured through survey items and qualitatively described through interviews with administrators. Moreover, the classroom environment was characterized by teachers' orientation as motivators and the degree of authentic intellectual work they

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incorporated into their instructional tasks, both of which were addressed by the same two data sources. In particular, teachers' motivation orientation was operationalized through survey items and discussed by administrators. Also, teachers' level of rigorous and relevant instruction was evaluated based on a task they submitted and also addressed in administrators' interview responses.

In consideration of external validity, this study was not affected by inherent threats to experimental studies such as testing effects, novelty effects, and experimenter effects, to name a few. Yet, social desirability and volunteer bias may have threatened the study's external validity if the participants responded in a manner they believed would please the researcher or if they did not have similar characteristics to the general population (i.e., respondents may volunteer to participate because they have extremely positive or negative relationships with their principal), respectively.

Participants

In the current study, participants consisted of K-12 teachers and administrators in a southeastern state who were recruited through purposeful sampling procedures from two participating school systems. One participating school system housed 14 schools, including seven elementary schools, two middle schools, and five high schools which served approximately 9,700 students. The median income of the population residing within this rural community was approximately $40,000 with an average free and reduced lunch rate of 56.2%. Approximately 73% of the student population was white, followed by 23% black, 3% Hispanic, and 1% Asian. The second participating school system was made up seven schools with five elementary schools, one middle school, and one high school which served about 3,700 students. Also a rural community, the median income was approximately $30,000 and the average percent

of students who qualified for free or reduced lunch was 69%. About 51% of the students were

white, 36% were black, and 13% other.

Teacher Participants

Teachers were invited to complete the survey if they were employed in a school system

whose superintendent agreed to participate in the study. Among the two school systems from

which participants were recruited, the online survey was directly sent by the researcher to 786 K-

12 teachers via their school system E-mail address. In the recruitment E-mail, teachers were

invited to participate in a dissertation study to understand their experiences of school leadership

and job satisfaction as well as elements of their classroom environment. Further, they were told

that their responses would be used to inform administrators about strategies to increase teachers'

satisfaction.

Moreover, the first 20 respondents to complete the online survey were rewarded by

allowing them to select a children's charity from a list of options to which $5 was donated. The

children's charities in which participants could select from included Make-a-Wish Foundation,

March of Dimes, My Stuff Bags Foundation, Canines for Disabled Kids, and Special Olympics.

On the survey, each charity selection included a description of the charity and its mission

statement. Based on the first 20 respondent choices, the following amounts were donated to each

charity, respectively: $35, $25, $15, $10, and $15. Teachers were also informed that if 150

teachers completed the online survey, then the most frequently selected charity would receive an

additional $150.

The response rate was approximately 25.2% with 198 teachers responding to the survey.

Among the 198 respondents, 24 teachers only completed the demographic portion of the survey

and none of the scale items; therefore, their responses were removed which reduced the response

rate to 22.1%. Therefore, the response goal of 150 participants was met and the most commonly

selected children's charity, Make-a-Wish Foundation, received an additional $150 donation.

Another criteria for inclusion in the current research study was that teachers must have

worked under their current principal for more than one year. The purpose of this criterion was to

allow teachers time to more fully experience and evaluate the leadership styles of their principal.

Among the respondents who completed all portions of the survey, 141 educators indicated that

they had worked under their principal for more than one year and, thus, made up the population

of participants for this study.

There were 115 female respondents and 26 male respondents, or 81.6% and 18.4% of

participants respectively. Further, 118 participants (83.7%) were Caucasian, 19 (13.5%) were

African American, 3 (2.1%) were Hispanic, and 1 (0.7%) was biracial/multiethnic. When asked

to indicate the highest degree they had completed relevant to the field of education, the majority

of respondents (48.2%) reported a master's degree which was followed by 52 (36.9%) with a

bachelor's degree, 15 (10.6%) with a specialist degree, 4 (2.8%) with a doctoral degree, and 2

(1.4%) who did not indicate their highest completed degree.

In the survey, participants were also asked to select a description that best defined their

current teaching position. A large majority of 111 (78.7%) participants selected general

education teacher (i.e., teach main content subject areas such as math, reading, science, and/or

social studies) followed by 17 (12.1%) special education teachers, 7 (5.0%) media specialists, 4

(2.8%) physical education teachers, 1 (0.7%) gifted teacher, and 1 (0.7%) paraprofessional/

teacher's assistant. Table 5 shows the frequency count in which participants selected grade

levels they taught at the time of taking the survey. On the survey, participants were instructed to

check all of the grade levels that applied to them; therefore, the frequency count exceeded the

number of participants.

Table 5

Frequency of Grade Levels Taught by Participants

Grade Level	Frequency	Percent
K	12	4.5%
1	14	5.3%
2	12	4.5%
3	12	4.5%
4	20	7.5%
5	24	9.0%
6	28	10.5%
7	26	9.8%
8	21	7.9%
9	22	8.3%
10	26	9.8%
11	30	11.3%
12	19	7.1%

On average, the participants of this study have been a teacher for 15.3 years (SD = 8.5).

Further, participants have been employed as a teacher at their current school for an average of

10.5 years (SD = 7.2) and have worked under their current principal for an average of 6.9 years

(SD = 5.3).

Administrator Participants

　　As previously stated, school administrators were purposefully selected and recommended by school district leaders in participating systems who met the criteria of being "highly effective in supporting teacher motivation and student learning." One participant did not meet the criterion of holding the position as school principal at the time when recommendations were requested and served as an administrator at the school district level instead; therefore, she was not recommended. However, I recruited her to participate in this study because of her former experience as a principal and her apropos insights that she shared in our previous discussions. Because the intent of the study was to explore individuals' perceptions, this approach to sampling allowed me to gather opinions of the targeted populations.

　　Richer descriptions about the administrator participants are included in Chapter Four; however, the basic demographic information regarding completed years of experience, race/ethnicity, and job positions are outlined in the following table. The actual names of participants have been replaced with pseudonyms to maintain confidentiality. The average number of completed years as an administrator among the participants was 7.8. There were five female participants and one male participant. Three of the participants had elementary and secondary school administrative experience whereas the other three participants' experience was limited to an elementary setting. Four participants were white and two participants were black.

Table 6

Demographic Information of Administrator Participants

			Job Position	
Participant	**Years as Administrator**	**Race/ Ethnicity**	**2014-2015 School Year** (year interviews were conducted)	**2013-2014 School Year** (year teacher surveys were administered)

Amy	4	white	elementary school principal	elementary school assistant principal
Barbara	8	white	elementary school principal	elementary school principal
Brandon	10	black	high school principal	high school principal
Cathy	12	black	Director of Administrative Services	elementary school principal
Sally	7	white	elementary school principal	elementary school principal
Susie	6	white	elementary school principal	elementary school principal

The generalized population for this study is school administrators who have influential

power over teachers. Furthermore, the findings rendered from administrator interviews

regarding teacher motivation and their practices are transferable to school administrators who

lead within in a similar context as the participants.

Instrumentation

The following variables were included in the current study for the purpose of defining

unknown elements of the relationship between principal leadership styles, teacher motivation,

and classroom environments.

Variables

1. Principal Leadership Style

   The different principal leadership styles were measured by the Leadership Styles

   Questionnaire which had a total of 18 items and included democratic, laissez-faire, and

   authoritarian styles (Northouse, 2012).

2. Teacher Motivation

Teachers' psychological need satisfaction for autonomy, competence, and relatedness were measured by the Basic Psychological Needs at Work Scale which included a total of 21 items (Ilardi, Leone, Kasser, & Ryan, 1993). Teachers' motivation was also qualitatively addressed through interview questions with administrators.

3. Classroom Environment

Teachers' classroom environment included their orientation for motivating children and the degree of authentic intellectual work they incorporated into their instruction. Teachers' orientation as motivators, or their disposition to either control students or support their autonomy, was measured by the Problems in Schools (PIS) Questionnaire which included eight vignettes and four ways of how to handle the situation in each scenario, making a total of 32 survey items (Deci, Schwartz, Sheinman, & Ryan, 1981). Teachers were asked to submit assignments that incorporated challenging and higher-order thinking strategies for students which were scored based on construction of knowledge, elaborated written communication, and connection to students' lives using the Authentic Intellectual Work (AIW) rubric for teachers' assignments (Newmann, King, & Carmichael, 2007). Moreover, administrators were asked to describe the classroom environment (i.e., teacher strategies for motivating students, student learning experiences) of teachers who they considered motivated at work.

4. Background/Demographic Information

This included survey items for teachers regarding the number of years at their current school, years of teaching experience, grade levels currently taught, gender, ethnicity, and highest degree completed. Also, administrators were asked in the interview to describe their employment experience as an administrator.

Instruments

Five instruments were used in the present study to measure the previously outlined variables. Standard procedures such as Cronbach's alpha and factor analyses were used to estimate reliability and validity of survey scales. Specifically, certain values of Cronbach's coefficient alpha suggested that the items for the scale had relatively high internal consistency. In terms of validity, factor analyses tested the variability among correlated variables. Moreover, the Leadership Styles Scale and Basic Need Satisfaction at Work Scale were alternately presented to participants in the online survey to limit the effects of exposure influence over how participants responded.

Leadership Styles Questionnaire

In accordance with the first research question, teachers' perceptions of their principal's leadership style must be measured. The most appropriate method to operationalize the latent variable of leadership styles was through representative survey items that could be directly measured; therefore, the Leadership Styles Questionnaire was included as an 18-item subscale in the survey administered to teachers. The Leadership Styles Questionnaire was developed as an instrument for individuals to measure their personal style of leadership using a 5-point Likert scale that ranged from 1 meaning "strongly disagree" to 5 meaning "strongly agree." For the purposes of this study, the survey directions and items were changed to measure teachers' perceptions of their principal's leadership style. For example, Item 2 originally stated, "Employees want to be a part of the decision-making process" whereas the adapted item in the survey read, "My principal wants me to be a part of the decision-making process in my school." Moreover, specified survey items measured each type of principal leadership style which included democratic leadership, laissez-faire leadership, and authoritarian leadership. The scores

for each style were computed by calculating the mean, and the type of leadership style experienced by each teacher was then determined by the highest average.

An exploratory factor analysis (EFA) using a principal component extraction method and a varimax rotation was conducted to determine what underlying structures existed for the constructs of democratic, laissez-faire, and authoritarian leadership styles which made up the Leadership Styles scale. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.876, indicating that the data were suitable for principal component analysis. Furthermore, Bartlett's test of sphericity was significant ($p < 0.001$) which signified that there was significant correlation between the variables and the analysis could proceed.

The EFA for leadership styles produced a four-component solution which was evaluated using eigenvalue, scree plot, and variance criteria. Using the Kaiser-Guttman retention criterion of eigenvalues greater than 1.0, four components should be retained. The scree plot also suggested the retention of four components which was the point at which the plot began to level off (see Figure 5). These four components accounted for 64.35% of the total variance. Components 1, 2 and 3 accounted for 23.02%, 20.23, and 14.38% of the variance, respectively, whereas Component 4 only accounted for 6.70% of the variance and was the highest factor loading for only one item. Therefore, it was decided to only retain three components, leaving the total accounted variance at 57.64%.
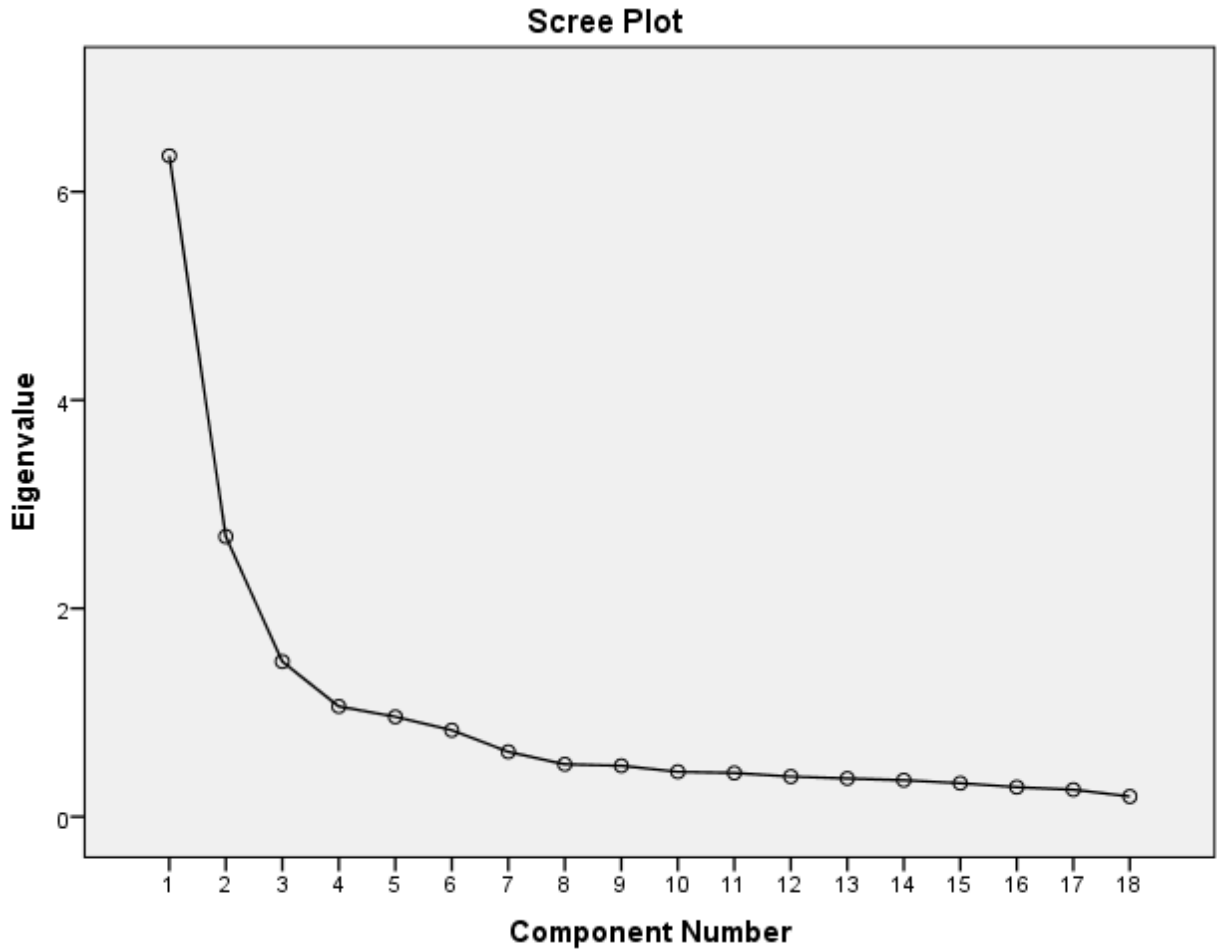
Figure 5. Scree plot for the Leadership Styles scale

Component 1 included the highest factor loadings for four items identified by the survey

instrument as democratic, three items identified as authoritarian, and one item identified as

laissez-faire. The amount of variance in the variable accounted for by two of the authoritarian

items was only 35.1% and 50.0%, the lowest communalities among all of the items; therefore,

the items were deleted. The third authoritarian item loaded negatively, so this item was deleted.

The laissez-faire item loaded relatively high between two components and could not be

theoretically supported as a retained item in Component 1; therefore, this item was deleted as

well. Further, Stevens (2001) recommended that components are reliable regardless of sample

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size if they include four or more loadings above .60. Consequently, Component 1 was labeled

Democratic Leadership Style. Cronbach's coefficient alpha was 0.836, indicating a high

reliability. Furthermore, the corrected item-total correlation ranged from .618 to .714 and (see

Table 7).

Component 2 included the highest factor loadings for six items, all of which were

positive. Five of the items were identified by the survey instrument as laissez-faire. The sixth

item was identified by the survey instrument as democratic, however, the factor loading was

below .50 and it also loaded almost as highly with a different component. This item was deleted

and Stevens' (2001) suggestion for reliability was maintained. Therefore, this component was

named Laissez-Faire Leadership Style. The reliability was good with a Cronbach's coefficient

alpha of 0.822. Also, the corrected item-total correlation ranged from .656 to .732 and (see

Table 7).

Component 3 included three authoritarian items with the highest factor loadings which

were all positive; therefore, it was labeled Authoritarian Leadership Style. The communalities

for this variable ranged from .651 to .734, close to meeting Kaiser's rule that communalities be >

.70 when the amount of original variables is less than 30 (Stevens, 2001). The corrected item-

total correlation ranged from .651 to .734 (see Table 7). Further, Cronbach's alpha coefficient

was .765, indicating good internal consistency.

Table 7

Items Retained for the Leadership Styles Scale

Item #	Item	Factor Coefficients	Item-Total Correlation
Democratic Leadership Style			
8	My principal knows that I prefer supportive communication from him/her.	.785	.618

5	My principal provides me with guidance without pressure.	.742	.643
14	My principal helps teachers to find their "passion."	.733	.714
2	My principal wants me to be a part of the decision-making process in my school.	.685	.624

Laissez-Faire Leadership Style

6	My principal stays out of the way of teachers as we do our work.	.820	.721
12	My principal gives me complete freedom to solve problems on my own.	.800	.682
18	In general, my principal believes it is best to leave teachers alone.	.767	.732
3	In complex situations, my principal lets me work problems out on my own.	.717	.657
9	My principal allows me to evaluate my own work.	.639	.656

Authoritarian Leadership Style

10	My principal believes that teachers need direction and feel insecure about their work.	.815	.734
11	My principal thinks I need help accepting responsibility for completing my work.	.752	.679
1	My principal acts like I need to be supervised closely, or I am not going to do my work.	.572	.651

Basic Need Satisfaction at Work Scale

Three of the research questions required the measurement of psychological need satisfaction in order to determine the effects of this construct as a dependent variable and independent variable, depending on the question. Developed by Ilardi et al. (1993), the Basic Need Satisfaction at Work Scale directly measured the theoretical constructs of Basic Psychological Needs Theory (BPNT), a subtheory of Self-Determination Theory which states that individuals need to experience support of autonomy, competence, and relatedness in their environments in order to grow psychologically (Ryan & Deci, 2002). According to BPNT, need satisfaction varies based on different social domains of which one is a part.

In this study, teachers' psychological need satisfaction in their work environment was measured based on a 7-point Likert scale that ranged from 1 ("not at all true") to 7 ("very true") with 4 ("somewhat true") as the median response option. Further, the scale was comprised of three subscales which measure each psychological need. For example, Item 1 measured autonomy and stated, "I feel like I can make a lot of inputs to deciding how my job gets done." Perceived competence was measured by items like #3 that stated, "I do not feel very competent when I am at work" whereas relatedness was measured by items such as Item 2 which stated, "People at work care about me." Higher scores indicated participants' greater psychological need satisfaction. Moreover, Ilardi et al. (1993) found an adequate internal reliability score of the survey ($\alpha = .74$).

An EFA using a principal component extraction method and varimax rotation was also conducted for this scale which was an appropriate factor analysis approach for the study's sample based on the Kaiser-Meyer-Olkin result of .847 and Bartlett's test of sphericity result of $p < 0.001$. According to the Kaiser-Guttman retention criterion, the analysis rendered a five-component solution accounting for 59.87% of the total variance. The scree plot criterion also supported the retention of five components (see Figure 6).
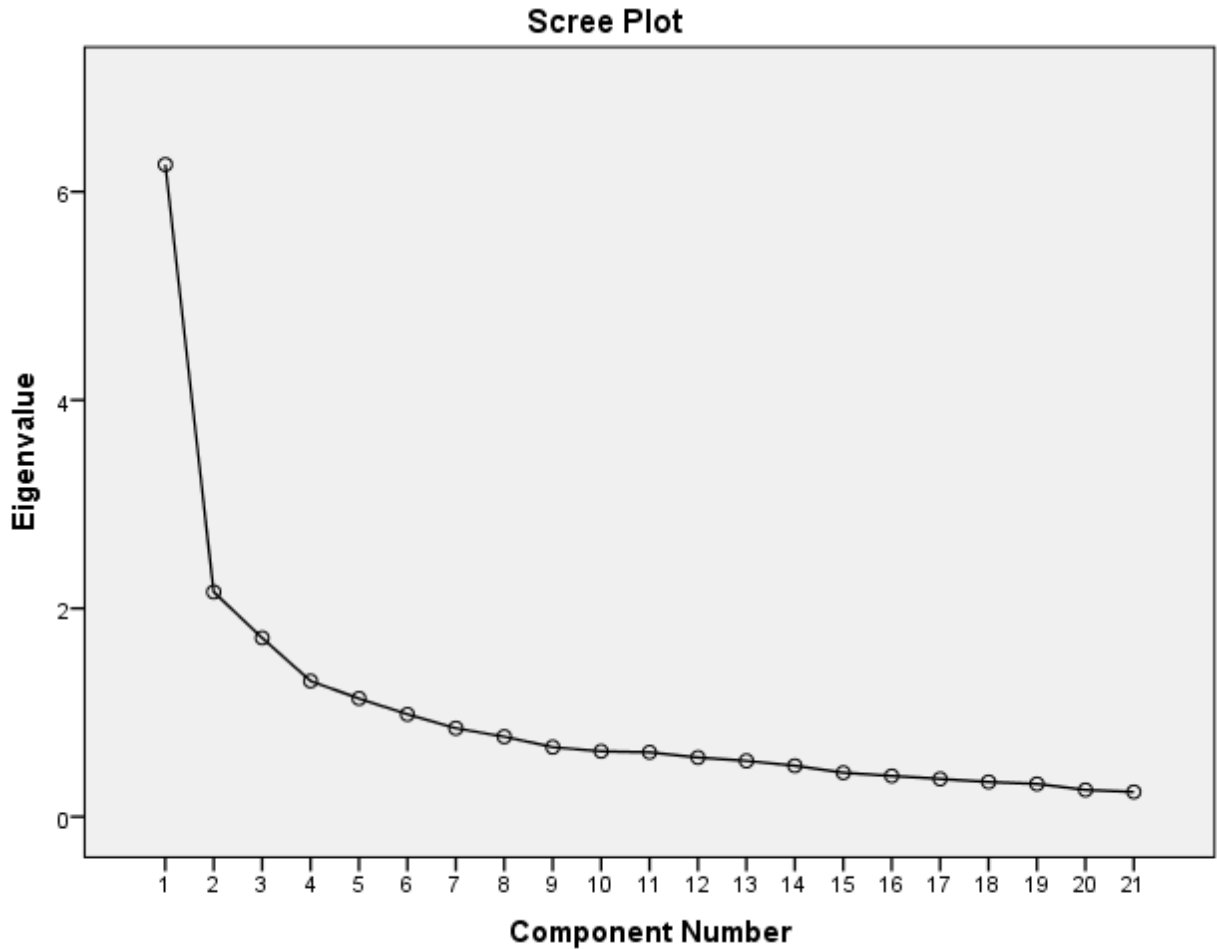
Figure 6. Scree plot for the Basic Need Satisfaction at Work Scale

Only items with communalities greater than .50 were retained; therefore, three items were removed based on this criterion. The first component contained four autonomy items and two competence items. One of the autonomy items negatively loaded to this component; however, the item should be reversed scored so the item was retained. Although the competence items had adequate factor loadings (.690 and .559) and communality results (.597 and .541), their inclusion could not be theoretically justified. Therefore, these items were deleted and the first component was named Autonomy. Cronbach's alpha was .768, and the communalities for this variable ranged from .564 to .748 (see Table 8).

The second component included the highest factor loadings for seven survey items with six items identified by Ilardi et al. (1993) as measuring relatedness and one item measuring autonomy. The latter item stated, "I feel like I can pretty much be myself at work," which can measure teachers' feelings of autonomy from the perspective of having an internal perceived locus of causality at work, a belief rooted in SDT (Ryan & Deci, 2000). However, another interpretation of this survey item is that teachers' true self is valued by their colleagues, an antecedent belief to feeling that they can be themselves at work, which would then align with their sense of relatedness to others at work. Therefore, this item was retained for the second component and labeled Relatedness. The reliability was good, as measured by a Cronbach's alpha value of .797. The communalities for Relatedness ranged from .536 to .655 (see Table 8).

The third component included the highest factor loadings for two items that were also labeled by the instrument's authors as measuring relatedness. These items were constructed as reversed-scored items; therefore, the expectation was that they would negatively load onto the Relatedness component. However, both items positively loaded onto a separate component. The items stated, "There are not many people at work that I am close to" and "I pretty much keep to myself when I am work;" therefore, the researcher labeled this component Social Isolation which deviated from the original survey instrument design. Cronbach's alpha for this subscale was .681 (see Table 8 for factor coefficients and item-total correlations).

Component 4 included the highest factor loadings for two competence items, both of which were positive. Because the communalities and factor loadings were mostly high, this component was retained and labeled Competence (see Table 8) even though the Cronbach's alpha value for this subscale (.571) indicated poor reliability.

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The fifth component, however, included the highest factor loading for only one item.

Further, it only accounted for 5.68% of the total variance; therefore, only Autonomy,

Relatedness, Social Isolation, and Competence were retained, leaving the total variance

accounted for at 54.18%.

Table 8

Items Retained for the Basic Need Satisfaction at Work Scale

Item #	Item	Factor Coefficients	Item-Total Correlation
Autonomy			
13	My feelings are taken into consideration at work.	.820	.748
1	I feel like I have a lot of input into deciding how my job gets done.	.741	.624
8	I am free to express my ideas and opinions on the job.	.709	.626
20	There is not much opportunity for me to decide for myself how to go about my work. (reversed scored)	-.616	.564
Relatedness			
21	People at work are pretty friendly towards me.	.738	.592
6	I get along with people at work.	.719	.653
9	I consider the people I work with to be my friends.	.588	.574
2	I really like the people I work with.	.577	.536
17	I feel like I can pretty much be myself at work.	.576	.543
15	People at work care about me.	.571	.585
18	The people I work with do not seem to like me much. (reversed scored)	-.560	.655
Social Isolation			
16	There are not many people at work that I am close to.	.799	.715
7	I pretty much keep to myself when I am at work.	.791	.682
Competence			
3	I do not feel very competent when I am at work. (reversed scored)	.829	.714
19	When I am working, I often do not feel very capable. (reversed scored)	.737	.584

Problems in Schools (PIS) Scale

The purpose of including the PIS scale was to answer Research Question Two which called for the measurement of teachers' orientations as a motivator. The instrument was composed of eight vignettes involving realistic problems that are likely to occur in a school setting. Each scenario presented the respondent with four possible approaches for resolving the issue, and they were asked to rate the appropriateness of each solution on a 7-point Likert scale with 1 meaning "very inappropriate," 4 meaning "moderately appropriate," and 7 meaning "very appropriate."

According to Deci et al. (1981), the authors who created the survey, the different solutions exist along a continuum from highly controlling to highly autonomy supportive. In the "highly controlling" solution, the teacher determines how the child should resolve the problem and issues sanctions to guarantee compliance. The "moderately controlling" response allows teachers to maintain control over deciding the solution but is coupled with statements intended to evoke guilt in the child or suggest that it is in the child's best interest. In "moderately autonomous" responses, the teacher advises the child to socially compare their standing with other classmates in order to gauge how they should respond to the problem. Lastly, the "highly autonomous" option allows the child to determine for him/herself how to resolve the issue while receiving guidance from the teacher as to elements of the problem which should be taken into consideration. Further, Deci et al. (1981) found acceptable internal consistency as Cronbach's alpha for the four subscales were .73, .69, .63, and .76, respectively.

Using a principal component extraction method and a varimax rotation, an EFA was conducted for the PIS scale. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.630 and Bartlett's test of sphericity was significant ($p < 0.001$). In accordance with the Kaiser-Guttman retention standard, 12 components had an eigenvalue greater than 1.0. Further, the

scree plot showed that the components began to level off after the twelfth component (see Figure 7). Collectively, the 12 components accounted for 69.60% of the total variance.
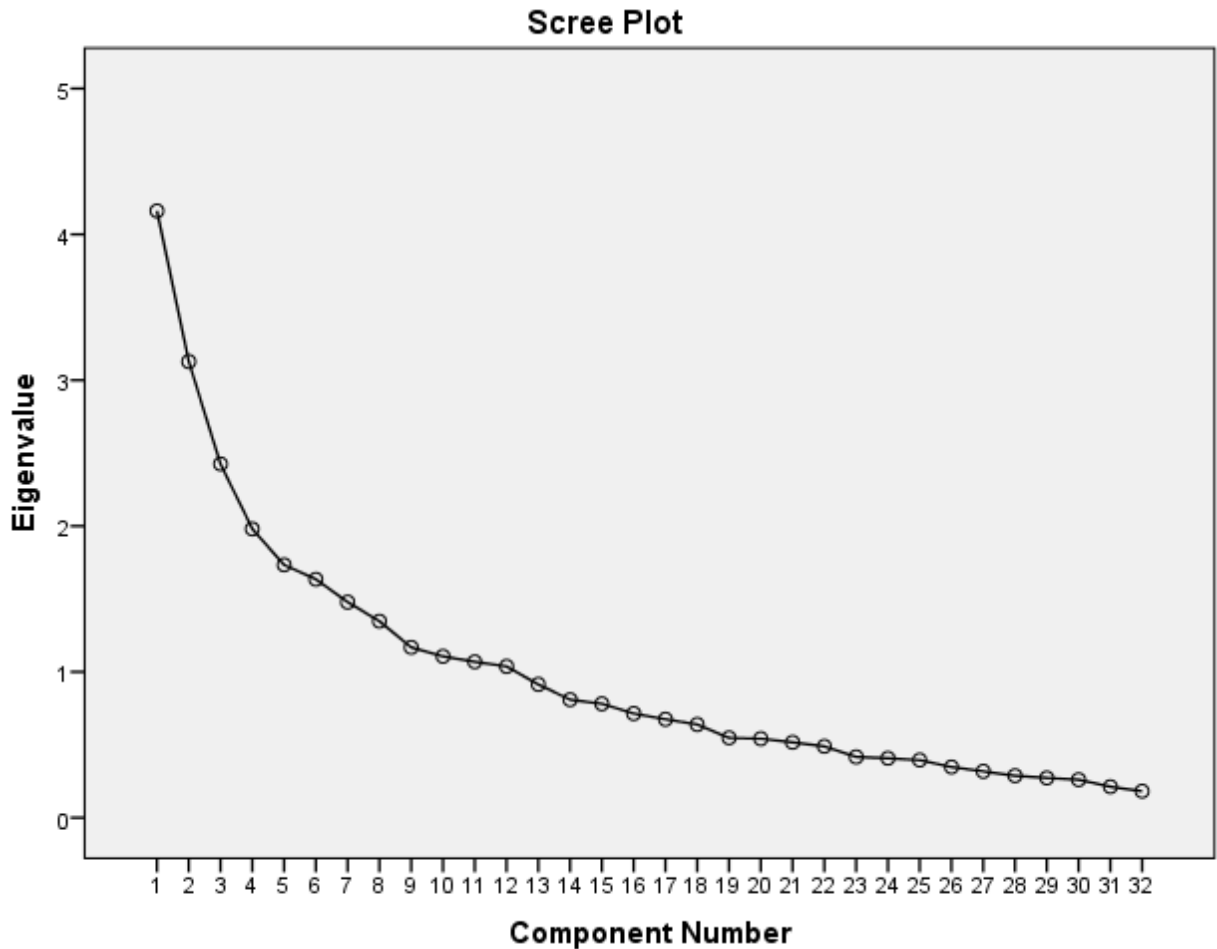

Figure 7. Scree plot for the Problems in Schools Scale

The last three components had the highest factor loading for only one item each; therefore, these three items were deleted as well. Additionally, six items loaded equally onto different components and were also removed from the analysis. Component 7 included two items identified by the instrument's authors as controlling and one item identified as autonomy-supportive. Because of the theoretical inconsistency, this component was removed. One item included in the first component could not be theoretically supported either and was deleted.

Moreover, the eighth component contained two autonomy-supportive items, however, one item was positively loaded whereas the second item was negatively loaded, leading to the decision to delete this component as well. Therefore, seven components were retained which accounted for 45.58% of the total variance. Three of the components consisted of autonomy-supportive items, and the remaining four components consisted of controlling items. Cronbach's alphas for each component were .656, .585, .592, .795, .499, .610, and .521, respectively, which indicated overall acceptable reliability. Table 9 displays the factor coefficients and item-total correlations for each component.

Table 9

Items Retained for the Problems in Schools Scale

Item #	Item	Factor Coefficients	Item-Total Correlation
Autonomy Supportive 1			
7	Tell her about the report, letting her know that they're aware of her increased independence in school and at home.	.747	.658
13	Ask him to talk about how he plans to handle the situation.	.746	.722
20	Help the group devise ways of learning the words together (skits, games, and so on).	.666	.598
Autonomy Supportive 2			
30	Go over the report card with her; point out where she stands in the class.	.713	.676
25	Talk to him about the consequences of stealing and what it would mean in relation to the other kids.	.696	.667
15	See if others are in the same predicament and suggest he do as much preparation as the others.	.589	.603
29	Encourage her to talk about her report card and what it means for her.	.532	.625
Autonomy Supportive 3			
24	Encourage her to observe how other children relate and to join in with them.	.820	.769
11	Help him see how other children behave in these various situations and praise him for doing the same.	.573	.712
Controlling 1			
32	Offer her a dollar for every A and 50cents for every B on	.728	.721

	future report cards.		
18	Make them drill more and give them special privileges for improvements.	.710	.696
5	Increase her allowance and promise her a ten-speed bike if she continues to improve.	.685	.580

Controlling 2

14	Tell him he probably ought to decide to forego tomorrow's game so he can catch up in spelling.	.889	.846
16	Make him miss tomorrow's game to study; soccer has been interfering too much with his schoolwork.	.871	.827

Controlling 3

19	Have each child keep a spelling chart and emphasize how important it is to have a good chart.	.778	.780
21	Prod her into interactions and provide her with much praise for any social initiative.	.675	.702

Controlling 4

27	Give him a good scolding; stealing is something which cannot be tolerated and he has to learn that.	.803	.743
28	Emphasize that it was wrong and have him apologize to the teacher and promise not to do it again.	.771	.724

The authors recommended calculating a total score by weighting the highly controlling subscale score with -2, the moderately controlling subscale score with -1, the moderately autonomous subscale score with +1, and the highly autonomous subscale score with +2. They further stated that the higher the cumulative score, the more autonomy-supportive teachers are when trying to motivate children. However, the EFA results did not support dividing the items into these four subscales and weighting them accordingly. Therefore, the controlling items were reversed scored, the averages for each component were calculated, and the averages were added together for an overall autonomy-supportive score. In keeping with the authors' suggestion, a higher cumulative score indicated a higher autonomy-supportive orientation.

Authentic Intellectual Work (AIW) Rubric

Research Question Three investigated whether teachers' psychological need satisfaction influenced the intellectual and relevant quality of the tasks they designed for students. Therefore, participating teachers were asked to submit an original activity that they personally developed and implemented within the past month which incorporated challenging learning experiences for students. The submitted activities were evaluated by using the Authentic Intellectual Work (AIW) rubric for teachers' assignments based on three standards—construction of knowledge, elaborated written communication, and connection to students' lives (Newmann et al., 2007; see Appendix 3).

Construction of knowledge was defined as asking students "to organize and interpret information in addressing a concept, problem, or issue relevant to the discipline" as opposed to asking students to "retrieve, report, or reproduce information" (Newmann et al., 2007, p. 47). The degree of meeting this standard was determined by selecting a score of 1, 2, or 3 which had corresponding descriptive criteria. The underlying belief for including the second standard, elaborated written communication, was that assignments "must ask for articulation of and support for generalizations in the relevant discipline" which can be accomplished by asking students to elaborate their understanding, explanations, or conclusions through prose, graphs, tables, diagrams, equations, or sketches (Newmann et al., 2007, p. 49). The rubric for this standard included a score of 4 for assignments which required support of understanding through analysis, persuasion, or theory; a score of 3 for reports or summaries; a score of 2 for short-answer exercises; and a score of 1 for fill-in-the-blank or multiple-choice exercises. Lastly, the standard for connecting to students' lives was evaluated based on whether the assignment "present[ed] students with a question, issue, or problem that they have actually encountered or are likely to encounter in their daily lives and that can be addressed by applying knowledge or

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skills from the relevant discipline" (Newmann et al., 2007, p. 50). The degree of meeting this standard was scored using the descriptions of a 3-point rubric. An overall score of teachers' assignments was calculated by adding the scores from rubrics measuring each standard, which made 10 the highest possible score.

To establish consistency in evaluating the tasks using the AIW rubric, an outside researcher and I scored two tasks together while engaging in discussion regarding our reasoning. Furthermore, 25% of the tasks (N = 5) were randomly selected and independently evaluated by each of us to determine inter-rater reliability (Patton, 1987). The AIW instrument authors recommended that the standard for reliability be greater than 65% exact scoring and greater than 90% of scoring within one point (Newman & Associates, 1996). The inter-rater reliability scores are outlined in the following table and show that the standard was met for reaching greater than 90% agreement within one point. However, accuracy of the findings, or qualitative validity, was also checked using the peer debriefing strategy to discuss results and reach a consensus score with the other rater.

Table 10

Summary of Inter-Rater Reliability Task Scoring

	Inter-Rater Reliability Scoring	
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Standard	**Exact**	**Exact or 1-Point Difference**
Construction of Knowledge	40%	100%
Elaborated Communication	40%	100%
Connection to Students' Lives	20%	80%
Mean	33%	93%

Administrator Interview Protocol

I developed the administrator interview protocol for the purposes of gathering information regarding the participants' methods for motivating teachers, descriptions of highly motivated teachers' classroom environments, reactions to the teacher survey findings, and implications of the findings for school leaders (see Appendix 2). The collection of this information served as structural corroboration for the first three research questions which addressed components of principal leadership styles, teacher motivation, motivational practices of teachers, and teachers' instructional practices. Furthermore, the interview was designed to specifically gather data to answer Research Question Four which addressed practical implications for school leaders' practices.

Reliability measures included reviewing interview records for transcription mistakes and ensuring consistency in coding through peer debriefing with an outside researcher. In order to check the codebook's integrity, I asked the outside researcher to code an unmarked copy of the transcript using the codebook I developed from the administrator participants' responses during their interview and a priori constructs from the literature review. Another measure I took to gauge the validity of the codebook was giving it back to one principal who was interviewed and, in turn, who helped to provide the data from which the codebook was developed. She read through the codebook with the two-fold purpose of looking for any misrepresentations of the information she provided as well as suggestions for improvement based on her expertise of the subject matter. Based on her feedback, the codebook comprehensively captured her the experiences she shared during the interview.

Validity strategies included the disclosure of negative or contradictory findings and member checking with participants by verbally summarizing their responses during the interview

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to ensure an accurate understanding of their responses and to ask if they wished to modify or qualify the information they shared.

Statistical Analyses

The Statistical Procedures for the Social Sciences (SPSS) version 21 was used to analyze data for Research Questions One, Two, and Three.

Research Question One

1. How do teachers' perceptions of their principal's leadership style influence their psychological need satisfaction at work?

The purpose of this research question was to test for differences among principal's leadership styles while investigating how it affected teachers' motivation. Moreover, the independent variable, teachers' perceptions of leadership styles, was categorized (i.e., category determined by style with highest score) and the dependent variables were continuous. Therefore, an analysis of variance was conducted to answer these research questions. Specifically, a one-way multivariate analysis of variance (MANOVA) was conducted to answer the research question. This analysis allowed for the simultaneous comparison of means from the three leadership style groups and decreased the chance of committing a Type I error. Further, the advantage for conducting a MANOVA included the ability to discover effects and interactions among several dependent variables as a result of different groups. Assumptions regarding equal variances were assessed then Wilks' Λ, F values, p values, and post hoc tests were evaluated to determine if the results were statistically significant (Mertler & Vannatta, 2010).

Research Questions Two and Three

2. How does teachers' motivation to work affect the conditions in which they motivate their students?

3. How does teachers' motivation to work affect the learning experiences they provide for their students?

The purpose of these research questions were to determine the best combination of predictors (autonomy, relatedness, competence, social isolation) on the dependent variables (orientation as a motivator, intellectual and relevant quality of assignments); therefore, the most appropriate statistical test was a standard multiple regression. This statistical analysis allowed the researcher to predict the value of a teacher's motivational orientation and authentic intellectual work from a weighted, linear combination of their psychological need satisfaction. Moreover, the independent and dependent variables were continuous in nature which met the variable specifications for conducting a multiple regression analysis. Further, the independent variables were simultaneously entered into the analysis based on the theoretical implications of Cognitive Evaluation Theory (CET) which, for example, suggests that the combination of satisfaction for autonomy and competence promotes intrinsic motivation which, in turn, leads to greater persistence, problem-solving skills, and creativity, essential characteristics for planning authentic intellectual tasks (Deci, 2012; Ryan & Deci, 2000). Assumptions regarding equal variances were assessed then R^2, R^2_{adj}, F, and p values were evaluated to determine if the results were statistically significant (Mertler & Vannatta, 2010).

Qualitative Analyses

Research Questions One, Two, Three, and Four

1. How do principals' leadership styles affect teachers' motivation at work?

2. How does teachers' motivation to work affect the conditions in which they motivate their students?

3. How does teachers' motivation to work affect the learning experiences they provide for their students?

4. What are the implications of this study for school leaders seeking to support teacher motivation, student autonomy, and authentic intellectual work in the classroom?

The analysis of the qualitative data rendered from interviews with administrators involved the systematic search for recurrent themes that emerged from the data, or content analysis. Patton (2002) explained that "content analysis is used to refer to any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (p. 453). Stated differently, "content analysis is a careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, biases, and meanings" (Berg & Latin, 2008; Leedy & Ormrod, 2005; Neuendorf, 2002 as cited in Berg & Lune, 2012, p. 349). Berg and Lune (2012) asserted that the primary purpose of content analysis was to "code the content as data in a form that can be used to address research questions" (p. 350). In other words, content analysis was a coding process, or transforming data into units of analysis, and method for interpreting data.

Based on Strauss' (1987) guideline for conducting open coding and as explained by Berg and Lune (2012), I began the coding process by asking myself questions related to my study's purpose. What overlaying constructs am I investigating? What themes can capture the relationships between the constructs? How is the content viewed through the theoretical lenses that shaped my literature review? Next, I color coded the text in order to identify how the overarching constructs embedded in my research purpose were presented in the content of the interviews. Therefore, I read through the data with the purpose of looking for elements of leadership styles, teacher motivation, and classroom environment (student motivation and

learning experiences) and color coded them accordingly. This process provided me with a visual representation of triangulating these data with the constructs measured by my survey as well as when the constructs overlapped with one another to form a relationship.

Also in keeping with Strauss' (1987) open coding guidelines, I minutely coded the data with many phrases, categories, terms, and types of interpretive language. According to Berg and Lune (2012), "this effort [later] ensures extensive theoretical coverage that will be thoroughly grounded" (p. 366). Much how the authors predicted, I also started to repetitively code the interview data which allowed me to move through the open coding process more quickly and see initial patterns of saturation. This information provided the groundwork for developing the codebook which began with my collapsing the data into more parsimonious categories, or axial coding.

A codebook provides the researcher with a reference guide for coding data in a consistent manner as well as a means for tracking the researcher's analytical thinking. In the process, I first created a chart of the themes that emerged from axial coding and aligned them with their corresponding color-coded constructs. I then labeled each theme as "a prior" (deductively coded from the study's theoretical lenses) or "emergent" (inductively coded from the participants' responses). Next, I developed definitions from the literature or participants' explanations, depending on the type of code, and included illustrative examples to clarify the code's meaning (see Appendix 4 for the complete codebook).

When coding, the data were segmented into units of analysis based on the entirety of a participant's response to a question I asked. In other words, if a participant mentioned the same theme in one response several times, the code was only counted once. In the example below, I

asked Sally, "So, can you describe how [motivated teachers], in turn, motivate their students?"

She replied,

> *They…first of all, it's their, it's their demeanor. It's their inside motivation and the things that they're excited about what's going on in the classroom. I truly believe that you can't, if you're not excited about it, it's not going to happen. I mean and I don't mean that you have to be bouncing off the walls, I mean you've got to be, you've got to show that you're really interested in whether they're learning 1 + 1 is 2 and being able to put that on every day in, in some form and be able to show that but I think that they've got to be motivated and they've got to be…if they're not enjoying what they're doing, it's not going to, it's just not going to work. I know that we all have off days and I'm not saying that that's not going to happen but that teacher that's highly motivated and shows that to those students through they're enthusiasm is what is important to me and what I see is [what] works the best and in just my experiences. An exciting classroom, I just think that those kids learn more than when you go in and it's boring and dull. You know, I think that we get so much into the old adage of that they had to sit in the rows and be quiet that they don't learn like that. I don't learn like that. I'm sitting there going, "okay what's going on? I'm bored." If I go in and I'm bored in an observation, then those kids definitely are bored so I just think that their motivation is what leads that classroom.*

This response served as one unit of analysis to which two codes, positive disposition and self-determination, were assigned. Although, the participant referenced the teacher's enthusiastic demeanor several times throughout her responses, it was only coded once. This is highlighted because frequency counts are discussed in Chapter Four, the results section.

After the interviews were coded, the task at hand was to restructure the original story told by the principals into a narrative transformed by analysis and interpretation. Kvale and Brinkmann (2009) wrote, "The analysis of an interview is interspersed between the initial story told by the interviewee to the researcher and the final story told by the researcher to an audience" (p. 193). Moreover, Patton (2002) explained that the "interpretation involves explaining the findings, answering 'why' questions, attaching significance to particular results, and putting patterns into an analytic framework" (p. 438). A computer program, Atlas.ti, was used to determine frequency counts of codes and to view all participant quotes associated with each code for

comparative purposes and in order to extrapolate contextual meanings of the codes. In other

words, I summarized the data generated from the dialogue between the participants and

interviewer and interpreted their meaning.

CHAPTER IV. RESULTS

This research study was conducted to answer the following research questions regarding the relationships between principal leadership styles, teacher motivation, and teachers' classroom environment.

1. How do principals' leadership styles affect teachers' motivation at work?

2. How does teachers' motivation to work affect the conditions in which they motivate their students?

3. How does teachers' motivation to work affect the learning experiences they provide for their students?

4. What are the implications of this study for school leaders seeking to support teacher motivation, student autonomy, and authentic intellectual work in the classroom?

Specifically, a survey was distributed to participating K-12 teachers for the purpose of measuring their perceptions of their principal's leadership style, motivation at work, motivational orientation toward children, and the level of intellectual rigor and authenticity of tasks they provided their students. The relationships among these constructs were addressed in the first three research questions and analyzed for statistical significance.

Six administrators were then interviewed for the purpose of structural corroboration with the survey results and to gain richer data regarding how they supported teachers' motivation, their observations of how teachers' motivation affected motivational and instructional practices in the classroom, their impressions of the teacher survey results, and the implications for school leaders seeking school improvement. Information rendered from the interviews aligned with Research Question One as the administrator participants implicitly expressed their personal leadership style and discussed strategies they implemented to support teachers' motivation. The

interview data from administrator participants more explicitly addressed the remaining research

questions as they were directly asked about their observations and insights regarding these

relationships and implications.

The data for this study were collected from these two sources for the purpose of

answering the driving research questions; therefore, the ensuing organizational structure of the

results section has also been framed in this manner. In other words, each research question is

presented followed by all of the quantitative and qualitative results gathered to answer the

investigative question.

Research Question One

How do teachers' perceptions of their principal's leadership style influence their psychological

need satisfaction at work?

Results from Teacher Surveys

A multivariate analysis of variance (MANOVA) was conducted to determine the effect of

a principal's leadership style, as perceived by teachers, on the teachers' psychological need

satisfaction for autonomy, relatedness, competence and feelings of social isolation. The

independent variable was the type of principal leadership style (democratic, laissez-faire,

authoritarian), and the dependent variables included the different psychological needs.

Before the analysis was conducted, one participant's responses was deleted because

he/she only completed half of the Leadership Styles Questionnaire. Additionally, four

participant responses were deleted because the highest mean score was tied between two

leadership styles and one primary style could not be determined. Further, one respondent did not

complete one item on the Basic Psychological Needs at Work Scale; consequently, the mean

score for this item replaced the missing data. Therefore, data rendered from a total of 136

participants were analyzed. The following table outlines the frequency and percentage of

participants who reported having a principal with a democratic, laissez-faire, or authoritarian

leadership style.

Table 11

Descriptive Statistics for Leadership Styles

Leadership Style	Frequency	Percent
Democratic	57	41.9%
Laissez-Faire	64	47.1%
Authoritarian	15	11%

The Box's Test for Homogeneity revealed that equal variances could be assumed, $F(20,

6235.885) = 1.253$, $p = .075$; therefore, Wilks' Lambda test statistic was used in interpreting the

results. MANOVA (N = 136) results indicated that leadership styles significantly affected the

combined dependent variables of autonomy, relatedness, competence, and social isolation

(Wilks' $\Lambda = .609$, $F(8, 260) = 9.148$, $p < .001$, $\eta^2 = .220$). According to Cohen's (1988) criteria,

the multivariate effect size was small to medium.

Univariate ANOVA and Scheffe post hoc tests were conducted as follow-up tests.

ANOVA results indicated that a principal's leadership style significantly affected teachers'

autonomy [$F(2, 133) = 38.547$, $p < .001$, $\eta^2 = .367$], relatedness [$F(2, 133) = 12.103$, $p < .001$, $\eta^2

= .154$], and competence [$F(2, 133) = 3.547$, $p = .032$, $\eta^2 = .051$]. However, teachers' feelings of

social isolation [$F(2, 133) = 2.055$, $p = .132$, $\eta^2 = .030$] were not significantly affected by their

principal's style of leadership. In terms of the significance in mean differences, there was a

medium effect size for autonomy, small to medium effect size for relatedness, and small effect

size for competence (Cohen, 1988).

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The Scheffe post hoc analysis revealed that teachers' autonomy under a democratic leadership style significantly differed from teachers who experienced laissez-faire and authoritarian leadership styles. Additionally, teachers' need for autonomy under laissez-faire leadership differed from those under authoritarian leaders. Moreover, teachers' feelings of relatedness significantly differed under democratic and authoritarian leadership styles and between laissez-faire and authoritarian leadership styles; however, there was not a significant difference between democratic and laissez-faire leadership styles with regard to teachers' need for relatedness. In terms of teachers' feelings of competence, the only significant difference was between democratic and authoritarian principal leadership styles. Table 12 presents the means and standard deviations for each leadership style by autonomy, relatedness, competence, and social isolation.

Table 12

Means and Standard Deviations for Leadership Styles by Basic Psychological Needs

	Autonomy		Relatedness		Competence		Social Isolation	
	$F = 38.547$		$F = 12.103$		$F = 3.547$		$F = 2.055$	
Leadership Style	*M*	SD	*M*	SD	*M*	SD	*M*	SD
Democratic	5.360	0.992	5.927	0.737	6.184	1.194	3.009	1.540
Laissez-Faire	4.797	1.097	5.674	0.927	6.023	1.271	3.422	1.703
Authoritarian	2.667	1.121	4.746	0.674	5.200	1.590	3.867	1.407

Results from Administrator Interviews

Leadership Styles

The three leadership styles, as defined by Northouse (2012), were included in the codebook a priori and consisted of authoritarian, democratic, and laissez-faire styles. For the

purposes of coding, an authoritarian style would be coded if he/she were to "limit collaborative efforts with teachers and make unilateral decisions which [were] communicated through directives and monitored for fidelity in a micromanagement manner" whereas having a democratic leadership style was defined as one who would "share the decision-making power with teachers by creating a work environment based on open communication, collaboration, and valued input." Although no examples were found in the administrator interviews, a laissez-faire style was defined as a leader who "abdicate[d] all control and responsibility to their staff who, in turn, [were] left without any leader or guidance." These codes were applied when the administrators were asked to name strategies they used at their school to support their faculty's motivation and how they supported teachers who they considered to be unmotivated at work.

When discussing motivational strategies for their faculty at large, the participants implicitly revealed a democratic style. Specifically, Amy, Barbara, Brandon, and Cathy discussed soliciting input from teachers and including them in a participative capacity during decision-making processes. Sally did not discuss organized leadership processes and procedures but explained that she was not a "micromanager" and allowed teachers to make their own decisions within "some boundaries" as long as their students were "making progress," according to achievement data. Illustrative examples from the participants who discussed organized and intentional shared decision-making processes are provided below.

> *I have a leadership team that I developed this year. I have a representative from every grade level and when I ask them questions, I really...it's their decision. Like I don't say "hey what do you think about this?" and already have my mind made up… I think that dictatorship is not effective. I just, you know, it doesn't work and I can tell you that in here, they haven't had a whole lot of decision-making power and so for next year, I have tried to get them to do their schedules and we're going to do some teaming and I have one grade level that can't get it together and they keep coming and I keep saying "but I don't want to be the one because you need to know and you need to look at your data and see where your strengths and weaknesses are as teachers and then you need to make your assignments."*

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I always try to get input which is why I developed the culture committee when I first came here so that the teachers could see, you know, I try to identify the issues that are in the school themselves and then for them as the panel of experts, because they have been here much longer than I have, to come up with solutions so that their buy-in is in the solutions such as when we developed the school-wide rules.

Barbara

You know, we have our leadership team where we have those discussions [about keeping teachers motivated and involved]...so [teachers] having a voice in what's happening at the school is a huge, I think, motivation to them to keep them engaged. Now, it's not always now you go do but you have a voice in the different activities.

Brandon

Well, one of the things I try to make sure that I um that there's buy in, that the teachers have input in the decisions and that they understand that I value their opinions because at the end of the school year I always say "okay what worked? what did you like? what didn't you like?" and then I will meet with every grade level one on one and they'll spend two hours or whatever saying "okay what worked this year? what didn't?" and most of time if you hear something consistent then we make changes...To me, that's team building, that's motivating the teachers because hey then they get to see that hey our ideas are actually being implemented cause you don't want to come across like a dictator but then also there's some things that it's nonnegotiable because as a leader, [I] hav[e] a vision.

Cathy

Lastly, Susie's response to this question highlighted other important elements of a leader such as being a role model, enthusiastic supporter, and helping teachers to improve which would be characterized as transformational leadership through the theoretical lens of the full range model (Avolio et al., 1999); however, her reply did not meet the definitional criteria for the democratic style code because she did not discuss the process of making decisions. For the purpose of this study, these elements were characterized as motivational strategies and defined as leading by example, relatedness, and professional reflection, respectively, which will be discussed later at greater length. Nevertheless, Susie's response is worth noting in the discussion

of leadership styles in order to provide epistemological context for other responses she provided during her interview.

Participants were also asked how they handled teachers who they perceived to be unmotivated at work, and two of them provided responses that were authoritarian in nature. When discussing teachers who were unmotivated at work, the language in which Amy and Barbara used was more controlling as they described directives they gave to these teachers. For example, the excerpts provided below included words such as "tell," "need," and "allow" which connoted a position of power held by the administrator over the teacher rather than an exchange of ideas for the purpose of shared decision-making.

> *I had one, "I can't stand the noise. I'm old. Nerves are bad. I can't stand the noise." You know, I have to then say, "Well, I can't stand not to hear noise. We don't need to be busting walls but they need to be in meaningful conversations and we need to.." We complain that they don't know how to act but we haven't ever taught them how to talk, how to ask each other challenging questions and answer each other and that's her job.*
> Amy

> *You tell them what the outcome needs to be and then you let them see what it looks like when it is good, and then you allow them to practice it or try to practice it, you go back in the classroom and observe them practicing it, and then see if there are any changes.*
> Barbara

However, it is important to mention again important components of the leadership theoretical framework employed in this study. Northouse (2012) acknowledged that not all situations called for a democratic leadership style and leaders exhibited an overall style even though they may fluctuate with different situations. In these cases, Amy and Barbara still favored a democratic leadership style based on a holistic view of their responses even though their styles were more authoritarian when discussing teachers who they perceived to be unmotivated at work. Amy and Barbara, along with the other participants, also discussed

motivational strategies that they employed with this group of teachers which will be explained further in the analysis.

Strategies Used by Administrators to Support Teachers' Motivation

This research study was built upon the convergence of theories from the two academic fields of educational leadership and educational psychology and, furthermore, were selected for their inherent overlap in order to provide a fresh and comprehensive perspective on teacher motivation. As formerly discussed in the literature review, a school leader with a democratic style guides teachers as they share in the decision-making process (support of autonomy), believes teachers are capable of doing work on their own (support of competence), and encourages open communication and collaboration (support of relatedness). Therefore, these tenets for teachers' motivation at work served as a priori codes and were naturally coded along with the democratic style code sometimes; however, just because these motivational strategies were coded, it did not warrant a dual coding of democratic style unless shared decision-making was mentioned. As such, some of the previous data which was discussed in reference to participants' leadership styles will be readdressed in this section through the perspective of the study's motivational theory.

In addition to the three intrinsically oriented a priori codes of supporting autonomy, competence, and relatedness, another code emerged as an intrinsically focused motivational strategy and was labeled professional reflection. The extrinsic motivational strategies included rewards, punishments, social comparison, and leading by example. Some of these codes were anticipated to be evident based on the literature review and were, therefore, included in the codebook a priori whereas some were not expected and emerged from participant responses.

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The code type (a priori or emergent), source, and operational definition used when coding are

included in Table 13.

Table 13

Strategies Used by Administrators to Support Teachers' Motivation

Code	Code Type (Source)	Definition
autonomy	a priori (rooted in self-determination theory; Ryan & Deci, 2000)	choice and the opportunity for self-direction
competence	a priori (rooted in self-determination theory; Ryan & Deci, 2000)	effectively engage in the surrounding environment
relatedness	a priori (rooted in self-determination theory; Ryan & Deci, 2000)	personal relationship between administrator and teacher(s) or between teachers (i.e., colleagues, mentors/mentees); feelings of value and belongingness
professional reflection	emergent (Amy, Barbara, Brandon, Sally, Susie)	deliberate reflection on professional practices for the purpose of learning and improvement
reward	a priori (rooted in self-determination theory; Ryan & Deci, 2000)	providing a desirable external outcome (i.e., praise, acknowledgement, object) for the purpose of encouraging a desirable behavior
punishment	a priori (rooted in self-determination theory; Ryan & Deci, 2000)	providing an undesirable external outcome (i.e., reprimand) for the purpose of discouraging undesirable behavior
social comparison	emergent (Barbara, Brandon, Sally)	comparing how a person performs in relation to others as a way to judge the person's abilities
leading by example	emergent (Amy, Cathy, Susie)	administrator models desirable behaviors

Table 14 displays the frequency counts in which each participant's responses were

assigned the aforementioned codes. The table also outlines the percentage in which each code

was assigned among all the motivational strategies. For example, there were 56 times in which a

motivational strategy targeting teachers was coded, with autonomy being coded a total of six times among all the participants. Therefore, 10.7% of all motivational strategies dealt with participants providing teachers with autonomy as a means for supporting their motivation at work.

Table 14

Frequency of Strategies Used by Administrators to Support Teachers' Motivation

Code	Amy	Barbara	Brandon	Cathy	Sally	Susie	Frequency	Percentage of Strategies
autonomy	2	1	1	1	1	0	6	10.7%
competence	1	1	1	0	0	0	3	5.4%
relatedness	3	1	2	5	5	3	19	33.9%
professional reflection	2	1	2	0	2	3	10	17.9%
reward	1	1	1	2	2	1	8	14.3%
punishment	1	1	0	1	0	0	3	5.4%
social comparison	0	2	1	0	1	0	4	7.1%
leading by example	1	0	0	1	0	1	3	5.4%

When responding to questions regarding how they supported their faculty's motivation and teachers who they perceived to be unmotivated at work, the participants not only revealed their leadership styles but they also shared motivational strategies they employed with both groups. Two of the motivational strategies were only discussed by participants within the context of talking about their faculty at large whereas one motivational strategy was only discussed in response to how they handled teachers who they perceived to be unmotivated at

work. Moreover, the remaining five motivational strategies were mentioned when participants were talking about both groups. Therefore, a discussion of these qualitative results is organized accordingly.

Motivational Strategies for Faculty

Interestingly, supporting teachers' autonomy and competence at work were only discussed by participants when referencing strategies they employed with their faculty at large and not teachers who they perceived to be unmotivated. The five participants whose responses were coded as democratic were simultaneously coded as supporting teachers' autonomy because they each discussed sharing choice and control over school decisions, an axiomatic trait to democratic leadership. However, only three of these participant responses explicitly included statements regarding teachers' competency. Elements of these two themes are extracted from the participants' words previously included in the discussion of their leadership styles.

Support Autonomy

Each of the five participants who revealed democratic leadership styles, according to this study's operational definition, also provided teachers with control in their work environment. For example, Amy discussed leading teachers in the process of creating their own schedules in the previous excerpt and later mentioned in the interview how the school's leadership team selected teacher recipients of new smartboards. Also in a previous excerpt, Barbara described how she developed a culture committee to resolve school-wide issues and how teachers co-created a "discipline ladder" of consequences for behavioral infractions. Brandon broadly discussed having a leadership team at the school and encouraging teachers to have a voice in the quote previously presented. Cathy described her practice in the previous excerpt of going to teachers by each grade level at the end of the school year and asking them to reflect on what they

felt worked well and suggestions for change. She then evaluated their feedback based on "quality" and "validity" or if she would "hear something consistent[ly]" then made changes for the upcoming school year. Lastly, Sally allowed teachers to create their own schedules as long as student performance data indicated there was a gain in their students' knowledge.

Support Competence

It is interesting to note that teachers reported, through the survey, that they were most satisfied with how their principal supported their feelings of competence (see Table 12); however, the administrators who were interviewed mentioned teachers' competency the least among the three psychological needs (see Table 14). The three administrators who did discuss teachers being competent included Amy, Barbara, and Brandon. Barbara called her school's culture committee members "the panel of experts because they [had] been [there] much longer than [she had]" and trusted them to "come up with solutions." Amy trusted her teachers to make scheduling decisions based on student data, conveying her confidence in their ability to analyze student data, assess the strengths and weaknesses of teachers in their grade level, and decide teacher assignments accordingly. In reference to a meeting with his school's leadership team, Brandon explained his process of saying to the team members, "Now I need you to take what we've said and come up with ideas with what will work here" which suggested his assurance in the teachers' ability to critically think about the topics he presented and design solutions that would transfer to their school in a meaningful way.

Motivational Strategies for All Teachers (The Motivated and Unmotivated)

The five strategies participants used to support all teachers' motivation at work included supporting teachers' psychological need for relatedness, facilitating professional reflection, implementing rewards, encouraging social comparison, and leading by example. Each

participant discussed the support of relatedness and use of rewards, the majority of participants

discussed professional reflection, and half of the participants discussed social comparison and

leading by example (see Table 14).

Support Relatedness

Relatedness, the most prevalently discussed motivational strategy, was mentioned when

discussing all teachers despite their level of motivation. Making up approximately one third of

the strategies discussed, relatedness encompassed many elements of the relationship between the

administrator and teacher such as knowing teachers' needs (e.g., what motivates them) or their

personal life (e.g., family dynamics, background) and supporting teachers' feelings of value.

This code also encompassed relationships between colleagues (e.g., mentor/mentee relationship).

Even though these administrators mentioned relatedness about three times more than supporting

teachers' autonomy and six times more than their competence (see Table 14), the survey results

indicated that teachers' feelings of relatedness were supported less than their feelings of

competence (see Table 12).

Among all of the motivational strategies they discussed, relatedness was supported and

valued the most by Cathy, Sally, and Amy. Susie and Brandon equally discussed relatedness and

engaging teachers in professional reflection as motivational methods; however, Brandon's

discussion focused only on relatedness among teachers rather than with him. Interestingly, each

participant was prompted in the same manner at the beginning of the interview with "tell me

about your experience as an administrator" but only Cathy, Sally, and Susie talked about their

relationships with other people whereas Brandon and Barbara discussed the number of years and

schools in which they were administrators and Amy said she relied on her religious faith for

guidance as to whether she should become an administrator.

Cathy shared her story of going into administration because of a confluence of interactions with different people—a friend with whom there was a "strong relationship" and was someone who wanted to become an administrator and encouraged her to do the same, a principal who said "I feel like you're the perfect person" for an interim assistant principal position, a brother who convinced her to "just try it," a teacher who told her that "teaching [was] great but God [had] a higher calling for [her]," and a "longtime mentor" along with other colleagues who voiced their encouragement. Sally also discussed her relationship with her former principal with whom she worked in her capacity as an assistant principal before replacing him as principal at their school. She talked about the initiatives they put into place in order to build a positive school culture when the school first opened. Susie also briefly discussed having a positive relationship with her former principal and faculty when she was an assistant principal before she became a principal. Therefore, experiencing relatedness early in their careers may have strongly influenced some of these administrators in how they supported their teachers' sense of relatedness.

When discussing elements of relatedness, Amy, Cathy, Sally, and Susie made statements in the context of supporting their faculty's motivation as well as teachers who they thought were unmotivated. They each described their efforts in getting to know teachers on a personal level when discussing their faculty at large. Barbara only mentioned relatedness when discussing her faculty, and stated that she wanted them to know how valuable they were to the school. Brandon only mentioned relatedness when discussing unmotivated teachers and while talking about these teachers, both he and Amy described their reliance on the unmotivated teachers' more knowledgeable colleagues such as instructional coaches and mentors. Cathy, Sally, and Susie said that administrators must investigate why the teachers are unmotivated at work (e.g.,

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hardships in their personal life) and openly communicate with them in a supportive, but clear,

manner. Example excerpts from the participants' interviews that deal with relatedness follow.

Comments made in reference to faculty:

> *That is the biggest thing-building that relationship, really getting to know your teachers…I hear administrators say that "I don't care about their background" but I like to know as much as I need to know because it helps me understand…For example, there was a teacher, she's loud. That's just her personality, and she was misunderstood a lot of times because she came from a large family. Coming from a large family, especially in an African American culture, you talk and it's just normal to talk…and it sounds like you're yelling. I'm not saying that that's acceptable but you can understand that a little bit better and know the person…sometimes she was judged like "oh she's just mean, she's ornery." No she's not, she's used to having to talk over everybody else in this large family.*
>
> <div align="right">Cathy</div>

> *…sometimes if we were having a grade level meeting, I personally know that she likes the Coke, she likes the Sprite…I just may bring them a personal drink. How would I know that if I didn't have a relationship with them? I mean that may not be a good analogy but I'm just saying like just to know personally sometimes..or I might just say "hey I'm going to have lunch with Ms. Guild today." If I had lunch with Ms. Guild, then I'm building a relationship with her and in that conversation she may share with me that she has a grandbaby or something like that. So, just little things like that that we think sometimes is irrelevant, really it makes a big difference that I felt like building relationships and really getting to know my teachers.*
>
> <div align="right">Cathy</div>

> *…as a leader, you've got to be there because when people know that you care and they know genuine versus "well, you know, I'll talk to you next week." Most of the time, if you say that two or three times, people are just going to shut down…I mean because you have to put people before you put yourself. It's like being a servant and that's the way I look at.*
>
> <div align="right">Cathy</div>

> *I believe in being relational which is hilarious cause I'm not a touchy feely person either but they know I care. If they're out, I try to send a text "hey are you doing okay?" You know, I genuinely care and they respond to that.*
>
> <div align="right">Amy</div>

> *Well, some of the things that I do is I try to help teachers to feel like they are an integral part of the school.*
>
> <div align="right">Barbara</div>

Comments made in reference to unmotivated teachers:

> *I might have expectations but sometimes these teachers that maybe might not be so motivated, why are they not motivated? Same thing with the kids--find out why. So when I know the why, that helps me understand if they're not quite where I need them to be but some are just lucky to get out of bed every day and they're employees and I'm going to treat them like a human and we're going to make progress…*
>
> <div align="right">Sally</div>

> *I think that to motivate teachers you've got to realize they are people. They have a big life outside of this school and…they try not to let it affect, but it does, you know, if they're got a sick child or they've got a relative…or they're going through some problems. It's [sending a note] just letting them know, "hey I don't have a lot of time to talk about it but I just want you to know I'm thinking about ya and I realize that you're going through a tough time. If there's anything I can do let me know." I think that those kind of things help them the most I feel like. I know it feels good to me when somebody does that. It just takes that little bit of time to just to say "hey, I know you. I know what's going on."*
>
> <div align="right">Susie</div>

> *…and I also just stress that to my teachers too…I want to care about you, you care about your kids and then we're all going to care about their families and try to take care of them. I just think you get more out of people when you do that. I mean, you probably find that out with your kids. You can holler and yell at them all you want to…but you can get a whole lot more out of them by not doing that. So, you know, I just think teachers are the same way.*
>
> <div align="right">Susie</div>

> *Each person, new person, has a mentor that teaches the same content area and they have a person who's in their department as well so they kind of have two people to talk to.*
>
> <div align="right">Brandon</div>

Encourage Professional Reflection

The second most frequently mentioned motivational strategy that the participants said they implemented was leading teachers in professional reflection for improvement purposes. All of the participants except for one discussed this strategy. Sally and Susie talked about facilitating all teachers' professional reflection despite their amount of motivation whereas Amy, Barbara, and Brandon only discussed it in reference to teachers who they thought were unmotivated. Furthermore, Susie, Amy, and Brandon talked about using feedback gathered from

classroom observations to lead teachers through self-reflection. Brandon also mentioned a new

strategy he intended to implement which was having teachers view video recordings of their

lessons before engaging in a reflective conversation. Barbara and Sally discussed presenting

student performance data which indicated low performance trends before asking teachers to

reflect on their practices in an effort to deter teachers from, as Sally stated, continuously

"blam[ing] the group of children" for low scores. Example statements are included below.

Comments made in reference to faculty:

> *And we also do a lot of one on one meetings with them. One of the best things that we've done this year I think is I've gotten in the classrooms more to do observations which appears to be "ooo, she's coming in the classroom" but the instructional coach and I have been doing them together and…so we immediately, that day, have like a feedback meeting with them and the very first thing that we do is, is I tell them all the good things that I saw and, you know, we try to make it positive and then so much the negatives are things that "hey, we see a couple of areas that we need to work on." So nobody has left out of here just crushed and felt like beat down where if they had come in here and we had said, "Boom, boom, boom, this is bad. Oh yeah, by the way, we really like the student engagement part." It's just…we're just all about being positive and giving positive reinforcement.*
>
> Susie

Comments made in reference to unmotivated teachers:

> *When I approach a teacher who I consider to be weak in certain areas, I usually just go in and sit down and say, "Hey, how do you think things are going? What are you seeing?"*
>
> Amy

> *We ask them, you know, "How can you improve? From our walkthroughs, this is what we saw in your walkthrough. What do you think about this?"…One thing we talked about more recently is…videoing their classes for them to see themselves. So I think they'll learn a lot from that.*
>
> Brandon

> *Oftentimes, they feel like they have a better way of doing it and yet you throw that data at them to show them that they are failing seventy percent of their students. You can't really say after seven years of doing that, that it is the student.*
>
> Barbara

I've got one or two that aren't making progress and they typically like to blame the group of children. It's not them, so…having some good solid data to back up so that, you know, I'm still living on one year of good data with our new Global Scholar and Aspire and…if they'll leave these two pieces alone for me a little while, I might can prove it's not the children. [laughing] I just need a little time. Don't change, don't change my test…

<div align="right">Sally</div>

Provide Rewards

As the third most frequently discussed motivational strategy, the rewards given to teachers included tangible items such as supplies (e.g., ink cartridges, paper) and food items (e.g., donuts and juice) in addition to nontangible reinforcements such as praise, acknowledgement, and release from professional obligations. However, Barbara stated that "you have to look at the culture and see what they want, what you can do to help them." For example, she wrote praises on bright paper and posted it outside teachers' doors or sent out an E-mail to the entire faculty to thank a teacher who went "beyond their normal job description." Also, Brandon discussed his school administrators' practice of sending out a "Friday Focus" to everyone via E-mail which would "have a little shout out section" highlighting teachers for exceptional work. Cathy talked about "send[ing] a sweet note or something like that and say[ing] 'hey I enjoyed your class,'" and Susie discussed "drop[ing] a little card to somebody…especially when things [were] happening in their life." However, Cathy, Sally, and Susie shared caveats to the use of praise.

You can cause dissension sometimes if you're just praising second grade and don't ever praise fifth grade or sixth grade. So I try to make sure that..it's just like if you use equity sticks [laughing], you know just kind of finding okay, well I praised sixth grade, let me praise kindergarten because sometimes if you just...even though third grade may be the runners. They may be the shining stars but if you just constantly praising them and guess what? "She likes third grade" so you kind of have to embrace everybody and find the good and make sure that there's balance in recognizing.

<div align="right">Cathy</div>

You highlight the ones who are, you know, but I have found a little more success in finding the positive in the one's that aren't than just always glorifying the ones that are because the ones that are, are not always the ones that you need you patting them on the back every day because they were already doing it. They need encouragement, but they're not doing it for my encouragement. They were just going to do it so they need to know that I'm proud of what they're doing but they're not going to do it because I do or don't. So it is important to do that because you don't want them to get burned out on why they're doing it but I found success in trying to find the positive in the ones that no one else has ever found the positive in.

<div align="right">Sally</div>

I think though that has been my number one thing, is just going by and telling them, "Hey this looks great today" or just the small things, so many times are things that they were lacking in and just telling them that, "Hey you're doing a good job" and even the ones that are necessarily not always doing… trying to find the good, just a little something good.

<div align="right">Susie</div>

According to these participants, a school leader should strive to praise teachers equitably, even when the task of finding something worthy of praise may prove challenging with unmotivated teachers.

With regard to professional exemptions, Amy told her teachers they did not have to attend the school's PTO (Parent Teacher Organization) meeting one month because they worked hard to implement professional development. Also, Susie offered duty free lunches and "go home early passes" as rewards to her teachers. Furthermore, Susie and Brandon provided jeans passes (written permission to wear blue jean pants for a day) as a reward to teachers because, as Brandon stated, "Most teachers, they'll walk on water for a jeans pass."

Encourage Social Comparison

Barbara, Brandon, and Sally purported the use of creating situations in which teachers compared how they performed in relation to their colleagues as a way to judge their abilities and, hopefully, improve their practice. This strategy is founded on the concept known as social comparison in the field of educational psychology (Wigfield et al., 2009). Barbara and Sally

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discussed creating conditions in which teachers would strive for improvement because one of

their colleagues received recognition for being highly effective. Both Barbara and Brandon

referenced their attempts to help motivate teachers by requiring them to observe their successful

peers who could model the practices in need of improvement.

Comments made in reference to faculty:

> *But we've not had consistent data built around anything we can follow and um, I'm not going to say the word tracking, but um just to follow and some accountability in that part. Not that I wanna fire them or anything like that but that, you know, you've got to..they may not always like it but if we get back Global Scholar data, DIBELS data, you're gonna see everybody in your grade level. We're going to talk about that and I'm not doing it to compare one to the other but if I've got one that is up here [moves hand up high], I'm trying to build this relationship where you're gonna find out what they're doing.*
>
> <div align="right">Sally</div>

> *If a teacher has done something that has really stood out that is beyond their normal job description, I try to send them a thank-you and then CC it to the staff so that everyone can see it and hopefully try to get on board and help out in the same manner.*
>
> <div align="right">Barbara</div>

Comments made in reference to unmotivated teachers:

> *You allow them to go and see a teacher who is doing whatever that concept is well. Umm…so that they can see the modelling of it…you know, the same way that you would in the classroom with a student.*
>
> <div align="right">Barbara</div>

> *…but [what] we're trying with our older group is trying to have those conversations with them and sending them to see someone's classroom that's working…*
>
> <div align="right">Brandon</div>

> *Lead by Example*

Based on their comments, it was important to Susie and Cathy to lead their faculty by

setting a good example. Specifically, Susie said she tried to "be positive about all kinds of

things" to model positivity to her faculty. As stated below, Cathy wanted to show her teachers

that she was willing to do anything herself that she asked of them.

I lead by example in saying that and making sure that I don't expect teachers to do anything that I wouldn't do so I like to be a part of what they're doing. To me, I think that that's a great motivation. Like for kindergarten, I want to help make like the little background scene or whatever, you know, just doing little things like that sometimes just to motivate them to say, "Hey she's with us. She's involved. She's actively engaged."

Also, Amy noticed that absenteeism was an issue at her school, largely from unmotivated teachers. Therefore, it was important for her to lead by being present, as she stated below.

One thing that I try to do with attendance is model by being here. I've two half days this year and I'm going to have to miss a half day tomorrow because I have a doctor's appointment but, I mean you know, I'm here.

Motivational Strategy for Unmotivated Teachers

Implement Punishment

The use of punishment was the only motivational strategy that was unique to participants' discussion of teachers who they perceived to be unmotivated at work. The punishments for not completing professional responsibilities included verbal warnings, written reprimands, and recommendation for dismissal. In her statement below, Amy admitted to how difficult it was for her to implement punishments but she felt that ultimately it was necessary for the benefit of the children at her school. Barbara and Cathy discussed their practice of progressive discipline. For Barbara, a conversation with the teacher first transpired, then she placed them on a corrective action plan with support for improvement (i.e., professional development, peer observation), and observed them again to see if progress was made toward meeting the expectations she outlined in her initial meeting. If there was not any improvement, then she would recommend termination to the school board. Although Cathy's practice of supporting teachers who she thought were unmotivated was similar to Barbara's in terms of first giving a verbal warning before a written reprimand, it was also important to her to stay positive in her efforts to prompt change. Also, she

evoked a relational approach with the teacher as a mediator for change in behavior and strongly

believed in "try[ing] not to give up."

> *I don't like reprimanding at all. That's usually my last resort but sometimes you just have to. Not everybody's meant to be a teacher and, you know, I don't mind making the hard decisions sometimes. It's not fun. I lose sleep but it's about my kids.*
>
> Amy

> *You tell them what the outcome needs to be and then you let them see what it looks like when it is good and then you allow them to practice it or try to practice it. You go back in the classroom and observe them practicing it and then see if there are any changes. And if there are not, you just continue to document and hope that one day if they are tenured that you have enough evidence to take them to the board to non-renew, and if they are not tenured, then you just don't renew them.*
>
> Barbara

> *I believe in dealing with it. You can't ignore it but I always try to make sure that I focus...on the positive and not the negative. But I believe in dealing with the situation just say like if someone is habitually late or whatever, then I will have a conversation, you know, "Hey we're going to talk about it. Is there anything I need to know? Is there anything going on?"...Most of the time it's a verbal warning or whatever then I try to make sure that if it happens again, there's going to be a written reprimand and then there's a conversation, you know, I'm not just going to give you a letter...I try to make sure...I try to find something good, a positive approach but...some employees, of course, are more challenging than others to get on board but I try not to give up.*
>
> Cathy

The administrators who were interviewed for this study provided valuable insight into

motivational strategies that could transcend teachers of all motivational levels; however, Cathy

made a poignant belief statement—knowing your teachers means knowing which motivational

strategies would be effective.

> *There's no magic wand or anything but and I can't just tell you that this strategy I use, this, this, this, this. It depends on the person cause back to building relationships, really getting to know that person and then what strategy worked for this person may not work for the other person.*
>
> Cathy

Teacher Motivation as Perceived by Administrator Participants

      According to the theoretical and empirical assumptions of this study, one causal source

for teachers' motivation included the conditions in which school leaders created through their

leadership style. The participants implicitly acknowledged this relationship because they listed

different strategies they used to support teachers' motivation at their school; however, they also

noted other internal causes of teachers' motivation which, inherently, were beyond their control.

This theme emerged when the administrators were asked to think of a highly motivated teacher

with whom they had worked and to describe what that teacher's classroom looked like. The

participants described teachers who were self-determined and portrayed other positive personal

attributes (i.e., positive disposition, prepared, confident, knowledgeable). The participants who

discussed the attribute, coding definition, and exemplars are included in Table 15.

Table 15

Attributes of Motivated Teachers Discussed by Administrator Participants

Attribute	Participant(s)	Definition	Data Exemplar(s)
self-determined	Amy, Barbara, Sally, Susie	self-motivation to psychologically grow and seek inherently rewarding experiences that align with personal interests (i.e., teaching)	We have some teachers who are dynamic teachers and change with the times and stay current on the research. They truly have a love for learning...
positive disposition	Amy, Barbara, Brandon, Cathy, Susie	positive attitude characteristic of individual (i.e., enthusiastic)	They [motivated teachers] love their job, and they love people, and they love kids and it shines in everything that they do. They don't groan, they're not grumpy…they get the job done.

prepared	Amy, Barbara, Cathy, Susie	evidence of instructional/behavioral pre-planning and classroom procedures	The classroom flows easily, the students know what the procedures are in the classroom, what they should be doing. If they need to go to the bathroom or they don't have the assignments they need, there is a procedure in place for everything. She has predetermined and thought it out.
confident	Amy, Brandon, Sally	willingness to take instructional risks; showing certainty in one's abilities	And a lot of it is they're [motivated teachers are] not afraid to take the chance on this activity may flop. This activity may not work but at least they're willing to try the activity and try to keep the different instructional strategies to make them, the students, stay engaged.
			She [motivated teacher] realizes during the lesson when something's not working out right and she's not afraid to say "okay, wait a minute, let me try this again."…There's not a fear when I walk into the room that "oh she's here." There's a comfort.
knowledgeable	Brandon	possess mastery of skills and concepts that one is responsible for teaching students	So, they have to know their content well enough to know when to interject those things [instructional strategies] without losing control of the class.

Three participants also made statements regarding the personal attributes of teachers who they considered not motivated (e.g., apathetic) and perceived some of the unmotivated teachers' lack of motivation as intrinsic and unwavering. These concepts aligned with another motivational theory that was previously highlighted in the review of literature chapter. In accordance with Weiner's (1985) Attribution Theory, these teachers' motivation may not be improving if they also attributed their failures at work to an internal locus of causality which was stable (i.e., lack of ability).

> *I don't know if it's that they just don't want to improve or I don't know if they're set in their ways or what...it's kind of like, you know, what do you do? kind of thing cause we try things to motivate them but sometimes you've gotta have some type of...intrinsic motivation to want to be better so it's kind of interesting to see what to do with those people and I think some of them need to try somewhere else...*
>
> Brandon

> *Some of them are so unmotivated, apathetic, it doesn't matter what you say. There's very little change. They are very resistant to change. Umm...most of the time in my observations what I have seen is those teachers, when they self-evaluate, they already believe that they are there...it's just not going to get better if it's an attitude more than anything. You can have a teacher that's not doing everything you expect, but if they have an attitude that they want to learn, oftentimes what they are doing can be corrected.*
>
> Barbara

> *[I'm] not even sure how to master change of personality in people because if it's a personality issue, there's not a lot..I mean motivation's not going to do it, force is not going to do it, you know. It's the same way with a child but these are adults and so once they've made up their mind with what kind of person they are, that's rather difficult to change.*
>
> Sally

Brandon further put these administrators' frustration with unmotivated teachers into perspective when he recollected a conversation he had with Ron Clark, author of several educational books and a highly public figure in American education.

> *...we're continuing to try to work on them, but [Ron Clark's] like, "You gotta clock out of them cause you're putting all your energy in them when these people really need your support and you're not getting it to them cause you're so focused on this group." So, it's*

been difficult is all I can say cause you want to see the growth. You want to see some change in what they're doing.

Thus far, the focus of this chapter has been on describing causes for teacher motivation; however, the discussion of results will now turn toward the effects of teacher motivation.

Research Question Two

How does teachers' motivation to work affect the conditions in which they motivate their students?

<u>Results from Teacher Surveys</u>

A multiple regression analysis was conducted to determine the best predictors among teachers' basic psychological needs on their autonomy-supportive orientation as a motivator. The basic psychological needs of autonomy, relatedness, competence, and social isolation served as the independent variables and teachers' orientation as a motivator served as the dependent variable.

Nine participant responses were deleted before the analysis was conducted. This included the previously mentioned eight participants who did not complete at least 80% of the PIS scale and an additional participant who did not complete any of the Basic Psychological Needs at Work Scale items. Consequently, data from 132 participants were used in the analysis.

The multiple regression results (N=132) indicated that teachers' reported feelings of autonomy, relatedness, competence, and social isolation did not statistically significantly predict their orientation as a motivator, R=.224, R²=.05, p=.158. Table 16 shows the unstandardized coefficients, standardized beta weights, and the significance of the beta weights for each psychological need in relation to the variables' ability to predict the orientation as a motivator.

Table 16

Unstandardized Coefficients, Standardized Coefficients, and Significance for Teachers'
Motivational Orientation by Basic Psychological Needs

Psychological Need	*B*	*SE B*	β	t	Sig.
Autonomy	-.048	.247	-.019	-.196	.845
Relatedness	-.764	.401	-.202	-1.908	.059
Social Isolation	-.027	.201	-.013	-.134	.893
Competence	.451	.248	.168	1.821	.071

Results from Administrator Interviews

During the interviews, each administrator participant was prompted to describe how a

highly motivated teacher motivated his/her students. Similar to the coding of teacher motivation,

one code was included a priori (autonomy support) based on theoretical assumptions and

empirical findings grounded in the literature review. Just as relatedness and rewards emerged as

codes in participants' discussions of how they supported their teachers' motivation, they were

also present in their responses regarding ways in which they observed teachers supporting

students' motivation. Also, two additional intrinsically oriented motivational strategies (goal

setting, utility value) emerged from participant responses. The following table outlines the code

type and definition for each motivational strategy that was implemented in the classroom of a

highly motivated teacher, according to the participants. As indicated in the table, teachers'

support of students' competence was not found in their responses.

Table 17

Strategies Used to Support Students' Motivation

Code	Code Type (Source)	Definition
autonomy	a priori (rooted in self-determination theory; Ryan & Deci, 2000)	choice and the opportunity for self-direction

relatedness	emergent (Amy, Barbara, Brandon, Sally, Susie)	personal relationship between teacher and student; having a positive rapport with students; interacting with students; feelings of value and belongingness (Ryan & Deci, 2000)
goal setting	emergent (Barbara)	the task in which one participates is given meaning through goals (Maehr & Zusho, 2009)
utility value	emergent (Amy, Barbara)	how the qualities of a task influence a person's desire to do the task, specifically, "how a task fits into an individual's future plans" (Wigfield, Tonks, & Klauda, 2009)
reward	emergent (all participants)	providing a desirable external outcome (i.e., praise, acknowledgement, object) for the purpose of encouraging a desirable behavior (Ryan & Deci, 2000)

The next table displays the frequency counts and percentages in which the participant's responses were assigned the codes relating to highly motivated teachers' methods for supporting their students' motivation.

Table 18

Frequency of Strategies Used to Support Students' Motivation

Code	Amy	Barbara	Brandon	Cathy	Sally	Susie	Frequency	Percentage of Strategies
autonomy	0	0	0	0	1	0	1	3.8%
relatedness	2	6	2	0	3	3	16	61.5%
goal setting	0	1	0	0	0	0	1	3.8%
utility value	1	1	0	0	0	0	2	7.7%
reward	1	1	1	1	1	1	6	23.1%

Support of Autonomy

One reason for asking administrators to describe motivational strategies they observed being implemented in the classroom was to compare their responses to the results rendered from teachers' replies to the survey. The survey results indicated that there was not a statistically significant relationship between teacher motivation and their support of students' autonomy. In other words, teachers' self-reported motivation did not statistically significantly predict their orientation as an autonomy-supportive motivator. When discussing teachers who they perceived to be highly motivated, participating administrators did not frequently address support of students' autonomy either. In fact, just one participant, Sally, mentioned teachers affording control to their students which made up only about 4% of all strategies that were discussed. She stated,

> *This new trend in passing it off to the student, let the student be in control or be in charge of their own learning, that's different for a lot of teachers but that's giving up that feeling of control and so we're moving in that direction…*

The survey was designed to measure how teachers supported students' motivation by determining the degree in which they supported students' autonomy. While this design aligned with extant literature, restricting the operationalization of student motivation to teachers' support of autonomy limited other potential findings. Therefore, administrators were asked about their observations regarding teachers' support of their students' motivation not only to triangulate findings from the survey taken by teachers, but also to include a less restrictive investigation of teachers' motivational practices which will be discussed at length below in the order of greatest frequency.

Support of Relatedness

The majority of participants' discussions regarding teachers' motivational strategies involved relatedness with their students (see Table 18). The only participant who did not mention relatedness was Cathy which was surprising because she was one of the participants to discuss relatedness with her teachers the most. One possible reason it was not noted by Cathy could be because an hour had already passed and her responses became terser at this point in the interview; therefore, she could have experienced participant fatigue. The other participants asserted how important it was for teachers to build relationships with their students and interact with them during instruction. Example response are included below.

> *I'm so convicted by that, [having] a relationship with their students and when they build that relationship, that will motivate a child because one child's going to need this pat on the back or computer time where this other student is going to intrinsically do it without it. They just need to be told "you're on the right path" and move on…[such as] with another 6th grade teacher, just the relationships she's developed with those children. I don't have behavior problems out of there…I mean there's just none cause she developed a relationship with them. I don't know if she's ever brought one to me this year. Others that don't develop the relationship? Quick to get them out of the room, quick to let you know they can't deal with them, can't do this, you know.*

Sally

> *It takes that motivated teacher…[who] will take the time to say, "Okay I've got to sit with this student one on one and I've got to find out what is going on." And it may be something totally off base but it's something that you've got to find.*

Susie

> *[A motivated teacher] knows her students and she's able to put into place the things that will help them to be successful, whether its social goals, academic goals, or behavioral goals.*

Barbara

> *You see the teacher up...interacting with the students. You can tell there's...energy there and the motivation because [you] hear [it in] that voice. You see how they are, um, positive reinforcing the students' behavior. You see not only that, but you see them also correcting students in a manner that tells you there's a positive relationship with them and not wholly negative where they just correcting them, moving on.*

Brandon

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Provide Rewards

The second largest motivational strategy that the administrators stated they observed highly motivated teachers implementing was the use of rewards. Each administrator discussed this strategy which included praise (e.g., comments on the Class Dojo website, giving a high five), privileges (e.g., lunch with a buddy, take your shoes off), and tangible items (e.g., piece of gum, popcorn). Example excerpts from the interviews are included.

> *The one [motivated teacher] I'm thinking about uses Class Dojo and one thing that Dojo does, which I like, is it tells the teacher how much she's praising the students cause you can look at that report and see how often you praise and you should praise, what seven times more than you um redirect or give a negative [comment].*
>
> <div align="right">Amy</div>

> *Well, for example in an observation yesterday I had, one of the students who was doing bubblegum math so the student was motivated to learn their multiplication facts and when they learn a certain fact family, they get to put up the sticker that has bubblegum on the bubblegum machine and they get a piece of gum. Another teacher uses popcorn as an incentive where they use the little cotton puffballs and when she sees students doing things that they are supposed to be doing, if they are on task or they are being kind to their neighbor or they finish the assignment in a good manner, then she puts little puffs in the popcorn thing and then that group works together in order to earn a popcorn and drink.*
>
> <div align="right">Barbara</div>

> *[Motivated teachers are] not afraid to say "Good job" and they're not afraid to give them a high five and not afraid to pat them on the back, you know. Those types of things are given out, coins or tickets or something to help keep them..keep not only them as teachers motivated, but as students being motivated because now they have some skin in the game in a sense.*
>
> <div align="right">Brandon</div>

> *I dealt with this very thing this morning in a sixth grade student that is not motivated…as we talked to three different teachers, and you know, one teacher is like "well, he's not doing too bad in here. I mean he does his work." Second teacher, "da da da da." But this third teacher, that's where he's got all of the referrals from, he's not, there's a definite thing going on. You know, so we talked about that, sort of got that out in the open and, you know…she stopped by this afternoon [and] she had talked to him a little bit. She had pulled out a punch card where he can punch things and if he gets so many [he earns a reward]…and he came back in and he had a smile on his face and he's like "Ms. [Third Teacher's] room was good today and I did good," you know.*
>
> <div align="right">Susie</div>

Discuss Utility Value

Two participants, Amy and Barbara, commented on how they personally tried to help motivate students by discussing the utility value of school. Amy's personal experience, which is included below, was shared as an example of how she supported teachers' motivation by taking an interest in their personal life. In this example, one of her teachers had a son who attended their school and demonstrated low motivation so she discussed how success in school could lead to higher paying jobs in the future. Barbara's response was given after being asked how highly motivated teachers supported their students' motivation. She talked about the time in which she was a classroom teacher and explained to her students that education would affect their future.

> *I'll try to take interest if their children are here and I've had one who's come to me. She's a kindergarten teacher, has a son in sixth grade, he's having some trouble with being motivated but has one of the highest IQs you've ever seen, making a C, so I brought him in, we're doing the laying the foundations to get him ready for the AP [advanced placement] courses that the high school is starting next year, and I just brought him in and said, "Hey look, we don't need to tell your mom about this conversation but these are things that are going to be offered to you which makes more money in your pocket sooner" cause that's the language he understood and to try to get him to want to come to school and do better.*
>
> Amy

> *It's me educating them on, "You've got to finish high school to be able to do that," or, "You've got to take some difficult math classes in order to be ready for college if you want to go into that." But, you know, helping them to understand that education is not just something that is required by law, but it's something that's gonna benefit them in terms of quality of life. You know, after they graduate, are they going to go to a job? Are they going to be on welfare? Are they going to go to a career that they love?*
>
> Barbara

Promote Goal Setting

Barbara also referenced that when she was a classroom teacher, she helped motivate students by having them set their personal academic goals. She stated,

I am a big proponent of students moving from the extrinsic to the intrinsic and I think that, oh and also being aware of their own learning, and I think that there was a movement fifteen years ago when I was in the classroom, I had students set their own goals. They looked at pre-tests and post-tests well before it became popular just because as a teacher I realized that they need to know where they are at.

Research Question Three

How does teachers' motivation to work affect the learning experiences they provide for their students?

<u>Results from Teacher Surveys</u>

A multiple regression analysis was also conducted to determine the best predictors among teachers' basic psychological needs on the level of intellectual rigor and authenticity of tasks teachers provided their students. Teachers' basic psychological needs of autonomy, relatedness, competence, and social isolation served as the independent variables and the level of rigor and relevance of the tasks they submitted through the online survey served as the dependent variable.

The majority of participant responses were deleted before the analysis was conducted. Specifically, only 19 participant responses met all of the criteria and, therefore, were included. The same participant who was deleted from the previous analysis for not completing any of the Basic Psychological Needs at Work Scale items was also removed for the current analysis. Among the other participating teachers who responded to the online survey, 28 uploaded documents. However, nine responses were removed because one file was corrupted, one file was blank, one teacher submitted a student work sample rather than a task, two submitted tasks could not be determined due to limited details, two teachers submitted tasks that were obviously not self-created but reproduced from other resources (source was displayed on document), and two teachers submitted weekly lesson plans.

The results from a multiple regression analysis (N=19) indicated that teachers' reported feelings of autonomy, relatedness, competence, and social isolation did not statistically significantly predict the level of authentic intellectual tasks, R=.535, R²=.286, p=.284. Table 19 shows the unstandardized coefficients, standardized beta weights, and the significance of the beta weights for each psychological need in relation to the variables' ability to predict the authentic intellectual work submitted by teachers.

Table 19

Unstandardized Coefficients, Standardized Coefficients, and Significance for Teachers' Authentic Intellectual Work by Basic Psychological Needs

Psychological Need	*B*	*SE B*	β	t	Sig.
Autonomy	.806	.453	.424	1.781	.097
Relatedness	-.658	.813	-.281	-.810	.432
Social Isolation	-.327	.308	-.270	-1.062	.306
Competence	.851	.630	.417	1.351	.198

Results from Administrator Interviews

Newmann et al. (2007) designed three Authentic Intellectual Work (AIW) rubrics to evaluate different types of data including tasks, classroom observations, and student work. Because teachers were asked to submit tasks through the survey, the AIW task rubric was used for scoring purposes. However, administrators were asked during the interviews to describe the learning experiences they had observed in highly motivated teachers' classrooms; therefore, the AIW rubric that targeted instruction was used in developing a priori codes. The fundamental criteria of the AIW model included construction of knowledge, disciplined inquiry, and value beyond school; yet, the terminology used to describe these criteria were worded differently between the two rubrics (see Table 20 for a comparison).

Table 20

Comparison Criteria of Instruction and Tasks for Authentic Intellectual Work

Criteria for Authentic Intellectual Work	Instruction	Tasks
Construction of Knowledge	Higher Order Thinking	Construction of Knowledge
Disciplined Inquiry	Deep Knowledge, Substantive Conversation	Elaborated Communication
Value Beyond School	Connections to the World Beyond the Classroom	Connection to Students' Lives

The four components of the AIW instruction rubric (higher order thinking, deep knowledge, substantive conversation, and connections to the world beyond the classroom) were included in the codebook a priori for the purpose of corroborating findings rendered from the teacher surveys. Two additional codes, instructional strategies and instructional pacing, emerged from participants' responses. Table 21 displays the codes relating to instruction as well as their sources and definitions. The frequency counts for these codes can be found in the next table.

Table 21

Instructional Practices Used by Teachers

Code	Code Type (Source)	Definition
higher order thinking	a priori (Newmann et al., 2007)	"instruction [that] involves students in manipulating information and ideas by synthesizing, generalizing, explaining, hypothesizing, or arriving at conclusions that produce new meaning and understandings for them"
deep knowledge	a priori (Newmann et al., 2007)	"instruction [that] addresses central ideas of a topic or discipline with enough thoroughness to explore connections and relationships and to produce relatively complex understands"
substantive conversation	a priori (Newmann et al., 2007)	"students engage in extended conversational exchanges with the teacher and/or their peers about subject matter in a way that builds an

		improved and shared understanding of ideas or topics"
connections to the world beyond the classroom	a priori (Newmann et al., 2007)	"students make connections between substantive knowledge and public problems or personal experiences they are likely to have faced or will face in the future"
instructional strategies	emergent (all participants)	techniques the teacher uses to actively engage students in learning skills/concepts (i.e., centers, providing feedback, differentiating instruction, hands-on learning)
instructional pacing	emergent (Amy, Barbara)	speed at which the teacher instructs

Table 22

Frequency of Instructional Practices Used by Teachers

Code	Amy	Barbara	Brandon	Cathy	Sally	Susie	Frequency	Percentage of Practices
higher order thinking	1	0	0	0	0	1	2	7.4%
deep knowledge	0	0	1	0	0	0	1	3.7%
substantive conversation	0	0	1	0	0	0	1	3.7%
connections to the world beyond the classroom	0	0	0	0	0	0	0	0%
instructional strategies	6	4	4	4	1	2	21	77.8%
instructional pacing	1	1	0	0	0	0	2	7.4%

Authentic Intellectual Work

Only about 15% of all instructional practices discussed by administrators could be defined by the AIW framework whereas most of the responses were best described by emergent codes. In other words, rigor and relevance seldom came to the administrators' minds when they recalled instructional elements of a highly motivated teachers' classroom. Similarly, teachers' motivation did not statistically significantly predict the level of rigor and relevance they embedded in the tasks they submitted through the survey.

However, two participants did note the presence of higher order thinking and Brandon highlighted both deep knowledge and substantive conversation in a highly motivated teachers' classroom. No participants mentioned teachers who touched on the relevance of their lessons to the real world. In reference to higher order thinking, Amy cited "different levels of questioning" and Susie stated, "[The students are] actually taking that knowledge that she's giving to them and actually putting it into some other kind of form where they can learn from it." In the following quotes, Brandon highlighted how a teacher tried to engage his students in a more holistic and complex understanding of the material as well as encourage conversations between students about the content, which were coded as deep knowledge and substantive conversation, respectively.

> *I hear him say "it's not so much, you know, you remembering the dates but why this is happening. You know, what role did the citizens play?" And so he tries to take those students and put them in that situation.*

> *It's getting [students] moving around, getting them having discussions with one another about the content which is always good.*

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Instructional Strategies

By far, the majority of instructional practices that were described by participants involved strategies used by teachers. For example, Amy, Barbara, and Cathy emphasized the implementation of small group instruction or stations. The same participants, along with Sally, also mentioned differentiated instruction, or teaching students in different ways to meet their individual needs. Hands-on, active learning was discussed by Cathy and Susie. Also, Susie and Amy both talked about teachers providing feedback to students regarding their progress. Barbara referenced teaching to students' different learning styles (e.g., visual, auditory, kinesthetic). Similarly, Brandon acknowledged the use of lecture and Amy named direct instruction as part of a highly motivated teacher's repertoire of techniques. Example responses can be found below.

> *When I walk in the door, the teacher is up or she is in small group with students. She is interacting with them… She has plans for differentiated instruction, the kids for reading and math go through small centers.*
>
> Barbara

> *He has a combination of things going on with this class. You know, from starting with his bell ringer, he has his before, during, and after strategies but it's a history class so, you know, there has to be some lecturing of the content but at the same time, he keeps…the students engaged by giving them a part. You know, he kind of sometimes breaks it in parts and [has] them become that person they're talking about….*
>
> Brandon

> *…students are actually, actually doing things, where they're not just sitting and taking notes or they're not just sitting and listening to a teacher. They're actually doing things with their hands a lot of times or engaging with other students is what I really like to see and that teacher is almost like a facilitator in that classroom more so than sitting there just teaching them everything.*
>
> Susie

Instructional Pacing

Two administrators mentioned instructional pacing—Amy and Barbara. Amy referenced the teacher's use of wait time but also not wasting instructional time when she stated, "She's

teaching with a sense of urgency. It's a great pace, not a lot of down time but there is wait time."

Furthermore, Barbara noted that the highly motivated teacher was on track with the lesson plans

she submitted.

Research Question Four

What are the implications of this study for school leaders seeking to support teacher motivation,

student autonomy, and authentic intellectual work in the classroom?

The first part of the interview with administrators addressed the first three research

questions of this study then I presented the results from the teacher survey. Afterward, the

remaining part of the interview involved questions that were designed to explore their reactions

to the results and, in turn, answer the fourth research question driving this study. They were each

asked what findings from the survey they thought were most surprising and least surprising as

well as implications for school leaders. Their responses are disaggregated below by each

question.

Least Surprising Finding

Unanimously, each administrator expressed the least surprise over the significant

relationship between leadership styles and teacher motivation. Amy stated that she "just thought

that would be right." Cathy shared that she "would think that that would have been significant"

because the democratic style of leadership would be "highly motivate[ing] for the teachers, more

because they have ownership." Moreover, Susie asserted, "I would of thought that definitely

would have been like that" and laughed as she added, "That's good. That's good that it's

proven!" Sally talked about the shift in her school system to a more democratic leadership

persuasion and said, "I would hope that the more democratic kind of person is going to see better

teacher motivation and…I would have thought that would have shown up." In the quote below,

Barbara also shared changes in leadership that have occurred in her school district over time and poignantly described its effects.

> *It wasn't surprising because I've seen them both in place. Older principals, some that have retired from our district, were very [authoritarian] and it was the way that they were trained in the school of education. You say it, they do it. And, you know, it went over but because they were afraid not to do it but, um, there wasn't the creativity and the enjoyment and the sharing, the thinking outside the box that occurs when people come together and have a discussion about what can we do? what is the problem? how can we fix it? You know, then you just had one person making a decision and there's not...all the input that you can go from. Not only that but, for the principal, that poor soul, that if their idea is not good, then he or she has failed as an individual on the job. You know, maybe not as a person but professionally whereas with democratic, we would fail as a group and it might be a little easier to take. You know? We do what we thought we could do and when more than one person had their input on it, this what we decided, then I think the risk taking would be bigger as a group than it would be individually.*

Two participants, Brandon and Sally, suggested that the predictive factor in the relationship between leadership styles and teacher motivation was reversed in their experience because the level of motivation a teacher portrayed determined their leadership style with that individual. Therefore, they would be more authoritarian with unmotivated teachers and demonstrate a democratic style toward the teachers who were motivated at work. Example comments are below, but it is important to note again that assumptions held by the leadership style theory in this study was that leaders favor an overall style which can fluctuate, depending on the situation, and that not all situations call for a democratic style.

> *[Administrators] have a lot of teachers who want to be in on every decision but any good administrative team gonna be all three [pointing to three leadership styles] at some point and... you can't be totally authoritarian, you can't be totally democratic, and you can't be totally laissez-faire to everyone so it's kind of where you are with that person, a group of people, because there are some teachers here, they're doing a great job. My thing is just supporting them in what they're doing and some of them are like, "Well I don't ever see you" and I'm like, "Because when I look in your window, I see what I need to see so there's no need in me bothering you, I need to go next door and bother them." [laughing]*
>
> <div align="right">Brandon</div>
>
> *My leadership style almost can be individualized like you would your students and that's a very hard thing when you're managing a whole school because they're adults...I have*

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teachers that I think if I'm not standing over them, they're just not, it doesn't matter, they're just not, and then some that I can give them this and they're going to create this wonderful thing in they're classroom.

<div align="right">Sally</div>

Most Surprising Finding

All participants also agreed that the most surprising findings were the insignificant relationships between teacher motivation and their support of students' autonomy and the authentic intellectual work they implemented in their classroom. Their responses were reflected in Cathy's comment of being surprised "that the teacher motivation or the democratic leadership style did not translate into the classroom." Cathy and Amy also brought up questions regarding how the data were gathered. Cathy suggested that data from teacher observations would be more reliable, and Amy questioned the participant pool.

> *I would question the people who actually took the survey and the characteristics of those people because as I teacher, I would have never [responded] and the ones that I'm thinking about in this school who are highly motivated aren't going to take the time to do the survey because they're too busy. They're too busy making sure their kids are getting what they need.*

<div align="right">Amy</div>

Amy, Barbara, and Brandon gave anecdotal counter examples of highly motivated teachers who did demonstrate effective motivational and instructional practices.

> *I see in their classrooms like the highly motivated teacher, she's going to, like you said, she's going to say "tell me things you need" and I can think of a situation where I sat in on a conference and she said, "Tell me where in your behavior you need to improve" and the child, without us having to say it, she knew, "I need to keep my hands to myself. I need to say kind words to people." "How long do you think you can go without putting your hands on somebody?" and we broke it up to a 30 minute thing and "what reward do you think you want if you...?" and she can tell you. I mean I've got several stories like that where we've done it... Yeah, my motivated teachers are going to do whatever it takes and they understand that children need autonomy in the classroom. They get that.*

<div align="right">Amy</div>

> *I think for most of the teachers that I see that are highly motivated that the tasks are more rigorous. There's more accountability. There's more reflection on how the students are doing, how can I fix it when they're not doing?*

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I'm surprised that teacher motivation didn't have more of an influence on students' work because on a daily basis, you see that...I've got one particular group, you can follow them, when they go in this guy's class, they [are] pumped up. They [are] ready but they go right next to the next class and they [are] giving that teacher fits. And it's amazing that [with] the same group of children, he's like "I don't have any problems with them" but in here, they [are] writing up the whole class. It's like, it's just amazing in that it's that person's motivation and their engagement of the students.

Brandon

However, four administrators also offered potential reasons behind these results, namely why even motivated teachers did not abdicate control to their students. Barbara, Brandon, Cathy, and Susie suggested that teachers wanted to be given control, yet, they did not want to lose it to children. Cathy acknowledged the dissonance between teachers' expectations and practices whereas Susie, Brandon, and Barbara offered possible explanations. Susie conjectured that her teachers might have resisted giving students autonomy because of the controlling leadership style of the principal before her who made them feel like they might "get written up" if their "kids [were] not doing exactly what that person [thought] they should be doing." From a high school perspective, Brandon suggested that his teachers might have viewed the practice of giving students autonomy as "too elementary." Barbara wondered if the discrepancy could stem from teachers' lack of time, their belief that adults inherently deserved autonomy but children did not, or perhaps limited training on how to provide students with autonomy support.

If I'm giving you choices, then it seems like you really would want [to be] flexible with the kids and when you develop the rules maybe the kids would have input because I'm modeling for you what I would expect. I would [have] thought that it would kind of filter down…It's almost like we want to receive something that we don't want to give sometimes so if I'm flexible, why aren't you flexible? Like I've used that scenario with teachers before to say, you know, when we have faculty meetings, be respectful of one another but when you have a faculty meeting, everybody's talking and it [will] be [when] someone is up and I'm like, don't we say that to our kids all the time?

Cathy

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[Teachers] like being motivated and given that choice yet they don't want to give up the choice to their students…and that's hard and I think that's why we're struggling so much nowadays…that's what they're pushing us to do [which] is to let these kids start learning on their own and…it's hard to [do which is what] we see that here. Teachers don't want to quite give that up… it's a lot of different things but I know that's one thing here is I think they still just feel like I just can't do this. I just can't let go of this reign on them. I gotta keep them in control because it may appear as I'm not in control…It almost appears as the teacher's not doing their job but I don't see it like that.

Susie

I think that [teachers] are more authoritarian than their administrators are because they…like to be in control of everything that happens in their class and I say that because when we talked about instructional strategies and high school teachers…think that's too elementary and I always ask, "Why is that too elementary? It's working in elementary. Why not do it in high school?" And I never get a legitimate response because if it's working in elementary, why are we not doing these strategies in high school? And it's because they don't want the kids up talking. They don't want the kids up moving around. They want everyone to stay in that straight row and they want them to listen to them and take notes. And that's not working.

Brandon

I'm thinking that one of the factors may be the time. You know, the time factor in the classroom. You know, sometimes you just want to kids to do it and get it done…if there was a scenario of them having autonomy whether it's grades or behavior or whatever, it takes time to sit down with the kid and talk with them about that and we're so pushed for teaching the curriculum that we want a quick fix. We don't really want to invest the time into training kids in the value of being reflective on their behavior and setting their own personal academic goals. So, that may be one [and] it may also be that the teacher just feels like that they're the head of the classroom and you're going to do what I tell you to do so it may just be that mindset that they're children and I'm an adult whereas with an administrator, it's an adult to adult relationship and I should have some autonomy. It may be training, you know? Teachers don't know how to sit down with the students and guide them in being reflective because that's a life skill and some of them may not even know themselves how to do it. In order to teach it, you have to know it yourself.

Barbara

Barbara was the only participant who also commented on possible reasons for the insignificant relationship between teacher motivation and authentic intellectual work in the classroom. She stated that this also could have been due to a lack of training in how to make tasks and instruction more rigorous and, perhaps, some teachers did not fully understand the complexity of the new state standards.

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Implications for School Leaders

The administrators were asked to consider the findings from the teacher survey results

and suggest implications for school leaders' practice. From their responses, seven themes

emerged which are presented in Table 23.

Table 23

Implications of Teacher Survey Findings Discussed by Administrator Participants

Implication	Participant(s)	Data Exemplar
Build relationships with teachers and express your appreciation	Barbara, Sally	I guess if you don't have that relationship with teachers and you don't take time to invest in them and then you want them to do things, it feels more like manipulation than if you don't have that relationship so I think that's always going to have to be there. If you want to see motivation or if you want someone to work really hard for you, they need to know that they're appreciated and that you value them as a person and who they are and their families and that's just probably as important as the PD [professional development] for curriculum.
Share decision-making power with teachers and provide opportunities for choice	Amy, Brandon	Actually [go into a leadership team meeting] and [let teachers] having some decision-making power…
Solicit input from teachers	Amy	One thing that I've done that I think is effective was earlier in the year [after] every PD [professional development] I had, I would follow up and the follow up was the "Hey, come tell me what worked and didn't work."
Explicitly discuss with teachers and provide professional development on student autonomy, rigor, and relevance	Barbara, Brandon, Susie	I just explained to teachers if we have a positive attitude, if we display the energy, if we put in, guess what? Students are going to pick up and they're going to do that then the community gonna know because kids talking about it which it all flows. But if we have a negative attitude and we're going to give it to the kids and they're

		going to give it the community. So if we want to see a difference, then it starts with us and it starts with that teacher motivation and wanting to be the best, you know, wanting to do good and if they don't have it, then it don't flow. So, that's a huge impact into the students' work.
Have realistic expectations of teachers and look for progress	Sally	So [have] realistic expectations of those teachers and just [look] for progress with each teacher like you would with each child.
Provide time for teachers to collaborate with colleagues and conference with students	Barbara, Brandon	…teachers need to have time with kids [because]…unless we're willing to invest the time in the child, they're not going to get the sense of autonomy because it takes time to sit down and do that one-on-one counseling to say this is where you're at
Stay informed on current research regarding teacher motivation, student motivation, and student learning	Cathy	If you want to make a difference, then look at the research. What's working? What's not working?...so that you can be most effective.

Summary

Results from a multivariate analysis of variance (MANOVA) indicated principals' leadership styles significantly affected teachers' motivation, and post hoc tests revealed that the facets of their motivation that were significantly affected included their feelings of autonomy, relatedness, and competence at work. Specifically, teachers reported significantly greater autonomy, relatedness, and competence when their principal held a democratic leadership style. The administrators who were interviewed were the least surprised by these findings. Before they were presented with the survey results, they were asked to name strategies they implemented to support teachers' motivation. From their responses, they appeared to lead with a democratic style and their support of teachers' autonomy, competence, and relatedness also emerged. Other

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motivational strategies that were mentioned included their use of professional reflection, rewards, social comparison, leading by example, and occasional implementation of punishment. Sometimes the strategy they used differed according to a teacher's level of motivation. Although it was not inquired about in the interview questions, the principals also described personal attributes of a highly motivated teacher which included their demonstration of self-determination, positive disposition, preparedness, confidence, and professional knowledge.

Furthermore, results from multiple regression analyses suggested that teachers' motivation did not significantly predict their support of students' autonomy nor their implementation of authentic intellectual work. The administrator participants were the most surprised by these findings. According to them, highly motivated teachers used strategies such as autonomy support, relatedness, goal setting, utility value, and rewards to support their students' motivation. In terms of instructional practices, the administrators stated that these teachers implemented higher order thinking, deep knowledge, substantive conversation, instructional strategies, and instructional pacing. These motivational and instructional practices were discussed before the survey results were revealed and similar to the insignificant findings from the survey, support of students' autonomy and critical components to authentic intellectual work (higher order thinking, deep knowledge, substantive conversation) were seldom mentioned.

Another important purpose of this study was to make use of the findings in a practical manner by determining implications for school leaders. The administrators who were interviewed suggested that school leaders should build relationships with teachers, share decision-making power with teachers, provide opportunities for choice, solicit input from teachers, provide professional development on student autonomy and authentic intellectual work,

have realistic expectations of teachers, provide teachers with time, and stay informed on current

research. The next chapter provides further summarization, discussion, and recommendations.

CHAPTER V. DISCUSSION AND RECOMMENDATIONS

There are many facets of a learning organization and considering the interpersonal nature of learning itself, a vital component involves the relationships between administrators, teachers, and students. From these interactions, complex structures such as leadership, motivation, and instruction emerge. The task of taking a still snapshot of any moving system such as a school setting for the purpose of investigating its intricate landscape and extrapolating meaningful findings is quite a challenging endeavor. As researchers, the best we can do is to view the educational setting and its problems from many angles and through varying theoretical lenses in order to look for meaningful patterns across different individuals, scenarios, and time. Therefore, the first undertaking of this study was to review and synthesize literature that related to the relationships between educational leadership styles, teacher motivation, student motivation, and student learning.

School leadership has a profound impact on a learning organization, namely its members which include students and teachers (Hallinger & Heck; 1998; Leithwood, 2011; Leithwood et al., 2004; Lezotte & McKee, 2002; Louis et al., 2010; Marzano et al., 2005). Next to teachers, it has the greatest influence on student learning (Leithwood et al., 2004; Louis et al., 2010). Northouse (2012) described different styles of leadership as democratic, authoritarian, or laissez-faire. A school leader with a democratic style shares decision-making power, fosters collaboration, and values input from others which, in turn, can lead to teachers who are more motivated, satisfied, committed, and creative (Northouse, 2012). Within the context of Self-Determination Theory (SDT), an individual's intrinsic motivation is best supported when their basic psychological needs for autonomy, competence, and relatedness are met (Ryan & Deci,

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2000, 2009). The nurturance of teachers' psychological needs are vulnerable to the working

environment created by a school leader; however, the nature of a democratic leader is to support

these needs. Moreover, teachers who have experienced a positive, autonomy-supportive work

environment also created a classroom environment that supported students' autonomy (Bressoux

et al., 2007; Filak & Sheldon, 2008; Roeser, Marachi, & Gelhbach, 2002 as cited in Roeser et al.,

2009; Roth et al., 2007). Furthermore, teachers are the greatest influential factor affecting

student achievement which has been shown to increase through the implementation of authentic

intellectual work (Leithwood et al., 2004; Louis et al., 2010; Newmann et al., 2007).

Although these findings found in current literature offer valuable insight, there remains a

paucity of research that explores the complexity of these relationships within a sample

population from the viewpoints of both school leaders and teachers and through the convergence

of theoretical lenses provided by both the educational leadership and educational psychology

fields for the ultimate goal of equipping educational practitioners with practical strategies.

Therefore, this need informed the purpose of the study.

Purpose of the Study

The purpose of this study was to investigate how principals' leadership styles affected

teacher motivation and, in turn, how teachers' motivation affected their motivational and

instructional practices in the classroom. Specifically, the theories from educational leadership

and educational psychology that were employed in this study theoretically overlapped and one

goal was to determine if a democratic leadership style did in fact significantly affect teachers'

support of autonomy, competence, and relatedness. Additionally, it was important to determine

if teachers' motivation significantly predicted their support of students' autonomy and

implementation of rigor and relevance in their instruction. Lastly, a driving focus was to

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synthesize the findings from teachers and administrators across multiple interpersonal dynamics within a school that affect school leaders, teachers, and students into a culmination of useful strategies. The purpose of this study aligned with Murphy's (2002) conviction that a breakthrough in school leadership depended on pulling together fragmented ideas and theories in a pragmatic form for practicing professionals in an effort to produce valuable outcomes which, in this case, included the increase of teacher motivation, student autonomy, and student learning. Therefore, the research questions of this study were as follows:

1. How do principals' leadership styles affect teachers' motivation at work?

2. How does teachers' motivation to work affect the conditions in which they motivate their students?

3. How does teachers' motivation to work affect the learning experiences they provide for their students?

4. What are the implications of this study for school leaders seeking to support teacher motivation, student autonomy, and authentic intellectual work in the classroom?

Summary and Discussion of Findings

According to results from a survey taken by teachers in two southeastern school systems, principals' leadership styles were found to significantly affect teachers' motivation at work (Wilks' Λ = .609, $F(8, 260)$ = 9.148, $p < .001$, η^2 = .220). These findings aligned with the outcomes from other research studies (Collie et al., 2013; Eyal & Roth, 2011; Tschannen-Moran, 2009). However, this study uniquely examined how three different leadership styles affected all the basic psychological needs of teachers. Specifically, post hoc tests indicated that teachers reported higher levels of autonomy, relatedness, and competence under a democratic leader.

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Support of these psychological needs also emerged from administrators' responses; yet, the amount of support for each need differed between the participant groups. The highest mean score in terms of teachers' self-reported psychological needs under a democratic leadership style was competence (6.184), followed by relatedness (5.927) then autonomy (5.360). In other words, the teachers who participated in this study and indicated they worked for a principal with a democratic style also most strongly felt that their feelings of competence were supported. However, participating administrators in the same school systems seemed to have a democratic style but seldom discussed supporting teachers' competence as one of the motivational strategies they used (frequency count = 5.7%). In fact, competence was the psychological need least discussed by administrators.

One reason for these discrepant findings could be due to the ambiguous nature of describing competence support through an interview. In other words, teachers can clearly reveal their personal thoughts through a self-report survey but this psychological need may be harder, compared to the other needs, for administrators to describe in terms of their overt actions. For example, autonomy support can be described as providing choice or sharing decision-making power and relatedness can be described by the ways relationships are established; however, competence support is difficult to describe because it is implicitly revealed by stating trust in teachers to make competent choices or because its description relies on more passive actions such as telling teachers they are competent. Another reason could be similar to Guskey's (2007) findings in that perceptions of administrators were misaligned with teachers' perceptions which supports the need for a practice discussed by one administrator participant—solicit feedback from teachers.

Another interesting result regarding teachers' psychological needs related to Deci and

Ryan's (2002) statement that "relatedness typically plays a more distal role in the promotion of

intrinsic motivation than do competence and autonomy, although there are some interpersonal

activities for which satisfaction of the need for relatedness is crucial for maintaining intrinsic

motivation" (p. 14). The importance of relatedness could be theoretically supported because of

the interpersonal nature of the school environment. Also, Collie et al. (2013) empirically

supported the significance of teachers' relatedness with students and colleagues, and the teacher

survey results from this study indicated that relatedness with "people at work" was important.

However, another important element to this study, interviews with administrators, provided

findings specific to teachers' relatedness with administrators. Based on the frequency of times in

which relatedness was mentioned as a motivational strategy (33.9%), which was the highest

among all the strategies discussed, this psychological need did not play a distal role in the

support of teachers' motivation but rather a crucial facilitative.

During the interview with administrators, they were also asked to discuss their

experiences with teachers who they considered to be unmotivated at work. An important

element of SDT, the motivational theory used to describe teacher and student motivation in this

study, is viewing motivation not just in terms of amount but also within the context of why

individuals engage in certain actions (Ryan & Deci, 2009). However, this theoretical feature had

to be compromised due to the limitations that existed when asking administrators to describe

teachers' actions because they were not privy to the teachers' internal cognitive processes unless

teachers chose to verbally share them. For example, a teacher who strives to increase her

students' achievement scores may be motivated by ego-enhancing feelings of accomplishment

upon their successful performance or because she is intrinsically motivated through her self-

determination; however, the type of motivational drive behind her actions may be difficult for an administrator to distinguish and this level of theoretical inquisition was inappropriate for the interviewing process at hand. Nevertheless, interesting findings regarding their motivational strategies were found from administrators' descriptions of teachers they perceived as unmotivated at work.

For one, none of the administrators discussed supporting unmotivated teachers' needs for autonomy and competence; yet, four administrators mentioned relatedness as a strategy for these teachers. Because the administrators discussed autonomy and competence strategies with their entire faculty, one possible reason for this finding could be that the teachers were already given opportunities to exercise autonomy and competence through choice and trust but they still failed to successfully meet their professional obligations. However, there are ways in which a school leader can support even an unmotivated teacher's basic psychological needs and, hopefully, increase their motivation. For example, the administrator could relate to the teachers on a personal level and talk with them about why they are not adequately fulfilling their responsibilities, which was suggested by some participants. Also, administrators could establish opportunities for reflective coaching with teachers, specifically, where they are guided to "reflect on the efficacy and appropriateness of [their] behavior, goals, beliefs, and values" while "assum[ing] the role of the primary decision maker" (Nolan & Hillkirk, 1991). Through this coaching model, teachers would determine the areas in which they need improvement and the strategies they would try to implement in order to improve their practice. Furthermore, Parker, Hall, and Kram (2008) posited that "at the same time, identity and competence are continuously reshaped and affirmed through interactions with others" in "a relational approach [to career growth]" (p. 489). This method is designed to support all three of the basic psychological needs

of teachers. After all, SDT theorists have asserted that everyone possesses an internal drive to psychologically grow by pursuing personal interests and rewarding experiences (Ryan & Deci, 2002).

A school leader may make efforts to create a work environment in which teachers' autonomy, competence, and relatedness are supported but still oversee teachers who are unmotivated at work. This is where the educational leadership theory used in this study can pick up the conversation since Northouse (2012) stated that a democratic leadership style may not be appropriate for all situations. For instance, school leaders may need to adopt a more authoritarian approach like two participants in this study if they have exhausted their repertoire of motivational strategies. However, an important goal of this study is to provide school leaders with more strategies, many of which came from administrators who participated in the study. For example, findings rendered from this study included other motivational strategies administrators used such as guiding teachers in professional reflection, giving rewards, creating the conditions in which teachers engaged in social comparison, and leading by example. As a last resort, some administrators in this study discussed using punishments (i.e., written reprimands, recommendation for termination) with unmotivated teachers.

Another driving purpose of the study was to investigate whether teachers' motivation predicted fundamental elements of their students' learning environment such as autonomy support and authentic intellectual work; therefore, two multiple regression analyses were conducted. Results from the first multiple regression suggested that teachers' motivation did not statistically significantly predict their support of students' autonomy ($R=.224$, $R^2=.05$, $p=.158$). Moreover, the second multiple regression results also indicated similar insignificance between

teachers' motivation and the level of rigor and relevance they embedded in tasks given to students (R=.535, R²=.286, p=.284).

The administrators who participated in this study were very surprised by these findings; however, they seldom discussed student autonomy, rigor, or relevancy when asked to describe the classroom environment of a highly motivated teacher. To the administrators, other motivational strategies such as relatedness, rewards, and utility value were more frequently mentioned. Goal setting was a motivational strategy that was discussed the same amount as student autonomy. Further, specific instructional strategies (i.e., differentiated instruction, centers) were talked about at a much greater frequency than the components of authentic intellectual work (higher order thinking, deep knowledge, substantive conversation, and connections to the world beyond the classroom). Instructional pacing was also noted, although infrequently. According to the administrators, possible reasons for these insignificant findings could have been teachers' limited time, training, or knowledge. Also, several administrators pointed out the disconnect between teachers believing they should be given autonomy by their principals but failed to afford their students the same rights to choice and self-direction. Another potential reason the survey results were insignificant may be the way in which student motivation and learning were described in the study. However, it is important to discuss the theoretical and methodological reasons behind defining student motivation in terms of their autonomy and student learning by authentic intellectual work submitted by teachers.

According to a subtheory of SDT, Organismic Integration Theory (OIT), individuals' type of motivation is highly subjected to the level of autonomy support they experience in different environments (Ryan & Deci, 2009). Therefore, students who experience autonomy in the classroom will more likely engage in activities such as learning from an intrinsic

motivational orientation which has been shown to result in greater learning, effort, persistence, creativity, and performance (Amabile, Hill, Hennessey, & Tighe, 1994; Ferrer-Caja & Weiss, 2000; Guay & Vallerand, 1997; Lepper, 1994 as cited in Carbonneau, Vallerand, & Lafreniére, 2012). Also related to performance, Newmann et al. (2007) have found that student achievement increased when authentic intellectual work was utilized in the classroom.

Lastly, the practical methods for measuring student motivation and learning had to be taken into consideration. Therefore, I decided that the best methodological approach for this study was to utilize the Problems in Schools (PIS) Questionnaire created by Deci et al. (1981) to measure autonomy support because it had the potential to limit social desirability since teachers were asked to respond to scenarios rather than directly answer whether they supported their students' autonomy. Also, teachers were asked to submit a task they created and implemented with their students in order to capture learning opportunities they provided their students. A better method, that does not depend on self-reported responses, is classroom observations which was suggested by one administrator who participated in the study. However, student learning needed to be linked to individual teachers in order to complete the statistical analysis, and the teachers were assured anonymity since they were asked to describe sensitive topics such as their job satisfaction and the leadership practices of their principals. Furthermore, student achievement data was not requested for the same protection of anonymity in addition to the variability in rigor and relevance that could be introduced through varying assessments used to apprehend the performance data. Although these theoretical and methodological choices presented some limitations, they presented fewer limitations than alternative approaches and seemed the most appropriate for this study. Further limitations to the study will be addressed below.

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Limitations

As previously discussed, some limitations to this study involved its methodological approaches. For example, the findings from the teacher survey and interviews with administrators required self-reported responses; therefore, the conclusions and implications of findings from this study relied on participants' truthfulness which could have been altered by social desirability to respond in ways perceived by participants as more acceptable. Also, one administrator participant pointed out another limitation to the study which involved the teacher sample population. She suggested, which has a possibility of being true, that the teacher participants in the study were not representative of teachers at large. Lastly, the generalizability of the findings from the study were limited by the sampling procedures, non-experimental research design, and population from which the participants were recruited.

Recommendations

A driving focus for this study was to elucidate recommendations for school leaders seeking to support teachers' motivation as well as effective motivational and instructional practices in the classroom. Based on the findings from the current study, it is recommended that school leaders:

1. Share decision-making power with teachers

2. Provide teachers with opportunities for choice and self-direction

3. Solicit feedback from teachers and implement changes based on reasonable and valid suggestions

4. Foster open and collaborative communication with and among teachers

5. Provide time for teachers to collaborate with colleagues

6. Build relationships with teachers and express their value to the learning community

7. Express trust in teachers' competence to complete professional responsibilities successfully

8. Provide teachers with professional development on the effective implementation of student autonomy, rigor, and relevance in the classroom and discuss the positive outcomes (e.g., increased student learning, effort, persistence, creativity, performance) associated with these practices

This research study will hopefully provide both theoretical and pragmatic significance to the relationships between educational leadership styles, teacher motivation, and students' learning environment. However, there is still a need for further research to investigate the theoretical and methodological approaches that were taken in this study. For example, much attention has been devoted to exploring student motivation and achievement through the lens of Self-Determination Theory (Ryan & Deci, 2009), but a need exists for this theory to expand and encompass teacher motivation as well (Bouwma-Gearhart, 2010; Collie et al., 2013; Eyal & Roth, 2010). Furthermore, to the best of my knowledge, this is the first study to explore the relationship between teacher motivation and authentic intellectual work implemented in the classroom; therefore, further investigation is warranted, perhaps after professional development on rigor and relevance has been provided to teachers in order to determine if the relationship would still test insignificant.

The results relating to teacher motivation and their support of students' autonomy was also insignificant which did not align with findings from other studies (Roth et al., 2007; Bressoux et al., 2007); therefore, there is an additional need for future research endeavors to gather richer data. For example, classroom observation data from teachers identified by their principals as being highly motivated could provide greater insight into the motivational dynamics of their

classrooms. This method could also shed light on our understanding of how teachers' motivation affects their instructional practices regarding rigor and relevance.

Finally, future researchers could use statistical methods such as structural equation modeling (SEM) to examine the complex causal structures between leadership styles, teacher motivation, student motivation, and student learning. The advantages to this method include the ability to take a confirmatory rather than exploratory approach to data analysis, account for parameter estimates, model multivariate relationships, and determine indirect effects (Byrne, 2010). However, this type of analysis calls for approximately 300 participants which was a large contributing factor to why SEM was not conducted in this study (Tabachnick & Fidell, 2007 as cited in Mertler & Vannatta, 2010). Therefore, it is suggested that results from future related studies be analyzed through this statistical method.

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Appendix 1—Teacher Survey

Including this year, how many years have you been employed as a teacher in YOUR CURRENT SCHOOL?

Including this year, how many years TOTAL have been a teacher?
What grade(s) do you currently teach? (check all that apply)
❑ K (1)
❑ 1 (2)
❑ 2 (3)
❑ 3 (4)
❑ 4 (5)
❑ 5 (6)
❑ 6 (7)
❑ 7 (8)
❑ 8 (9)
❑ 9 (10)
❑ 10 (11)
❑ 11 (12)
❑ 12 (13)
❑ other (please specify) (14) _____

What is your gender?
○ Male (1)
○ Female (2)

What is your ethnicity?
○ African American (1)
○ Asian (2)
○ Caucasian (3)
○ Hispanic (4)
○ Native American (5)
○ Biracial/Multiethnic (6)
○ Other (please specify) (7) _____

What is the highest degree you have completed relevant to the field of education?
○ Bachelor's Degree (1)
○ Master's Degree (2)
○ Specialist Degree (3)
○ Doctoral Degree (4)

The following questions concern your feelings about your job during the last year. (If you have been on this job for less than a year, this concerns the entire time you have been at this job.) Please indicate how true each of the following statement is for you given your experiences on this job. Remember that your administrators and colleagues will never know how you personally responded to the questions.

	1-Not at All True (1)	2 (2)	3 (3)	4-Somewhat True (4)	5 (5)	6 (6)	7-Very True (7)
I feel like I can make a lot of inputs to deciding how my job gets done. (1)	❍	❍	❍	❍	❍	❍	❍
I really like the people I work with. (2)	❍	❍	❍	❍	❍	❍	❍
I do not feel very competent when I am at work. (3)	❍	❍	❍	❍	❍	❍	❍
People at work tell me I am good at what I do. (4)	❍	❍	❍	❍	❍	❍	❍
I feel pressured at work. (5)	❍	❍	❍	❍	❍	❍	❍
I get along with people at work. (6)	❍	❍	❍	❍	❍	❍	❍
I pretty much keep to myself when I am at work. (7)	❍	❍	❍	❍	❍	❍	❍
I am free to express my ideas and opinions on the job. (8)	❍	❍	❍	❍	❍	❍	❍
I consider the people I work with to be my friends. (9)	❍	❍	❍	❍	❍	❍	❍
I have been able to learn interesting new skills on my job. (10)	❍	❍	❍	❍	❍	❍	❍
When I am at work, I have to do what I am told. (11)	❍	❍	❍	❍	❍	❍	❍
Most days I feel a sense of accomplishment from working. (12)	❍	❍	❍	❍	❍	❍	❍
My feelings are taken into consideration at work. (13)	❍	❍	❍	❍	❍	❍	❍
On my job, I do not get much of a chance to show how capable I am. (14)	❍	❍	❍	❍	❍	❍	❍

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People at work care about me. (15)	○	○	○	○	○	○	○
There are not many people at work that I am close to. (16)	○	○	○	○	○	○	○
I feel like I can pretty much be myself at work. (17)	○	○	○	○	○	○	○
The people I work with do not seem to like me much. (18)	○	○	○	○	○	○	○
When I am working, I often do not feel very capable. (19)	○	○	○	○	○	○	○
There is not much opportunity for me to decide for myself how to go about my work. (20)	○	○	○	○	○	○	○
People at work are pretty friendly towards me. (21)	○	○	○	○	○	○	○

The following questions concern your feelings about your principal's style of leadership. Principals have different styles in dealing with teachers, and I would like to know more about how you have felt about your encounters with your principal. Remember that your administrators and colleagues will never know how you personally respond to the questions.

	1-Strongly disagree (1)	2 (2)	3 (3)	4-Neutral (4)	5 (5)	6 (6)	7-Strongly agree (7)
My principal acts like I need to be supervised closely, or I am not going to do my work. (1)	❍	❍	❍	❍	❍	❍	❍
My principal wants me to be a part of the decision-making process in my school. (2)	❍	❍	❍	❍	❍	❍	❍
In complex situations, my principal lets me work problems out on my own. (3)	❍	❍	❍	❍	❍	❍	❍
It is fair to say that my principal thinks most teachers are lazy. (4)	❍	❍	❍	❍	❍	❍	❍
My principal provides me with guidance without pressure. (5)	❍	❍	❍	❍	❍	❍	❍
My principal stays out of the way of teachers as we do our work. (6)	❍	❍	❍	❍	❍	❍	❍
My principal gives us rewards or punishments in order to motivate us to achieve our school objectives. (7)	❍	❍	❍	❍	❍	❍	❍
My principal knows that I prefer supportive communication from him/her. (8)	❍	❍	❍	❍	❍	❍	❍
My principal allows me to evaluate my own work. (9)	❍	❍	❍	❍	❍	❍	❍
My principal believes that teachers need direction and feel insecure about their work. (10)	❍	❍	❍	❍	❍	❍	❍
My principal thinks I need help accepting responsibility for completing my work.	❍	❍	❍	❍	❍	❍	❍

(11)							
My principal gives me complete freedom to solve problems on my own. (12)	❍	❍	❍	❍	❍	❍	❍
My principal is the ultimate judge of teachers' achievements at my school. (13)	❍	❍	❍	❍	❍	❍	❍
My principal helps teachers to find their "passion." (14)	❍	❍	❍	❍	❍	❍	❍
In most situations, my principal gives me little input. (15)	❍	❍	❍	❍	❍	❍	❍
My principal gives orders and clarifies procedures. (16)	❍	❍	❍	❍	❍	❍	❍
My principal believes that I am competent and will do a good job if given a task. (17)	❍	❍	❍	❍	❍	❍	❍
In general, my principal believes it is best to leave teachers alone. (18)	❍	❍	❍	❍	❍	❍	❍

For the following questions, you will find a series of short vignettes. Each one describes an incident and then lists four ways of responding to the situation. Please read each vignette and then consider it to as a means of dealing with the problem described in the vignette. You might think the option to be "perfect"; in other words, "extremely appropriate"; in which case you would respond with the number 7. You might consider the response highly inappropriate, in which case you would respond with the number 1. If you find the option reasonable, you would select some number between 1 and 7. So think about each option and rate it on the scale shown below. Please rate each of the four options for each vignette. There are eight vignettes with four options for each. There are no right or wrong ratings on these items. People's styles differ, and I am simply interested in what you consider appropriate given your own styles. Some of the stories ask what you would do as a teacher. Others ask you to respond as if you were giving advice to another teacher or to a parent. Some ask you to respond as if you were the parent. If you are not a parent, simply imagine what it would be like for you in that situation.

A Jim is an average student who has been working at grade level. During the past two weeks, he has appeared listless and has not been participating during reading group. The work he does is accurate, but he has not been completing assignments. A phone conversation with his mother revealed no useful information. The most appropriate thing for Jim's teacher to do is:

	1-Very inappropriate (1)	2 (2)	3 (3)	4- Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
She should impress upon him the importance of finishing his assignments since he needs to learn this material for his own good.	○	○	○	○	○	○	○
Let him know that he doesn't have to finish all of his work now and see if she can help him work out the cause of the listlessness.	○	○	○	○	○	○	○
Make him stay after school until that day's assignments are done.	○	○	○	○	○	○	○
Let him see how he compares with the other children in terms of his assignments and encourage him to catch up with the others.	○	○	○	○	○	○	○

B At a parent conference last night, Mr. and Mrs. Greene were told that their daughter Sarah has made more progress than expected since the time of the last conference. All agree that they hope she continues to improve so that she does not have to repeat the grade (which the Greenes have been kind of expecting since the last report card). As a result of the conference, the Greenes decide to:

	1-Very inappropriate (1)	2 (2)	3 (3)	4-Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
Increase her allowance and promise her a ten-speed bike if she continues to improve.	○	○	○	○	○	○	○
Tell her that she's now doing as well as many of the other children in her class.	○	○	○	○	○	○	○
Tell her about the report, letting her know that they're aware of her increased independence in school and at home.	○	○	○	○	○	○	○
Continue to emphasize that she has to work hard to get better grades.	○	○	○	○	○	○	○

C Donny loses his temper a lot and has a way of agitating other children. He doesn't respond well to what you tell him to do and you're concerned that he won't learn the social skills he needs. The best thing for you to do with him is:

	1-Very inappropriate (1)	2 (2)	3 (3)	4-Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
Emphasize how important it is for him to "control himself" in order to succeed in school and in other situations.	❍	❍	❍	❍	❍	❍	❍
Put him in a special class which has the structure and reward contingencies which he needs.	❍	❍	❍	❍	❍	❍	❍
Help him see how other children behave in these various situations and praise him for doing the same.	❍	❍	❍	❍	❍	❍	❍
Realize that Donny is probably not getting the attention he needs and start being more responsive to him.	❍	❍	❍	❍	❍	❍	❍

D Your son is one of the better players on his junior soccer team which has been winning most of its games. However, you are concerned because he just told you he failed his unit spelling test and will have to retake it the day after tomorrow. You decide that the best thing to do is:

	1-Very inappropriate (1)	2 (2)	3 (3)	4-Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
Ask him to talk about how he plans to handle the situation.	○	○	○	○	○	○	○
Tell him he probably ought to decide to forego tomorrow's game so he can catch up in spelling.	○	○	○	○	○	○	○
See if others are in the same predicament and suggest he do as much preparation as the others.	○	○	○	○	○	○	○
Make him miss tomorrow's game to study; soccer has been interfering too much with his schoolwork.	○	○	○	○	○	○	○

E The Rangers spelling group has been having trouble all year. How could Miss Wilson best help the Rangers?

	1-Very inappropriate (1)	2 (2)	3 (3)	4-Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
Have regular spelling bees so that Rangers will be motivated to do as well as the other groups.	○	○	○	○	○	○	○
Make them drill more and give them special privileges for improvements.	○	○	○	○	○	○	○
Have each child keep a spelling chart and emphasize how important it is to have a good chart.	○	○	○	○	○	○	○
Help the group devise ways of learning the words together (skits, games, and so on).	○	○	○	○	○	○	○

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F In your class is a girl named Margy who has been the butt of jokes for years. She is quiet and usually alone. In spite of the efforts of previous teachers, Margy has not been accepted by the other children. Your wisdom would guide you to:

	1-Very inappropriate (1)	2 (2)	3 (3)	4-Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
Prod her into interactions and provide her with much praise for any social initiative.	❍	❍	❍	❍	❍	❍	❍
Talk to her and emphasize that she should make friends so she'll be happier.	❍	❍	❍	❍	❍	❍	❍
Invite her to talk about her relations with the other kids, and encourage her to take small steps when she's ready.	❍	❍	❍	❍	❍	❍	❍
Encourage her to observe how other children relate and to join in with them.	❍	❍	❍	❍	❍	❍	❍

G For the past few weeks, things have been disappearing from the teacher's desk and lunch money has been taken from some of the children's desks. Today, Marvin was seen by the teacher taking a silver dollar paperweight from her desk. The teacher phoned Marvin's mother and spoke to her about this incident. Although the teacher suspects that Marvin has been responsible for the other thefts, she mentioned only the one and assured the mother that she'll keep a close eye on Marvin. The best thing for the mother to do is:

	1-Very inappropriate (1)	2 (2)	3 (3)	4-Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
Talk to him about the consequences of stealing and what it would mean in relation to the other kids.	❍	❍	❍	❍	❍	❍	❍
Talk to him about it, expressing her confidence in him and attempting to understand why he did it.	❍	❍	❍	❍	❍	❍	❍
Given him a good scolding; stealing is something which cannot be tolerated and he has to learn that.	❍	❍	❍	❍	❍	❍	❍
Emphasize that it was wrong and have him apologize to the teacher and promise not to do it again.	❍	❍	❍	❍	❍	❍	❍

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H Your child has been getting average grades, and you'd like to see her improve. A useful approach might be to:

	1-Very inappropriate (1)	2 (2)	3 (3)	4-Moderately appropriate (4)	5 (5)	6 (6)	7-Very appropriate (7)
Encourage her to talk about her report card and what it means for her.	○	○	○	○	○	○	○
Go over the report card with her; point out where she stands in the class.	○	○	○	○	○	○	○
Stress that she should do better; she'll never get into college with grades like these.	○	○	○	○	○	○	○
Offer her a dollar for every A and 50 cents for every B on future report cards.	○	○	○	○	○	○	○

Think of an activity that you developed and implemented within the last month that is challenging and supportive of higher-order thinking. Please upload a copy of any materials (i.e., activity instructions) that you provided to your students when they were completing this activity. Also, please remove any identifiable information (i.e., your name).

Appendix 2—Administrator Interview Protocol

Interviewer's Introduction:
"I am interested in learning about your experience as an administrator. I highly value your honesty, and would like you to speak your mind openly. Your actual name will not be used in the reporting of your responses. This interview should last approximately 30 minutes. Before we begin, do you have any questions?"

As an icebreaker, do some general chatting to set the participant at ease if necessary.

Background Information

1. Tell me about your experience as an administrator.

Teacher Motivation

2. Think of a highly motivated teacher that you have worked with. Describe what that teacher's classroom looks like.

   Describe the type of learning experiences that teacher provides for his/her students.

   Describe how that teacher motivates his/her students.

3. Think of a teacher who you would considered unmotivated at work. Describe what that teacher's classroom looks like.

   Describe the type of learning experiences that teacher provides for his/her students.

   Describe how that teacher motivates his/her students.

Administrative Practices—Supporting Teacher Motivation

4. What strategies do you use at your school to support teachers' motivation?

5. How do you motivate the teachers who you would consider unmotivated at work?

Reactions to Teacher Survey Results

6. What findings from the survey were most surprising to you? Why?

7. What findings from the survey surprised you the least? Why?

8. What are the implications of these findings for school leaders seeking to support the motivation of their teachers?

Appendix 3— Authentic Intellectual Work (AIW) Rubric

General Rules

The main point here is to estimate the extent to which successful completion of the task requires the kind of cognitive work indicated by each of the three standards: Construction of Knowledge, Elaborated Communication, and Connections to Students' Lives. Each standard will be scored according to different rules, but the following apply to all three standards.

➢ If a task has different parts that imply different expectations (e.g., worksheet/short answer questions and a question asking for explanations of some conclusions), the **score should reflect the teacher's apparent dominant or overall expectations**. Overall expectations are indicated by the proportion of time or effort spent on different parts of the task and criteria for evaluation, if stated by the teacher.

➢ **Take into account what students can reasonably be expected to do at the grade level.**

➢ When it is difficult to decide between two scores, give the higher score only when a persuasive case can be made that the task meets minimal criteria for the higher score.

➢ If the specific wording of the criteria is not helpful in making judgments, base the score on the general intent or spirit of the standard described in the tips for scoring a particular AIW standard.

Score	Construction of Knowledge	Elaborated Written Communication	Connection to Students' Lives
	Consider the extent to which the assignment asks the student to organize and interpret information, rather than to retrieve, report, or reproduce information. Asking students to repeatedly apply previously learned information, rules, and procedures is usually an indication of reproduction, not construction of knowledge.	Assignments can ask for elaboration through prose, graphs, tables, diagrams, equations, or sketches. The assignment must ask for articulation of and support for generalizations in the relevant discipline.	Consider the extent to which the assignment presents students with a question, issue, or problem that they have actually encountered or are likely to encounter in their daily lives and that can be addressed by applying knowledge or skills from the relevant discipline.
4	N/A	*Analysis / Persuasion / Theory* Explicit call for generalizations AND support. The assignment requires the student to show his/her solution path, AND to explain the solution path with evidence such as models or examples.	N/A
3	The assignment's dominant expectation is for students to interpret, analyze, synthesize, or evaluate information, rather than merely to reproduce information.	*Report / Summary* Call for generalization OR support. The assignment asks students, using narrative or expository writing, either to draw conclusions or make generalizations or arguments, OR to offer examples, summaries, illustrations, details, or reasons, but not both.	The question, issue, or problem clearly resembles one that students have encountered or are likely to encounter in their lives. The assignment asks students to connect the topic to experiences, observations, feelings, or situations significant in their lives.
2	There is some expectation for students to interpret, analyze, synthesize or evaluate information, rather than merely to reproduce information.	*Short-answer Exercises* The assignment or its parts can be answered with only one or two sentences, clauses, or phrasal fragments that complete a thought. Students may be asked to show some work or give some examples, but this is not emphasized and not much detail is requested.	The question, issue, or problem bears some resemblance to one that students have encountered or are likely to encounter in their lives, but the connections are not immediately apparent, and the assignment does not explicitly call for students to make the connections.
1	There is very little or no expectation for students to interpret, analyze, synthesize, or evaluate information. Its dominant expectation is for students to retrieve or reproduce fragments of knowledge or to repeatedly apply previously learned information and procedures.	*Fill-in-the-blank or Multiple-choice Exercises* The assignment requires no extended writing, only giving solutions or definitions.	The problem has virtually no resemblance to questions, issues, or problems that students have encountered or are likely to encounter in their lives. The assignment offers very minimal or no opportunity for students to connect the topic to experiences, observations, feelings, or situations significant in their lives.

Appendix 4— Administrator Interview Codebook

Construct in Study	Theme	Code	Code Type (Source)	Definition (Source)	Data Exemplar(s)
Principal Leadership	leadership style	authoritarian style	a priori (Northouse, 2012)	limit collaborative efforts with teachers and make unilateral decisions which are communicated through directives and monitored for fidelity in a micromanagement manner	You put them [unmotivated teachers] on a plan, you discuss what they're doing wrong, what you want them to do to change it, you send them to professional development.
Principal Leadership	leadership style	democratic style	a priori (Northouse, 2012)	share the decision-making power with teachers by creating a work environment based on open communication, collaboration, and valued input	I have a leadership team that I developed this year. I have a representative from every grade level and when I ask them questions, I really...it's their decision. Like I don't say "hey what do you think about this?" and already have my mind made up.
Principal Leadership	leadership style	laissez-faire style	a priori (Northouse, 2012)	abdicate all control and responsibility to their staff who, in turn, are left without any leader or guidance	No examples found in interviews
Principal Leadership	motivational strategy (intrinsic motivation)	autonomy (rooted in self-determination theory)	a priori (Ryan & Deci, 2000)	choice and the opportunity for self-direction	So them [teachers] having a voice in what's happening at the school is a huge, I think, motivation to them to keep them engaged. Now, it's not always now you go do but you have a voice in the different activities…
Principal	motivational	competence	a priori	effectively engage in the surrounding	I try to identify the issues that are in

Leadership	strategy (intrinsic motivation)	(rooted in self-determination theory)	(Ryan & Deci, 2000)	environment	the school themselves and then for them [teachers] as the panel of experts, because they have been here much longer than I have, to come up with solutions.
Principal Leadership	motivational strategy (intrinsic motivation)	relatedness (rooted in self-determination theory)	a priori (Ryan & Deci, 2000)	personal relationship between administrator and teacher(s) or between teachers (i.e., colleagues, mentors/mentees); feelings of value and belongingness	I believe in being relational which is hilarious cause I'm not a touchy feely person either but they know I care. If they're out, I try to send a text "hey, are you doing okay?" You know, I genuinely care and they respond to that. Each person, new person has a mentor that teaches the same content area and they have a person who's in their department as well so they kind of have two people to talk to. Well, some of the things that I do is try to help teachers to feel like they are an integral part of the school.
Principal Leadership	motivational strategy (intrinsic motivation)	professional reflection	emergent (Amy, Barbara, Brandon, Sally, Susie)	deliberate reflection on professional practices for the purpose of learning and improvement	We ask them, you know, what can...how can you improve? From our walkthroughs, this is what we saw in your walkthrough, what do you think about this? And so, we're trying that one thing we talked about more recently is having them video themselves and that was one of my questions that I asked them as a whole, you know, how many have you ever saw your class through a video? And a lot of them haven't and so it's something that we're considering changing now we're trying to set up a

					schedule and start videoing their classes for them to see themselves. So I think they'll learn a lot from that.
Principal Leadership	motivational strategy (extrinsic motivation)	reward (rooted in self-determination theory)	a priori (Ryan & Deci, 2000)	providing a desirable external outcome (i.e., praise, acknowledgement, object) for the purpose of encouraging a desirable behavior	If a teacher has done something that has really stood out, that is beyond their normal job description, I try to send them a thank-you and then CC it to the staff so that everyone can see it and hopefully try to get on board and help out in the same manner.
Principal Leadership	motivational strategy (extrinsic motivation)	punishment (rooted in self-determination theory)	a priori (Ryan & Deci, 2000)	providing an undesirable external outcome (i.e., reprimand) for the purpose of discouraging undesirable behavior	And if there are not [changes], you just continue to document and hope that one day if they are tenured that you have enough evidence to take them to the board to non-renew, and if they are not tenured, then you just don't renew them…you know, because it's just not going to get better if it's an attitude more than anything.
Principal Leadership	motivational strategy (extrinsic motivation)	social comparison	emergent (Barbara, Brandon, Sally)	comparing how a person performs in relation to others as a way to judge the person's abilities	You just have to follow along like you would with any other teacher. You put them [unmotivated teacher] on a plan, you discuss what they're doing wrong, what you want them to do to change it, you send them to professional development, hopefully so that they hear it from someone else. You allow them to go and see a teacher who is doing whatever that concept is well.
Principal Leadership	motivational strategy	leading by example	emergent (Amy, Cathy,	administrator models desirable behaviors	I lead by example in saying that and making sure that I don't expect

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	(extrinsic motivation)		Susie)		teachers to do anything that I wouldn't do so I like to be a part of what they're doing. To me, I think that that's a great motivation.
Teacher Motivation	self-determination (rooted in self-determination theory)		a priori (Ryan & Deci, 2002)	self-motivation to psychologically grow and seek inherently rewarding experiences that align with personal interests (i.e., teaching)	We have some teachers who are dynamic teachers and change with the times and stay current on the research. They truly have a love for learning...
Teacher Motivation	personal attribute	positive disposition	emergent (Amy, Barbara, Brandon, Cathy, Susie)	positive attitude characteristic of individual (i.e., enthusiastic)	They [motivated teachers] love their job, and they love people, and they love kids and it shines in everything that they do. They don't groan, they're not grumpy…they get the job done.
Teacher Motivation	personal attribute	prepared	emergent (Amy, Barbara, Cathy, Susie)	evidence of instructional/behavioral pre-planning and classroom procedures	The classroom flows easily, the students know what the procedures are in the classroom, what they should be doing. If they need to go to the bathroom or they don't have the assignments they need, there is a procedure in place for everything. She has predetermined and thought it out.
Teacher Motivation	personal attribute	confident	emergent (Amy, Brandon, Sally)	willingness to take instructional risks; showing certainty in one's abilities	And a lot of it is they're [motivated teachers are] not afraid to take the chance on this activity may flop. This activity may not work but at least they're willing to try the activity and try to keep the different instructional strategies to make them, the students, stay engaged. She [motivated teacher] realizes during the lesson when something's

					not working out right and she's not afraid to say "okay, wait a minute, let me try this again."…There's not a fear when I walk into the room that "oh she's here." There's a comfort.
Teacher Motivation	personal attribute	knowledgeable	emergent (Brandon)	possess mastery of skills and concepts that one is responsible for teaching students	So, they have to know their content well enough to know when to interject those things [instructional strategies] without losing control of the class.
Classroom Environment (motivating students)	motivational strategy (intrinsic motivation)	autonomy (rooted in self-determination theory)	a priori (Ryan & Deci, 2000)	choice and the opportunity for self-direction	…this new trend in passing it off to the student, let the student be in control or be in charge of their own learning, that's different for a lot of teachers but that's giving up that feeling of control and so...we're moving in that direction but um that takes a relationship.
Classroom Environment (motivating students)	motivational strategy (intrinsic motivation)	relatedness	emergent (Amy, Barbara, Brandon, Sally, Susie)	personal relationship between teacher and student; having a positive rapport with students; interacting with students; feelings of value and belongingness (Ryan & Deci, 2000)	You see them also correcting students in a manner that..that tells you there's a positive relationship with them and not wholly negative where they just correcting them, moving on.

A motivated teacher is also someone who wants to get to know the students outside of school, so they stay for after-school functions so that they can interact with the kids where there's not so much pressure to learn…but just being people who enjoy one another's company. |

Classroom Environment (motivating students)	motivational strategy (intrinsic motivation)	goal setting (rooted in achievement goal theory)	emergent (Barbara)	the task in which one participates is given meaning through goals (Maehr & Zusho, 2009)	I am a big proponent of students moving from the extrinsic to the intrinsic and I think that…oh, and also being aware of their own learning, and I think that there was a movement fifteen years ago when I was in the classroom, I had students set their own goals. They looked at pre-tests and post-tests well before it became popular just because as a teacher I realized that they need to know where they are at.
Classroom Environment (motivating students)	motivational strategy (intrinsic motivation)	utility value (rooted in expectancy- value theory)	emergent (Amy, Barbara)	how the qualities of a task influence a person's desire to do the task, specifically, "how a task fits into an individual's future plans" (Wigfield, Tonks, & Klauda, 2009)	It's me educating them [students] on "You've got to finish high school to be able to do that" or "You've got to take some difficult math classes in order to be ready for college if you want to go into that."
Classroom Environment (motivating students)	motivational strategy (extrinsic motivation)	reward	emergent (all participants)	providing a desirable external outcome (i.e., praise, acknowledgement, object) for the purpose of encouraging a desirable behavior (Ryan & Deci, 2000)	Another teacher uses popcorn as an incentive where they use the little cotton puffballs and when she sees students doing things that they are supposed to be doing, if they are on task or they are being kind to their neighbor or they finish the assignment in a good manner, then she puts little puffs in the popcorn thing and then that group works together in order to earn a popcorn and drink.
Classroom Environment (learning experiences)	instruction	higher order thinking	a priori (Newmann, King, & Carmichael, 2007)	"instruction [that] involves students in manipulating information and ideas by synthesizing, generalizing, explaining, hypothesizing, or arriving at conclusions that produce new meaning	They're actually taking that knowledge that she's given to them and actually putting it into some other kind of form where they can learn from it.

				and understandings for them"	
Classroom Environment (learning experiences)	instruction	deep knowledge	a priori (Newmann et al., 2007)	"instruction [that] addresses central ideas of a topic or discipline with enough thoroughness to explore connections and relationships and to produce relatively complex understands"	I hear him [motivated teacher] say "it's not so much, you know, you remembering the dates but *why* this is happening. You know, what role did the citizens play?" And so he tries to take those students and put them in that situation.
Classroom Environment (learning experiences)	instruction	substantive conversation	a priori (Newmann et al., 2007)	"students engage in extended conversational exchanges with the teacher and/or their peers about subject matter in a way that builds an improved and shared understanding of ideas or topics"	It's getting [the students] moving around, getting them having discussions with one another about the content which is always good.
Classroom Environment (learning experiences)	instruction	connections to the world beyond the classroom	a priori (Newmann et al., 2007)	"students make connections between substantive knowledge and public problems or personal experiences they are likely to have faced or will face in the future"	No examples found in the interviews
Classroom Environment (learning experiences)	instruction	instructional strategies	emergent (all participants)	techniques the teacher uses to actively engage students in learning skills/concepts (i.e., centers, providing feedback, differentiating instruction, hands-on learning)	He [motivated teacher] has a combination of things going on with this class. You know, from starting with his bell ringer, he has his before, during, and after strategies but it's a history class so, you know, there has to be some lecturing of the content but at the same time, he keeps it..keep the students engaged by giving them a part. She [motivated teacher] has plans for differentiated instruction. The kids for

					reading and math go through small centers.
Classroom Environment (learning experiences)	instruction	instructional pacing	emergent (Amy, Barbara)	speed at which the teacher instructs	She's teaching with a sense of urgency. It's a great pace, not a lot of down time but there is wait time.