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Teachers' Perceptions of Motivational Support in Middle School Classrooms: A Multiple Case Study

Cherie Marlene Gibson

University of Nevada, Las Vegas, chereemg@gmail.com

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TEACHERS' PERCEPTIONS OF MOTIVATIONAL SUPPORT IN MIDDLE SCHOOL
CLASSROOMS: A MULTIPLE CASE STUDY

By

Cherie M. Gibson

Bachelor of Science – Psychology
Grand Valley State University
2001

Master of Arts – School and Community Psychology
Wayne State University
2004

A dissertation submitted in partial fulfillment
of the requirements for the

Doctor of Philosophy – Educational Psychology

Department of Educational Psychology & Higher Education
College of Education
The Graduate College

University of Nevada, Las Vegas
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Dissertation Approval

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The University of Nevada, Las Vegas

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This dissertation prepared by

Cherie M. Gibson

entitled

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is approved in partial fulfillment of the requirements for the degree of

Doctor of Philosophy – Educational Psychology
Department of Educational Psychology & Higher Education

Gwen Marchand, Ph.D.
Examination Committee Chair

Kathryn Hausbeck Korgan, Ph.D.
Graduate College Interim Dean

LeAnn Putney, Ph.D.
Examination Committee Member

Kim Nehls, Ph.D.
Examination Committee Member

Jori Beck, Ph.D.
Graduate College Faculty Representative

Abstract

Student motivation is central to educational outcomes such as achievement, engagement, well-being, and educational attainment. Current trends in education show that students' overall level and quality of motivation decline throughout the years of schooling, particularly in middle school. Framed by Self-Determination Theory (SDT), the purpose of this multiple case study is to understand how teachers support the fulfillment of student's basic psychological needs for autonomy, competence, and relatedness which is required for active engagement, positive school functioning, and self-determined forms of motivation. Teachers' sense of efficacy and conceptualizations of their role in supporting their students' motivational needs were also examined. Through multiple sources of data, the perspectives of eight teachers from three middle schools in the Midwest United States were illustrated in individual case reports and interpreted from cross-case analysis. Findings suggest that teachers reported motivational efforts closely align with autonomy-supportive, structured and involved educational approaches. The results of this study contribute to existing literature by shedding light on the issues related to translating theory in to practice when faced with the challenge of motivating adolescents. The study concludes with a discussion of implications and future directions for research.

Keywords: self-determination theory, student motivation, need-supportive teaching, multiple-case study

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Dedication

This dissertation is lovingly dedicated to my mother, Earlene, an amazing example of strength and fortitude. Your unconditional love and unwavering support has helped me become the woman I am today. You instilled in me a tireless work ethic and persistent determination to be whatever I wanted to be in life. Thank you for uplifting me and believing in me and my dreams. Let this Doctorate in Educational Psychology be a testament to your hard work and sacrifice as well.

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Chapter 1: Introduction

Student motivation is a key construct for students' task persistence, academic performance, and school success (Wigfield & Eccles, 2000). However, students' overall level and quality of motivation decline throughout the years of schooling (Anderman, Maehr, & Midgley, 1999; Anderman & Midgley, 1997; Archambault & Barnett, 2010; Gottfried, Fleming, & Gottfried, 2001). In early studies, scholars attributed developmental changes such as puberty to the decline in motivation (Simmons & Blyth, 1987). Other studies have focused on the effects of the classroom environment on students' motivation levels (Eccles & Midgley, 1989; Eccles et al., 1993; Reeve & Jang, 2006; Skinner & Belmont, 1993; Vallerand, Fortier, & Guay, 1997). Furrer, Skinner, and Pitzer (2014) speculated that the decline in motivation may signify diminishing classroom motivational support of students' basic psychological need for autonomy, competence, and relatedness. Given this trend in motivational decline, it is critical to better understand how supporting students' needs could enhance motivation and the educational experience of all students.

Brief Overview of Theoretical and Conceptual Framework

Self Determination Theory (SDT) is a foundational theory of motivation related to classroom engagement and school functioning (Deci & Ryan, 1985, 2000a). Fundamental to self-determination theory is the satisfaction of basic psychological needs. SDT identifies three innate psychological needs: autonomy, competence, and relatedness. Autonomy refers to the experience of volition and self-endorsement of one's activity (DeCharms, 1968; Deci & Ryan, 1985, 2000). Competence can be defined as the need to sense effectiveness when interacting with one's environment (Ryan & Deci, 2002; White, 1959). Relatedness concerns the experience of care and connectedness with significant others (Baumeister & Leary, 1995; Ryan & Deci, 2002).

By measuring the satisfaction of needs for competence, autonomy, and relatedness, we can predict a person's psychological well-being (Deci & Ryan, 2000a). These basic needs function as prerequisites for active engagement and positive school functioning (Jang, Reeve, Deci, & Kim, 2009). Individuals experience optimal psychological functioning, growth, integration, and social development when needs for relatedness, autonomy, and competence are satisfied (Ryan & Deci, 2000a). As a result, greater need satisfaction leads to greater engagement in further need-satisfying experiences. The satisfaction of these basic psychological needs for students can contribute to their beliefs about themselves as competent, autonomous, or related, which in turn leads to motivated action in the classroom (Skinner et al., 2008). Needs theory is a part of the overall framework of this study and is explicit and central to SDT.

SDT and Contextual Factors

Motivation is not only an internalized and individualized phenomenon, but also an interpersonal process within the sociocultural context. Motivation does not reside entirely within the individual or entirely within the context. Instead, motivation emerges from the interaction between individuals within the social context of the classroom and school (Rogoff, 2003; Urdan & Schoenfelder, 2006). A student-teacher dialectical framework is embedded within SDT, which conceptualizes engagement as a joint product of students' motivation and teachers' interactions (Reeve, 2012). Teachers act as invisible hands in the classroom, influencing children's peer behavior through both modeling and feedback (Luckner & Pianta, 2011). As a result, teachers' interactions with students have been found to predict students' behavioral and emotional engagement in the classroom. Research suggests these types of interactions with significant others play an important role in either supporting or frustrating the basic psychological needs for autonomy, competence, and relatedness (Vallerand, Pelletier, & Koestner, 2008).

Nature of Interactions

Classroom cultures are mutually constituted by teachers and students, along with the practices in which they engage (Putney & Frank, 2008; Rueda & Moll, 1994; Sameroff, 2009). Numerous scholars have studied the importance of interactions between teachers and students in social contexts such as the classroom (e.g. Bronfenbrenner, 1994, 2000; Putney & Broughton, 2011; Sameroff, 2009). A growing movement in developmental and educational psychology conceptualizes motivation and learning as complex socially-embedded processes in which teachers and students influence each other (e.g. Bronfenbrenner, 1994, 2006; Luckner & Pianta, 2011; Sameroff, 2009). Bronfenbrenner's ecological and Sameroff's transactional models of development stress person-context interrelatedness, bidirectional interactions between children, and the immediate contexts in which they operate and explain that interplay between the child and environment. While individuals shape their experiences, experiences shape the characteristics of the individuals through time. Given these perspectives, all members of classrooms (i.e., teachers and students) can be seen as contributing to the development of the classroom culture itself, which supports the importance of examining the interpersonal factors that contribute to the satisfaction of students' needs.

Role of Teachers in Motivation

Classroom teachers are central figures in facilitating student motivation for academic learning. Teachers' behaviors and practices have a substantial effect on students' engagement and learning (Hardré & Sullivan, 2009). Teachers can affect motivation through their interactions with students, their assignments and assessments, and how they create the classroom climate (Center on Education Policy, 2012). However, academic pressures to raise student achievement and improve performance on high stakes testing driven by educational policies (e.g., National

Assessment of Educational Progress [NAEP]) as well as heightened accountability and teacher evaluation create personal challenges to making classrooms more motivationally supportive (Kena et al., 2016; Pelletier, Segion-Levesque, & Legault, 2002). Teachers also face challenges in secondary schools related to external factors typically seen in at-risk areas, such as increased student behavior problems and family or environmental stressors (Padrón et al., 2014). However, despite these challenges, few scholars have taken into account teachers' perceptions of their role.

How do teachers contribute to positive educational outcomes in the classroom?

Motivational efforts by teachers may take the form of design of the classroom environment, direct intervention, or explicit instructional and/or interpersonal strategies (Hardré & Sullivan, 2008). Teachers' motivational efforts are aimed at three types of related outcomes: (a) to improve student motivation as demonstrated by effort, engagement, and investment in classroom activities; (b) improve students' self-perceptions; and (c) improve student learning and academic achievement (Hardré & Reeve, 2003). Teachers' motivational efforts can help satisfy students' basic psychological needs and are reflected in intrinsic motivation, self-regulated behavior, and more self-determined forms of motivations.

Recently, researchers have suggested that consistent teacher support for student psychological needs plays a central role in the development of motivational resilience, which involves both ongoing engagement as well as continued persistence in academic endeavors even in the face of challenges and failure (Skinner, Pitzer, & Brule, 2014). Teachers can enhance student learning by cultivating students' motivational resources, in other words, by teaching in ways that provide autonomy support, structure, and involvement to students (Furrer & Skinner, 2003).

Need-supportive teaching is characterized by teachers' provision of autonomy support, structure, and involvement (Connell & Wellborn, 1991; Stroet, Opdenakker, & Minnaert, 2013). It relates to teacher's educational practices that support student's needs for competence, autonomy and relatedness. Autonomy support is characterized by the identification, nurturance, and development of students' interests and goals (Reeve, 2009). Structure has been defined as the guidance and encouragement students require to successfully achieve academic outcomes (Skinner & Belmont, 1993). Involvement is demonstrated by both quantitative and qualitative features of student-teacher interactions (Skinner & Belmont, 1993). The quantitative features of relatedness support refer to the degree of teachers' involvement with regard to spending a considerable amount of time, energy, and resources on students. The qualitative features refer to how teachers communicate their warmth, responsiveness, and emotional support (Skinner & Belmont, 1993).

Teacher-Student Relationships

Teacher-student relationships (TSRs) stimulate learning behavior and support the child in the school context. Positive teacher-student relationships have been defined as the degree to which students feel respected, supported, and valued by their teachers (Doll, LeClair, & Kurien, 2004). Teachers serve as a secure base for students, and positive relationships between the teacher and student promote feelings of security. Teacher-student relationship quality is associated early school adjustment (Birch & Ladd, 1997). High-quality teacher-student relationships enhance student motivation, while poor teacher-student relationships often result in a decline in students' motivation for learning (Maulana, Opdenakker, den Brok, & Bosker, 2013; Opdenakker, Maulana, & den Brok, 2012). Thus, the relationships that develop between students and teachers are an integral part of the social and behavioral contexts of schools, and these

relationships can have lasting effects on the lives of children and youths (Murray, Waas, & Murray, 2008). Considering the role of context in motivation and engagement, teachers can catalyze motivational support for students through need-supportive teaching and fostering high-quality relationships.

Differential Need-Support in Classrooms

Every classroom should afford opportunities and provide experiences that meet students' individual needs for autonomy, competence, and relatedness. Individual differences in students' expressed levels of needs of autonomy, competence, and relatedness moderate the relation between the environmental support that teachers give and the support that students' perceive from their teachers (Katz et al., 2010). Researchers argue that it is the students' perception of environmental support that relates to need satisfaction and adaptive motivation (Deci & Ryan, 2000; Vallerand, 2000). In other words, students' expressed level of need is contingent on whether they perceive the conditions of their classroom environment as supportive or not.

However, students do not perceive teachers' support in the same manner because their basic psychological needs are expressed differently dependent on their culture (Katz, 2003), developmental stages (Eccles et al., 1993), and experience or time (Deci & Ryan, 2000a). Students with varied basic psychological needs may have different sensitivities to environmental conditions such as the school or classroom context and perceive their teachers' support differently. For example, students who express a lower expressed level of needs would likely perceive higher teacher support than those with higher expressed needs while students with higher levels of expressed needs may experience classroom environments and teachers as less supportive. On the other hand, it is also possible that students with different levels of basic psychological needs who perceive similar levels of environmental support of their needs may

require different levels of support for their individual need-satisfaction. In this case, students with lower levels of needs may require lower levels of environmental need-support for needs satisfaction than would students with higher level of needs (Katz et al., 2010, Mouratidis, Vansteenkiste, Sideridis, & Lens, 2011, Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Therefore, teachers must become aware of the differences in expressed level of need in order to differentiate need-supportive strategies to meet students' individual needs. Teachers are the driving force responsible for creating supportive classroom environments that meet students' individual motivational needs.

Statement of the Problem

While most teachers believe they can make a substantial impact on student learning, many express frustration about their ability to affect student motivation (Hardré & Sullivan, 2009). Many teachers often feel helpless and under skilled about motivating students (Hardré & Sullivan, 2008). Student motivation and engagement are generally lower in secondary school classrooms than in elementary school classrooms (Gottfried, Fleming, & Gottfried, 2001; Tucker et al., 2002; Wang, Liu, Chatzisarantis, & Lim, 2010). Students tend to disengage from school and exhibit reduced effort toward academics during middle school years (Ryan & Patrick, 2001; Turner, Christensen, Kackar-Cam, Trucano, & Fulmer, 2014). Furthermore, teachers also face the challenge of working with students with individual differences in needs.

This study will apply Self-Determination Theory (SDT) to investigate teachers' perceptions of their role in motivation and how they support students' individual needs. Teachers should be flexible and adjust instructional behaviors based on those individual needs. In order to differentiate support for individual students, teachers must identify when students require more or less support. These teaching decisions regarding how to motivate students require a process of

observation and awareness, making choices, gathering information, and accessing alternative solutions. Making decisions in such challenging situations does not come easy for every practicing teacher and may demand more consideration. Yet, little guidance has been given to assist teachers in determining the level of support and interventions to address students' individual motivational needs effectively.

Gaps in Literature

SDT has been studied extensively in education. Several empirical classroom studies have used the tenets of SDT (La Guardia, Ryan, Couchman, & Deci, 2000; Reeve, Jang, Carrell, Jeon, & Barch, 2004). There is also evidence of a relationship between teachers' need-support and positive student academic outcomes (Niemic & Ryan, 2009; Reeve, 2002, 2009; Reeve & Assor, 2011; Su & Reeve, 2011). Although some emerging observational studies examine what teachers actually do in classrooms to support needs (Haerens et al., 2013; Jang & Reeve, 2009), only a small number of studies have examined teacher perceptions of need-supportive teaching. Practitioners need more information on the concrete, observable teaching behaviors that students perceive as need-supportive.

Much of the research on SDT has been conducted across grade levels in elementary settings (Assor, Kaplan, & Roth, 2002), middle school settings (Assor et al., 2002; Vansteenkiste, Sierens, Soenens, Luyck, & Lens, 2009), high school (Hardré & Reeve, 2003; Jang, Reeve, & Deci, 2010; Jang, Reeve, Ryan, & Kim, 2009; Reeve et al., 2014; Reeve et al., 2004; Vallerand et al., 1997), and collegiate levels (Jang, 2008; Reeve et al., 2002; Vansteenkiste et al., 2004). Several studies included samples of international participants from Korea (Reeve et al., 2002), Belgium (Berghe et al., 2013; Haerens et al., 2013), Jordan, Israel, Norway, and Singapore (Reeve et al., 2013). Other studies were conducted primarily in physical education

settings (Maulana et al., 2011; Reeve et al.; Vansteenkiste et al., 2006). However, for the most part, researchers tend to investigate the resulting student outcomes of classrooms, but they rarely examine what actually takes place in the classrooms such as the processes and interactions.

Studies that give qualitative descriptions of the daily practices teachers use to support students' motivational needs are relatively few (Turner et al., 2011). The majority of studies measuring need-supportive classroom practices were experimental in nature (Haerens et al., 2013). Most experimental studies were conducted in the laboratory rather than in the school settings, which researchers suggest reduces their ecological validity (Haerens et al., 2013). Very few scholars have framed student motivation and engagement studies within the sociocultural theory and employed qualitative methods (Tessier, Sarrazin, & Ntoumanis, 2008, 2010; Turner & Patrick, 2004). There is limited qualitative research to date that explores teachers' perceptions of motivational decision-making and intentions for addressing students' individual needs. Therefore, additional qualitative research is needed with the primary focus on developing a better understanding of teachers' perceived role in motivational support.

Purpose of the Study

The current study was designed to highlight the teachers' role in supporting students' needs. The need-supportive teaching framework is a potential vehicle for addressing and supporting student motivation in classrooms. Teachers can create motivationally supportive contexts through need-supportive teaching while simultaneously paying special attention to building positive relationships. Drawing on the literature on need-supportive teaching, this researcher examined teachers' perceptions of motivational support at the secondary level. The study concerned the extent to which teachers make provisions for autonomy-support, structure, and involvement. The study of environments that both facilitate and undermine students' needs is

thus relevant at the level of individual interactions between teachers and students in secondary schools. Further, in this study, I attempted to interpret teachers' perceptions and their instructional practices in secondary school contexts, where students tend to lose motivation (National Research Council, 2004).

Research Questions

This qualitative case study was framed by the following research questions:

1. What are teachers' beliefs about student motivation and the sources of motivation?
2. How efficacious are teachers with providing individualized motivational support for students?
3. How do teachers know when to provide support and what type of motivational support students need?
4. How do teachers conceptualize their role in supporting students' motivation?

Significance of the Study

This study contributes to existing literature of how classroom contexts can either support or thwart need satisfaction, thereby impacting student motivation. The present study broadens the scope and understanding of teachers' instructional behaviors that influence student motivation. In the study, I offer insight into how teachers meet students' individual needs for autonomy, competence, and relatedness. SDT has implications for both classroom practice and educational reform (Ntoumanis, Ryan, & Deci, 2009; Ryan, 2011). Historically, researchers have used SDT to examine applied education settings to inform and guide interventions. Intervention studies have shown that PE teachers can be trained to adopt a more need-supportive teaching style to the benefit of their students' motivation (Cheon, Reeve, & Moon, 2012; Tessier et al., 2010). This study may help teachers identify areas of strength and weakness in their own individual practices

and maximize efforts aimed at improving student motivation. This study has strong implications for teachers' educational practice and professional development, educational leadership, educational policies, and school reform with respect to motivationally-driven education programs.

Summary

Researchers emphasize the importance of viewing student motivation as an important outcome of education and as a means to learning and achievement (Ford & Smith, 2009). There is a considerable body of educational research that demonstrates the effect motivation has on educational outcomes. Nonetheless, motivation is a complex construct dependent on external and internal forces. The classroom environment is a dynamic and influential context created by both the teacher and students. SDT examines social environments that foster basic psychological needs and provides the basis for predicting which aspects of the classroom environment will be supportive or thwarting (Deci, Koestner, & Ryan, 1999). Greater attention must be placed on examining motivational factors that contribute to enhanced engagement and improved academic achievement within secondary contexts.

Educational researchers agree upon the value of creating a culture of mutual respect and support in the classroom (Skinner & Belmont, 1993). Teachers play an important role in creating a culture in which students' basic psychological needs for autonomy, competence, and relatedness will be either supported or thwarted. Further, one strategy or instructional practice may not work for all students; the students' individual motivational needs may have to be met through a variety of approaches. Educators know a lot about best practices that motivate students, but they know less about how to differentiate or scaffold these strategies to meet the

basic psychological needs of individual students. Therefore, teachers' motivational support merits further examination.

In Chapter 2, I outline the theoretical and conceptual framework through which this study is informed. The remaining chapters of the study include a thorough review of related research and a description of the research design and methods.

Chapter 2: Theoretical Framework and Empirical Literature Review

Teachers differ in their beliefs about the sources of student motivation (Hardré et al., 2008). Some claim that motivation begins internally while others believe it to be influenced by home and school environments (Hardré et al., 2008). Relevant literature suggests that motivation develops when one's needs are satisfied within a socially supportive context (Deci & Ryan, 2000). Social environments, such as the classroom, play an important role in students' motivation, engagement, and achievement at school (Patrick et al., 2011). This chapter begins with a discussion on the nature of interactions within the classroom in order to better understand the underlying dynamics that relate to motivational support. Next, I discuss the relevant theoretical underpinnings of need satisfaction, which frame this study. The chapter concludes with a discussion of the teacher's role along with essential elements supportive of student needs as evidenced in the review of empirical literature.

The Nature and Importance of Interactions within the Classroom

Researchers conceptualize motivation and learning as complex, socially-embedded processes in which teachers and students influence each other (Bronfenbrenner, 2006; Deci & Ryan, 1985; Sameroff, 2009; Skinner & Belmont, 1983). Scholars agree that academic motivation derives from a complex interaction of factors consisting of contributions from the student, in the form of needs and beliefs, and the teacher, in the form of classroom supports and actions (Skinner, Kindermann, Connell, & Wellborn, 2009). This crucial interaction component between a teacher and students has been widely researched from the developmental perspective (Ainsworth 1967; Bowlby, 1969; Fielder, 1975), social-ecological perspective (Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006; Sameroff, 2009; Luckner & Pianta, 2011),

social learning perspective (Wubbels, Creton, & Hooymayers 1985), and social-motivational perspectives (Connell, 1990; Connell & Wellborn, 1991; Deci & Ryan, 1985; Skinner, Kindermann, Connell, & Wellborn, 2009).

The ecological model of human development (Bronfenbrenner, 1994) asserts that development occurs through proximal processes and the bidirectional interactions between children and the immediate contexts in which they operate. An individual shapes his or her experiences while experiences within surrounding social environments shape the characteristics of the individual through time. The transactional model of development (Sameroff, 2009) explains the interplay between a child and environment, and describes how people and their environments work together to reach success or failure. Following Bronfenbrenner's lead, Sameroff (2009) discussed the bi-directional influence in which children are actively engaged as they attempt to organize and structure their environments. From a developmental perspective, classrooms are the most proximal settings for influencing early adolescents in school (Pianta & Hamre, 2009). The social organization of the classroom, combined with teacher-student interactions, is a major influence on student motivation. Creating classroom environments that promote positive and healthy interactions and satisfy basic psychological needs leads to students' motivated actions.

The Self-Determination Theory (SDT: Deci & Ryan 1985; Ryan & Deci, 2000) views motivation as dependent on context and emphasizes the role of the environment in motivational change. The concept of needs in SDT serves as a means of organizing and integrating research related to social contexts whereby socio-cultural conditions can nurture needs or frustrate them (Jang et al., 2009). SDT assigns the primary role to teachers in providing support for student's psychological needs that contributes to the internalization of their motivation for activities (Assor

et al., 2002; Deci & Ryan, 1985; Furrer & Skinner, 2003; Reeve & Jang, 2006; Vallerand et al., 1997). Research guided by SDT has focused on the socio-contextual conditions that facilitate satisfaction of needs and make classroom settings conducive for teaching and learning.

This section serves as the starting point for understanding contextual influences on motivation in the classroom, which occurs through interactions between the teacher and student. Supportive classrooms are marked by positive interpersonal relationships, and teachers' awareness and responsiveness to students' academic, motivational, social and emotional needs. Therefore, it is important to review how the concept of needs relates to these complex processes within the classroom. Next, I discuss SDT, which forms the theoretical foundation that ties together the preceding concept of interactions and the role of teachers in student motivation.

Self-Determination Theoretical Framework

Self-determination theory (SDT) is an organismic meta-theory of human motivation (Deci & Ryan, 1985). SDT assumes that humans are inherently proactive and have the potential to act on inner forces (e.g., drives, desires, and emotions) and external forces (e.g., environment). SDT addresses such basic issues related to personality development, self-regulation, universal psychological needs, the relations of culture to motivation, and the impact of social environments on motivation, behavior, and well-being (Deci & Ryan, 1985). SDT postulates that humans have three essential needs for autonomy, competence, and relatedness that concern the deep structure of the human psyche because they refer to innate and life-span tendencies to achieve effectiveness, connectedness, and coherence (Deci & Ryan, 1985). The next section reviews historical and seminal work concerning the concept of needs.

Historical Influences of SDT

SDT is rooted in research by several theorists (Bowlby, 1969; deCharms, 1968; White, 1959). According to deCharms (1968), people have a motivational desire to feel as if they are the source of their own behavior. DeCharms (1968) argued that individuals want to incite their own behaviors of their own volition instead of being forced to act or acting only to gain rewards and avoid punishments. This motivational propensity is referred to as a perceived locus of causality and relates to the basic psychological need for autonomy. Likewise, White's (1959) seminal work underlies SDT's claim that humans have a need to feel competent. White argued that people have a natural desire to feel effective within their environment. This desire gave rise to the concept of intrinsic motivation because it helped explain behaviors such as curiosity and interest that do not rely on external forces for motivation.

Based on Bowlby's (1969) attachment theory, the notion of relatedness emphasizes proximal support and the importance of feeling connected (Deci & Ryan, 2000). Bowlby (1969) explored the bond established between infants and their primary caregivers and argued that these secure attachments were essential for establishing productive relationships later in life. Further, Bowlby claimed that positive relationships between a parent and child promoted emotional security (Bowlby, 1969; Cornelius-White, 2007). Extending such relationships to the classroom setting, positive teacher-student relationships enable students to feel safe and secure in their learning environments. Secure and reciprocal attachments are important, so that students can engage in their relationships with teachers, peers, and subject matter, and develop healthy self-concept and sense of well-being. The research of deCharms, White, and Bowlby provided the foundation for understanding the concept of basic psychological needs.

Basic Psychological Needs

The Basic Psychological Needs mini-theory of SDT provides the groundwork for this study. In SDT, needs are defined as universal necessities essential for psychological growth, integrity, and well-being (Deci & Ryan, 2000, p. 229). In the next section, I detail each psychological need represented in Figure 1.

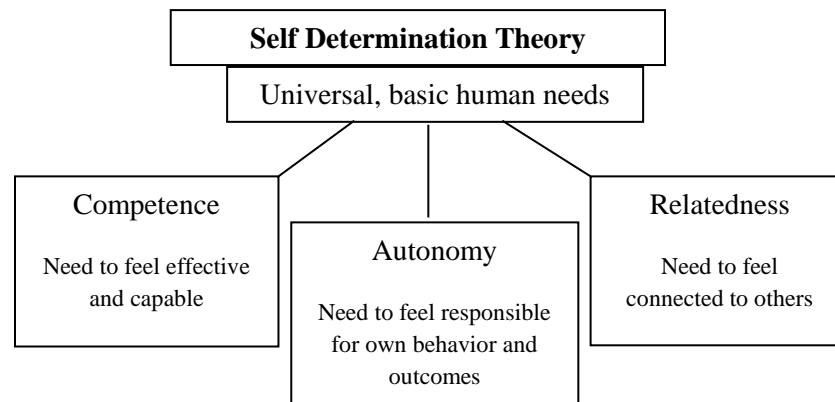


Figure 1. Self-Determination Theory model of needs. Adapted from “The darker and brighter sides of human existence: Basic psychological needs as a unifying concept,” by E. Deci & R. Ryan, 2000, Psychological Inquiry, 11, p. 237.

Autonomy. Autonomy refers to the need to feel that one’s behavior and resulting outcomes are self-determined or self-caused as opposed to one being influenced or controlled by outside forces (deCharms, 1968; Deci & Ryan, 1985, 2000). A concept that arises from deCharms’ work, autonomy is the urge to act as a causal agent in control of one’s own behaviors and motivated actions. Autonomy entails the experience of freedom from coercion to think and behave in a certain way (Ryan & Deci, 2011). When students’ needs for autonomy are met, they tend to demonstrate enhanced motivation, engagement, learning, and psychological well-being (Reeve & Halusic, 2009). With regard to autonomy and higher volition, learners demonstrate higher-quality learning outcomes, enhanced wellness, and a greater appreciation for what school has to offer (Niemic & Ryan, 2009).

Students' sense of autonomy derives from the close interpersonal relationships within the classroom, and through this relationship context students can experience their own sense of autonomy (Reeve & Jang, 2006). High autonomy develops within these close interpersonal relationships and contributes positively to prosocial behaviors (Gagné, 2003).

Competence. Competence refers to the need to feel effective and capable of performing tasks at varying levels of difficulty (Harter, 1978; Ryan & Deci, 2002; White, 1959). SDT considers perceived competence as one of the primary psychological predictors of motivational, dynamic well-being and performance (Trouilloud, Sarrazin, Bressoux & Bois, 2006). Scholars have determined that high perceived academic competence are strongly related to positive achievement-oriented behaviors such as engagement, effort, persistence through difficult tasks, low anxiety, emotional stability, internal locus of control, intrinsic motivation, mastery goal orientation, and academic achievement (Bong & Skaalvik, 2003).

Relatedness. Relatedness refers to the need to feel connected to, supported by, or cared for by other people (Baumeister & Leary, 1995; Ryan & Deci, 2002). Relatedness involves a universal propensity to interact with others and plays an important role in motivational development (Furrer & Skinner, 2003). In the classroom, relatedness describes a sense of the teacher's warmth, affection, and acceptance of students (Furrer & Skinner, 2003). Elementary students reported greater academic and emotional engagement when they felt a sense of relatedness to their parents, teachers, and peers. Researchers found that a sense of relatedness in the school context was vital for children's participation and academic achievement, and extensive research further indicated that students' achievement depends on the quality of teacher-student interactions (Reeve, 2002; Zimmer-Gembeck, Chipuer, Hanisch, Creed, & McGregor, 2006).

Researchers have noted that learning environments which promote a sense of relatedness to teachers, parents, and peers can strengthen motivation and have a positive effect on school outcomes (Chen & Jang, 2010; Furrer & Skinner, 2003; Ryan & Deci, 2000b). In contrast, children who feel disconnected from key social partners may find it harder to become constructively involved in academic activities, more easily become bored, worried, and frustrated, and are more likely to become disaffected (Connell & Wellborn, 1991; Furrer & Skinner, 2003). Pavey, Greitmeyer, and Sparks (2011) suggested that relatedness increased prosocial motivation and behavior through increased feelings of connectedness to others. Niemiec and Ryan (2009) outlined teacher strategies for enhancing relatedness; these include conveying warmth, caring, and respect to students. In the classroom, relatedness is deeply associated with a student feeling that the teacher genuinely likes, respects, and values him or her.

Satisfaction of the basic psychological needs is deemed essential to psychological thriving (Ryan, 1995) and is a central tenet of student motivation. Students who perceive themselves as having a greater sense of needs satisfaction experience high-quality motivation and vice versa (Reeve 2009, 2012). Self-reports of basic psychological need satisfaction were associated with greater engagement with prosocial tendencies (Gagné, 2003; Weinstein & Ryan, 2010). In a quantitative study of Korean high school students, students reported that when they thought of a highly satisfying learning environment, they thought of experiences in which they felt highly competent, autonomous, and related to others (Jang et al., 2009).

In summary, all three basic psychological needs are essential. Research shows that the needs for autonomy, relatedness, and competence are positively interrelated (Sheldon & Bettencourt, 2002). Individuals who have their needs for relatedness met, on average also have their needs for autonomy met (Sheldon & Bettencourt, 2002). Studies have shown that the

satisfaction of these three basic psychological needs predicts adolescents' secure relationships with attachment figures (La Guardia et al., 2000).

Basic Needs and Self-System Processes

The extent to which basic needs are supported or undermined in the school setting is reflected in individuals' self-system process (Connell & Wellborn, 1991). Self-system processes are assumed to develop within an individual throughout the life span and are affected by cultural context and interaction with others (Reeve, 2012). Relatedness affects individuals' motivation and behavior by positively affecting self-processes relevant to achievement motivation (Beachboard, Beachboard, Li, & Adkison, 2011; Connell & Wellborn, 1991; Furrer and Skinner 2003). Children's self-system processes of autonomy, competence, and relatedness allow them to appraise themselves in relation to an ongoing activity and are generated as a means to evaluate whether needs are satisfied (Connell, 1990; Connell & Wellborn, 1991). Self-system processes are key predictors of student engagement in school (Marchand & Skinner, 2007). According to the Self-System Model of Motivational Development (SSMMD) (Connell & Wellborn, 1991; Skinner, Kindermann, Connell, & Wellborn, 2009) students' engagement, demonstrated by effort and investment in classroom activities, drives student learning and school success.

Students' engagement is shaped by the extent to which their interactions with the social context fulfill the three basic psychological needs. Students draw on these inner motivational resources when faced with challenges or difficulties. The action that results from self-system processes can be positive or negative and takes the form of engagement or disaffection. Students who are disaffected have fewer social and personal resources and have difficulty coping with failure and re-engaging classroom activities. Teachers who support student needs and nurture

their inner motivational resources have higher levels of student engagement and academic success (Connell, Spencer, & Aber, 1994).

SDT asserts that individuals' psychological well-being is contingent upon the quality of their social environment. Social motivational perspectives explain why relationships matter. Relationships are important because they make affordances for self-system processes and the development of motivational resilience and development of inner motivational resources (Skinner et al., 2009). Teacher-Student Relationships (TSRs) have been assessed on dimensions of closeness—as a positive quality (Hamre & Pianta, 2001), conflict—as a negative quality (Hamre & Pianta), and dependency—as a form of emotional security (Roorda et al., 2011). TSRs influence school engagement and achievement (Roorda et al., 2011), serve a regulatory function with regard to children's social, behavioral, academic, and emotional development (Birch & Ladd, 1998; Furrer & Skinner, 2003; Hamre & Pianta, 2001; Murray & Malmgren, 2005; Pianta & Stuhlman, 2004; Wentzel, 2002), and can have a positive or negative influence on children's ability to succeed in school (Gregoriadis & Tsigilis, 2008).

Researchers stress the need for teachers to build strong relationships with the children in their classes if they are to teach them effectively (Arthur et al., 2003; Putney & Broughton, 2011). Studies have found correlations between positive teacher-student relationships and positive student outcomes (Cornelius-White, 2007). When teachers form positive bonds with students, classrooms become supportive environments where students can engage in academic and socially productive ways (Hamre & Pianta, 2001).

Teachers are encouraged to create a supportive emotional classroom climate where children can feel both physically and psychologically secure (Connell & Wellborn, 1991; Wills et al., 2006). Findings suggest that when students feel safe at school, they are more likely to

enjoy positive relationships with their teachers (Crosnoe et al., 2000). Further, secure and emotionally supportive relationships and interactions result in a sense of belonging and relatedness in children which promote a positive sense of self, adoption of academic and social goals, and development of social and academic competencies (Furrer & Skinner, 2003; Wentzel, 2004). Teachers must establish positive relationships with students to provide the motivation students need to be successful. Satisfaction of student needs leads to more self-determined forms of motivation, enhanced engagement, and academic achievement. In the next section, I review different forms of motivation.

Need Satisfaction and Self-Determined Forms of Motivation

Numerous studies support the SDT postulate that satisfaction of students' basic psychological needs for autonomy, competence, and relatedness is critical to their internalization of academic motivation (Deci et al., 1999; Niemiec & Ryan, 2009; Ntoumanis et al., 2009; Vallerand et al., 2008). Observational studies using SDT suggested that psychological need satisfaction is directly positively linked to autonomous motivations, and, indirectly, to psychological well-being, adaptive cognitive responses, persistence, and intentions (Cheon & Reeve, 2013; Haerens et al., 2013; Ntoumanis, 2005; Ntoumanis & Standage, 2009; Reeve et al., 2014; Standage, 2005; Van den Berghe et al., 2014).

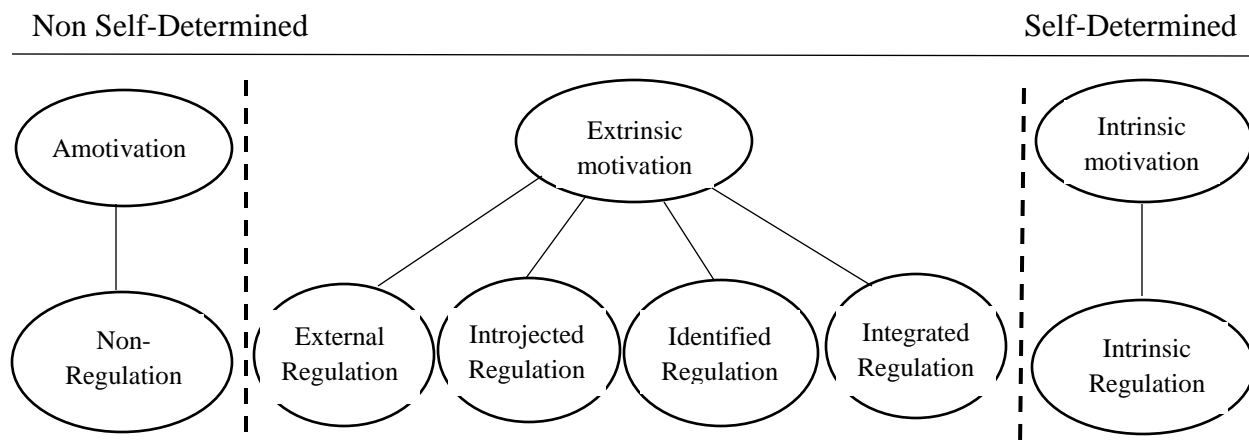


Figure 2. Self-Determination Theory Continuum. Adapted from “The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior,” by E. Deci & R. Ryan, 2000, *Psychological Inquiry*, 11, p. 237.

As depicted in Figure 2, SDT distinguishes between intrinsic (self-determined motivation) and extrinsic motivation (Deci & Ryan, 2008; Deci, Vallerand, Pelletier, & Ryan, 1991). The process of transferring the regulation of behavior from outside to inside the individual is referred to as internalization. Deci and Ryan (2008) defined several levels in the process of moving from external to more internalized regulation: external (regulation coming from outside the individual), introjected (internal regulation based on an individual's feelings that he or she should or has to engage in the behavior), identified (internal regulation of behavior that is based on the utility of that behavior, such as studying hard to get into college), and, finally, integrated (regulation based on what the individual thinks is valuable and important).

When students engage in academic tasks out of interest, enjoyment, and for the purpose of learning and understanding, their engagement in tasks is more meaningful. In addition, students tend to regulate their learning, achieve higher grades, retain the material, and manifest higher overall well-being (Vansteekieste et al., 2005). Conversely, when students engage in academic tasks out of more extrinsic reasons such as a desire to please others, to demonstrate

ability, to avoid feeling stupid, or to avoid punishment, they experience less positive educational outcomes (Grolnick, Ryan, & Deci, 1991; Hardré & Reeve, 2003; Vansteekiste et al., 2004; Vansteekiste et al., 2005). Students who report feelings of relatedness are more likely to exhibit identified and integrated regulation for the arduous tasks involved in learning, whereas those who feel disconnected or rejected by teachers are more likely to move away from internalization and thus respond only to external contingencies and controls (Niemic & Ryan, 2009).

Deci and Ryan (2008) proposed that an environment that supports one's autonomy facilitates changes toward a more self-determined motivation. Environments that provide autonomy support lead to qualitatively superior forms of motivation characterized by high levels of autonomous types of motivation (e.g., intrinsic motivation and identified regulation in SDT) conducive to cognitive, affective, and behavioral outcomes (Ntoumanis, 2001; Vallerand et al., 2008). Students tend to be more intrinsically motivated in classroom contexts that satisfy needs for autonomy, competence, and relatedness, (Deci & Ryan, 2008; Vallerand et al., 2008).

In sum, the satisfaction of needs heavily influences students' motivation and engagement in learning tasks. Need satisfaction is therefore conceptualized as an important experiential mediator between social contexts and a variety of outcomes. This includes social contexts in which significant others are involved and are autonomy-supportive or, in other words, promote higher quality learning and better personal adjustment (Deci & Ryan, 1994). Teachers provide support for students' motivational needs through provisions of autonomy support, structure, and involvement, which are considered need-supportive and will be discussed in detail in the following section. Researchers inform us that when students' needs are met through positive interactions with school social partners and the creation of a positive classroom climate, they tend to have better educational outcomes such as enhanced academic motivation, well-being,

greater intrinsic motivation, improved academic achievement, and full engagement (Deci & Ryan, 1985; Stroet et al., 2013). Research on motivation and school performance found that students with high self-determined forms of motivation were likely to have high school performance; however, it was dependent on the context (Ntoumanis, 2001). When the conditions of the classroom environment support student needs, students tend to internalize high self-determined forms of motivation such as intrinsic motivation and perform successfully in school.

To sum up, SDT concerns the concept of needs for autonomy, competence, and relatedness. Satisfaction of these needs leads to optimal functioning and positive student outcomes, such as academic engagement, more self-determined and high-quality forms of motivation, autonomous self-regulation for learning, academic performance, and wellbeing (Niemic & Ryan, 2009). SDT focuses on the social conditions that nurture and support these essential and universal psychological needs for autonomy, competence, and relatedness. Furthermore, SDT assumes that humans require nutriment from the social environment, referring to the interactions between the person and environment. This dialectical relation is observed in teacher-student relationships in classrooms. Student perceptions of need satisfaction have been extensively studied in classrooms; however, further investigation into the role of teachers in supporting students' needs is warranted. Teachers can influence student motivation by shaping the classroom environment to support or undermine students' needs. Next, I will discuss the role of teachers in the facilitation of student motivation using SDT as a primary basis for supporting motivational needs.

Role of Teachers in Student Motivation

With an understanding of the nature of classroom interactions and the impetus to satisfy students' basic psychological needs for autonomy, competence, and relatedness, it is important to

address the role of teachers in affecting student motivation. Satisfaction of the needs for autonomy, competence and relatedness requires supportive classroom conditions, which can be created largely from teachers' instructional behaviors. In school, the presence versus the absence of environmental conditions that allow the satisfaction of basic psychological needs is of great importance. Teachers can either support or frustrate these needs through the type of instructional behaviors and practices they adopt that are autonomy-supportive (instead of controlling and coercive), structured (as opposed to chaotic), and encourage involvement (as opposed to discouraging involvement). Teachers' instructional acts can foster intrinsic interests (Deci & Ryan, 1985), positive self-perceptions and motivation (Stipek, Feiler, Daniels, & Milburn, 1995), and self-regulation (Connell & Wellborn, 1991). Scholars agree that students who demonstrate a higher level of engagement experience more positive interactions with teachers (Deci & Ryan, 1985). In other words, how classroom participants act together can support how students engage and feel in relation to others, which is central to students' motivation (Gresalfi, Barnes, & Cross, 2012).

Teachers play a critical role in shaping and promoting students self-determined motivation and achievement outcomes (Ryan & Deci, 2000). The notion of teacher support for students has been widely examined in the education literature (Patrick, Ryan, & Kaplan, 2007). Existing literature cites what classroom teachers do to support students' needs for autonomy, competence, and relatedness. When teachers support students' autonomous motivation (e.g., interests, needs, preferences, and personal goals) to guide their learning, they also support students' engagement by presenting interesting and relevant learning activities, providing optimal challenges, highlighting meaningful learning goals, and supporting student volitional

endorsement of classroom behaviors (Jang, Reeve, & Deci, 2010; Reeve & Jang, 2006; Reeve et al., 2004).

One way teachers can support student's needs for autonomy, competence, and relatedness is by creating an environment that provides autonomy-support, structure, and involvement to all students. There are two lines of literature that inform the role of teachers: need-supportive teaching and teacher-student relationships quality. The following section contains descriptions of teachers' instructional practices found to support student needs.

Need-Supportive Teaching

SDT maintains that human beings are self-organizing with the natural tendency to move toward growth, development, and optimal functioning under need-supportive circumstances (Vansteenkiste & Ryan, 2013). A primary social environmental factor within a motivational climate concerns the degree of need-supportiveness. Need-supportive teaching, a classroom approach nested within the SDT model, provides the necessary conditions to satisfy student needs, leading to enhanced student motivation and engagement (Deci & Ryan 1985; Ryan & Deci, 2000; Stroet et al., 2013). The components and teaching techniques of need-support are as follows.

Teachers' provisions of need-supportive teaching. The framework for need-supportive teaching includes teachers' provisions of autonomy support, structure, and involvement, and serves as a vehicle for supporting student needs while concurrently fostering positive relations with and among students. Key components of need-support have been operationalized by several researchers (Haerens et al., 2013; Reeve, 2009; Skinner & Belmont, 1993; Su & Reeve, 2011).

Table 1. Classroom Applications of Need-Supportive Teaching

Provision	Definition	Concrete Examples
Autonomy-Support	Acts of instruction to identify, nurture, and develop students' inner motivational resources (Reeve, 2009)	Spending time listening, offering informational language, providing meaningful rationales, praise, offering encouragements and hints, communicating perspective-taking statements (Reeve & Jang, 2006)
Structure	Amount and clarity of information that teachers provide to students about expectations and ways of effectively achieving desired educational outcomes (Jang et al., 2010).	Communication of clear guidelines and expectations (Jang et al.; Sierens et al., 2009; Vansteenkiste et al., 2012), support during activities (Jang et al.) providing relevant feedback, challenging tasks (Niemic & Ryan, 2009).
Involvement	Quality of interpersonal relationships with teachers and peers (Skinner & Belmont, 1993)	Attunement, supportiveness, relatedness, gentle discipline, available to offer support, effort toward forming and maintaining strong and stable interpersonal relationships, dedicate time and resources

Autonomy-support. Autonomy-support represents acts of instruction to identify, nurture, and develop students' inner motivational resources, such as their interests, preferences, and personal goals (Reeve, 2009). Specifically, teachers support autonomy by spending time listening, offering informational language, providing meaningful rationales for learning activities and praise as informational feedback, offering encouragements and hints, and communicating perspective-taking statements (Reeve & Jang, 2006). Intervention studies have shown the

importance of teachers providing modeling, scaffolding, and problem-solving (Su & Reeve, 2011).

Provisions of autonomy-support, as expressed in opportunities for choice and egalitarian decision-making, are likely to have a direct impact on students' own perceptions of autonomy and self-regulation (Grolnick et al., 2002). Research in environmental science found that in order to support students' need for autonomy, curricular activities should include ample opportunities for students to actively solve environmental problems of their choosing, afford opportunities to problem-solve, and allow them to make their own decisions about how to act regarding the environment instead of receiving instructions from someone else about how to behave (Lepper, Corpus, & Lyengar, 2005).

Researchers investigating the different aspects of autonomy support found substantial evidence that connecting learning material to students' lives through the provision of relevance is consistently associated with better motivation and engagement (Assor, Kaplan, & Roth, 2002; Katz & Assor, 2007; Wentzel, 2002). Researchers used questionnaires and experimental designs to identify what specific behaviors teachers with an autonomy-supportive style enact during instruction and found specific instructional behaviors such as choice, positive feedback, feelings of competence (Lepper et al., 2005), task relevance (Reeve, Bolt & Cai, 1999; Reeve & Jang, 2006), acknowledging students' feelings, and minimizing the use of pressure to control behavior (Stroet et al., 2013).

Researchers have shown that teachers' autonomy support is a key feature of learning environments that support quality student motivation (Reeve & Jang, 2006). An abundance of research with typically developing children has investigated the role of teachers' autonomy-supportive behaviors in the classroom (Assor et al., 2002; Jang et al., 2012). Over the past

decades, SDT researchers have continued to manipulate autonomy support (vs. control) within experimental settings (Reeve et al., 2004) and within intervention studies (Su & Reeve, 2011), showing consistent effects of social-contextual variables. Studies on autonomy-supportive teacher behaviors tended to more strongly predict need satisfaction and positive effect, while controlling behaviors tended to more strongly predict need-thwarting and negative effect (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011).

Teachers' autonomy-supportive instructional style enriches students' perceived autonomy and their sense of personal causation. Empirical research has shown that students with autonomy-supportive teachers experience greater perceived autonomy and more positive functioning in terms of classroom engagement, emotionality, creativity, intrinsic motivation, psychological well-being, conceptual understanding, academic achievement, and persistence in school (Deci & Ryan, 1985; Hardré & Reeve, 2003; Vallerand et al., 1997, 2008). Researchers also showed a direct positive association between teachers' perceived autonomy-supportive behavior and self-determined forms of motivation (Ntoumanis, 2001; Vallerand et al., 2008).

When teachers support children's autonomy in the classroom, their students report higher levels of intrinsic and internalized motivation (Pelletier et al., 2002). Chirkov and Ryan (2001) studied both Russian and US high-school students and found that students' perceptions of both teacher and parent autonomy support were associated with greater internalization of academic motivation. Cross-cultural research has since confirmed that these findings extend to samples from China (Zhou, Ma, & Deci, 2009), Korea (Cheon, Reeve, & Moon, 2012; Jang et al., 2009, 2012), Israel (Assor et al., 2005), Brazil (Chirkov, Ryan, & Willness, 2005), Russia (Chirkov & Ryan, 2001), and Nigeria and India (Sheldon et al., 2009). Jang, Kim and Reeve's (2009, 2012) multi-wave longitudinal study showed that teacher-provided autonomy support first nurtures

students' psychological need satisfaction which then predicts the extent of classroom engagement and the extent of engagement predicts course-related outcomes such as learning performance and achievement.

Structure. Structure refers to the amount and clarity of information that teachers provide to students about expectations and ways of effectively achieving desired educational outcomes (Jang et al., 2010). Characterized by three instructional behaviors, structure involves the communication of clear and understandable guidelines and expectations (Jang et al., 2010; Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009; Vansteenkiste et al., 2012), the provision of help and support during activities (Jang et al., 2010), and providing relevant feedback and optimally challenging tasks (Niemic & Ryan, 2009).

As shown by Jang et al. (2010), teacher-provided structure has also been characterized within the classroom management literature as establishing order, introducing procedures, communicating policies about how class work should be completed and submitted (Carter & Doyle, 2006), and minimizing misbehavior while encouraging engagement and achievement (Brophy, 2006). Teachers can provide structure by giving guidance during the lesson, providing step-by-step directions when needed, providing opportunities for student activities, setting guidelines off activities and orchestrating the transitions between them, offering task-focused and personal control-enhancing feedback, and providing consistency in the lesson (Brophy, 2006; Carter & Doyle, 2006; Skinner & Belmont, 1993).

Researchers found that positive feedback led to enhanced and maintained intrinsic motivation (Deci, 1971). The more students perceived that their teacher provided positive feedback (praise and encouragement), the more they felt their needs to be competent, autonomous, and related to their classmates were satisfied. Teachers act as invisible hands in the

classroom, influencing children's peer behavior through the modeling and feedback provided during teacher–student interactions and through the ways in which the teacher uses these interactions to indirectly support and facilitate peer experiences in the classroom (Luckner & Pianta, 2011; Putney & Broughton, 2011). Evidence shows that when teachers provide more structure, students tend to be more motivated and engaged (Stroet et al., 2013; Tucker et al., 2002; Tyler & Boelter, 2008).

The setting of clear expectations is a prerequisite for children to develop a sense of effectiveness because, without distinct guidelines, they are simply left confused and have difficulty making progress toward a particular goal. Evidence indicates that students who perceive their teacher to have higher expectations report feeling more self-efficacious (Tyler & Boelter, 2008) and being more interested in class (Wentzel, 2002; Wentzel & Wigfield, 2009; Wentzel et al., 2010). Teachers who communicate high expectations for individual students can bring about positive changes in academic accomplishments (Jussim, Robustelli, & Cain, 2009) and have shown some degree of association with children’s classroom adjustment or performance (Pianta & Nimetz, 1989). When teachers provide high structure by communicating clear expectations, they support students’ engagement by keeping students on task, managing their behavior, and avoiding chaos during transitions (Jang et al., 2010; Skinner & Belmont, 1993; Tucker et al., 2002).

Involvement. Involvement, typically associated with the need for relatedness, concerns the desire to form and maintain strong and stable interpersonal relationships (Baumeister & Leary, 1995). Involvement refers to the quality of students’ interpersonal relationships with teachers and peers (Skinner & Belmont, 1993). Based on prior theorizing by Belmont et al.

(1992), four qualities of teachers' involvement, including attunement, supportiveness, relatedness, and gentle discipline, were seen as contributing to students' learning and well-being.

High-Quality Teacher-Student Relationships

First, teachers can express their attunement by showing that they understand the student. Attunement is the process of sensing and reading students' states of being and adjusting one's instruction accordingly (Reeve, 2006). Supportiveness is an affirmation of, and contribution to, students' capacity for self-direction (Reeve, 2006). Emotionally supportive and safe environments, in which children know that adults are available for needed support, cultivate students' self-reliance and the confidence to try new things and take risks (Luckner & Pianta, 2011). Teachers can dedicate resources (e.g., time) to the student; they can make sure that they are dependable and available to offer support (Reeve & Jang, 2006; Skinner & Belmont, 1993). Teachers can express their involvement by showing affection. Gentle discipline is a socialization strategy that involves explaining why a particular way of thinking or behaving is right or wrong (Reeve, 2006). As evidenced in Figure 3, teachers can provide students with high-quality relationships rich in attunement, relatedness, gentle discipline and supportiveness. Within the context of that relationship, students can experience their own sense of autonomy and engagement (Reeve & Jang, 2006).

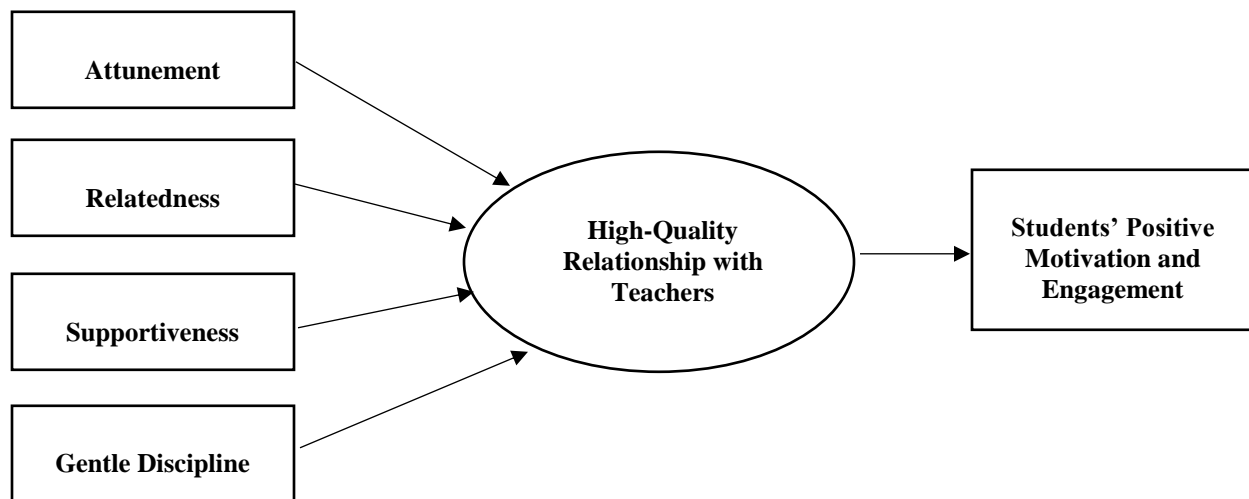


Figure 3. Teacher characteristics of high-quality teacher-student relationships. Adapted from “Teachers as facilitators: What autonomy-supportive teachers do and why their students benefit,” by J. Reeve, 2006, *Elementary School Journal*, 106, p. 233.

Quality relationships with significant others in the learning environment, exemplified, for instance, by a teacher’s warm and caring involvement and support from classmates, have great significance for fostering self-regulation and students’ academic initiative (Danielsen, Breivik, & Wold, 2011; Ryan & Deci, 2000). Teachers’ involvement has a direct effect on students’ effort (Pavey, Greitmeyer, & Sparks 2011), participation, and strategy use (Meyer & Turner, 2002).

Teacher involvement is a strong predictor of students’ emotional functioning and engagement (e.g., effort) over time, especially when reports of relatedness and student functioning come from the same teacher or student informant (Furrer & Skinner, 2003). A recent review found that involvement demonstrated a consistent positive effect on student-perceived belonging and, in particular, engagement (Stroet et al., 2013). Further, when teachers are perceived to be more involved, students also view them as having higher expectations (Murray et al., 2009).

Student motivation may be influenced by the cumulative effects of high-quality relationships and teacher support. Aspects of need-supportive teaching, independently and in combination, have been found to be instrumental in enhancing student motivation and are associated with positive academic actions for all students (Stroet et al., 2013). Autonomy support and relatedness support enhance energetic resources and enthusiasm (Mouratidis, Vansteenkiste, Sideridis, & Lens, 2011). Structure enriches students' perceived competence and perceptions of control over outcomes. As a result, teachers need to combine elements of structure that also support students' autonomy. Nonetheless, numerous lines of motivation research agree that autonomy-support, structure, and involvement are teacher behaviors necessary for creating classroom conditions that support students' basic psychological needs.

In short, need-supportive teaching and high-quality student-teacher relationships serve as a vehicle for creating motivationally supportive contexts where students feel safe and secure, allowing for appropriate allocation of social and motivational resources, and development of academic competence and control. As stated by Skinner, Furrer, Marchand, & Kindermann (2008), teacher support may help shape students' views of themselves as competent and autonomous (Danielsen et al., 2011). Researchers found that students enjoyed classes more and felt more energized when their teachers used a need-supportive teaching style (Mouratidis et al., 2011). Mouratidis found that high need-supportive teaching style differentially affected students' average interest, enjoyment, and vitality from one PE class to another. Students high on relative autonomous motivation appeared to profit more from high need-supportive environments (Mouratidis et al., 2011). However, findings indicated that for all students teachers' support was significantly and positively related to autonomous motivation (Katz et al., 2010; Van den Berghe et al., 2013). Greater emphasis placed on need-supportive teaching aligned with high-quality

teacher-student relationships allows educators to better understand how to create motivationally supportive classroom environments that meet students' psychological needs, thus enhancing classroom engagement and improving student achievement. In the next section, I highlight some of the mitigating factors that influence how teachers provide support and discuss possible explanations for the differences.

Differences in Classroom Support

The needs for autonomy, competence, and relatedness must be satisfied or fulfilled in order for students to be strongly motivated (Vansteenkiste et al., 2006), engaged in activities (Deci et al. 2010), and autonomously motivated (Katz et al., 2010). Teachers can create classroom environments that stimulate need satisfaction. Numerous lines of research across disciplines have provided examples of the best instructional and motivational practices teachers should employ in the classroom to support students' motivational needs as discussed in the previous section. However, teacher support may vary due to the several reasons.

One possible reason may be due to differences in students' perceived environmental support. Second, teacher characteristics such as beliefs, teaching efficacy, and motivating style influence how teachers support student motivation. Teachers differ in treatment and relationships, which may also be a reason for the variability in classroom supports. Another reason teacher support varies may be due to their inability to meet students' basic psychological needs because of individual differences in students' expressed needs. This section discusses possible explanations for the variability in classroom support and establishes the need for further investigation of teachers' motivational support.

Teacher Characteristics

There are contributing variables associated with a teacher's ability to support students' needs such as teacher belief systems, motivating-style, and teaching efficacy. Most teachers hold stable long-term beliefs about the nature of student motivation (Pajares, 1992; Turner, 2010; Turner et al., 2009). Teacher beliefs are developed through teachers' own experiences as learners, their initial teacher training, and their professional experiences as teachers (Turner et al., 2009, Hornstra et al., 2015). However, some discrepancies have been found between teachers' beliefs and their practices (Schraw & Olafson, 2003).

Teachers' motivating-style toward students can be viewed on a continuum that ranges from highly controlling to highly autonomy-supportive; the choice of motivating-style can influence need satisfaction in the classroom (Deci et al., 1981). Autonomy-supportive teachers facilitate the relation between students' self-determined intrinsic motivation and classroom activities while nurturing students' motivational needs (Reeve et al., 2004). Conversely, controlling teachers demonstrate instructional behaviors that interfere with students' motives (Reeve et al.). Researchers studied factors which cause teachers to adopt a more need-supportive teaching style or a need-thwarting teaching style (Reeve et al., 2004; Van den Berghe et al., 2013). They concluded that the degree to which teachers experience pressure on the job (Pelletier et al., 2002), teachers' own beliefs, personality dispositions, values, and motivational orientation are antecedents to whether teachers will adopt a need-supportive or need-thwarting teaching style (Van den Berghe et al., 2013). Nonetheless, these specific teacher characteristics and instructional techniques can have a profound influence on student motivation.

Teacher self-efficacy is defined as the extent to which a teacher is confident in his or her ability to promote student learning (Bandura, 2002). Research literature noted the reciprocal relationship between teachers' beliefs and their practices. Teachers who engage in specific

teacher practices can increase teachers' sense of efficacy as they experience success (Fives et al., 2014). Teacher efficacy has been associated with teacher effort, commitment, and persistence when facing difficulties (Mojavezi & Tamiz, 2012). In their correlational analyses, Mojaezi and Tamiz (2012) found that teacher efficacy had a positive influence on student motivation and achievement. Highly efficacious teachers tended to be more organized, used a variety of modalities to meet the needs of all learners, and displayed greater instructional skills such as questioning, explaining, and providing feedback to students having difficulty whereas teachers with a low sense of efficacy tended to rely on a more controlling teaching style. Mojavezi and Tamiz's study supported the idea that teachers with a high sense of efficacy believe unmotivated students can be taught, while teachers with a low sense of efficacy think they can do little for poorly motivated students. Hence, it is necessary to examine teachers' self-efficacy in connection with students' motivational needs, teachers' own beliefs, and personality dispositions.

Teacher Relationships

Researchers have reported that minority children have more negative relationships with teachers than white children (Murray & Murray, 2004). Teachers of all races rated relationships with African-American students as higher in conflict (Saft & Pianta, 2001). The ratings among non-African American teachers were approximately one standard deviation higher in conflict than the ratings of African-American teachers (Saft & Pianta, 2001). Affective relatedness in the classroom, in the form of teacher-student relationships, has a greater impact on student outcomes for ethnic minorities (Roorda et al., 2011). Numerous researchers found that ethnic minorities were strongly influenced by the positive quality of TSRs in terms of perceived positive relationships and achievement (Roorda, Koomen, Spilt, & Oort, 2011; Wubbels & Brekelmans, 2005; Hamre and Pianta, 2001). Ethnographic studies of middle school inner-city ethnic minority

students documented that they value instrumental help from teachers but also warmth and acceptance coupled with high academic expectations (Smokowski, Reynolds, & Bezrucko, 2000). Studies of at-risk, ethnically diverse groups of middle school students also highlighted the importance of teachers who are responsive to individual differences and needs, and who provide students with autonomy and choice (Oldfather, 1993).

Student Differences in Basic Psychological Needs

Teachers face the challenge of meeting students' psychological needs because individual differences in need satisfaction may lead to differences in how students express their needs. Although researchers believe that the needs for autonomy, competence, and relatedness are innate universal nutrients necessary for psychological well-being (Deci & Ryan, 2000), and therefore common to all students, there may be differences in how students express those needs in the classrooms (Katz et al., 2010). Differences in need satisfaction may be the result of individual personality dispositions, characteristics of home environment such as parental support and cultural background, orientations toward academic learning, interests, or interpersonal relationships between the student and teacher (Katz et al., 2010), differing motivational profiles of self-determined forms, and differences in value and strength (Haivas, Hofmans, & Pepermans, 2014). These differences may also be the result of an interaction among all of these personal, contextual, and situational processes (Vallerand, 2000).

Although these needs are universal, students don't always express them in the same way or at the same time. For instance, individuals may express changes in the level of need at different periods of their life (Eccles et al., 1993), in relation to different types of activities, different times of day and different cultures (Katz, 2003). Students may express different levels of need for autonomy, competence, and relatedness in different domains, developmental states,

and contexts. The role of individual differences in experienced and expressed level of needs is an understudied topic in SDT.

Differences in Perceived Environmental Support

Researchers found students' level of need is a positive predictor of perceived teachers' support of students' needs (Katz et al., 2010). However, the teachers' task is compounded by the fact that students with different levels of expressed needs may also perceive different levels of teachers' support (Katz et al., 2010). Teacher attitudes and expectations have been associated with classroom supports for student motivation (Aelterman et al., 2014) and may translate to differences in support for students' motivational needs. Existing literature suggests that when students show signs of engagement, teachers are more likely to provide more instructional support, lend motivational resources, and display greater autonomy support and structure whereas when students are disengaged, teachers are less likely to provide the same level of instructional support creating a "Matthew effect" where the rich get richer and the poor get poorer (Jang et al., 2010; Skinner & Belmont, 1993; Skinner et al., 2008). That is, students rich in engagement receive more instructional support from teachers while students with low (poor) engagement receive less support and motivational resources and may be less likely to experience positive academic outcomes.

Aside from researchers who focused on individual differences in need satisfaction, Katz and colleagues (2010) claimed that the level of perceived environmental support should be the focus of educators. A study of urban seventh and eighth graders found students perceived changes in contextual features of school environments such as teacher support. Teacher support has been linked to a decline in academic motivation for secondary students in urban environments (Ryan & Patrick, 2001). Findings revealed that junior high school students

perceived their teachers as less supportive of their psychological needs than did elementary school students (Katz et al., 2010). The transition to middle school is a challenge with regard to declining motivation. Researchers found that in middle school, teachers' provision of autonomy-support and relatedness support varied from one class to another (Mouratidis et al., 2011). Students are no longer in the same classroom with one teacher the entire day and often see up to eight individual teachers each day. Experts are unclear about how students with different motivational characteristics are affected by need-supportive environments (Mouratidis et al., 2011). The unique challenge with respect to middle school context is discussed in detail later in the chapter.

Given these differences in classroom support, teachers face challenges to meeting students' individual motivational needs. Existing literature informs us that when students' needs are met, engagement will be manifested in affect, behavior, and cognition. On the other hand, when psychological needs are not met, students are likely to be dissatisfied and will manifest adverse reactions such as doubt, lack of participation, underachievement, social exclusion, anxiety, or maladaptive behavior (Grolnick & Ryan, 1987; Ryan & Connell, 1989). Students' patterns of motivated action and expressed level of need are influenced by the level of teacher support.

When considering the contributions of the teacher and students within a classroom system, it is important to note that one size does not fit all in the delivery and instructional acts of teacher support. Individual differences in innate needs for competence, autonomy, and relatedness may be expressed differently through students' patterns of motivated actions such as engagement. Students' expressions of different levels of need are fluid and likely to change in different contexts, developmental stages, and times, independent of the classroom environment;

nevertheless, the existing literature is most scarce on how classroom teachers meet those demands and provide differential need-support for all students. It is important to understand how teachers meet these demands.

Motivational outcomes can be indirectly observed through an examination of students' and teachers' actions and behaviors (Rueda & Moll, 1994). Students' expressed needs are a set of proximate responses that teachers can detect; these responses indicate how students are positioned for engagement and academic success (Maehr & Midgley, 1996). Students may exhibit observable behavioral manifestations of motivation such as effort, engagement, and investment in classroom activities. Furthermore, students demonstrate varying levels of needs through their patterns of motivated actions such as goal-directed engagement with learning tasks and self-regulation (Connell & Wellborn, 1990). Researchers have shown that students demonstrate various levels of need by their engagement (or disaffection), confidence (or doubt), effort (or lack of participation), achievement (or underachievement), social integration (or social isolation), and self-regulation of behaviors (or maladaptive behavior (Grolnick & Ryan, 1987; Ryan & Connell, 1989). Teachers need to be aware of these student indicators in order to engage in educational decision-making. While there is much research on how students demonstrate their psychological needs in the classroom, few studies analyzed how teachers use these expressions to make effective teaching adjustments to meet the motivational needs of students.

Teachers' pedagogical decisions. Decision-making research has evolved from sociological, psychological, and curricular approaches. Teachers draw on experience, instinct, and knowledge when making instructional decisions (Miranda, 2014). Others suggest that decisions are made out of previously thought out plans and the operation of habitual or automatized sequences of routines in which teachers respond to student cues (Maggioni, 2008;

Vaughn, 2015). From a psychological perspective, instructional decision-making is characterized as an information-processing activity where teachers identify problems, extract relevant cues from their environment, evaluate the pros and cons of different strategies, and select the relevant criteria then decide upon the appropriate action (Calderhead, 1981).

Scholars identified the following influences that guide teachers' decisions: local contexts, beliefs about students, teaching and learning, as well as expectations and self-efficacy (Ruppar, Gaffney, & Dymond, 2015). Teachers' beliefs form implicit criteria for making decisions, which may change depending on the context or problem (Ruppar et al., 2015). Little is known about whether teachers consciously consider these decision-making strategies when making judgments about motivational support for each student. One study interviewed teachers and found no conscious awareness of about half of the specific practices that teachers actually used (Hativa et al., 2001). Regardless, in order to maintain consistent supportive conditions throughout the school year, teachers must respond and adjust to varying levels of student need. Therefore, teachers should become attuned to monitoring student engagement as a way for monitoring student motivation.

Middle School Context

In this section, I discuss motivation within the context of middle school environments. There are two existing models of education for young teens. The "junior high" model is typically for students in seventh and eighth grade buildings while "middle school" refers to a school that starts in sixth grade. The terms middle school and junior high school are used interchangeably throughout this report and are inclusive of grades 6-8. Educators realized that special consideration should be given to the unique biological and developmental needs of adolescents which affect cognitive, social, and emotional aspects of teen life (Anderman & Mueller, 2010;

Erikson, 1993). Occasionally ignored by school reforms is the focus on motivational needs of early adolescence, which have a profound impact on educational performance.

Relevant literature suggests student motivation and engagement are generally lower in secondary school classrooms than they are in elementary school classrooms (Gottfried, Fleming, & Gottfried, 2001; Tucker et al., 2002; Wang, Liu, Chatzisarantis, & Lim, 2010). Likewise, intrinsic motivation of students shows a general decline in the transition to middle school (Anderman & Mueller, 2010). There are educational, psychological, developmental, and environmental explanations for the decline in student motivation (Anderson & Maehr, 1994; Ryan & Patrick, 2001; & Turner et al., 2014). Turner and colleagues (2014) suggested that middle school is a time when students disengage from school. Seventh and eighth grade adolescents have been found to have decreased effort toward academics and tend to doubt their abilities to succeed in school (Ryan & Patrick, 2001). At this age, youths begin to question the value of doing schoolwork. In addition, previous research has found that young adolescents report declines in the nurturing qualities of teacher-student relationships after the transition to middle school that correspond to declines in academic motivation (Midgley, Feldlaufer, & Eccles, 1989).

In 2007, it was discovered that only 21% of eighth grade students from low socioeconomic environments graduate from high school prepared for college (Padrón, Waxman, & Lee, 2014). Students in high-risk and high-poverty environments typically seen in urban areas were reported to have increased behavior problems, disengagement from school, and low academic achievement when compared to their counterparts. In particular, middle school students who attend schools in high-risk areas have been found to be at greater risk of academic failure (Padrón et al., 2014). These problems are prevalent in urban schools where teachers have

struggled to create supportive and engaging learning environments for adolescents. Educators are concerned about the consequences of low motivation and poor student engagement in learning (Logan & Medford, 2011). This study specifically targets teachers for that reason.

Summary

Student motivation is driven by the satisfaction of needs for autonomy, competence, and relatedness. When needs are met, motivation flourishes. Greater satisfaction of the needs for relatedness, autonomy, and competence are suggested to lead to optimal psychological functioning, fostering growth, integration, and constructive social development (Ryan & Deci, 2000a), with need satisfaction motivating greater engagement in further need-satisfying experiences. Teachers play an important role in motivational support and can shape students' motivated actions in the classroom through their effects on students' beliefs of autonomy, competence, and relatedness. Based on the assumptions of SDT, need-supportive teaching serves as a vehicle for satisfying student needs through provisions of autonomy support, structure, and involvement. It is argued that availability of autonomy support, structure, and involvement positively affects satisfaction of fundamental needs and, thereby, motivation and engagement.

Need-supportive teaching practices aligned with the research on high-quality teacher-student relationships have been shown to positively influence student learning. High-quality student-teacher relationships are characterized by structured interactions, attunement, warmth, and emotional and social safety. These relationship qualities provide a context for communicating positive and high expectations for optimal student performance. Taken together, teachers' provision of need-supportive teaching and high-quality teacher-student relationships better support students' motivational needs, leading to enhanced classroom engagement and more self-determined forms of motivation (i.e., intrinsic motivation and identified regulation).

Mainstream primary education requires teachers to be proactively responsive to a variety of student educational needs (Bruggink, Meijer, Goei, & Koot, 2014). Educators know much about best practices that help students, but we know less about how to differentiate or scaffold these strategies to meet the needs of individual students. Students differ in the strength of their psychological needs (Katz et al., 2010). Current literature provides insufficient guidance on how to best support students in light of the existing inconclusive evidence of variability of need (Hardré & Sullivan, 2009). Need-supportive teaching is a potential framework for helping teachers in classrooms understand how they can support students in ways that are “good teaching” for every student, but also modify support to better motivate students by considering their specific individual needs.

An abundance of research has been conducted on what teachers can do to support student motivational needs in the classroom and why teachers’ instructional acts are deemed necessary for achieving positive student outcomes. Classrooms where teachers model respectful interactions, focus on the success of every student, and engage students in help-giving and help-seeking behaviors can provide the safety net that students need to engage in autonomous, self-regulated behaviors (Marchand & Skinner, 2007; Murray & Malmgren, 2005). Putney & Broughton’s (2011) study of collective classroom efficacy illustrated ways in which the classroom teacher is responsible for organizing the social culture by setting expectations guiding instruction, promoting self-worth and dignity, encouraging autonomy, building respect, developing leadership, holding students accountable through active participation in authentic activities, and ultimately fostering a sense of collective efficacy. Aside from Putney & Broughton’s (2011) work, not much empirical research exists about how teachers enact motivational support in classrooms and adapt these general principles. While taking into account

the individual differences in teachers' characteristics and students' expressed needs, previous studies failed to investigate the decision-making processes involved in supporting students' motivational needs. In this study, I focused on characterizing teachers' perceptions of their role in student motivation and shedding light on differential teacher support from a motivational perspective.

Chapter 3: Methodology

The purpose of this multiple-case study, framed by Self-Determination Theory (SDT), is to gauge how teachers support students' motivational needs. Extensive research has been conducted on satisfying needs as a way of affecting student outcomes such as achievement, engagement, and autonomous motivation (Furrer & Skinner, 2003; Jang et al., 2009; Katz et al., 2010). Yet, little guidance is available for teachers on the role they should play in addressing students' individual motivational needs in the classroom. In this study, I explored teachers' perceptions of motivational support with the intention of highlighting an effective application of motivational theory to everyday teaching practices. This chapter provides an overview of the research methods of the present study. It includes a description of research design and a detailed description of the methods and procedures for data collection and analysis.

Approach to the Study

Qualitative Paradigm

Qualitative research methods were deemed appropriate for this investigation because they allow the researcher insight into a specific phenomenon (Stake, 1995; Yin, 2009). In this study, I intended to capture the perceptions of middle school teachers with regard to student motivation through their own voices. Unlike other forms of research, qualitative methods offer a human understanding of experiences and thinking of participants within an educational context (Stake, 1995). The focus of such studies is to describe “objectively what is happening, while simultaneously examining its meaning and redirecting observations to refine or substantiate those meanings” (Stake, 1995, p. 9). In this case, qualitative research affords the opportunity for close collaboration with teachers while enabling them to tell their experiences, thereby expanding the understanding of teachers' motivational support in classrooms.

This line of qualitative research has philosophical underpinnings grounded in the idea of multiple realities. This study is shaped by the ontological position of idealism, which asserts that reality is constructed and shared by people within a particular context, and that no external reality is independent of beliefs or understandings (Creswell, 2012). This interpretive framework allowed for examination of multiple forms of evidence such as qualitative questionnaires, interview and written responses to video prompts to describe individuals' perspectives and experiences related to student motivation.

Description of multiple-case study. Case study design was chosen to examine the unique perspectives of middle school teachers. Case study design allows flexibility in how one answers and approaches the “how” or “why” of research questions concerning teachers' motivational support (Yin, 2002, 2009). Yin (2009) depicts four types of case study designs, including single-case holistic, single embedded, multiple-case holistic, and multiple embedded designs. Multiple-case designs have been regarded as more robust and are considered more compelling when compared to single-case designs (Herriott & Fireston, 1983). For the purposes of this inquiry, I used an embedded, multiple-case study design aimed to capture how middle school teachers felt about student motivation through their own voices. This examination was exploratory in nature, making qualitative research and case study methodology very appropriate for this research.

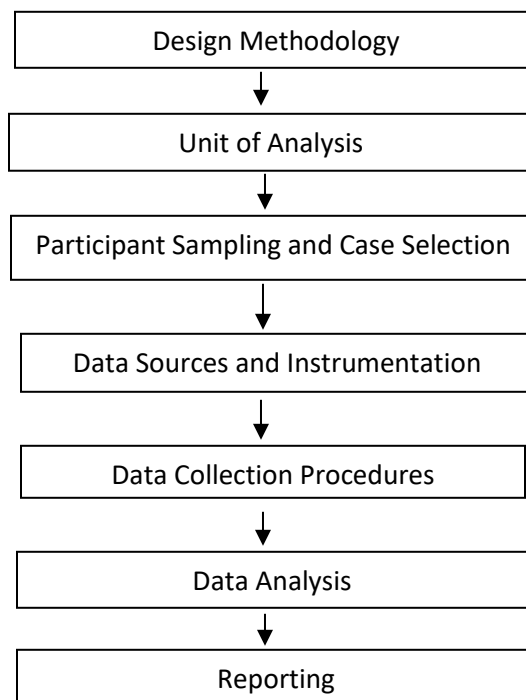


Figure 4. Flow chart of the research design and procedures.

Multiple Case Study Design

The primary focus of this multiple-case study was on middle school teachers and their perceptions of student motivation. Yin's (2009) approach to case study allowed me to investigate individual cases independently while evaluating them against existing theoretical propositions. Adhering to Yin's perspective, I reviewed the relevant literature (discussed in Chapter 2) prior to conducting this study and relied on the theoretical framework of SDT, need-supportive teaching and high-quality teacher-student relationships to guide my research questions, data collection, and analysis. These theories posit the necessary teaching conditions and educational approaches for supporting or frustrating the fulfillment of student's basic psychological needs for autonomy, competence and relatedness within the classroom. This initial step distinguishes this case study

approach from other qualitative methodologies such as grounded theory and ethnography (Yazan, 2015).

Restatement of the Research Questions

The following research questions are aimed at understanding more deeply the role of teachers in motivational support in secondary classrooms:

1. What are teachers' beliefs about student motivation and the sources of motivation?
2. How efficacious are teachers with providing individualized motivational support for students?
3. How do teachers know when to provide support and what type of motivational support students need?
4. How do teachers conceptualize their role in supporting students' motivation?

Unit of analysis. A case is defined as “a contemporary phenomenon within its real-life context, especially when the boundaries between a phenomenon and context are not clear and the researcher has little control over the phenomenon and context” (Yin, 2002 p. 13). This case study considered the phenomenon of teachers’ motivational support within the particular context of middle schools. As discussed in Chapter 2, middle school is a critical turning point in students’ lives in which student motivation may wane due to a changing structure of day-to-day education and less perceived support from teachers. Middle school teachers face unique challenges to addressing student motivation and admit to needing and wanting more help in motivating students (Hardré et al., 2008). From the SDT perspective, students’ motivational needs can be satisfied or thwarted in the classroom environment. Therefore, the role of teachers and their interactions with students in affecting student motivation is worth investigating.

Teachers were an ideal source of information for understanding how they perceive their role in student motivation and how they support students' basic psychological needs. From a perspective of personal pedagogical systems, teachers are stores of beliefs, knowledge, theories, assumptions, and attitudes, which influence their instructional decisions and perhaps the way they implement strategies to support student's individual needs (Borg, 1998). Given this perspective, each teacher was treated as individual units of analysis. Figure 5 depicts the embedded case study design.

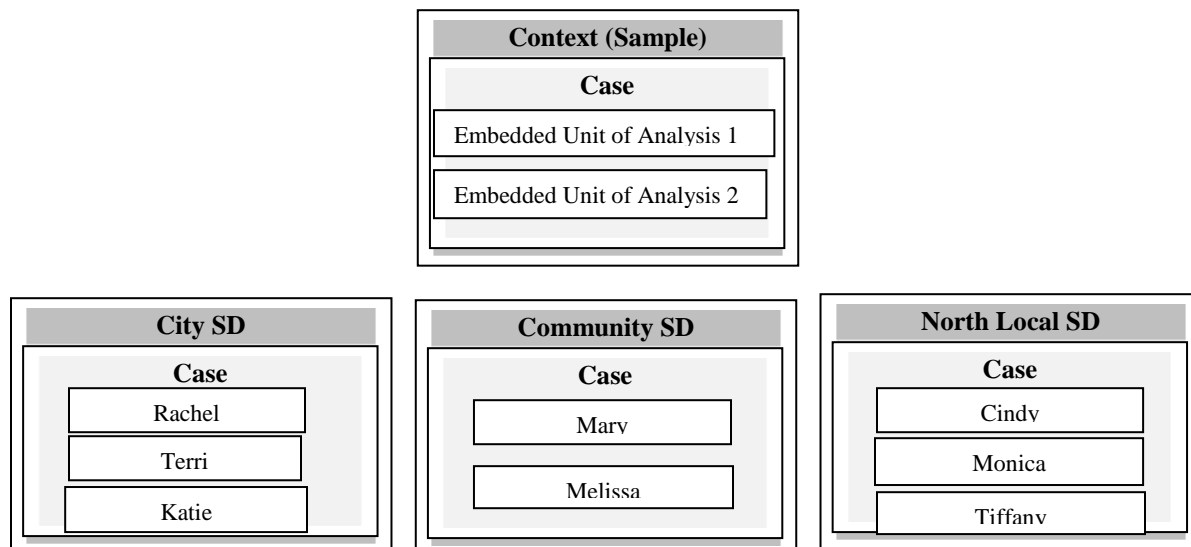


Figure 5: Embedded Multiple-Case Study Design. Adapted from “Case study research: Design and methods,” by R. K. Yin, 2009, 4th Ed., p. 46. Los Angeles, California: Sage Publications.

School contexts. This study examined teachers from three school sites—two junior high schools and one middle school—in Southwest Ohio for three months during the second semester of 2015-2016 and two months at the beginning of the 2016 academic year. I chose teachers who were employed in schools with close geographical locations in neighboring counties because the schools would have similar grade levels and education standards held by the Ohio Department of

Education. All sites and participant names were anonymized to protect the participants and their schools.

School accountability reports for each school district were displayed in Figure 6 for the purpose of providing the context of the study. Each school district had one middle/junior high schools in which teachers were selected, however the accountability report did not aggregate school-level data with respect to student ethnicity, student attendance, transiency, percentage of students identified as economically disadvantage and limited English proficient. Thus, the district-level results were presented. Teacher attendance, degree level, core subject certifications, and evaluations were also presented for a district-level perspective. The teacher data was used to contextualize the cases within each school district as depicted in Figure 6. Also relevant to this case study, were the districts' sixth, seventh and eighth grade-level achievement scores as interpreted in the findings in Chapter 4.

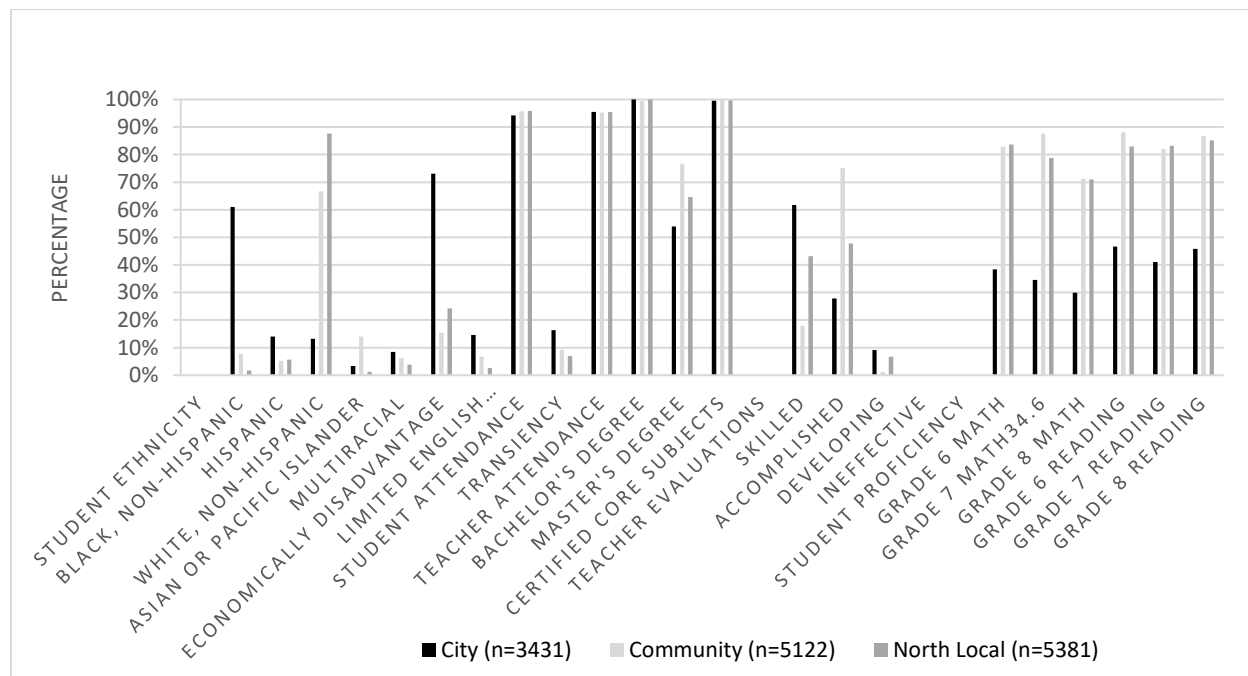


Figure 6. Demographics of three school sites from Ohio School Report Cards 2014-2015.

City School District is located in one of the largest urban counties in Southern Ohio. The district has six schools all designated as high-poverty schools by the State of Ohio based on the percentage of the district's economically disadvantaged students. According to the 2014-2015 Report Card, the average daily enrollment was 3,431 students. Enrollment by subgroup indicated 3.3% of students as Asian or Pacific Islander, 61% as Black Non-Hispanic, 14% as Hispanic, 8.5% as multiracial, and 13.2% as White Non-Hispanic. Furthermore, 73.1% of students were designated as economically disadvantaged, and 14.6% were students with limited English Proficiency. Attendance for all students in the district was 94.2%, with a 16.4% rate of transiency which referred to students who moved into or out of the district and did not spend the majority of the school year within City School District.

The report card provided information regarding its teaching staff. The average teaching experience of all teachers in the district was 9 years. Teachers received a 95.5% attendance rate. The percentage of teachers with at least a Bachelor's Degree was 100% and with Master's Degree—53.9%. "Properly" certified teachers taught 99.6% of core academic subjects. Teachers were evaluated at four different levels: skilled, accomplished, developing, and ineffective. Based on teacher evaluations in 2014-2015, 61.7% teachers at City School District were considered skilled, 27.8% were evaluated as accomplished, and 9.1% as developing. No teachers were evaluated as ineffective during the 2014-2015 school year.

According to the 2014-2015 report card for City School District, the district received an F grade for percentage of students who passed state tests. The middle school received a D grade on the achievement performance index and an F grade on the measure of progress for all students in math and reading. In mathematics, only 38.4% of sixth graders, 34.6% of seventh graders and 29.9% of eighth graders were considered proficient. In reading, 46.4% of sixth graders, 41.1% of

seventh graders, and 45.8% of eighth graders passed the state test. City School District's middle school students performed below similar districts and the state average in both reading and math.

Community School District is located in one of the largest, urban counties in Southern Ohio. The district has seven schools all designated as low poverty schools by the State of Ohio. In 2014-2015, enrollment was 5,122 students. Enrollment by subgroup indicated 14.0% of students as Asian or Pacific Islander, 7.8% Black Non-Hispanic, 5.2% Hispanic, 6.3% multiracial, and 66.7% White Non-Hispanic. Students with disabilities made up 9.7% of the district's enrollment. Further, 15.4% students were designated economically disadvantaged, and 6.7% were students with limited English Proficiency. Attendance for all students in the District was 95.7% with a 9.3% rate of transiency.

For Community School District, the average teaching experience of all teachers in the district was 15 years in 2014-2015. Teachers' attendance rate was 95.3%. The percentage of teachers with at least a Bachelor's Degree was 99.4% and 76.7% with a Master's Degree. All teachers of core academic subjects were properly certified. Based on teacher evaluations in 2014-2015, the percentage of teachers at City School District that were considered skilled was 18%, 75.2% were evaluated as accomplished, and 1.1% as developing. There were no teachers evaluated as ineffective during the 2014-2015 school year.

According to the 2014-2015 report card for Community School District, the district received an A grade for the percentage of students who passed state tests. The junior high school, in comparison, received a C grade on the achievement performance index, and a D grade on the measure of progress for all students in math and reading. In the area of mathematics, only 82.8% of sixth graders, 87.6% of seventh graders and 71.2% of eighth graders were considered proficient. In reading, 88.0% of sixth graders, 82.0% of seventh graders and 86.8% of eighth

graders passed the state test. Students in sixth grade performed above similar districts and the state average in both reading and math. Seventh graders performed above the state average in reading and math, but performed lower than other districts comparable to Community School District. Eighth graders performed higher than the state average and similar districts in Mathematics, but performed below the State average in Reading.

North Local School District is located in the greater Cincinnati-Dayton Metropolitan Area. The district has six schools all designated as low poverty schools by the State of Ohio. There were 5,381 students enrolled during the 2014-2015 school year. Enrollment by subgroup indicated 1.2% of students as Asian or Pacific Islander, 1.7% Black Non-Hispanic, 5.7% Hispanic, 3.8% multiracial, and 87.6% White Non-Hispanic. Students with disabilities made up 12.3% of the district's enrollment, 24.2% students were designated economically disadvantaged, and 2.7% students had limited English Proficiency. Student attendance for all students was 95.8% with a 7.0% rate of transiency.

On average, teachers in the North Local School District had 11 years of teaching experience. Teacher attendance was 95.5%. The percentage of teachers with at least a Bachelor's Degree was 100% and 64.6% had Master's Degrees. At the time of the study, 99.7% of teachers of core academic subjects were properly certified. The percentage of teachers at North Local School District that were evaluated as skilled was 43.1%, 47.8% were considered accomplished, and 6.7% were marked as developing. There were no teachers evaluated as ineffective during the 2014-2015 school year.

North Local School District received an A grade for percentage of students who passed state tests. The junior high school received a B grade on the achievement performance index, and an A grade on the measure of progress for all students in math and reading. In the area of math,

83.7% of sixth graders, 78.8% of seventh graders and 71.0% of eighth graders were considered proficient. In reading, 82.9% of sixth graders, 83.2% of seventh graders and 85.1% of eighth graders were proficient in math. Students in the sixth grade performed above similar districts and the state average in the area of mathematics and below the state average and comparable school districts in reading. Seventh graders performed above other districts in reading, but performed lower than the State average and schools comparable to North Local School District in Mathematics. Eighth graders performed below the state average and similar districts in Reading, and above the State average in Math.

In general, these school districts were similar in size and geographical location in southern Ohio. However, the districts' accountability results according to indicators assessed by the State's Department of Education varied. City School District is failing in achievement, while Community and North Local's achievement were average or above. The differences across these otherwise similar districts suggest that some differences would be seen in teachers' perspectives about student motivation among the cases studied. Understanding the settings in which the teachers' work is critical for characterizing the educational approaches of each teacher and conceptualizing the contextual factors related to teacher's motivational support in which each case is situated.

Common methods of multiple case studies are observation, interview, coding, data management and interpretation (Stake, 2006). Although observations were considered beyond the scope of this study at this time, I used a variety of sources, including a questionnaire with open-ended responses, individual structured interviews, and documents to address the research questions. Multiple sources of evidence were gathered to enable triangulation and allow for a

more coherent understanding of the phenomenon under review (Yin, 2009). The data source and process of analysis relevant to each research questions are identified in Table 2.

Table 2. Data Table

Research Questions	Kind of Data Collected	Process of Analysis	Literature
What are teachers' beliefs about student motivation and sources of motivation?	interviews, questionnaires	Pattern Matching Thematic Analysis	Deci & Ryan, 1985, Turner et al., 2009, Hornstra et al., 2015, Pajares, 1992, Turner, 2010, Turner et al., 2009, Murh, 2005, Yin, 2009
How efficacious are teachers with providing individualized motivational support for students?	interviews, questionnaires	Narrative analysis, Componential analysis	Bandura, 2002, Mojavezi & Tamiz, 2012, Yin, 2009
How do teachers know when to provide support and what type of motivational support students need?	interviews, written responses, questionnaire	Pattern Matching, Componential Analysis	Miranda, 2014, Lincoln & Guba, 1985, Spradley, 1979, Yin, 2002, 2009
How do teachers conceptualize their role in supporting students' motivation?	interviews, written responses	Pattern Matching, Thematic Analysis	Ryan & Deci, 2000, Reeve, 2006, Jang, Reeve & Deci, 2010, Stroet et al., 2013, Yin, 2002, 2009

(Taken from Putney, L.G. (1997). Collective-individual development in a fifth grade bilingual class: An interactional ethnographic analysis of historicity and consequentiality. (Unpublished doctoral dissertation). University of California, Santa Barbara, Santa Barbara, CA.)

I anticipated using replication logic as one form of analysis. Therefore careful consideration was given to case selections in order to have adequate data for the purpose of predicting expected or contrasting results. I concluded the study with eight teachers from three middle schools as the embedded units of analysis (see Figure 5). The lessons learned from this multiple case study were assumed to be informative and essential to the depth of understanding

of motivational support. Following recruitment and case selection, documents in the form of school accountability reports were obtained. The remaining data collection was divided into two phases. Data from online questionnaires were collected in the first phase and individual interviews were conducted in phase two. Data from three 30-page accountability reports, 8 completed 19-question online surveys, approximately 3.5 of hours of interviews, 637 words (3,277 characters excluding spaces) in written responses were analyzed using open and emergent coding, narrative analysis, pattern-matching, thematic analysis and componential analysis for cross-case synthesis. Specific data collection procedures, data management and treatment of the data are outlined later in this chapter.

Research Methods

Recruitment and Sampling

Snowball sampling is conventionally associated with qualitative research. It is a non-probability sampling technique based on the judgment of the researcher. Research literature supports this type of sampling for small sample sizes, such as with classrooms, and suggests that this technique increases transferability (Teddlie & Yu, 2007). For this study, snowball sampling appeared most appropriate because it allowed me to gain access to educators in a new and unfamiliar locale. It resulted in the most parsimonious and effective way to achieve the number of necessary cases for studying teacher's motivational support. The snowball sampling technique was used with friends, mentors, and colleagues currently working in the education field in southwest Ohio. These personal connections were contacted for access to potential participants. In order to solicit participants, I emailed colleagues in seven schools in the surrounding area about the present study and included the recruitment flyer as an attachment. Then, each recruited

participant was asked if he or she knew any other interested teachers. This process continued until the desired sample size was met.

The use of technology has become a viable option for conducting qualitative research (Nehls, Smith, & Schneider, 2015; Salmons, 2012). Using technology in this study was very helpful for recruitment and data collection purposes. The use of technology did not pose any challenges to data collection for this study. Technology through email, online survey tools and video-conferencing afforded greater access to teachers. The online format allowed the researcher to recruit participants from a variety of schools in multiple geographic areas through email. Friends, mentors, and former colleagues were emailed information about the study along with an attached recruitment flyer to circulate amongst staff (Appendix E). Hyperlinks were embedded in the email that led to the survey's home page and an informed consent form. The questionnaire procedures will be explained later in the chapter.

Primarily, the invitation to participate in the study was extended to middle school teachers who met the following criteria: in-service, teaching an academic subject area that involves reading, with access to technology (i.e., email and internet) and have knowledge and experience using online video-conferencing tools for ease of use. Subjects who did not meet the criteria were rejected and explained the primary focus of the study either through face-to-face contact, phone conversation, or email. In total, 14 teachers volunteered to complete the online questionnaire. Two fifth grade teachers and one kindergarten teacher were unable to participate in the current research study due to their position at a lower grade level. Two teachers started the online questionnaire, but did not submit completed responses. Another teacher completed the online questionnaire but was unable to be reached for the interview portion. As a result, 6 people were excluded from participating in the second phase of the study.

Case Selection

Eight teachers were selected to participate in the case study and completed both phases of data collection. According to Yin (2009), two or more cases are deemed appropriate for literal and/or theoretical replications when a theory (i.e., SDT) is straightforward and does not demand a degree of certainty (Yin, 2009). In this case, I sought at least three teachers to provide sufficient evidence of the conditions in which student motivation was supported and three teachers for the opposing conditions if any existed. Thus, a minimum of six cases was needed for examination, yet the eight selected cases exceeded the basic criteria for replications (see Table 4). Two of the eight teachers were identified as exemplar cases because of their unique differences in professional development training and sense of efficacy relative to the description of strategies utilized in their classrooms.

The included teachers taught students in sixth through eighth grades. Rachel and Tiffany are Special Education teachers. Pseudonymsⁱ were used in place of the names in case profiles and school sites when necessary. Cindy, Mary and Monica teach English. Melissa and Katie are History teachers and Terri teaches both English and Writing. Katie, Rachel, and Terri are employed by City School District. The smallest district (City School District) with the largest percentage of ethnically minority students and disadvantaged students had the highest percentage of teachers evaluated as “skilled,” but the lowest student performance on state tests and student attendance. Mary and Melissa both teach at the junior high school in Community School District. Community School District’s teachers on average had more teaching experience and the highest performing students relative to North Local or City School Districts. Cindy, Monica, and Tiffany

teach at North Local School District. Student enrollment in North Local Schools largely includes white students from low poverty households. It had the highest student attendance and lowest percentage of transiency, yet academic results in reading and math were mixed. Further details regarding individual case profiles will be discussed in Chapter 4.

Table 3. Demographics of Study Participants

	Gender	Education Level	Grade Level	Age range (years)	School District
Cindy	Female	Masters+	7	30-44	North Local
Monica	Female	Masters	8	30-44	North Local
Tiffany	Female	Masters+	SPED	45-59	North Local
Mary	Female	Masters	7	30-44	Community
Melissa	Female	Masters	7	30-44	Community
Rachel	Female	Masters+	SPED	30-44	City
Terri	Female	Masters+	6	45-59	City
Katie	Female	Masters+	8	45-59	City

Data Sources and Instrumentation

Multiple sources of data result in the ability to triangulate data for deeper understanding of the complexity of a particular phenomenon studied (Yin, 2009). For that reason, I used a variety of sources, including a questionnaire with open-ended responses, individual interviews, and documentation to address the research questions. Data collection and the means for analysis are described in detail below.

Table 4. Data Sources Aligned with Research Questions

Research Questions	Written Responses	Questionnaires	Interviews
Q1		X	X
Q2	X		X
Q3	X	X	X

Online questionnaire. In qualitative research, formal questionnaires are deemed useful for answering the “what” and “how” questions in case study research (Yin, 2009). In part one of this study, participants were asked to answer 19 questions related to motivational support through Survey Monkey (SurveyMonkey, 1999-2016). SurveyMonkey is a secure online survey research tool that allows researchers to design surveys using a variety of question types (SurveyMonkey, 1999-2016). The purpose of the questionnaire was to help answer more structured questions that were exploratory in nature and examine teachers’ perceptions of motivational support related to the need-supportive teaching framework, supports, and challenges to implementing provisions of need-supportive teaching along with demographics/experience. The average completion time for the 19-question survey was 19.3 minutes.

The online questionnaire was designed to produce both qualitative and quantitative data; however, this case study should not be considered mixed methods research. Quantitative evidence such as the results of the teacher efficacy scale was used to inform the case rather than be used for inferential statistical analysis. Researchers have identified teacher efficacy as a teacher characteristic influencing teachers’ classroom practices (Van den Berghe et al, 2013). For this reason, the fifth section of the survey included a portion on teacher efficacy. Teacher self-efficacy was operationally defined as “the teacher’s belief in her or his ability to organize and execute the courses of action required to successfully accomplish a specific task in a particular context” (Tschannen-Moran, Hoy, & Hoy, 1998). Previous studies indicated that teachers’ sense of efficacy was an antecedent to classroom goal structures, instructional attitudes, decision-making, and practices (Putney & Broughton, 2011; Wolters & Daugherty, 2007). Correlational

analysis supports that teachers' sense of efficacy may influence types of instructional practices used in the classroom (Wolters & Daugherty, 2007). Questions I used in the questionnaire were adapted from the *Teacher Efficacy Scale* to relate to motivational concepts.

Instrumentation. The Teacher Efficacy Scale (short form) was developed by Hoy and Woolfolk (1990) to gather information regarding the actual attitudes of educators concerning efficacy beliefs. The Teacher Efficacy Scale was a useful data source for triangulation and descriptive purposes to help characterize teacher support with more depth. The Teacher Efficacy Scale is considered a reliable and valid instrument, ranging from moderate to highly reliable for the short form (Hoy & Woolfolk, 1990). The coefficient reliability values of the two independent factors of the TES scale are as follows: Personal Teaching Efficacy (0.84) and General Teaching Efficacy (0.72) (Hoy & Woolfolk, 1990). The instrument is available to the general public <<http://anitawoolfolkhoy.com/wp-content/uploads/2014/09/Teacher-Efficacy-10-1em1vkf.pdf>> and has been validated by other researchers who have utilized it in their research (Wolters & Daugherty, 2007).

Teachers' efficacy beliefs obtained from the online questionnaire were analyzed qualitatively and used to complement the participants' perspectives providing a clearer and more extensive understanding of the individual cases with regard to the phenomenon of teachers' motivational support. The Teacher Efficacy Scale measures general teaching efficacy and personal teaching efficacy on a 6-point Likert scale (1=strongly agree, moderately agree, agree slightly more than disagree, disagree slightly more than agree, moderately disagree and 6=strongly disagree). Given the 1="strongly agree" to 6="strongly disagree" format, the high score (6) on each scale indicates a strong sense of efficacy (Hoy & Woolfolk, 1993). Whereas the personal teaching efficacy items required reverse scoring thus a score of 1 on items 3, 6, 7, 8

indicates a high score. For example, strongly agree response to the statement, “If I really try hard, I can get through to the most difficult or unmotivated students” the respondent would receive a score of 6 rather than 1. In this case study, teachers were assigned to categories reflecting high, moderate or low sense of efficacy. Treatment of the data is outlined in the analytic plan later in the chapter. Table 16 shows which category each teacher was assigned.

Qualitative interviews. Interviews are essential sources of case study information which allows researchers to access participant perceptions and ideas (Yin, 2009). Interviewing is key to many forms of qualitative research, and interviews are important because they allow researchers to investigate phenomena and experiences (Stake, 2005; Yin, 2009). Seidman (2006) emphasizes structuring interviews and protocols to develop an understanding of the respondents’ meaning of their experience. For this study, interviews were conducted to allow teachers to share experiences, elaborate on their understanding of student motivation, and describe their role in student motivation. Participants were asked to allow one hour for individual interviews, but interviews were found to only last on average 26.3 minutes. Sample questions included the following: “What role do teachers play in motivation in school,” “Which indicators do you receive from students that suggest the need for more support,” “How do you adjust your instructional practices to support students who require more support or less support?” (See Appendix B). The interviews afforded teachers the opportunity to describe their thought processes behind decisions made to support students.

Interviews were conducted by phone and online video-conferencing tools, such as Skype and FaceTime. Online video-conferencing interviews were considered a suitable form of data collection because they provided a medium that simulated a typical face-to-face environment commonly seen in qualitative research (Nehls et al., 2015; Janghorban, Roudsari & Taghipour,

2014) while allowing the researcher to conduct them without traveling. Interviews using video-conferencing closely resemble the reciprocal exchanges of in-person interviews (Salmons, 2012). There were numerous advantages to conducting interviews via online video-conferencing. I was able to communicate with participants through audio and video, which provided an opportunity to observe nonverbal body language and adapt questioning, based on those exchanges.

Online interviewing overcame the barriers of geography. It afforded participants the flexibility to engage in research from their own location, which has been noted in previous research to increase the level of privacy depending upon the designated location (Nehls et al., 2015). Furthermore, it provided a greater flexibility for individuals in terms of scheduling the date and time of their interview. Nehls and colleagues (2015) have suspected that engaging in research from the comfort of a desired location such as home or office puts participants at ease and may increase their willingness to speak openly and honestly in an interview. Teachers were able to respond more candidly without interruption or worry away from the school environment. Not only did teachers maintain control over the location, they also controlled the pace of their engagement in the research study.

Online video-conferencing was also considered a viable option for interviews because of its utility. Colleagues with mobile devices such as iPads or phones were able to communicate with me at any time or any location, creating a sense of comfort and convenience. Moreover, using video-conferencing for interviews was cost-effective with significant travel savings and a “reduced cost of failure” when participants rescheduled or canceled (Nehls et al., 2015; Shore et al., 2007, p. 834).

Certain disadvantages of online interviewing exist such as the need for substantial technology, access to internet, and ease of use. Researchers indicated that some elderly, less

educated, and low-income populations were least likely to have access to the internet (Deakin & Wakefield, 2013; Zickuhr & Smith, 2012). However, in this case, all participants were teachers well-versed in technology use; they experienced minimal difficulty with technology requirements. To sum it up, technology in and of itself presented an added dimension to the complexity of qualitative interviewing (Salmons, 2012); yet, I found that the advantages outweighed the disadvantages in this case.

Written responses. Open-ended questions were used to investigate how teachers determine student motivational levels and describe the corresponding behaviors observed. Additionally, the open questions helped to ascertain the type of instructional behaviors that each teacher would hypothetically employ to meet the individual motivational needs of students described as having low, average, or high levels of motivation. An advantage of using open-ended questions is that they provide a direct view into a respondent's own thinking (Roberts et al., 2014). The responses to open-ended questions were not limited to pre-determined answer choices and allowed respondents the opportunity to reflect on their individual perspectives.

Participants responded to three open-ended questions following each of the three video prompts. The videos and questions were designed to elicit feedback about motivational support. Teachers were asked to write responses to each question for each of the three students depicted in the videos in an open text box allowing up 1500 characters. Participants were given an opportunity to share additional insights and experiences in an open-text comment section. The teachers wrote an average of 79.6 words and 409.6 characters excluding spaces.

Documentation. Information from the school accountability reports discussed earlier in the chapter were examined to describe the school contexts in which the participants were employed. Documents such as these are regarded in case study research as a useful form of data

for corroborating and augmenting evidence from other sources (Yin 2009). According to qualitative methodologists, documents “play an explicit role in any data collection in doing case studies” (Yin 2009, p. 103). In the State of Ohio, schools receive accountability and school improvement reports called report cards (Ohio Department of Education, 2016). Ohio School Report Cards are intended to give the community a clear picture of the progress of a particular district and schools in raising achievement and preparing students for the future. The statistics measure district and school performance in the areas most critical to success in learning. School Report Cards for the 2014-2015 school year were obtained for the following three districts: City School District, Community School District, and North Local School District. The 2014-2015 Ohio School Report Card was the latest document released at the time of this study. Each report reviewed was approximately 30 pages.

Data Collection Procedures

This section discusses the specific case study protocol (Appendix K) used for obtaining informed consent, distributing the online survey, encouraging open-ended written responses, and conducting individual interviews.

Informed consent. Teachers were informed of the purpose and procedures of the proposed study at the start of the study via SurveyMonkey. Informed consent (Appendix F) was obtained from each participant before she began the online questionnaire. The informed consent included information regarding the purpose of the study, risks and benefits, costs and compensation, study format, confidentiality statement, and contact information. Also, the informed consent page included a statement that explained that the study was used as a partial fulfillment of the researcher’s doctoral program. Teachers were notified that participation was voluntary and he or she were free to leave the study at any point. Selecting “Yes” to the

agreement indicated voluntary consent to participate in the study. The participants were encouraged to print a copy of the informed consent form for their personal reference.

Questionnaire distribution. Teachers were directed to complete an online questionnaire on SurveyMonkey, following the informed consent agreement. The questionnaire was divided into five sections (Appendix A). Section one contained six demographic questions to gather information about the teachers' gender, teaching experience, educational level, grade taught, professional development and training experiences, and class size. Section two consisted of questions that gauged teachers' perceptions of their role in motivational support. Teachers' perceptions of the importance of providing motivational support was evaluated using a four-point Likert scale consisting of the following response options: very important, important, somewhat important, and not important. A neutral option was not offered to encourage the participants to take a stance. Questions in the third section focused on aspects of need-supportive teaching applications in the classroom. Section four questions concerned supports and challenges to providing students' individualized need-based support. Section five gathered information regarding teacher efficacy. After the Teacher Efficacy Scale section, teachers were directed to view three videos and respond to open-ended questions. The questionnaire ended with the completed written response section. Once submitted, the participants were prompted with a message notifying them that contact would be made via email to set up an interview.

Video prompts. Videos of classrooms were embedded in the questionnaire followed by prompts for written responses. Classroom videos for this study were found on the internet. YouTube was the primary source from which the video clips were sought. YouTube is a social media platform where people can upload videos, post comments, and share video clips with others (YouTube, 2016a). YouTube allows one to reuse copyright-protected material under

certain circumstances without getting permission from the copyright owner according to its fair use legal policy (YouTube, 2016b).

Purposive sampling was used to find representative videos of classrooms. The term “middle school classroom observation” was used to search for appropriate videos. Relevant and irrelevant results appear whenever a search term is used on YouTube. Therefore, certain criteria were adopted to ensure selection of the most relevant video clips that conform to this study’s objective. Specifically, I searched for videos that met the following criteria: screen-shot primarily focused on students, a variety of observable student behaviors, video clarity and volume, and allowable/permission to use. The videos had to be realistic in nature, excluding videos with only words or PowerPoint presentations, caricatures and animations. Videos that met the criteria were viewed in their entirety including the contextual information in the description.

Three videos of individual students were selected for the questionnaire (see Appendix C for video prompt protocol). Once the videos were downloaded, minimal editing was necessary to shorten the length of the video clips to less than 5 minutes each. On average, the video prompts lasted 2 minutes 4 seconds. Each video specified a target student for observation. Questions 17, 18 and 19 of the online survey were related to the video prompts. Each question contained one video and three questions that required extended responses (Appendix C). Teachers were asked to: 1) rank the targeted student according to perceived motivation level (e.g. low, average and high), 2) describe the behaviors that correspond to the particular rating, and 3) describe what they would do to support the targeted student’s motivation. The teachers’ ratings of student motivation depicted in the video prompts are displayed in Table 25. The written responses were analyzed through pattern matching and used to develop emergent themes for individual case profiles and cross-case analysis.

Interview protocol. The researcher conducted individual interviews at a time convenient to the participants. An interview protocol was used as a guide in the proposed study (Appendix B). Interview protocols have the potential to standardize data collection and reduce the tendency of premature closure of data collection (reaching a decision on the basis of incomplete data), anchoring (focusing too heavily on specific information), primacy and recency effects (recalling the first and last items of information, respectively, with greater frequency), or confirmatory biases (searching for information, interpreting new and existing information, or avoiding contradictory information to confirm one's preconceptions) (Gugiu & Rodriguez-Campos, 2007; Rubin & Rubin, 2005).

The interview was divided into sections as seen in Appendix B. One section of the interview sought clarification and elaboration on the teachers' role in student motivation. Another section included a discussion of motivational indicators that teachers observe from students that signal when to adjust the level of support and what type of support needs to be explored. The next section was designed to determine how teachers felt about their ability to support students' individual needs. Additional probing questions were asked when deemed necessary by the researcher. Interviews were conducted privately to ensure confidentiality, which contributes to the validity of the study.

Member checking. Member checks were completed with seven of the eight participants to help establish credibility (Lincoln & Guba, 1985). I contacted participants via email for follow-up. Each participant was debriefed by follow-up questions. Follow-up questions and member-checking were completed by email and phone (Appendix J). All interviews were recorded for transcription and uploaded to Atlas.ti software for analysis.

Study closure. Each participant received a statement thanking her for participation and promising to share a summary of the study when final results were completed either verbally by phone or by email. As an incentive for completing the study, teachers were offered an opportunity to participate in a voluntary raffle drawing where each of four randomly selected teachers received one \$25 Amazon gift card provided by the researcher. The gift cards were delivered either electronically or by US mail as specified by participant's preference.

Timeline. The timeline for this study included a total of thirteen months for recruitment, data collection including questionnaire and interviews, analysis and case reporting in order to secure sufficient data to answer the research questions. Table 5 specifically outlines the timeline for data collection, analysis and case reporting.

Table 5. Data Collection Timeline

Task	Time (Date in ranges)
Recruitment	2/27/16 – 8/3/16
Informed Consent, Open Questionnaire	2/27/16 – 8/3/16
Sample Selection	3/18/16 - 8/6/16
Initial Interviews	3/18/16 – 8/6/16
Initial Data Analysis	8/12/16 - 11/2/16
Member Checking	8/3/16 - 1/17/17
Final Data Analysis	10/28/16 – 3/20/17
Case Reporting	1/23/17 – 3/20/17

Description of Analytic Process

With case study design, data analysis “consists of examining, categorizing, tabulating, testing or otherwise recombining both quantitative and qualitative evidence to address the initial propositions of a study” (Yin, 2002, p. 109). The analytic process consisted of multiple steps. A variety of analytic case study approaches were utilized to treat the data as displayed in Table 6.

Table 6. Process of Analysis According to Research Questions and Data Sources

Research Questions	Kind of Data Collected	Process of Analysis
What are teachers' beliefs about student motivation and sources of motivation?	interviews, questionnaires	Pattern Matching
How efficacious are teachers with providing individualized motivational support for students?	interviews, questionnaires	Narrative analysis
How do teachers know when to provide support and what type of motivational support students need?	interviews, written responses, questionnaire	Pattern Matching, Open and Emergent Coding, Componential Analysis, Thematic Analysis
How do teachers conceptualize their role in supporting students' motivation?	interviews, written responses	Pattern Matching, Thematic Analysis, Componential Analysis

Data Transformation. The first step in the analysis concerned data transformation and entry. Each participant's responses to survey questions 1 through 15 were converted to a Microsoft Excel spreadsheet. The data was also sorted by school district, grade level, class size, age, and degree level. Interview recordings were transcribed to google documents through voice recognition software. Written responses from the video prompts on the online questionnaire (Questions 17-19) were organized in a matrix of observed behaviors by teacher per category of student's motivation level depicted in the video prompts. The participants' responses were also charted by self-reported instructional practices according to the depicted students' motivation level. Then, the transformed data was read-thru to "develop a sense of the data" (Creswell, 2007 p.164).

Responses to the 10-item Teacher Efficacy Scale were transformed into a data sheet using number 1 for strongly agree, 2 for moderately agree, 3 for agree slightly more than disagree, 4 for disagree slightly more than agree, 5 for moderately disagree and 6 for strongly disagree on items 1, 2, 4, 5, 10. Reverse scoring was required for on items 3, 6, 7, 8 and 9. Teachers who endorsed the most statements with a score of 6 or 5 on items 1, 2, 4, 5, and 10 or a score of 1 or 2 on items 3, 6, 7, 8, and 9 were categorized as having high efficacy relative to the group. Scores of 3 or 4 were placed in the moderate category and scores of 1 or 2 on items 1, 2, 4, 5, and 10 or a score of 6 or 5 on items 3, 6, 7, 8, and 9 were identified as having a low sense of teaching efficacy. The categorized efficacy data was add to the Excel spreadsheet with the survey data.

Coding. Second, the narrative text from the interview transcripts and written responses from the video prompts for each participant were uploaded to Atlas.ti (ATLAS.ti, 2005), a computer-assisted qualitative data analysis software for coding and categorizing. The ATLAS.ti

software manual was downloaded and referred to for guidance on coding techniques (ATLAS.ti, 2005). I initiated open coding for each case by dragging words with comparable meanings into close proximity. The data resulted in approximately 156 initial codes. I grouped the initial codes based on the frequency and then assigned a label. The categories with the highest number of initial codes was labeled Student Interest. For example, words and phrases related to student interest such as probe personal interest, find out interest and speak toward students' interest were grouped into advanced categories and defined. This process resulted in 36 categories (see Appendix L for coding scheme).

I displayed the codes and categories in sematic networks for conceptualization. With the aid of network views, one can express relationships between codes, categories and quotations (Murh, 2005). A sample of the categories and the definitions were shown in Table 7. This process was repeated for each individual participant and used to develop emergent themes. The emergent themes were interpreted in the individual case profiles and included in the cross-case analysis detailed in the next section.

Table 7. Sample of Initial Codes, Categories and Definitions

Category	Student Interest	Getting to Know Students	Cooperative Groups
Definition	Attentiveness to student preferences, interests	Obtaining information about student interests, experiences, background	Putting students together for a structured activity
Initial codes	Probe personal interest	Get to know him	Assign to group
	Find out interest	Ask about interests and experiences	Pair up with others
	Speak toward interest	Find out where he comes from Interact with him outside of the classroom or assignment	Create opportunities to engage with others

Pattern matching. Third, I relied on pattern matching to analyze the data for the individual case studies. Patterns can be identified by looking for a correspondence between two or more categories (Creswell, 2007). I displayed the defined categories in a word table for each individual case (Appendix L). This form of pattern-matching strengthens the case study's internal validity (Yin, 2009). Recurring patterns of observed behaviors and instructional strategies used by teachers were analyzed for overall categories in the fourth step. Categories of instructional strategies were aligned with a priori dimensions of need-supportive teaching (i.e. autonomy-support structure and involvement) in step 5. Several categories of regularly used teacher strategies emerged from the data and were aligned with a priori dimensions of need-supportive teaching (i.e. autonomy-support structure and involvement). It was important to note that there was overlap in the statements and definitions of categories. The five steps of this analytic process was repeated for each of the 8 cases.

Cross-case analysis. Cross-case synthesis is a technique specifically applied to multiple-case studies (Yin, 2009). In order to strengthen the case study findings, I conducted a componential analysis to assist with the synthesis of the eight cases. Componential analysis is a technique typically associated with ethnographic analysis that uses matrices and/or tables to examine the similarities and differences among subcategories across cases in a uniform framework (Leach & Onwuegbuzie, 2008; Onwuegbuzie et al., 2012); Spradley 1979; Yin, 2009). As conceptualized by Spradley (1979), a componential analysis involves the following eight steps: select a contrast set for analysis, inventory all contrasts previously discovered, prepare a paradigm worksheet, identify dimensions of contrast which have binary values, combine closely related dimensions of contrast into ones that have multiple values, prepare

contrast questions to elicit missing attributes and new dimensions of contrast, conduct an interview to elicit needed data, and prepare a completed paradigm (Onwuegbuzie et al., 2012, p. 22).

Across cases, major themes were covered in a replication design. Again, the themes were compared to literal and theoretical propositions within the existing body of empirical literature on need-supportive teaching practices. The themes were then used to describe uniform and rival explanations of teachers' perspectives on the instructional processes necessary to support student motivational needs. The findings of this multiple-case study are presented in Chapter 4.

Quality of Research Design

Four common tests for judging the quality of research designs include construct validity, internal validity, external validity and reliability (Yin, 2009). For this case study, I used multiple sources to triangulate the data (refer to Table 3), chain of evidence (Appendix M), and member checking (Appendix J) in the data collection and case reporting phase of research to increase construct validity and credibility. Pattern matching and componential analysis were utilized for cross-case synthesis. These analytic tactics were means for achieving internal validity. With regard to external validity, replication logic was at the forefront for selecting the cases for data collection and relevant to the development of generalizations in this multiple-case study. Given the theoretical framework of SDT and need-supportive teaching discussed in chapter 2, data from each case was analyzed for similar findings (a literal replication) or divergent findings (a theoretical replication) to the literature on student motivation. To ensure integrity and trustworthiness in data collection, all procedures of data collection were disclosed at the beginning of the study. I outlined specific procedures for data collection and analysis as

evidenced in the case study protocol in Appendix K, which emphasizes transparency and confirmability.

Delimitations

This qualitative case study was delimited to exploring and highlighting classroom teachers' perceptions of motivational support and their reflections on instructional practices and classroom experiences. Furthermore, the inquiry focused primarily on the teachers' self-report of interactions, approaches, and support. This study contains a broad examination of how teachers feel about student motivation and the role they play in motivational support.

Ethical Considerations

This research study adhered to all guidelines of the university's Institutional Review Board (IRB) (see Appendix H). The informed consent process was fully executed with notification of protective measures for participation in this study (see Appendix D). The data from this study, including the names of the teachers and schools, were not disclosed anywhere in the study. Pseudonyms were used in place of the names in case profiles and school sites when necessary. Although all identifiers were removed, there was a low risk that remarks may still make the participant vulnerable to exposure. Participants were informed of the potential risks associated with their involvement. Efforts were made to maintain the participants' confidentiality and privacy.

Technology and Data Security

Technology security was prioritized. Digital research data was kept secure in protected data files on my personal computer. I established a secure wireless home network with private password encryption. I also utilized secure internet providers. My personal laptop computer was password protected and a secure mobile broadband network was used to maintain privacy.

Regarding data security, I provided safe storage of the interview transcripts, survey responses, notes with researcher reflections, and any other identifying information concerning the participating subjects in a protected data file on my personal computer and backed up to a secure external password-protected USB. All physical documents and notes will be kept in a locked file cabinet for three years following the completion of this study.

Role of the Researcher

Before I present the findings of this multiple case study, I should acknowledge my role, investment, and intentions in this research project. I have worked in the public school setting for nearly 15 years as a former special education teacher and now as a school psychologist. Experience as a school psychologist in middle and high schools gave me a bird's-eye view of the challenges of motivating students to learn. Throughout my career, I cultivated relationships with many stakeholders in numerous schools. This personal connection to education and established rapport was conducive to recruitment and data collection because I was the sole investigator soliciting participants, conducting interviews, and performing member checks.

My intention in this paper was to explore teacher perspectives of motivation to better understand the areas where theory to practice in K-12 education converge, diverge, and complement one another. In graduate school, I embraced the theoretical perspectives of motivation evident in educational research, but became critical of the application of said perspectives in everyday teaching practices. While completing a professional paper, I became enchanted with the needs theory of SDT and the practical applications for supporting students' motivation in school. I developed an interest in case study research and engaged in the iterative process of narrowing my topic, honing my questions, and rationalizing the methodological approach to this dissertation that would best fit my epistemological orientation as a pragmatist.

The current project is the product of this research decision-making process and my culminating experience as a doctoral student and practitioner in secondary schools.

Assumptions

One must note that this line of research is reminiscent of positive psychology and positive practice. Applied positive psychology is the application of positive psychology research to the facilitation of optimal functioning (Linley et al., 2004). The desired outcomes of positive psychology are characterized by happiness and well-being (Seligman, 2002). Positive psychology explores what is positive, creative, and fulfilling in human behavior. In other words, positive psychology is the scientific study of what people do right. The researcher approached this study with the assumption that classroom teachers are making positive contributions to the students' overall psychological well-being and the development towards more self-determined forms of motivation. Further, a key component of positive psychology is having strong, positive social relationships, which are the path to having a meaningful and fulfilling life (Seligman, 2002). Evidence of social support through teacher-student relationships and interactions in this study speaks to that aspect of positive psychology.

Summary

In Chapter 3, I discussed the research methodology of the current study. A multiple case study was conducted to characterize teachers' perceptions of motivational support and describe the decision-making process for teachers' supportive actions. The design and methods for this multiple-case study were explicitly detail in this chapter. This chapter included a description of procedures used for recruitment, sampling, data collection, and the analytic plan. Assumptions, issues related to limitations and trustworthiness were addressed at the end of the chapter. Chapter 4 contains a detailed discussion of the case study findings.

Chapter 4: Findings

Grounded in Self-Determination Theory (SDT), this multiple-case study allowed the researcher to investigate teachers' perceptions of motivational support in middle school. As discussed in Chapter 2, teacher characteristics such as beliefs, teaching efficacy, and motivating style influence how teachers support student motivation. The findings in this chapter illustrate the teachers' individual beliefs about the sources of student motivation along with the teachers' perceived role in motivational support. The chapter also contains descriptions of what teachers say and do to support student's need for competence, autonomy, and relatedness and comparisons to evidence-based strategies found in recent literature (Reeve, 2012; Stroet et al., 2015). The findings in this chapter are reported in two ways – via individual case profiles and cross case analysis of the emerging themes. Data from teachers' (n = 8) responses to an online questionnaire, video prompts, and interviews were used to inform the ongoing study.

Individual Case Profiles

This section presents eight case profiles of the teachers in the study. Individual case profiles were built according to each teacher's demographics, beliefs about the source of motivation, sense of efficacy, and perspectives about motivational need-support. The data from 3.5 hours of transcribed interviews and written responses containing 3,277 characters excluding spaces were coded and grouped into categories for pattern-matching related to research questions one, two, and three. The data are presented here in the following way: first, teachers' beliefs on student motivation and efficacy, second, behavioral manifestations of expressed needs teachers observed in the video relative to their rating of student motivation level (low, average, and high), and third, instructional strategies these teachers would use with students at each level of

motivation. Then, the researcher aligned categories of instructional strategies with the dimensions of educational approaches defined in the literature as need-supportive.

Cindy

Cindy, the youngest teacher in the study, is a seventh grade teacher in the History department at a junior high school in North Local School District. She works part-time at a retail store in the evenings. Cindy was one of the first teachers who agreed to participate in the study. She promptly completed the survey online and scheduled the interview for the day after she was contacted. Cindy was interviewed by phone. She was prepared for the interview and acknowledged that she went back to her email to refresh her memory about the study. Cindy often answered the interview questions with examples of interactions with her students. She was more likely to provide a detailed description of an interaction to support the answers to particular questions. In several instances, she offered more than one example of a particular teaching behavior or interaction. She answered questions easily and quickly, but wanted to be helpful and clear with her answers as evidenced by her saying “does that answer your question?” or “you know what I mean?” throughout the interview.

Beliefs about the source of student motivation and teaching efficacy. Cindy’s interview and survey data were analyzed through qualitative narrative analysis to get an understanding about her beliefs on student motivation. Cindy placed strong emphasis on the influence of the home environment as the source of students’ motivation. In her interview, she discussed wanting more support from parents and argued that parents should take more responsibility in getting students motivated for school. Nonetheless, Cindy believed that supporting student motivation in the school setting is also important.

Based on her responses on the online questionnaire, Cindy rated her sense of teaching efficacy as low relative to the other teachers in the study. She had the lowest frequency of high scores on the Teacher Efficacy Scale questions. Qualitative analysis of her survey data indicated that she agreed slightly more than disagreed that she can get through to the most difficult or unmotivated student. She appeared to be more assured in her ability to redirect disruptive students. Consistent with her beliefs about the source of motivation, Cindy agreed with the statement that learning is related to family background. In her opinion, if students are not disciplined at home, they are not likely to accept discipline at school.

Observations of students' expressed needs. Students' basic psychological needs are innate, but are expressed through behavioral manifestations or outcomes relative to the classroom environment and the teacher's support. In this case study, teachers had to observe student behaviors as indicators of students' expressed needs. As discussed in chapter 3, teachers watched three video prompts and were asked to rate the students' motivation and describe the observed behaviors that correspond to the rating of low, average, or high motivation. Cindy's rating of the students' motivation was consistent with the rating assigned to each student in the videos (Table 25). For the student with average motivation, Cindy stated, "He confidently shares his answers." Whereas the student with low motivation showed a lack of confidence because the student did not speak loudly and needed prompting, Cindy observed that the student with high motivation "took ownership of the lesson and confidently delivered it."

Cindy referred to confidence several times in her written responses and interview, which suggests that she sees confidence as an indicator of perceived motivation level. Confidence is defined as self-reliance on one's own abilities and qualities and appears to be an expression of a fulfilled need for competence. In needs theory, competence is the need to feel effective and

capable at tasks (Ryan & Deci, 2002). According to Cindy, lack of confidence in students was manifested in their difficulty starting tasks, quieter speech, and need for prompting. This observation indicates a negative outcome of an unfulfilled need for competence for the student with lower motivation. Furthermore, in general, the students' observed confidence in completing work, sharing answers, and delivering lessons to classmates appeared to be a positive outcome of a satisfied need for competence in students with higher levels of motivation. SDT considers perceived competence as one of the primary psychological predictors of motivational, dynamic well-being, and performance (Trouilloud, Sarrazin, Bressoux, & Bois, 2006).

The analysis of Cindy's written and interview responses produced categories of observed behaviors related to student discourse and work completion. In this case, student discourse referred to the ways in which students convey information or express thoughts and feelings in spoken language. Behaviors such as giving one-word answers and having difficulty starting tasks would suggest that a student's needs for autonomy and competence are not being met. Similarly, Cindy reported in her interview that she observed students who do not volunteer answers or speak when called upon. From Cindy's point of view, those behaviors are associated with students having lower motivational levels. Conversely, work completion for the student rated with average motivation suggests that the need for competence was at some level being fulfilled. Overall, Cindy more readily observed behaviors that give indications of need for competence.

Instructional strategies implemented in the classroom. Upon review of the three video prompts, Cindy listed instructional strategies that she would implement to support the students' motivation according to her rating of them. For the student perceived as having low motivation, Cindy wrote that she would "find interests of the student and try to connect those (interests) to the lessons." Cindy's assessment of students' interests is a strategy consistent with

autonomy-supportive educational approaches because it is an act of instruction to identify, nurture, and develop the less motivated students' inner motivational resources and interests (Reeve, 2009). Cindy stated, "Once I know the students' interest, then I can use that information to guide classroom activities...so maybe they would participate more." The following table shows Cindy's rating of student motivation and categories of instructional strategies that she would use at each level (Table 8). Patterns were identified by looking for a correspondence between two or more categories (Creswell, 2007). There were no consistent patterns in Cindy's descriptions of instructional strategies she would use specifically for the students identified as having average and high motivation.

Table 8. Strategies Relative to Cindy's Rating of Student Motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Video #1	Low	Assessment of Student Interest	Inquiring about student interests	Find interests of the student and try to connect those to the lessons	Autonomy-support, Involvement
Video #2	Average	No evident pattern			
Video #3	High	No evident pattern			

Data from Cindy's interview and survey responses revealed that she used instructional strategies that demonstrate her involvement based on language in the research on need supportive teaching. A comparison of the general terms in her survey responses and the explicit strategies articulated by Cindy in her interview is presented in Table 9. In general, Cindy

worked on developing students' motivation by encouraging participation, building leadership, demonstrating interests in student preferences, and providing affirmations through praise.

Table 9. Teacher Strategies Related to Dimensions of Need-supportive Teaching

Category	Interview	Survey Responses	Dimension of Need-supportive teaching
Teacher Attunement	try to get them to participate more by prompting, keep involving them, validate what they say, point out positives, build leadership	showing affection toward students, dedicating personal resources (e.g. time, attention, and energy), being accessible to students, conveying warmth, care and respect toward students and maintaining close physical proximity to students	Involvement, Autonomy Supportive

In summary, Cindy responds to students with low motivation by assessing their interests in order to make connections to the lesson, which is an approach that supports students' autonomy. Although Cindy did not endorse the statement "allow students' interests and preferences to guide the classroom activity," her survey responses suggested that she would inquire about students' interests. With respect to all her students in general, Cindy's acts of involvement were evident in the following statements throughout her interview: "I try to get them to participate more by prompting and I continue to point out the positives," "keep involving them and validating what they say," "praise them and allow them to lead more activities and maybe even allow them to mentor other students... at lower skill levels." In this case, praise and affirmation allow Cindy to convey warmth, care, and respect. Such an attitude is also indicative of autonomy-support as offers of encouragement (Reeve & Jang, 2006). Cindy's perception of leadership was nuanced in her observation of student behaviors as well as in her self-reported

instructional strategies. One example of leadership behavior she provided was leading without assistance, and an example of a general strategy was building leadership in the classroom.

Mary

Mary is an African-American seventh grade English teacher at a middle school in Community School District. Mary is in her early 40s, and teaching is her second career. Previously, Mary had worked as a loan originator for a large commercial bank in Ohio. Mary discovered a love of teaching while working with the youth group at her church while raising her two boys, now 8 and 11. Mary has been involved in many aspects of education in her seven years of teaching. She represents her building as a member of the teachers' association, a member of the social committee and is a passionate member of the collective bargaining team for the district. Mary can be found every month attending the district's board of education meetings with a notepad in hand. From our conversation, it was apparent that Mary had a passion for educating students.

Beliefs about the source of student motivation and teaching efficacy. Mary believes that motivation is rooted in the home environment. Specifically, Mary shared that students' motivation comes from his or her parent. Mary sees motivation as multidimensional and suggests that other variables may exist that affect a student's motivation. She admitted, "There may be other factors or possibilities as to why a student is not motivated." Mary gave the impression that it is the teacher's job to find out what motivates students to engage in learning.

Compared to other teachers in the study, Mary had the highest rating of teaching efficacy (See Table 24). She endorsed high scores on all ten items on the Teacher Efficacy Scale, indicating a strong sense of efficacy. Qualitative analysis of her survey data suggests that she is confident in her ability to redirect students' misbehavior, to accurately assess the correct level of

task difficulty, and to increase retention of previously learned materials. She moderately agrees that she can get through to the most difficult or unmotivated students. Mary attributes her ability to motivate students with the positive relationships she has with her students. Mary believes that supporting student motivation is very important.

Observations of students' expressed needs. Mary described the observed behaviors that correspond to her rating of each student's motivation level. Mary rated the low student in Video #1 as reluctant, but engaged. Student discourse was one category of behaviors that Mary noticed in the video, which was defined as things said, written, or done in reaction to teacher instruction or interaction. In her observation, the first student answered the teacher's questions, wrote down responses, and gave a justification for his answer, actions which express his need for competence. Mary rated the student in Video #2 as having high motivation. She observed that he spoke loudly, repeated responses, and was eager to give answers and expand upon them. The latter are all examples of behaviors related to student discourse in the classroom.

For the students she described as highly motivated, forms of engagement were evidenced by eye contact and listening. She added, "They follow procedures, run activities, and are engaged in the lesson." In general, Mary's interview revealed that she perceived engagement as an indicator of high motivation and lack of engagement as an indicator of low motivation. In Mary's case, students' engagement in academic learning was shaped by the extent to which their verbal and nonverbal interactions within the social context fulfill the three basic psychological needs.

Instructional strategies. Mary listed instructional strategies she would implement that corresponded to her rating of the three students' motivation levels depicted in the videos. Data from her written responses showed that she would support the reluctant student in Video #1 by

trying to “get to know him more.” She would determine whether he was shy, got easily embarrassed, or was interested in the topic. Mary claimed that she tries to “learn about the students’ interests to help tie lessons to make a personal connection.” Mary’s assessment of the students’ interest is a strategy indicative of teacher’s involvement and autonomy-support. For the student with average motivation, there were no evident relationships noted among her written responses and interview. Again, patterns were only highlighted when two or more categories of instructional strategies corresponded (Creswell, 2007). Intent on encouraging group interaction for the student with high motivation, Mary leaned toward instructional strategies that would “encourage the student to interact with classmates during pairing activities.” Group interaction refers to structured activities that emphasize cooperative learning. How classroom participants act together can support how students engage and feel in relation to others, which is central to students’ motivation (Gresalfi, Barnes, & Cross, 2012). Table 10 presents the categories of instructional strategies reported by Mary according to her rating.

Table 10. Strategies Relative to Mary’s Rating of Student Motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Low (Video #1)	Low	Assessment of student interest	Inquiring about student interests	I would try to get to know him more. Learn about the students’ interests to help tie lessons to a personal connection	Autonomy-support
Average (Video #2)	Average	No Evident Pattern			
High (Video #3)	High	Group Interaction	Structured activities that emphasize cooperative learning	Encourage him to interact with his classmates during pairing activities, continue to encourage ideas and	Structure

Data from Mary's interviews and written responses were coded and categorized to illustrate the most frequent types of strategies she used in her classroom. Mary reported she offers praise to all of her students. She stated that she "praises the work that her students have done and encourage ideas and collaboration." This finding supports existing literature, which claims that the more students perceived that their teacher provided positive feedback (praise and encouragement), the more they felt their needs to be competent, autonomous, and related to their classmates were satisfied. Examples of Mary's instructional strategies shared in her interview were compared to her survey responses and aligned with the dimensions of need-supportive teaching; the results are presented in table 11.

Table 11. Teacher Strategies Related to Dimensions of Need-supportive Teaching

Category	Interview	Survey Responses	Dimension of need-supportive teaching
Emphasis on academics	Praise for work completion, determine if high interest topic, create opportunities for collaboration in group activities, encourage ideas and interaction with peers, help with lessons	Providing guidance and help giving encouragement, providing instructional feedback, offering clear and detailed expectations and instruction, establishing order scaffold skill-building test	Structure, Autonomy-supportive

In all, twelve initial codes informed the categories of instructional strategies Mary utilizes in her classroom. Findings suggest that Mary's reported instructional strategies relate to academics and learning. Mary mentioned in her interview that she gives praise for work

completion, asks about student interests to determine topics of high interest, creates opportunities for collaboration in group activities, encourages ideas and interaction with peers, and gives help with lessons. Mary's ideal strategies are considered structured and indicative of autonomy-support according to the literature on need-supportive teaching. Evidence shows that when teachers provide more structure, students tend to be more motivated and engaged (Stroet et al., 2013).

Tiffany

Tiffany has been teaching for over 20 years. She is a special education teacher at the junior high school in North Local School District. Compared to the others in the study, Tiffany was the only teacher who recalled learning about topics related to Self-determination Theory (SDT) from college courses, webinars, internet, and from observing the teaching practices of other colleagues. Tiffany allowed me to visit her classroom for the face-to-face interview. There were several short interruptions to the interview from other faculty members asking her questions. Tiffany appeared to be a firm teacher with no-nonsense tactics. Her answers to questions were very direct and matter-of-fact. She emanated a type of wisdom that is synonymous with a veteran teacher. She easily multi-tasked by cutting papers for an assignment while participating in the interview. With Tiffany, eye contact was variable. At times, she would stare with large eyes when making a point to be clear. At other times, she seemed distracted by other actions; yet, she was able to maintain the flow of conversation in the interview.

Beliefs about the source of student motivation and teaching efficacy. Data from Tiffany's interview and questionnaire data revealed that she believes in the interdependence between the teacher and students as the source of motivation. She mentioned the individual

student as the initial source of motivation stating that “students want to see what the school can offer them.” She stated that students want schools to be mindful of their individual needs for advancement, and through that process motivation derives. Besides the students themselves, Tiffany believes that teachers are the secondary source of motivation. In her opinion, motivation is “nurtured and developed by the teacher.”

Tiffany believes that supporting student motivation is very important. She endorsed 5 of the 10 items on the Teacher Efficacy Scale, indicating a moderate sense of teaching efficacy when compared to other teachers in the study. Qualitative analysis of Tiffany’s survey data showed that she believes she has the knowledge and skills needed to support students’ motivational needs for autonomy, competence, and relatedness. She feels assured that she knows some techniques to quickly redirect a student who becomes disruptive and noisy. Tiffany is confident that if one of her students could not do a class assignment, she would be able to accurately assess whether the assignment was at the correct level of difficulty. Tiffany moderately agrees that she can get through to even the most difficult or unmotivated students. From Tiffany’s perspective, the amount a student can learn is not primarily related to family background even though she believes that teachers are very limited in what they can achieve due to the large influence of a student’s home environment on his or her achievement. She disagrees with the statement that teachers cannot do much because most of student’s motivation and performance depends on his or her home environment.

Observations of students’ expressed needs. Tiffany found it hard to gauge the level of motivation for the student depicted as having low motivation. Data from Tiffany’s interview and written responses were coded and categorized to illustrate the most frequent types of behaviors she observed as indicators of expressed need. She observed a pattern of behaviors related to the

personal disposition and characteristics of the student's personality for the student with low motivation. Tiffany stated that he had difficulty answering questions, lacked eye contact, and looked lethargic and needed prompting. She questioned whether the first student possessed the skills to articulate how he felt. Data from Tiffany's interview suggest that she generally characterizes a student with low motivation as one who exhibits negative behaviors, does not participate in class activities, engages in off-task behaviors, refuses to complete academic tasks, has an unwillingness to share in class discussions, and does not want to attend school regularly. These behaviors are likely outcomes of unfulfilled needs for all areas of autonomy, competence, and relatedness. For example, a student may feel less competent, experience limited feelings of autonomy when giving a response, or lack confidence in risk-taking that may influence participation in academic discussions or activities.

In general, Tiffany characterizes a highly motivated student as one who comes to class or school early and works hard to complete assignments. Tiffany also observed behaviors related to engagement with the highly motivated student. Tiffany described the behavior of this student as "engaged, knowledgeable about strategies, and at ease with student-led activities." In needs theory, competence is the need to feel effective and capable at tasks (Deci & Ryan, 2000). In this case, behaviors associated with positive engagement are outcomes of conditions that afford need satisfaction for competence.

Instructional Strategies. The results of Tiffany's written responses from the video prompts did not indicate any obvious patterns of strategies she implemented for students rated with average or high motivation. In fact, Tiffany's hesitance to differentiate her instructional strategies was apparent in her inconsistent rating of the student's motivation in the videos. Nonetheless, Tiffany noted implementing instructional strategies related to the assessment of

student interests for the student in Video #1 whose motivational level was “hard to gauge.”

Tiffany wrote that she would ask about his interests and personal experiences as shown in Table 12.

Table 12. Strategies Relative to Tiffany’s Rating of Student Motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Low Video #1	Hard to gauge	Assessment of Student Interest	Inquiring about student interests and preferences	Ask about his interest, personal experiences	Autonomy-Supportive
Average Video #2	High	No Evident Pattern			
High Video #3	High	No Evident Pattern			

One major finding from Tiffany’s interview and written responses was that she uses strategies that foster relevance in learning which supports students’ need for autonomy. In general, Tiffany acknowledged that she probes her students for personal interests. She builds relationships with her students by asking questions and planning lessons that are relevant to students while considering factors such as culture, ethnicity, age, and current “nuances” or trends. She stated, “I rely on whatever draws students into a lesson.” She looks for ways to link relevant topics to the academic standards. Tiffany was the only teacher who explained that she allows her students multiple ways to express their learning and uses alternate methods of assessment, which is indicative of an autonomy-supportive motivating style consistent with a student-centered learning approach.

Table 13 presents the strategies Tiffany uses that support students’ needs. Tiffany’s data also suggests that she regularly facilitates opportunities for student collaboration through

partnered activities, which in her opinion builds mastery. These approaches are essential for creating autonomy-supportive classroom conditions. Tiffany listens to her students and allows them to speak freely and share their ideas according to classroom rules and guidelines. The guidelines that Tiffany puts forth and the feedback that she gives and gets back are indicative of a structured educational approach. Tiffany stated, “I’m learning and they’re learning,” implying the existence of bidirectional interactions between the teacher and students (Bronfenbrenner, 2006).

Table 13. Teacher Strategies Related to Dimensions of Need-supportive Teaching

Category	Interview	Survey Responses	Dimension of need-supportive teaching
Relevance in learning, assessment of student interests	Incorporate student in decision making, Ask about his interest, personal experiences, plan relevant lessons, allow multiple ways of learning, link relevance to standards, build mastery, gauge academic level	Allow students' interests and preferences to guide their classroom activity, give students choice	Autonomy-Supportive
Facilitate student collaboration	Provide positive feedback, have guidelines, encourage interaction with students though sharing	Provide guidance and help, give encouragement, provide instructional feedback, offer clear and detailed expectations and instruction, establish order scaffold skill-building test	Structure
Teacher attunement	Listen to students, give praise, build relationships	Show affection toward students, express attunement, dedicate personal resources (e.g. time, attention & energy), accessible to students, convey warmth, care and respect toward students, maintain close physical proximity to students	Involvement

When she was asked how she makes adjustments to her instructional practices, there was an obvious and apparent pause followed by a deep sigh. Unlike responses to the previous questions, Tiffany did not have a ready answer to this question. Tiffany engages in ongoing assessments of her students and makes conscious decisions about what students need individually. She attempts to gauge where her students are academically with regard to retention of skills and acquired knowledge. She interacts individually with students to determine their

level of comfort and willingness to participate in classroom activities. She gives her students the autonomy to choose what they want to do to feel more comfortable. In summary, Tiffany appears attuned to her students' individual needs. She is aware of the differences in students' rate of learning, responses to strategies, and retention of academic material. Her approach to instruction is student-centered while stressing the importance of ongoing assessment, positive reinforcement, collaborative dialogue, and building classroom culture.

Monica

Monica presented as a fiery, red head on her Skype interview. Her soft voice did not seem congruent with the short, red hairstyle. On the questionnaire, Monica noted that she implements strategies to support students' individual motivational needs only sometimes whereas the other teachers with a master's degree in the study stated that they always or almost always implement motivational strategies. Unlike others, Monica believes that the climate at her school in North Local School District is not conducive to supporting students' motivational needs and engagement because of the negative atmosphere and teacher burnout. Monica believes that the support from colleagues helps her support students' motivational needs and engage in the practice of need-supportive teaching.

Beliefs about the source of student motivation and teaching efficacy. Analysis of Monica's interview data revealed that she believes that the source of motivation derives from within the individual. Monica strongly disagrees with the statement that the amount a student can learn is primarily related to family background.

I see it at both spectrums. I've had a student that had great, supportive parents... both with college degrees and good jobs, that run a tight ship and provide every support under the sun, but the kid just doesn't get their act together... I've also seen it where my most

motivated student comes from a home where parents are not really involved in school, do not come to parent-teacher conference, rightfully so because of work or whatever... but despite it all he showed drive and the desire to do well in school... so I see it both ways, but I think it comes from whether the student wants to succeed in life or not.

Based on Monica's responses, her level of teaching efficacy was considered high (See Table 24). She strongly agrees that she can accurately assess level of task difficulty and use techniques to redirect disruptive students.

Observations of students' expressed needs. In response to the video prompts, Monica described student behaviors that were indicators of low, average, and high motivation. Monica's ratings were commensurate with the pre-assigned levels, and she was in agreement with most of the other teachers in the study. Monica described the most behaviors for the student depicted as having low motivation. She observed that the student identified as having low motivation interacted with the teacher, but was reluctant. Monica described the less motivated student as "lazy." Data from Monica's interview and written responses revealed observations of nonverbal body language for the student with low motivation such as blank affect and poor eye contact. These behaviors could be attributed to the student's low level of perceived competence and conditions that do not satisfy the need for relatedness. If so, the researchers then suggest that a teacher's warm and caring involvement and support from classmates could have great significance for fostering self-regulation and students' academic initiative (Danielsen, Breivik, & Wold, 2011). Without such support, the reported personal characteristics could also influence opportunities for him to feel involved with peers and teacher.

Conversely, the student Monica identified as having an average level of motivation showed positive behavioral manifestations. Monica noted that the student participated in

discussions, answered quickly, and had eyes on the speaker, suggesting a higher level of engagement. In her observation of the highly motivated student, Monica emphasized a pattern of student actions, which, in this case, is defined as autonomous motivation as evidenced by the student's participation, collaboration about the lesson, and the ability to follow the student-centered procedures set forth by the teacher. The use of procedures and control of learning are both meeting needs for autonomy and competence. Monica endorsed themes of general behaviors that were not only student-centered but that also affect engagement.

Instructional Strategies. Monica identified the student in the first video as having low motivation. For this student, Monica's attentiveness to student preferences and interests by administering an interest survey demonstrates her support for the student's autonomy. If she were his teacher, Monica would relate the student's responses to the real world. She would "find out what kind of job (career) the student was interested in and start speaking towards that interest." Using initial codes related to interaction such as having conversations and speaking with the students about their experiences allows Monica to get to know her students. She noted, "I might also have some type of interaction with him outside the assignment or classroom." Implicit in Monica's statement is the nature of interactions between the student and herself. By interacting with him, she demonstrates her involvement. For the students she identified as having average and high motivation, Monica did not report that she would do anything different as shown in Table 14.

Table 14. Strategies Relative to Monica's Rating of Student Motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Low Video #1	Low	Interaction	Reciprocal action or influence between the teacher and peers	Keep interacting with him. Have conversations about things that interest the student.	Autonomy-supportive, Involvement
Average Video #2	Average	Student Interest	Attentiveness to student preferences, assessment of student interests	Administer interests survey	
High Video #3	High	No Evident Pattern			

In her interview, Monica would support this student's motivational needs in the classroom by speaking with the students about his or her experiences, things the student enjoys, and those he or she would change. Monica's strong emphasis on interacting with her students is consistent with the provision of involvement in research on educational practices that support students' need for relatedness. When students' needs are met through positive interactions with school social partners and the creation of a positive classroom climate, they tend to have better educational outcomes such as enhanced academic motivation, well-being, greater intrinsic motivation, improved academic achievement, and full engagement (Deci & Ryan, 1985).

Table 15. Teacher Strategies Related to Dimensions of Need-supportive Teaching

Category	Interview	Survey Response	Dimension of need-supportive teaching
Relevance in learning	Relate the student's response to the real world, find out what kind of job the student was interested in and start speaking towards that interest. Provide opportunities for them to be in control of their learning	Be responsive the student generated question, offer hints, provide praise as informational feedback, provide explanatory rationales, allow students time to work on problems in their own way, give students choice, display patience and spend time listening, communicate perspective-taking statements, and allow student s' interests and preferences to guide their classroom activity	Autonomy-supportive
Teacher Attunement	Ask questions about enjoyment, speak with student about experiences, have conversations about interests, interactions outside of the classroom	Show affection toward students, express attunement, dedicate personal resources (e.g. time, attention & energy), accessible to students, convey warmth, care and respect toward students, maintain close physical proximity to students	Involvement
Classroom Culture	Reinforce behaviors, praise, provide opportunities, teach respect	Provide guidance and help, give encouragement, provide instructional feedback, offer clear and detailed expectations and instruction, establish order scaffold skill-building test	Structure

In general, Monica implements instructional strategies that foster relevance in learning, classroom culture, and teacher attunement as outlined in Table 15. Monica provides opportunities for students to be in control of their learning. She emphasized attunement she

achieves by making personal connections with her students, asking questions about what they enjoy, and speaking with them about their experiences and interests outside of the classroom. Data from Monica's interview revealed that she routinely implements instructional strategies associated with classroom culture. That is, Monica reinforces her students' behaviors, gives positive praise, provides opportunities to engage with others, and teaches respect for one another in the classroom. Monica's structured educational approaches are characterized by three instructional behaviors, which involve the communication of clear and understandable guidelines and expectations (Vansteenkiste et al., 2012), the provision of help and support during activities (Jang et al., 2010), and providing relevant feedback and optimally challenging tasks (Niemic & Ryan, 2009).

Melissa

Melissa is a seventh grade teacher at Community School District. She has been teaching for 18 years at several schools within the district. To characterize Melissa's position within this study, the researcher constantly had to ask for clarification and elaboration because her responses to the online questionnaire and interview questions were limited. She did not elaborate unless probed. Member checking proved to be more significant for Melissa in explaining her responses with further detail.

Beliefs about the source of student motivation and teaching efficacy. Melissa believes that motivation is rooted in the home environment from parents. In her opinion, supporting student motivation is very important to the development of classroom culture. Melissa's teaching efficacy appeared to be at a moderate level relative to the other participants. She felt confident in her ability to assess the correct level of assignment difficulty, to increase retention of previously learned concepts, and to redirect misbehavior or poor engagement.

Melissa believed that learning is related to family background. Regardless of the degree of discipline at home, Melissa felt effective in her ability to discipline and manage the classroom setting. According to her, she is able to get through to unmotivated students, but also thinks that teachers are limited in what they can achieve because of the large influence the home environment has on a student's motivation.

Observation of students' expressed needs. Findings from Melissa's responses to the first video prompt showed a pattern of observed behaviors related to the student's personal disposition, which for her was an indicator of low motivation. For the student depicted in the video as having low motivation, she specifically pointed out behaviors related to personal disposition, such as being reserved, shy, and disengaged. Melissa stated in her interview that students are sometimes overlooked if quiet: "depending on the student, if he is a reserved person... if he is engaged in learning, perhaps he did not have a clear understanding of the tasks given." Based on Melissa's perception, motivation is measured by the level of engagement and understanding of academic material. For the student with high motivation, she reported behaviors related to engagement. Melissa observed that the highly motivated student was engaged in learning and engaged with peers, which fulfills need for relatedness, competence, and autonomy. There were no obvious patterns of specific behaviors for the student with average motivation.

Data from Melissa's written responses revealed initial codes of observed behaviors related to engagement and academic performance. Melissa described behaviors that relate to academic performance such as understanding of tasks, work completion, and student discourse. According to Melissa, students with low motivation demonstrate poor work completion, have attendance issues, and do not ask questions in class. On the other hand, students who are more

motivated toward academic tasks tend to answer questions aloud, complete assignments, and show increased engagement. Lack of engagement and attendance were factors that generally impact student motivation and need satisfaction.

Instructional Strategies. Results of this analysis of strategies report suggest that Melissa tends to implement strategies that emphasize student interaction in cooperative groups, particularly for students with low motivation. According to her written response, she finds something that interests him or assigns him to a task in a group where he's actively involved with the group. Melissa reported that she would also assign a role in a group for the student who is described as having average motivation. Melissa described her general strategy in response to highly motivated students: she lets them own their learning. This pattern of student-centered learning develops in emotionally supportive and safe environments that cultivate students' self-reliance and confidence to try new things (Luckner & Pianta, 2011). Within the context of that relationship, students can experience their own sense of autonomy and engagement (Reeve & Jang, 2006). In response to the video prompt, Melissa explained she would assign a task in a group and actively involve the student. Again, there were no evident patterns found for specific or general strategies for the average and highly motivated students by Melissa.

Table 16. Strategies Relative to Melissa's Rating of Student Motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Low Video #1	Low	Group Interaction	Putting students together for a structured activity, reciprocal action between teacher and student	Assign him to a task in a group where he's actively involved with the group.	Autonomy, Involvement
Average Video #2	Average	No Evident Pattern			
High Video #3	High	No Evident Pattern			

Data from Melissa's interview and survey revealed a pattern of instructional strategies that support students' need for autonomy. A comparison of Melissa's responses from her interview and survey is presented in table 17.

Table 17. Teacher Strategies Related to Dimensions of Need-supportive Teaching

Category	Interview	Survey Response	Dimension of need-supportive teaching
Student-centered learning, Emphasis on academic	Scaffold learning, ask questions, give word banks, let students own their learning, assign tasks	Be responsive to student-generated questions, offer hints, provide praise as informational feedback, provide explanatory rationales, display patience, give students choice	Autonomy-supportive

In general, Melissa's instructional strategies that emerged included the following: student-centered learning and teacher's actions that promote learning. Ownership of one's learning and leadership are manifestations of support for autonomy. Melissa's actions promote learning. Examples of instructional strategies routinely used in her class are assigning tasks, scaffolding learning, and giving students appropriate resources, such as word banks. She does not recall learning about topics related to SDT, but contends that she always implements strategies to support students' motivational needs. She believes that making provisions for autonomy support, structure, and involvement is very important for supporting students.

Rachel

Rachel is a Special Education Teacher in City School District. She works at the only traditional middle school in the study that has grades 6 through 8. She has been teaching in the field for 19 years previously as a 5th grade middle school Social Studies teacher and special education department chair. She noted that she implements strategies to support students' motivational needs only sometimes; however, she employs several strategies that are considered supportive of student's autonomy, structure, and involvement. According to Rachel, these provisions are very important for supporting student's needs.

Beliefs about the source of student motivation and teaching efficacy. Rachel believes students derive their motivation from many sources. In Rachel's opinion, parents are the primary motivators. When students do not get support at home, teachers serve as an additional source of motivation. According to her, it is the teacher's responsibility to show love, provide positive reinforcement, give verbal praise, and build upon the students' academic progress. It is the teacher's role to function as the students' support system outside of the child's home and typical neighborhood. Rachel was the only teacher interviewed who named a third external source of

motivation – she pointed to guest speakers from local businesses and organizations outside of the school that may sponsor activities or events. In Rachel’s opinion, multiple sources from a variety of settings may influence any aspect of a child’s life and contribute to the students’ overall motivation level.

Compared to other teachers in the study, Rachel endorsed 9 of 10 items on the Teacher Efficacy Scale with high scores indicating a strong sense of general and practical teaching efficacy. Regarding her teaching practice, Rachel is confident that she can get through to the most difficult and unmotivated students and accurately assess their correct level of task difficulty. She knows techniques to redirect disruptive and noisy students and to increase student retention in subsequent lessons if the student does not remember information from the previously learned lesson. She believes that teachers can motivate students regardless of the fact that a student’s motivation and performance most depend on the home environments. Although she admits that the home environment has a significant influence on a child’s motivation, Rachel strongly disagrees that students cannot accept discipline at school if they are not disciplined at home. Rachel is confident in her classroom management techniques and her ability to impact student behavior and motivation.

Observation of students’ expressed needs. In her review of the video prompts, Rachel’s ratings of student motivation were in disagreement with the assigned ratings in the videos. Among the three videos, she did not perceive any of the students displaying low motivation. She rated the student in Video #1 as having average motivation. Rachel did not observe any patterns of specific behaviors related to her ratings other than the fact that she paid attention to the students’ body language.

Data from her interview and written responses revealed Rachel's tendency to note negative behaviors. In Rachel's experience, students characterized as having low motivation tend to engage in inappropriate behaviors, verbal aggression toward the teacher, have an extensive school discipline record or suspensions. Rachel reported feeling challenged by students who do not have appropriate behavior skills for school. In her interview, she shared an example of a student who was hungry and misbehaved at school. Rachel stated:

One particular day, I knew he wasn't getting the support that he needed with the people that he was staying with... I had to get him something to eat. He would say "I'm hungry, I'm hungry"... and there were times when I had to go buy a cheeseburger and told him to put it in his bag so they (caregivers) won't take it from him because I think they were taking food from him... how can I expect him to be engaged when dealing with all of that.

In this case, a student had basic underlying needs beyond autonomy, competence, and relatedness such as an unmet physiological need – a situation that may be better explained by Maslow's hierarchy of needs (Maslow, 1943).

Findings also suggest that Rachel pays close attention to student output and demonstrations of engagement. Rachel's data revealed behavioral patterns related to student discourse and verbal interaction with the teacher and peers. For example, she shared that highly motivated students in her class routinely interact with the whole group by answering questions, participating in discussions, and engaging with other learners. These behaviors were aimed at getting needs met for relatedness and competence. On the other hand, Rachel describes the highly motivated student as excited to learn, top of the class academically, and having appropriate behavior and high expectations. Among the general factors Rachel observed that

influence engagement with particular emphasis on negative behaviors were students' personal disposition, body language, externalized problems, which may all be indicative of disaffection, and need frustration. It is apparent that Rachel places emphasis on student behavior as a manifestation of motivational need and uses her classroom management techniques as a guide for whether she is giving the "support" that students need.

Instructional Strategies. For the student perceived as having low motivation, Rachel would ask questions to get the student involved, allow him to partner up with his choice partner, and give him a choice of activities discovered through an interest survey. Rachel would make provisions of autonomy-support for the student with low motivation by inquiring about the student's interests and allowing him or her to make decisions about his or her learning. All these strategies have the goal of making learning more relevant to the student. Based on Rachel's ratings, she did not describe any patterns of distinct strategies she would use to support a student with high motivation as shown in Table 18.

Table 18. Strategies relative to Rachel's rating of student motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Low (Video #1)	Average	Give choice	Allowed to make decisions regarding their learning	Use questioning techniques, allow choice of partner, choice of activities discovered through an interest survey	Autonomy-supportive
Average (Video #2)	Average	Assessment of Student Interest	Inquiring about student interests and preferences		
High (Video #3)	High	No Evident Pattern			

Data from Rachel's interview and survey responses revealed ideal strategies that she uses in her classroom that support student motivation. General categories of Rachel's instructional approaches emerged that included the assessment of student interests, making learning relevant, classroom culture, and Rachel's specific teacher characteristics that make support conducive to the learning environment. These instructional strategies were related to dimensions of need-supportive teaching and presented in Table 19.

Table 19. Teacher strategies related to dimensions of need-supportive teaching

Category	Interview	Survey Response	Dimension of need-supportive teaching
Assessment of student interests, Relevance in learning	Verbal praise, positive reinforcement, engaging activities, plan lessons according to student interest, give choice	Providing choice, positive feedback, task relevance acknowledging students' feelings, and minimizing the use of pressure to control behavior	Autonomy-supportive
Teacher Attunement	Give individualized attention and close relationships, spend time with them	showing affection toward students, dedicating personal resources (e.g. time, attention, and energy), being accessible to students, conveying warmth, care and respect toward students and maintaining close physical proximity to students	Involvement
Classroom culture	Clear, high expectations, help students by breaking-down assignments, use rewards, token boards,	Provide guidance and help, give encouragement, provide instructional feedback, offer clear and detailed expectations and instruction, establish order scaffold skill-building tasks	Structure

At the forefront of Rachel's instructional and motivational decisions are student assessments. From the online questionnaire, Rachel appeared to be one of two teachers who acknowledged allowing students' interests and preferences to guide their classroom activities. Inquiring about student interests is her way of showing involvement through making lessons more relevant and meaningful. Rachel also assesses her students' academic needs by evaluating applicable skills. For challenging students, she attempts to "take an interest in the student to learn more about his or her needs, goals and wants." Not only do these strategies demonstrate her involvement, but they also show her support for students' autonomy.

Findings also indicate that Rachel uses strategies necessary for the establishment of classroom culture. By creating a particular classroom culture Rachel aims to instill values and behavioral expectations, which is indicative of structure. Rachel has clear and high expectations for her students. She challenges them, reinforces behaviors, and builds leadership skills. Rachel uses praise to support autonomy while the other teachers in this study from City School District do not. Rachel evaluates her own motivational strategies through her students' responses to daily behavior charts and other structured guidelines within the classroom. She tries to maintain a 3 to 1 ratio of positive reinforcement to negative attention. These are all examples of structure. With regard to her attunement, Rachel gives individualized attention, spends time with her students, and maintains close relationships through personal connections. Rachel stressed the importance of consistency and trying new things, which is need-supportive on all dimensions for autonomy-support, structure, and involvement. Rachel makes self-evaluations to make sure she is supporting academic and future learning goals.

Terri

Terri was the only 6th grade teacher in the study from a middle school in City School District. She has a master's plus degree with over 21 years of teaching experience. She was among the three eldest teachers in the study sample. Terri has previous experience as a librarian, administrator, and classroom teacher. She taught at seven different schools across her career, primarily in low-income, inner city schools in Ohio. Currently, Terri teaches English and Writing. Her interview was conducted via FaceTime. When asked about how she supports student motivation, Terri immediately stated, "I do what I can and many times I supplement when necessary. I'm strong-willed and very persuasive." Terri claimed that she has the reputation of being the meanest teacher on campus.

Beliefs about the source of student motivation and teaching efficacy. From Terri's perspective, motivation derives from the home setting. She would like families to share in the responsibility of educating students. Although Terri admits to having the reputation of being mean, she believes that her role is to protect, care, and defend her students while in school. Terri attempts to "get kids excited about learning and get them to see that (school) is not hard." She reiterates to her students that learning new concepts is a challenge that can be overcome. Terri's ultimate goal is to find what students are excited about and use that information to influence engagement and motivated actions.

Terri's questionnaire data revealed high scores on the Teacher Efficacy Scale indicating that she has a strong sense of teaching efficacy. Terri does not believe that the amount a student can learn is primarily related to family background. She strongly disagrees with the idea that a teacher is limited in what he or she can achieve simply because a student's home environment is a large influence on the child's achievement. Although Terri believes that motivation derives

from parents, she strongly disagrees with the statement that a teacher cannot do much because most of a student's motivation and performance depends on his or her home environment. If parents would do more for their children, then Terri believes she could do more as their teacher. She is confident that she can increase students' retention of previously learned information. She feels assured that she knows techniques to redirect a disruptive or noisy student and that she can get through to even the most difficult or unmotivated students.

Observation of students' expressed needs. Findings from Terri's written responses to the video prompts showed that Terri's rating of the students' motivation was inconsistent with the rating assigned to each student. In describing the characteristics of a student exhibiting disaffection or low motivation toward school activities, Terri was less specific. Terri described the student with low motivation as one who is not engaged and does not want to share despite the teacher's prompts. She noted the difficulty with distinguishing low motivation and frustration. In her interview, she reported that "it may seem as if a student with low motivation does not care about learning," but suggested that there might be other mitigating factors contributing to the student sense of competence. Terri observed behaviors related to work completion, academic difficulty, personal disposition, excitement, leadership, and engagement, which are expressions of needs for competence and autonomy. With regard to student collaboration, Terri witnessed behaviors involving student discourse and student's willingness to share and participate, which are experiences of relatedness. From her experience, students lose motivation due to frustration with academic difficulty or learning disability. Therefore, the identification of a student who exhibits less motivation is not straightforward and depends on the individual characteristics of the child, according to Terri.

For the student with high motivation, Terri was able to point out obvious signs of engagement. Terri was the only teacher who described the third student as having a high level of motivation because he was a “class leader, engaged in learning.” In general, engagement in learning is one quality of a highly motivated student based on Terri’s responses. Engagement in learning includes the following characteristics: showing excitement, doing homework, having an easy connection to learning material, participation in hands-on projects, being eager and wanting to learn, telling about home life, having a spark and intuition about learning. In her opinion, the highly motivated student is naturally, intrinsically motivated toward school tasks.

Instructional Strategies. Table 20 presents the strategies Terri would use in response to students’ motivational level. For the student low motivation, Terri’s instructional strategies demonstrated her involvement. That is, she would find out what makes him excited and would build on it, find out more about where he comes from, and what could have stifled his love of learning. Terri reported that she generally tries to get to know her students, particularly students with low motivation. In response to the student in video #2, Terri noted that she would pair him up with students with similar ideas in cooperative learning groups.

Table 20. Strategies Relative to Terri's Rating of Student Motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Low (Video #1)	Low	Make Personal Connections	Building relationships by getting to know the student and sharing own interests	Find out what makes him excited and build on it. Find out more about where he comes from	Involvement
Average (Video #2)	High	Facilitate Student Collaboration	Putting students together for a structured activity	pair up with students with similar ideas, cooperative learning or project groups	Structure
High (Video #3)	High	No Evident Pattern			

Findings revealed that Terri tends to implement strategies that align with provisions of involvement and structure. Data from Terri's interview and survey responses showed that she routinely uses strategies that facilitate student collaboration, manage the classroom setting and demonstrate her attunement. A comparison of Terri's responses appears in Table 21.

Table 21. Teacher Strategies Related to Dimensions of Need-supportive Teaching

Category	Interview	Survey Responses	Dimension of need-supportive teaching
Facilitate student collaboration, Classroom management	Cooperative learning differentiated instruction, support, challenge to do more, help them be successful with learning, high expectations, classroom setup for focus	Provide guidance and help, give encouragement, provide instructional feedback, offer clear and detailed expectations and instruction, establish order scaffold skill-building	Structure
Teacher Attunement	Get to know them personally –their story, treat as human beings, be fair, honest, truthful, protect, care, and defend students	Show affection toward students, express attunement, dedicate personal resources (e.g. time, attention & energy), accessible to students, convey warmth, care and respect toward students, maintain close physical proximity to students	Involvement

In general, Terri gets to know students personally and takes an interest in their stories. She characterizes her involvement as letting her students “know that they are human beings to be cared about.” Terri describes herself as fair and honest. She stated, “you have to do what you say you’re going to do; if you say you’re going to do X, you need to do it and follow through because you can’t lie to them (students)... so they know I’m honest... I keep my word, and they know I have their back.” Terri makes provisions of structure by facilitating group interactions, asking students to mentor others, and providing students ample opportunities to engage in the learning process. Terri takes pride in her classroom management and describes it as a relative strength. She sets high expectations, challenging her students to achieve, reinforcing behaviors and giving help. These strategies foster students’ perceived competence through the established

routines, procedures, and set-up of the classroom. She builds relationships according to Kagan strategies and uses the first two weeks of school teaching her students to have respect for one another. Terri gives positive praise and tries to “catch them (students) doing good.” Overall, Terri has a very structured classroom environment.

Katie

Katie, an 8th grade teacher from City SD, has been teaching for 33 years. She attended graduate school beyond the master’s degree. Katie relies on teacher tools and resources to support students’ academic needs. She has a collaborative decision-making team for behaviors and academics. She demonstrates involvement by connecting with students and showing trust. In general, Katie described the decision-making process regarding student learning and motivation as a collaborative effort among teachers. She continued to discuss school-level and classroom-level intervention programs as tools that teachers at her school uses to make decisions about student learning. Academic assessment programs shared by Katie included What I Need (WIN), Common Core standards, and Positive Behavior Intervention Support (PBIS).

Beliefs about the source of student motivation and teaching efficacy. In Katie’s belief, student motivation begins at home with parents. Katie shared that cultural differences and underlying mental health issues in the home environment have a large influence on student’s motivation. In addition, she commented on the impact generational poverty has on her students’ engagement in school. Katie realizes that some of the most difficult students can be motivated to learn, but they have to believe in the value of school achievement. According to her, motivation changes over time. For this reason, Katie expressed that it is a challenge to sustain high levels of engagement and motivation with middle school students.

Katie was one of two teachers with the lowest rating of teaching efficacy. She strongly believes that if parents would do more for their children, she could do more to influence motivation and achievement. She moderately agrees with the statement that if students are not disciplined at home, then they aren't likely to accept any discipline at school. She moderately disagrees that she can get through to even the most difficult or unmotivated students. However, she believes that supporting students' needs is very important.

Observation of students' expressed needs. Katie's rating of the students' motivation was inconsistent with the rating assigned to each student in the videos. In terms of student behaviors, Katie observed mainly verbal interaction and factors that influence engagement, such as negative and positive behaviors. These behaviors relate to all needs for competence, autonomy, and relatedness. Examples provided were related to student discourse in terms of whether the student is responding, personal disposition, and nonverbal body language. In general, she observed negative behavior from students with low motivation. In her experience, students that appear to have low motivation tend to be angry, and exhibit verbal and physical aggression. On the other hand, she described indicators of expressed need for the student with average motivation for the most derived categories. Behaviors observed from the student depicted with high motivation included modeling his teacher's behaviors, wanting positive reinforcement, and "gut perseverance." These behaviors are manifestations of students' need to feel autonomous and competent. Katie identified the second student as having a high level of motivation as well because he used complete thoughts and reacted well to praise. She added that highly motivated students comply with instructions, persist through difficult tasks, and experience academic success more frequently in comparison to students at the other end of the continuum.

Instructional Strategies. Results of this analysis suggest that Katie tends to implement strategies geared toward the assessment of student interest, particularly for a student with less motivation. In response to video 1, Katie would find out what he is good at (competence/ability level) and what he is interested in. Katie rated the students in video 2 and 3 as having high motivation. For the highly motivated student, she would provide opportunities for student-directed learning experiences and self-paced, self-directed exploration. The latter examples are indicative of provisions of structure and autonomy as shown in Table 22.

Table 22. Strategies Relative to Katie's Rating of Student Motivation

Motivation Level by video prompt	Teacher Rating	Category	Definitions	Reported Strategies	Dimension of Need-support
Low Video #1	Low	Assessment of Student Interest	Ask for information to better understand interests	Find out what he is good at what is he going interested in	Autonomy
Average Video #2	High	No Evident Pattern			
High Video #3	High	Allow student-centered learning	Structured learning experiences and educational approaches aimed to develop independence	Self-paced self-directed exploration	Autonomy-supportive, Structure

Table 23 outlines the types of need-supportive strategies Katie commonly uses in her classroom. Katie uses instructional strategies that demonstrate how attuned she is with her students. She also uses program tools and resources that support academic needs, provides opportunities for student-centered learning experiences, and fosters relevance in learning by assessing student interests. Unlike many of the other teachers, she would provide an opportunity for student-directed learning experiences, assign project-based activities, and group students

according to skill level. She added her discontent with those teachers at her school who do not challenge the high achieving and engaged students.

Table 23. Teacher Strategies Related to Dimensions of Need-supportive Teaching

	Explicit Strategies	Teacher Selected Researcher Language	Dimension of need-supportive teaching
Student-centered learning experiences, Establishes relevance through assessment of student interests,	Provide opportunity for student directed learning experiences, Self-paced self-directed exploration	Be responsive the student generated question, informational feedback, provide explanatory rationales, allow students time to work on problems in their own way, give students choice, display patience and spend time listening	Autonomy-supportive
Teacher tools and resources that support academic needs	Help them feel success, BIP team, collaborative decision making at teacher-level, use of programs	providing guidance and help giving encouragement, providing instructional feedback, offering clear and detailed expectations and instruction, establishing order scaffold skill-building	Structure
Teacher attunement	Make personal connections, allow them to trust you, greet with handshakes	Show affection toward students, express attunement, dedicate personal resources (e.g. time, attention & energy), accessible to students, convey warmth, care and respect toward students, maintain close physical proximity to students	Involvement

Overall, Katie emphasized that she manages student behavior through classroom rules and behavior modification techniques. In her interview, she stated that the teacher is in control, but that she would provide more student-centered approaches. These statements do not align with the existing literature. In fact, a teacher with a controlling teaching style departs from the premise of student-centered learning. Katie noted on the questionnaire that she almost always makes provisions of autonomy-support, structure, and involvement in her classroom, but it was difficult to substantiate that claim. In Katie's case, she relies on the school-level programs when making decisions about how and when to modify her instructional strategies in response to student's level of instructional needs.

Cross-Case Analysis

In this section, I describe the main themes that emerged from this embedded multiple case study. The cross-case analysis helped me gain a better understanding of what teachers say and do to support student needs relative to the school district that they work in. This organization varies from the case by case illustration in the previous section because here I synthesize each teacher's contribution to determine the presence of reoccurring themes. Data from all participants is combined and reported together. Using Yin's (2009) replication logic, literal replication can be attained when two or more cases show a pattern of similar findings. Likewise, theoretical replication refers to differences found among cases. This cross-case analysis provides examples for themes to enable us to compare and contrast findings of teachers' motivational support. Componential analysis was utilized to examine any similarities and differences. By drawing on the important findings from the individual case profiles, one can make assertions about teachers' motivational support.

Major Finding Theme 1

Motivation viewed as externalized factor. Teachers' perspectives about the sources of student motivation were mixed (Table 24). In the present study, 63% of teachers believed that motivation derives from the home environment, particularly from parents. Cindy placed strong emphasis on the home influence as the source of students' motivation. In her interview, she stated, "It (motivation) starts at home. Parents have to be the first motivator to motivate their son or daughter to do well in school despite what the teachers say... students would stay focused because they want to please mom or dad." Both teachers in the Community School District believed that parents are the primary source of motivation. Melissa thought that learning is related to family background. She stated, "In my district, parents expect their kids to do well, be high achievers. It is an expectation from the day they enter school. The motivation is instilled... that they know they are supposed to go to school to learn." In Melissa's belief, teachers are limited in what they can achieve because of the large influence the home environment has on student's motivation. Although Terri believed that motivation derives from parents, she strongly disagreed with the statement that a teacher cannot do much because most of a student's motivation and performance depends on his or her home environment. Katie agreed with other teachers that motivation derives from the student's home. She strongly believed that if parents would do more for their children, she could do more to impact motivation and achievement. Tiffany and Rachel discussed multiple sources of motivation. Tiffany believed that teachers are another source of motivation secondary to the student's individual drives. In her opinion, motivation is "nurtured and developed by the teacher." Rachel explained:

Motivation can come from many different sources. First, it should start at home, motivated by the parents to do the very best they can at school, to get the education,

follow school rules and classroom rules, finish class assignments, homework, to be the very best students can be. This should start at home.

According to Rachel, teachers serve as an additional source of motivation when students do not get support at home, followed by external motivators such as guest speakers from local businesses and organizations outside of the school that may sponsor activities or events. In Rachel's opinion, multiple sources in a variety of settings may influence any aspect of a child's life and contribute to the student's motivation. Overall, this finding suggests that motivation is perceived by teachers in this study as an externalized concept originating from the home environment.

Table 24. Teachers' Beliefs about Motivation by Efficacy, Training, and School District

Participant	Source of Motivation	Importance	Teacher Efficacy	Training	School District
Cindy	Home	Very Important	Low	No	North Local
Monica	Individual	Very Important	High	No	North Local
Tiffany	Multiple	Important	Moderate	Yes	North Local
Mary	Home	Very Important	High	Don't recall	Community
Melissa	Home	Very Important	Moderate	Don't recall	Community
Rachel	Multiple	Very Important	High	No	City
Terri	Home	Very Important	High	Don't recall	City
Katie	Home	Very Important	Low	No	City

Major Finding Theme 2

Sense of teaching efficacy relates to confidence in supporting student motivation.

The majority of teachers felt highly efficacious in supporting their students' motivation. Mary had the strongest sense of general and practical teaching efficacy while Katie and Cindy had the

lowest rating of teaching efficacy (See Table 24). Mary, Monica, Rachel, and Terri reported that they can get through to even the most unmotivated students. Katie moderately disagreed that she can get through to even the most difficult or unmotivated students. Terri was confident that she can increase a student's retention of previously learned information. Rachel was confident that she can accurately assess the correct level of task difficulty for a particular student. Monica did not receive training and experience in supporting students' motivation even though she felt capable of getting through to the most unmotivated student. With the highest rating among participants, Cindy believed that if a student in her class becomes disruptive and noisy, she knows some techniques to redirect him or her quickly.

Katie and Mary strongly and moderately agreed that if parents would do more for their children, teachers also could do more. Regardless of the degree of discipline at home, Melissa felt effective in her ability to discipline and manage the classroom setting. Cindy, Melissa, Terri, Rachel, and Monica were more assured in their ability to redirect disruptive students as well. Monica agreed with the statement that if students are not disciplined at home, they are not likely to accept discipline at school. Based on the findings in this study, most teachers felt confident that they can get through to the most unmotivated and difficult students due to their strong sense of teaching efficacy for redirecting behavior.

Table 25. Teachers' Rating of Student Motivation by Video Prompt

	Video Prompt #1	Video Prompt #2	Video Prompt #3
Cindy	Low	Average	High
Mary	Reluctant, but Engaged	High	High
Tiffany	Hard to gauge	High	High
Monica	Low	Average	High
Melissa	Low	Average	High
Rachel	Average	Average	High
Terri	Low	High	Very High
Katie	Low	High	High

Major Finding Theme 3

Teachers are more consistent in their identification of students with high motivation. Table 25 presents the teachers' rating of student motivation level according to the video prompts in the online questionnaire. Greater consensus was evident in identifying characteristics of high motivation followed by low motivation. All of the teachers rated the student in Video #3 as highly motivated. Among the teachers surveyed, 50% labeled student #2 with average motivation while 50% rated the student's motivational level as high. Rachel identified student #1 as having average motivation while Tiffany said it was "hard to gauge." Overall findings indicate more common awareness of varying levels of motivation as characterized by expressed needs or manifestations of motivation and engagement than not. Although teachers were more consistent in their ratings of high motivation, they had the tendency to report more frequently observed behavioral indicators of the student rated with low motivation as explained in the next section.

Major Finding Theme 4

Teachers observe behaviors indicating expressed level of need. Findings indicate that teachers observe behavioral manifestations of expressed needs for autonomy, competence, and relatedness in categories related to group participation, academic tasks, student-centered learning, and also behaviors that interfere with motivation and engagement as shown in Table 26. Data from the overall set of teachers' interviews and written responses of their observations of student behavior were coded and divided into sub-categories for pattern matching in order to discover the most frequently types of behavioral manifestations of expressed level of need.

Table 26. Teachers' Observed Behaviors

Categories	Examples	City SD		N Local			Community		
		Rachel	Terri	Katie	Cindy	Tiffany	Monica	Melissa	Mary
Student behaviors related to participation in group activities	Student collaboration, group interaction, participation in discussions, sharing, speaking and engaging with peers	X	X				X		X
Student behaviors related to academics and learning	Student discourse, understanding tasks, work completion, demonstrate knowledge through answers, modeling teacher behaviors	X		X	X		X		X
Student-centered behaviors	Knowledge of strategies, use of procedures, ease with implementation, autonomy, engagement, leadership qualities, take control of learning		X		X	X	X	X	
Student behaviors that interfere with engagement and student motivation	Attendance, buy-in, negative behaviors, personal disposition, nonverbal body language, compliance, difficulty with task completion	X	X	X	X	X	X	X	X

Melissa was the only teacher to observe behaviors in every category. Half of the participants (four) observed behaviors related to student interaction in group activities. Tiffany and Monica indicated negative and positive behaviors related to student collaboration, group interaction, participation in discussions, and willingness to share. Tiffany reported negative behaviors associated with students with higher expressed needs including lack of participation

and unwillingness to share while Monica observed students speaking and engaging with peers while taking turns, indicating lower level of expressed needs.

Cindy, Tiffany, Melissa, and Katie provided examples of behaviors related to academics. Katie was the only teacher to report modeling as an observed behavior. Task completion was among the most frequently reported behaviors by Melissa and Cindy. However, Cindy endorsed the lowest score on the Teacher Efficacy Scale on the item that concerns a teacher's capability to determine the correct level of difficulty. Perhaps the explanation for this is because she only assesses work completion as an end-result of high motivation and not as a gauge for determining difficulty at lower motivational levels as evidenced in her individual case.

Student-centered behaviors were defined in the present study as behaviors in response to learning experiences and educational approaches aimed at developing independence. Examples of behaviors under this theme included the use of procedures, having control of own learning, being knowledgeable of strategies, ease with student-led activities autonomy, and active engagement. Melissa and Tiffany reported student behaviors in these categories. With regard to engagement, Melissa described general behaviors from her teaching experience. She discussed leadership and autonomy. Melissa lets students own their own learning. One difference between Melissa and Tiffany exists in the area of training is SDT. Tiffany recalls learning about SDT in college courses, webinars, and on the internet while Melissa does not recollect receiving any training. Nonetheless, both teachers provided examples of behaviors aimed at the highly motivated student who fulfills needs for autonomy and competence.

The majority of the participants reported that they observe behaviors that interfere with student engagement. This category is defined by behaviors that interfere with the overall learning process. Examples of behaviors in this category include negative behaviors, personal

disposition, attendance issues, need for reinforcement, nonverbal body language, and buy-in to the overall learning process. All of the teachers in Community and City school districts made similar observations of these externalizing and internalizing behaviors.

Major Finding Theme 5

Teachers view students' expressed level of needs on multiple dimensions. Teachers recognized higher expressed level of needs and low expressed level of needs more readily than students with average level of expressed needs. A low level of need is associated with high motivation while higher expressed needs are consistent with low motivation. Teachers commonly observed behavioral manifestations that reflect an unsatisfied, higher level of need than behaviors that reflect need satisfaction. Differences in observed behavior were reported across levels of teacher-perceived student motivation.

For students with perceived low motivation, teachers observed behaviors associated with student discourse, work completion, personal disposition, and other negative behaviors. In her interview, Tiffany discussed negative behaviors that she associated with low motivation. Her examples included off-task behaviors, refusals, and an unwillingness to share in class discussions. Teachers observed students' reluctance to speak, lower tone, and unwillingness to give answers. Rachel and Tiffany noticed differences in body language between the students with low motivation and high motivation. Tiffany noticed poor eye contact and lethargy in the poorly motivated student. Similarly, Monica observed flat affect and described the student with low motivation as reserved, shy, quiet, or unsure. In response to the video prompt, Katie noted that the student did not speak much. Katie and Rachel were the only teachers to observe externalizing behavior problems such as anger or aggression. Katie mentioned in her interview, "I see students who are disrespectful to the teachers, some are angry... they hit or throw chairs."

Rachel described behaviors such as verbal aggression toward the teacher. She discussed a profile of the poorly motivated student as having an “extensive school discipline record or suspensions.” Melissa mentioned attendance as a negative factor that influences student’s engagement in school. City school district had the lowest student attendance and student achievement among the three districts

On the contrary, most teachers noticed the propensity to respond and demonstrate competence by sharing answers in the highly motivated student. Mary observed behaviors associated with positive manifestations of satisfied needs such as answering questions, writing down responses, and giving justification for answers. She explained, “They follow procedures, run activities, and are engaged in the lesson.” Cindy observed confidence and ownership with students with high motivation. Terri stated, “they are naturally intrinsic, excited, do homework are eager...are more likely to share their home life.” In her description of students with lower expressed levels of need, Katie stated, “they comply to procedures and have that gut perseverance...” Overall, teachers do observe behaviors indicative of fulfilled or unfulfilled need for autonomy, competence, and relatedness. Needs that are not satisfied are referred to by teachers as negative behaviors. On the other hand, positive behavioral displays reflect high motivation and are the result of satisfied needs for autonomy, competence, and relatedness, according to teachers.

Major Finding Theme 6

Teachers use need-supportive educational approaches. A major finding is that teachers use instructional strategies that are indeed indicative of need-supportive educational approaches outlined in the literature. It is important to note that most teachers reported that they did not receive or did not recall receiving training about self-determination theory basic needs

theory. Yet, five of the eight teachers reported that they almost always implement educational approaches considered need-supportive. The teachers' reported instructional strategies were group and categorized. Seven broad categories of teachers' instructional strategies emerged from the individual case analysis. Based on the teachers' perspectives, they provide relevant and meaningful learning experiences, assess students' interests, facilitate student collaboration, allow student-centered learning experiences, provide opportunities to engage in the learning process, rely on classroom management, and invest in students' personal experiences, background, and learning style by staying attuned to students' needs. In effort to highlight the most motivationally supportive strategies, the categories were organized within each teaching provision characterized as need-supportive as defined by the literature. Tables 27 through 29 highlight the shared strategies and alignment with the established theoretical framework of need-supportive teaching.

Table 27. Teacher Strategies Aligned with Autonomy-supportive Educational Approaches

	City SD			N Local			Community	
	Rachel	Terri	Katie	Cindy	Tiffany	Monica	Melissa	Mary
Assessment of student interest								
Inquire about student preferences, interests		X	X	X	X	X	X	X
Connect interests to lessons		X		X				
Ask what they want to do to feel comfortable					X			X
Learn about personal experiences					X	X		
Facilitate student-centered learning								
Incorporate student in decision-making			X		X			
Provide relevant and meaningful learning experiences								
Give choice	X				X			
Relate examples to real world					X	X		
Praise for completed work	X	X						

Findings revealed that teachers use instructional strategies that support students' autonomy by assessing student interest, providing relevant and meaningful learning experiences, and incorporating students in decision-making. Componential analysis shows that the majority of teachers reported that they inquire about students' preferences and interests. Cindy and Terri reported that they allow students' interests and preferences to guide their classroom activity. Most teachers expressed that they complete some sort of informal and formal formative assessments with students to determine how to get them to learn. Tiffany stated, "I'm learning and they're learning." Asking about a student's interest was the most frequent informal method for assessment. Teachers' perceptions related to student-centered learning involved encouraging students to take ownership of their learning, building leaderships roles, offering choice, and taking into consideration student preferences for lesson plans. Monica reported, "I continue providing opportunities for them to be in control of their own learning." Katie and Tiffany involve students in the decision-making process. The teachers provided support for autonomy by having a listening ear and gauging students' needs and preferences while creating experiences that foster relevance and meaningful experiences. Provisions of autonomy-support, as expressed in opportunities for choice and decision-making, have a direct impact on students' own perceptions of autonomy and self-regulation (Grolnick et al., 2002). This argument is well supported by the data.

Table 28: Teacher-reported Strategies Aligned with Structured Educational Approaches

	City SD			N Local			Community	
	Rachel	Terri	Katie	Cindy	Tiffany	Monica	Melissa	Mary
Classroom Management								
Classroom rules and guidelines		X	X		X			
Positive Reinforcement	X					X		
Rewards, Incentives, token economy	XX							
High Expectations, challenge	X	X	X	X				
Consistent procedures	X	X						
Facilitate Student Collaboration								
Engage with others							X	X
Encourage group interactions		X	X	X			X	X
Pairing activities		X						X
Student-led groups	X			X				
Skill-based groups	X	X	X					
Provide Opportunities to Engage								
Provide opportunities		X	X			X		
Scaffold learning	X						X	
Give help		X	X					X
Differentiated Instruction		X	X					

Findings indicate that teachers use strategies consistent with the provision of structure. Teachers provide opportunities for students to engage with others, facilitate student collaboration and cooperative learning, and rely on classroom management techniques. As discussed earlier, most of the participants felt confident in their ability to redirect misbehavior. Teachers described the need for consistent, routine procedures, classroom rules, and guidelines that should be established during the first few weeks of school as evidenced in Kagan training attended by several of these teachers. Katie has high expectations for her students and relies on her classroom management techniques. Katie explained, “I let my students know... the teacher’s got this... I’m in control. Nothing you can do will shock me or scare me. We can do this together, as a team.” Regarding classroom management, Terri stated, “I set them up so that they (students) have to be part of the learning... I think that comes as a management piece for teachers.” Rachel

cited use of incentives, extrinsic rewards, and behavioral modification as techniques to control the classroom environment.

Six teachers mentioned that they facilitate cooperative learning through pairing activities, skill-based groupings, and project-based learning. Terri and Mary both use pairing activities to involve the students in their classrooms regardless of academic or motivation level. Mary creates opportunities for students to engage with one another and encourages them to share ideas through collaboration. In Melissa's case, she assigns students to a task in a group in order to keep them actively involved in the learning process. In her interview, Cindy shared that "she allows students to lead more... like mentor another student." The majority of teachers make affordances for group interaction through structured activities that emphasize cooperative learning. Consistent with existing literature, teachers' facilitation of student collaboration supports how students engage and feel in relation to others, which is central to students' motivation (Gresalfi, Barnes, & Cross, 2012).

Some of the teachers provide opportunities for students to engage in learning by scaffolding their learning, giving help, and differentiating instruction. For instance, Terri differentiates instruction for her students. She attempts to keep her students engaged and involved by finding new ways to instruct her students. She uses formative assessments and ongoing progress monitoring to identify students' academic or developmental needs. Teachers claim to provide help for students that have difficulty. Rachel knows how to increase student retention in subsequent lessons if the student did not remember information from the previously learned lesson. Monica strongly agrees that she can accurately assess the level of task difficulty. Individualized attention through help with homework, for example, demonstrates teachers' accessibility and dedicated time (Skinner & Belmont, 1993).

Table 29. Teacher-reported Strategies Aligned with Approaches Showing Involvement

	City SD			N Local			Community	
	Rachel	Terri	Katie	Cindy	Tiffany	Monica	Melissa	Mary
Investment in students' personal experiences, student interests, learning styles and background								
Get to know them more	X	X						X
Asks questions						X	X	
Have conversations			X			X		
Maintain & build positive relationships	X				X			
Teacher's attunement								
Show love, affection & respect		X	X					

Findings suggest that teachers show involvement by investing in students' personal experiences, interests, cultural background, and learning styles. Through frequent interactions with students, these teachers are able to get to know students better, stay receptive to body language, build and maintain positive relationships. Terri stressed the importance of getting to know her students:

I do everything that I can get them (student) excited about learning and if I can find what they're excited about, I can get them to do just about anything, the more I know about them personally, the more I know about their story, and the more I treat them like a human being, they'll do anything for me... they may not do it for their parents, but if they know that they are cared about and know that I'm here to help them be successful. I can get them to do just about anything.

Rachel maintains high-quality interpersonal relationships to support their motivation. Katie shared the same sentiments regarding her personal connections with students. "The connection between you and each child is so strong. Kids want to make their teacher happy." With regard to teacher's attunement, Terri described herself as fair, honest, and dependable. The

listed instructional strategies were regarded as the most frequent and highly relevant instructional strategies reported by the middle school teachers included in the present study.

Major Finding Theme 7

Teachers' conceptualize their role in student motivation as facilitators. Mary gave the impression that it is the teacher's job to find out what motivates students to engage in learning. From Mary's perspective, the teacher's role is to facilitate learning and help students achieve in school. She emphasized the importance of interaction within the classroom. According to Tiffany, teachers have a responsibility to provide learning opportunities to engage in a curriculum that is relevant and important to their students. Tiffany considers her role as a "facilitator." According to Rachel, it is the teacher's role to be the students' support system, provide a listening ear, "keep doors open" for accessibility, help with homework, tutoring assistance, and exposure to "life" outside of the child's typical neighborhood. Rachel acknowledged that she sees her role as a mentor. She believes that teachers must show genuine trust for students to work hard and exhibit motivated patterns of action. Terri conceptualizes her role as a teacher to protect, care, and defend her students as a demonstration of her involvement.

My deal is to get them ready for whatever their (students) future holds. My expectation is that they go on and do something amazing. In my opinion, I've got to arm them with the tools that will help them be successful.

Terri cited professional development, mentoring, supervision, and resources she receives through her school district as the top items that help her support student motivation and engagement in her class. Terri has participated in 350 hours of professional development over the past six years. She thinks she is in the minority of teachers who consider multiple factors for

motivating and keeping her students engaged. Contrary to Terri's beliefs, most teachers in the present study acknowledged that their role is essential to supporting students' motivation.

Additional Finding

Teachers reported more factors that impede the possibility of need-supportive teaching than factors that support the practice. In the online questionnaires, teachers selected the top factors that supported and affected their ability to support student's motivation. Katie was the only teacher who acknowledged having an organized and effective school-based team to support motivational practices within her school. Melissa finds that her training, access to technology, buy-in and support from school administrators helped her to effectively engage in this practice. She reported that her school uses curriculum-pacing guides, which help her support student motivation and engagement. Melissa listed existing policies and procedures (e.g., character education, district expectations) as some of the top factors that help her support student motivation along with her own training and experiences obtained while in undergraduate and graduate school. Additionally, Tiffany cited that the availability of assessment and intervention materials as supporting her ability to engage in this practice. As a special education teacher, Tiffany's smaller classroom sizes make it conducive for her to engage in ongoing assessment of her students' learning and motivation. Technology afforded her the opportunity for ongoing progress monitoring through assessment tools. Access to technology also helped her support student needs because she uses the computers for incentives and cooperative learning activities. Terri reported that she had attended over 350 hours of professional development, "sharpening her saw." Monica, Cindy, and Mary all reported that they have the knowledge and skills needed to engage in this practice.

Among the factors that hinder teachers' ability to support students' individual needs, the most reported constraints were lack of time, parental, and administrative buy-in according to survey responses. Data from Cindy's survey revealed that she does not have time in her schedule to engage in need-supportive teaching. Of the two teachers from Community School District, Mary differed from Melissa as she does not have enough time in her schedule to successfully support students' motivational needs. In fact, providing motivational support is not a priority at Monica's or Mary's schools from their perspective. Mary and Monica do not have an organized and effective school-based team to support motivational practices within her school. Monica noted that the climate at her school is not conducive for applying this practice at the school level. At Mary's school, she has buy-in and support from parents, but does not have buy-in and support from administrators. Among the obstacles to effectively supporting student's motivational needs and engagement was the lack of buy-in and support from administrators at Tiffany's school in North Local School District. Tiffany noted issues and pressures related to the fast curriculum pacing, inadequate time to provide individualized attention, and the recent emphasis on high stakes testing at her school. Katie noted the lack of appropriate assessment and intervention materials, limited professional development, mentoring, supervision and resources from her school district as obstacles to overcome

Among the top barriers, Katie stated that she did not receive training and experience in undergraduate or graduate school relative to effectively supporting students' motivational needs. Student misbehavior and limited professional development provided by City SD were said to hinder Melissa from supporting student's motivational needs. Rachel suspected that disrespect from the teacher, lack of support from home, dislike, and lack of care perceived by the student would undermine the teacher's ability to satisfy student's basic psychological needs. In general,

broken homes and poor relationships influence the interactions among those directly and indirectly involved in the student's life. Terri listed factors that prevent her from effectively supporting student's motivational needs as lack of buy-in from parents and families in City SD. Factors that hinder her ability to engage students include also a high workload, paperwork, and "helicopter parents." Terri believes that parents and families need to buy-in to school improvement ideals and step up with assisting students at home. One of the challenges to supporting student motivation reported by Katie concerned parental involvement. Katie's opinion is that there is no buy-in from students' families; yet, she said in her interview that she would build a community with parents. Given Katie's belief about the home as the source of motivation, her report of building a community with parents appears to be aimed at improving involvement. In this case, any effort of Katie's to increase parental engagement and buy-in would likely reduce this challenge of motivating students to learn.

Summary

This multiple case study provided an opportunity to examine the phenomenon of teachers' motivational support and explore the differences and similarities in their beliefs about motivation, teachers' observations as expressed needs, and teachers' instructional strategies that support student's individual needs for autonomy, competence and relatedness. In this chapter, the perspectives of eight middle school teachers were presented. The individual cases were reported to help provide explicit examples of student behaviors and teachers' instructional strategies in response to such behaviors. Seven themes emerged from the cross case analysis related to teachers' motivation support. In Chapter 5, I present the themes that answer each research question and discuss the relationship to existing research on student motivation and need-supportive teaching.

Chapter 5: Conclusion, Implications and Future Directions

The purpose of this study was to highlight teachers' perspectives on motivational support within the middle school context where motivating students is a challenging aspect of their profession. The major study findings of the cross-case analysis represent an integrated view of motivational support for students' expressed needs based on the perceptions and introspective voices of active middle school teachers. The discussion in this section is organized by the following research questions relative to the underlying theoretical propositions: (1) What are teachers' beliefs about student motivation and sources of motivation? (2) How efficacious are teachers with providing individualized motivational support for students? (3) How do teachers know when to provide support and what type of motivational support student's needs? and (4) How do teachers conceptualize their role in supporting students' motivation? Accordingly, seven emergent themes are used to explain these findings based on the teachers' perspectives. In this chapter, I provide a summary of the major findings, a discussion about the findings relative to existing research, and the limitations of the current study. Implications for future research are also discussed.

Teachers' Beliefs about Student Motivation and Sources of Motivation

Implicit in need-supportive teaching are the beliefs about the nature or source of student motivation (Stroet et al., 2015). Motivation was perceived by teachers in this study as an externalized, multidimensional factor that derives from sources outside of the student and is expressed at different levels associated with academic behaviors. Data from the eight interviews revealed that 63% of teachers believed motivation derived from the home environment, particularly from students' parents. Parental support in the home environment is perceived by teachers as an influential factor of students' motivation. This is in contrast to the theoretical

notions in existing research on motivation. According to the Self-Determination Theory, motivation is viewed as internalized needs for autonomy, competence, and relatedness that require nourishment from social contexts. A possible explanation for the difference between how teachers view motivation and how it is viewed in the research literature is because the source of motivation is a different process than influence. In this case, what teachers viewed as the source of motivation was in fact the processes that influence students' motivation and engagement. Furthermore, the teachers had difficulty entangling the origins of motivation and its influence.

Student motivation is an implicit aspect that should be explicitly recognized as a manifestation of the supportive or non-supportive classroom conditions that teachers create in effort to satisfy students' individual expressed needs for autonomy, competence and relatedness. From the teachers' perspective, motivation appeared multidimensional because of the differences in students' expressed level of needs and engagement. These differences in observed behavior were reported across the levels of student motivation. This observation was consistent with existing literature that suggests that students express their needs and engagement at different levels and go through the process of internalization at different levels of regulation such as external, introjected, identified, and integrated (Deci & Ryan, 2008).

One theme that emerged from the findings was that teachers were more consistent in their identification of students with high motivation than of students with lower levels of motivation. Greater consensus was evident in identifying characteristics of high motivation followed by low motivation. Findings also revealed that teachers recognize student behaviors associated with higher expressed level of needs and low expressed level of needs more readily than student behaviors associated with average level of expressed needs. Researchers argue that

teachers face the challenge of supporting students' individual psychological needs because individual differences in need satisfaction may lead to differences in how students express their needs. The reason for the variability in expressed needs concerns the students' individual personality dispositions, characteristics of home environment such as parental support, and cultural background, orientation toward academic learning, interests, and interpersonal relationships between the student and teacher (Katz et al., 2010), creating differing motivational profiles of self-determined forms, and differences in value and strength (Haivas, Hofmans, & Pepermans, 2014). Given this explanation of differences in students' expressed level of needs, it is not easy to identify a student who exhibits less motivation and higher level of needs through observation alone. This was clearly evident in Terri's experience: "students lose motivation due to frustration with academic difficulty or a learning disability." Given that motivation is a less tangible construct, teachers are encouraged to re-conceptualize students' behavior as indicators of engagement.

Teachers' Efficacy with Providing Individualized Motivational Support for Students

Teacher efficacy has a positive influence on student motivation and achievement. Highly efficacious teachers tend to be more organized, use a variety of modalities to meet the needs of all learners, and display greater instructional skills such as questioning, explaining, and providing feedback to students having difficulty whereas teachers with a low sense of efficacy tend to rely on a more controlling teaching style (Mojavezi & Tamiz, 2012). Among the interviewed teachers, Katie and Cindy had the lowest sense of efficacy. Cindy's school district performed similarly to Community School District with high achievement in reading. In Katie's district, her grade level had the lowest achievement scores, lowest student attendance, teachers with the lowest experience on average, and the lowest number of teachers with masters-level

degrees. On the other hand, Mary had the strongest sense of efficacy relative to the other participants. In her district, her middle school students had the highest math and reading achievement scores when compared to the other districts. The 8th grade achievement scores in reading and math are significantly lower at City SD where Katie works than where Mary teaches in Community SD. One could argue that if Mary's teacher efficacy is characteristic of the other teachers at Community School District, then teacher efficacy could be a potential mediating factor in their students' achievement. Therefore, the pattern in the present data supports the existing research on the impact of teacher efficacy on student motivation and positive achievement outcomes.

Teachers' Awareness of When to Provide Support and the Type of Motivational Support Students Need

In order to effectively discuss the findings that answer this question, this section is divided into two parts: (1) teachers identification of students' expressed level of need and (2) instructional strategies that support student needs.

Teachers' Identification of Students' Expressed Levels of Need

Most notable were the themes associated with teachers' observation of students' expressed needs. The students' observed behaviors were interpreted as indicators of expressed need for autonomy, competence, and relatedness. It can be argued that teachers see behaviors differently and perhaps rely on their own teaching experience, training, and background to make subjective observations. Findings indicate that teachers observe behaviors in categories related to group participation, academic tasks, and behaviors that interfere with motivation and engagement. Negative behaviors, often associated with students exhibiting low motivation, seemed to garner the most attention from teachers. An alternative explanation for this focus

could be due to the teachers' tendency to categorize students' behaviors when making assumptions about motivation level. Moreover, teachers may respond differently due to implicit bias as another reason for the differences in the identification at lower levels of motivation of students depicted in the video (Glock, Kneer, & Kovacs, 2013).

The negative behaviors observed by teachers consisted of either overt externalizing problems or characteristic of the absence of behavior. For example, lack of verbal interaction and academic difficulty were qualities teachers described as related to low motivation whereas participation in discussions and work completion were qualities they used to describe students with more self-determined forms of motivation. The students' personal traits such as shyness, affect as evidenced by eye contact, reluctance, and laziness were covert indicators of students' level of expressed needs. From the teachers' perspectives, negative behaviors reflect manifestations of an unfulfilled need, which is associated to low motivation. These behaviors are often referred to as disaffection in the research literature. On the other hand, students who exhibited positive behavioral and academic outcomes as manifestations of need satisfaction were viewed as highly motivated. In the literature, these positive manifestations of need-supportive teaching reflect students' autonomous and intrinsic motivation (Mouratidis et al., 2011; Van den Berghe et al., 2013). Figure 7 reflects the assertion that behaviors representing need fulfillment indicate higher levels of motivation, and unsupported needs are expressed through negative behaviors.

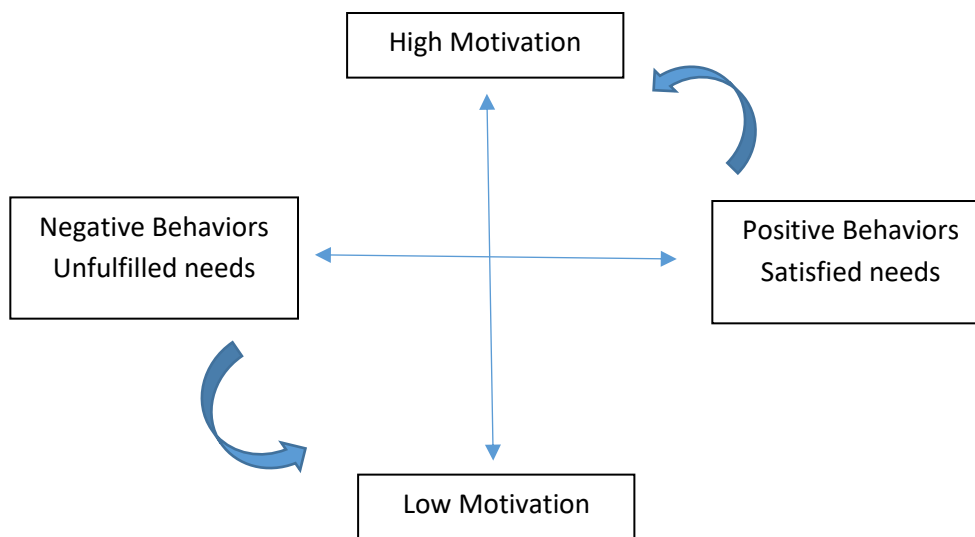


Figure 7: Continuum of motivation level and behavioral manifestation of satisfied or unfulfilled needs.

Students' motivational level could be depicted as a point on the continuum in either quadrant at any given time. It is possible that students can display behaviors that reflect need fulfillment or satisfaction of one need, and have a difference in satisfaction of their other needs. Existing literature found inconclusive evidence of variability of need, although students may differ in the strength of their psychological needs (Hardré & Sullivan, 2009). Findings from the present study provide support for claims of variability in engagement and inconsistencies in support for motivational needs. Identifying individual differences in students' expressed level of engagement was relevant for understanding when to provide support and the type of teachers' motivational support needed.

Instructional Strategies that Support Student Needs

Teachers were asked to rate the students' level of motivation as high, average, and low, list the observed behaviors supporting their determination, and then explain how he or she would support the individual student's need. This illustrative activity prompted teachers to consciously

think about what they would do in response to the students' expressed level of need satisfaction. Satisfaction of the needs for autonomy, competence, and relatedness requires supportive classroom conditions, which can be created largely by teachers' instructional behaviors. I examined teachers' instructional strategies to gain a better understanding of the conditions that support or frustrate need satisfaction. Findings revealed that teachers use instructional strategies that align with dimensions of need-supportive teaching: for example, they provide relevant and meaningful learning experiences by assessing students' interests, facilitate student collaboration, allow student-centered learning experiences, create opportunities for students to engage in the learning process, classroom management, and invest in students' personal experiences, background, and learning styles by staying attuned to students' need.

Results indicate that all of the teachers use autonomy-supportive instructional strategies. Teachers' assessment of student interests was evident across most teachers in the present study. The use of formative assessments helped to explain how teachers know when to provide support and what type of motivational support students need. Teachers make attempts to learn about students' individual interests and preferences in order to guide lesson planning and make instruction relevant and meaningful to students. Teachers do this by relating the curriculum to real world experiences, to the background culture, preferences, and age of students, and by staying attuned to current trends and social norms. The teachers reported that they make informal assessments by getting to know students, which, in turn, fosters feelings of relatedness. Interest surveys and interviews were specific ways in which teachers gauged interests and connected students to lessons. By demonstrating personal attunement, teachers can build a classroom culture necessary to meet students' individual needs, thereby influencing students overall motivation.

In addition to student interests, teachers make assessments of learning to determine academic needs. They use progress monitoring to assess whether assignments are at the correct level of difficulty. Through this process of student data gathering, teachers can effectively make provisions of autonomy-support, structure, and involvement. The underlying notion here is related to the bidirectional nature of student-teacher interactions. While the teacher is making attempts toward engaging students in the learning process by considering their interests and academic needs, they too are engaged in the learning for themselves. In other words, there is reciprocity in the learning process in the classroom for all social partners. This idea was evident in Tiffany's reflection in Chapter 4 when she stated, "I'm learning, and they're learning" in reference to her students. These types of interactions with significant others play an important role in either supporting or frustrating the basic psychological needs for autonomy, competence, and relatedness (Vallerand, Pelletier, & Koestner, 2008). This form of involvement from teachers is essential to creating classroom environments that are supportive of student's needs.

Some of the teachers rely on extrinsic motivation and traditional classroom management of behaviors. Classroom management was one instructional strategy characterized by the provision of structure in research on need-supportive teaching. Classroom management was noted as a vehicle for maintaining order, using procedures, and emphasizing behavioral expectations. Teachers associated negative behaviors with low motivation, and used classroom management strategies to encourage student participation. Further, extrinsic rewards, use of incentives, and behavioral modification are regarded as techniques which help teachers to control the classroom environment. A high degree of control can be a prime condition for thwarting students' need satisfaction. Researchers argue that controlling teachers demonstrate instructional behaviors that interfere with students' motives whereas autonomy-supportive teachers tend to

facilitate the relation between students' self-determined intrinsic motivation and classroom activities while nurturing students' motivational needs (Reeve et al., 2004). Classroom management for some teachers reflected a controlling-motivational style. Consequently, the choice of motivating-style can have a significant impact on need satisfaction in the classroom (Deci et al., 1981).

Teachers also facilitate student collaboration by structuring cooperative group activities. Specific examples provided by teachers included encouraging students to participate, creating skill-based and student-led group activities, allowing choice in partner selection, and asking students to mentor others. In current studies, scholars argue that secure and emotionally supportive relationships and interactions can result in a sense of belonging and relatedness in children which promote a positive sense of self, adoption of academic and social goals, and development of social and academic competencies (Furrer & Skinner, 2003; Wentzel, 2004). Ultimately, teachers act as invisible hands in the classroom, influencing children's peer behavior through the modeling and feedback provided during teacher-student interactions and through the ways in which the teacher uses these interactions to indirectly support and facilitate peer experiences in the classroom (Luckner & Pianta, 2011; Putney & Broughton, 2011). This finding was evident for several teachers in this study and is well supported in the literature.

Given these findings, it was apparent that teachers' instructional strategies demonstrated evidence of individual level support as well as class level support. For example, teachers emphasized strategies related to cooperative learning and group interactions that support students' individual autonomy and active involvement in the learning environment. The residual effect of the teacher's support for students' individual needs may also have a collective effect on support for the entire class. The effect of teachers' facilitation of group interactions per se is

reciprocal. An individual's involvement in a group may support his or her individual need for relatedness and autonomy, but may also support the needs of others in the group. Thus, supportive teacher practices benefit all students individually and collectively.

Developmental models explain this interplay between the student and classroom environment and describe how people and their environments work together to reach success or failure (Bronfenbrenner, 1994; Sameroff, 2009). An individual shapes his or her experiences while experiences within surrounding social environments shape the characteristics of the individual through time. This may be evident in the group interactions teachers facilitate. When students' needs are met through positive interactions with school social partners and the creation of a positive classroom climate, they tend to achieve better educational outcomes such as enhanced academic motivation, well-being, greater intrinsic motivation, improved academic achievement, and full engagement (Deci & Ryan, 1985; Stroet et al., 2013). This perspective acknowledges the importance and implications of interpersonal connections within the classroom. High quality relationships and classroom interactions help create conditions where individual and collective need satisfaction is possible.

An unexpected finding of this study was that teachers do not appear to consciously make decisions about how their instructional practices may support a student's individual need. There was no evidence that teachers make systematic decisions about impacting motivation by considering need-supportive teaching provisions. An explanation for the latter finding lies in the ubiquitous theory-practice gap (Richardson, 2011). Evident in the current findings was the difference in teacher's understanding of the definitions and underlying theories related to motivational support. One teacher did not endorse the researcher supported approach for "allowing students' interests and preferences to guide their activity (Reeve & Jang, 2010)." Yet,

she expressed in her interview and written responses two strategies that relate directly to student interests. In response to a student depicted with low motivation, Cindy noted that she would “find out the interests of the student and try to connect those (interests) to the lessons.” Cindy’s approach is the essence of support for student’s autonomy.

From the individual case profiles in chapter 4, the qualitative comparisons between the language teachers’ use in describing their approaches and the language used in research suggest tangible differences in vocabulary and conceptualizations. In other words, it appears that researchers and teachers are consistent in the implementation and the value of strategies that afford students opportunities to experience feelings of competence, autonomy and relatedness, but use different terms, which may explain the difficulty with translating theory into practice. Although seven of the eight teachers admitted that they had not received or did not recall training in SDT or need-supportive teaching from a theoretical perspective, they still appear to understand support for student motivation from a practical, pedagogical standpoint. To that end, the theoretical terms for supportive instructional strategies need to be translated into systematic and guided teacher language that is more concrete and explicit.

Teachers’ Conceptualization of their Role in Supporting Students’ Motivation

Teachers conceptualize their role in the classroom as a facilitator. From their perspectives, the teacher’s role is to facilitate learning and help students achieve in school. Teachers have a responsibility to provide learning opportunities to engage in curriculum that is relevant and important to their students. Essentially, the teacher’s role is to be students’ support system. The current findings support existing research that characterizes teachers as social partners whose actions are closely attuned to the learning processes of children (Valsiner, 1998). Teachers’ interactions with students play an important role in either supporting or frustrating the

basic psychological needs for autonomy, competence, and relatedness (Vallerand, Pelletier, & Koestner, 2008). Therefore, the role of teachers is to facilitate student motivation using SDT as a primary basis for supporting motivational needs.

Among the teachers studied, motivational support was considered important for creating supportive classroom environments with high expectations for engagement and achievement. In this case, 87.5% of teachers believed that it is very important to support student motivation, while 12.5% stated important. None of the teachers thought need-supportive teaching was an ineffective practice. Teachers play a critical role in shaping and promoting students self-determined motivation and achievement outcomes (Ryan & Deci, 2000). Teachers can reframe their current practices for the dual purpose of supporting academic and future learning goals and students' basic psychological needs as well.

Limitations

With regard to external validity, replication logic was at the forefront for selecting the cases for data collection and relevant to the development of generalizations in this multiple-case study. Special care was taken to ensure that the perspectives from middle school teachers were included and centered in the data collection. To that point, it is important to note that all teachers identified as female with at least a master's degree with over 5 years of teaching experience. Therefore, assertions about the representativeness of the entire population of middle school teachers cannot be made from these data. However, the data are useful for infusing teachers' perspectives into this line of research and may serve to guide future data collection efforts and methods for ensuing meaningful representation.

This multiple case study used a rigorous methodological design. Multiple data sources including an online questionnaire, written extended responses to video prompts, documents and

interviews were used to triangulate the data (refer to Table 4). By nature and design, qualitative studies aim to explore and describe a natural setting. The findings of naturalistic studies apply to specific contexts, perhaps physical rather than virtual. This study is an examination of teacher perceptions therefore the online context was appropriate for highlighting the teachers' insights. However, one of the limitations to the study is the lack of observational data to validate their responses and whether teachers are doing what they say they are doing in their classrooms. As a result, transferability was limited. Nonetheless, I attempted to reduce this validity threat by making comparisons among the individual teacher's survey, extended response and interview data. This triangulation within the multiple sources of data for each teacher was especially helpful for providing rich and detailed case profiles in Chapter 4.

The school accountability documents helped to achieve a greater level of depth in terms of the context in which these teachers were employed. This was considered a strength of this embedded multiple case study given the importance of context within the qualitative paradigm. It should be noted that the school accountability reports referenced district-level data and not specific school-level data. The eight participants were bounded within the middle school level. Each district included in the school context had one middle/junior high school. For that reason, I extracted only the data relevant to this case study, which included student attendance and achievement scores for the teacher's grade level along with other data in Figure 5 to make generalizations. The snowball sampling technique afforded me the opportunity to select participants from the three nearby school districts within the 7-mile radius in southwest Ohio.

The video prompts used to gather information about the teachers' rating of students' level of motivation, observed manifestations of engagement and instructional strategies. The videos were selected using a purposive sampling from YouTube. The use of the videos without

substantive vetting to remove the susceptibility of confounding bias associated with ethnicity, gender and various task demands of the students depicted in the videos is a limitation of this study. Although this method was exploratory in nature, future research should consider selecting videos depicting students with similar demographics and task demands. In addition, future researchers should make other considerations for vetting the videos perhaps by a panel of researchers or teachers. These considerations need to be made at the design and analysis phase of future study in order to minimize the effects of bias.

The video prompt responses on the online questionnaire did not evoke the rich data I anticipated which is an additional limitation to this study. I proposed that teachers would differentiate motivational support strategies because of the variability in students' expressed needs. The video prompts were used to solicit written responses specific to ratings of student motivation levels, behavior observations and instructional strategies in response to three students depicted in three separate videos. The data from the prompt responses were scarce perhaps because of time limitations as evidenced by their survey completion time in the chain of evidence (Appendix M), writing style, teaching style or the fact that they did not know what to do in response to the behavior in the videos. Along those same lines, the interview questions were aimed at the obtaining the same type of information except this data evoked more general information. The data from the video prompts and interviews did not provide sufficient evidence to characterize the behaviors and support strategies at tiered levels of student's motivational as expected. As a result, this lack of data informed the conclusion that there was not any clear differentiation of student's expressed needs or teachers' strategy use.

Another limitation of this study is related to the vulnerabilities associated with social desirability bias (Maxwell, 2013). This multiple case study involved self-reporting through the

online questionnaire and interview in order to get a better understanding of teachers' perceptions regarding student motivation and need-supportive educational approaches. Consequently, the social desirability bias is a valid threat particularly when asking teachers about what is actually happening in their classrooms. Efforts were made to ensure that questions were specific to the motivational support topic at hand and not used for the purpose of evaluating their teaching job. I used member checking (Appendix J) in the data collection and case reporting phase of research to increase construct validity and credibility in this study. Participants were contacted by phone to ask clarifying question and depending on when they were interviewed, I asked additional questions from the revised interview protocol (Appendix I). Pattern matching and componential analysis were then utilized for cross-case synthesis. These analytic tactics served as a means for achieving internal validity.

Finally, all of the data collection was completed by myself, a single researcher. The data timeline which matches dates for survey completion and interviews was provided to increase credibility. Survey completion times for each participant were logged in SurveyMonkey and interview lengths were used in relation to the analysis process. I developed the codes and defined the categories and themes and did not have another researcher for interrater agreement. For dissertations, the single multiple case researcher is acceptable (Stake, 2006).

Significance of the Study

This research is significant because it expands the literature on effective practices for supporting student's motivational needs to ultimately improve motivation and engagement toward positive academic achievement outcomes. This study brings notice to the factors teachers perceive as helpful and the factors that hinder their ability to implement strategies with fidelity and consistency. The significance of the present work is to build on previous research in

motivation support by highlighting teachers' perspectives. It provided examples of the teacher's instructional practices that are considered supportive from a researcher standpoint. The alignment of these practices with existing theory is important because it brings credence to the current practices already established and sheds light on areas that are missing or ineffective in supporting students' individual motivational needs. While the implementation of current practices may lead to improved student motivation, the absence of teacher support can perpetuate the declining student motivation observed in middle school. Implications discussed may help to reduce the disparities among individual students and their schooling throughout the years.

Implications and Recommendations for Future Research Directions

Theoretical Implications

SDT provides the framework for understanding the concept of needs as motivated action (Deci & Ryan, 1985). Teacher's motivational support through need-supportive approaches satisfy students' need for autonomy, competence and relatedness. Need satisfaction is critical to the internalization of academic motivation (Deci et al., 1999; Niemiec & Ryan, 2009; Ntoumanis et al., 2009; Vallerand et al., 2008). More recently, research on need-supportive teaching offers examples of autonomy-support, structure and involvement as means for satisfying student's basic psychological need. What seemed to be missing in the literature were explicit examples for when to use these approaches, how to use these approaches and when to make adjustments to the support teachers give to students. This study highlighted teacher perceptions and provided examples of specific need-supportive strategies in simple, concrete language. This study adds to the existing literature by bringing attention to the language discrepancy that exists between theory and practice. This study presents approaches that are need-supportive in relation to students' observed engagement in order to help teachers apply them with fidelity. This is one

contribution that specifically relates to the practice of middle school teachers, but it is also applicable to teachers of all grade levels.

The use of replication logic provided rival and respected explanations for the conclusions drawn from this study. For example, the present findings support the existing literature on need-supportive teaching, but also overlap several theories in education spanning across models of development (Bronfenbrenner, 1994; Sameroff; 2009), teacher pedagogical literature and other motivational theories (i.e. Teacher Efficacy: Wolters & Daugherty, 2007; Putney & Broughton, 2011). Among the educational approaches considered need-supportive, instructional strategies that aligned with the dimension of involvement were reported the least by teachers. One explanation for this finding was that several teachers did not feel that they have time to dedicate to making personal connections with students beyond the classroom instruction. An alternative reason may be perhaps due to the differences in teachers' engagement. Thus, additional research is needed to explore the implications of teachers' provision of involvement.

Methodological Implications

Triangulation of the multiple data sources in this case study design demonstrated trustworthiness and provided the opportunity to make generalizations. Componential analysis and pattern-matching helped interpret the data to identify similar and contrasting. Findings that were consistent adds more support to the existing qualitative research on need-supportive teaching. The addition of teacher perceptions as individual cases for study is fairly new to research on need-supportive teaching. While most studies apply quantitative methods or qualitative methods including observations and self-report of students, this case study focused on the perspectives of teachers specifically at the middle school level. It is suspected that a consequence of declining motivation during adolescence is receiving less support and guidance

from teachers” (Croninger & Lee, 2001, p. 561). The present study provided evidence on how teachers support student motivation from their perspectives. Perhaps observational studies at the middle school level could supply evidence and further explanations for declining motivation.

Examples of teachers provisions of involvement through group interaction include: spending time with students and learning about their background, culture and thoughts about current trends. However, teachers did not address cultural background in their reports of classroom strategies possibly due to the make-up of the school districts involved in the study, which were largely homogenous. Additional studies in diverse settings may illuminate the cultural dynamics of motivational support.

Practical Implications

Teacher Practice and Self-Evaluation. Engagement is a manifestation of motivation, which is determined by the influences of teachers’ motivational support. The emphasis on motivation is making it individual by personalizing instruction for every student. The influence teachers have on students’ academic outcomes is monumental. Existing literature suggests that teachers have more impact on students’ interest in school than either parents or peers (Wentzel, 1997). This is the case for teachers involved in this study. Tiffany and Rachel both mentioned probing a student’s interest or trying to encourage and align tasks to the student’s interest. Motivation is important for achieving positive outcomes related to student engagement and achievement. Teachers do not make conscious decisions about motivational support or include this support in their efforts toward increasing tests score achievement in school. Part of the reason for this is that teachers may be less aware of the impact and influence they have on student motivation. Ultimately, these supports are important for meeting both aims toward increase student motivation and engagement.

Teachers' self-reports of teaching efficacy for motivating students were generally high; however, teachers reported that some factors hinder their ability to implement strategies with fidelity and consistency in classroom practice. The highest rated factor that supports the practice of motivational support is positive interpersonal relationships with students. Among the highest ranked factors that were considered constraints to making more conscious efforts toward using approaches deemed supportive of students' needs for experience autonomy, competence, and relatedness while in middle school, teachers named the lack of an effective school-based team (School level) related to the ecological model of human development (Bronfenbrenner, 2000). Only one teacher (Katie) felt that their school-based RTI team addressed students' motivational needs. Researchers studied factors which cause teachers to adopt a more need-supportive teaching style or a need-thwarting teaching style (Reeve et al., 2004; Van den Berghe et al., 2013). The degree to which teachers experience pressure on the job (Pelletier et al., 2002), teachers' own beliefs, personality dispositions, values, and motivational orientation are antecedents to whether teachers will adopt a need-supportive or need-thwarting teaching style (Van den Berghe et al., 2013).

Also evident in the data was a contradiction in findings of teachers' efficacy and beliefs about motivation. The teachers viewed motivation as an external factor, but felt highly efficacious about supporting students' motivation. This contradiction could be explained by research on teachers' locus of control. Teachers simultaneously hold different types of beliefs about knowledge, their students and themselves (Levin, 2014). Other studies have found that teachers' beliefs are disconnected from their classroom practices (Buehl & Beck, 2014; Liu, 2011; Jorgensen, Grootenboer, Niesche, & Lerman, 2010). Further studies are warranted to

examine the inconsistencies between teachers' beliefs and practices with regard to motivational support.

Teacher Preparation. Needs are the source of motivated actions, but teachers do not use those terms in relation to motivation. Teachers in this study do not consciously connect the theoretical notion of basic psychological needs to motivational support in practice. Lack of training or recall of training could explain the variability in teachers' reported support of students' motivational needs. Seven of the eight participants reported that they either did not receive training on SDT or did not recall learning about SDT. This lack of training may be the reason why teachers do not connect or see their instructional practices as supporting or thwarting students' need for competence, autonomy, or relatedness. In fact, teachers described several behaviors that align with need-supportive teaching; yet, they did not conceptualize those practices specifically with the theoretical frame/foundation for which those practices are derived. Teachers need to develop a better understanding of the concept of needs in relation to their educational approaches. Mainstream primary education requires teachers to be proactively responsive to a variety of student educational needs (Bruggink, Meijer, Goei, & Koot, 2014). As a result, future research is needed to focus on teachers' responsiveness to student's expressed motivational needs in effort to support student motivation more systematically.

Educational Policy. Classroom teachers can maximize the impact of academic strategies and increase academic engagement by supporting students' basic psychological needs and placing emphasis on motivational support strategies. Over the past several years, increased attention has been devoted to tiered systems of support that integrate approaches to meeting students' multiple needs (Lane, Carter, Jenkins, Magill, & Germer, 2013). In this case study,

only one teacher reported having an organized and effective school-based team to support motivational practice within her school. Hence, teachers would benefit from a committee that focuses on a multi-tiered framework for providing support to students which will allow them to identify student who require additional motivational support, monitor students' level of support and make adjustments as needed. Within this framework, teachers would have a protocol for differentiating, supporting, and monitoring students' level of motivational support.

Multi-tiered System of Supports (MTSS) appears to be an ideal way to deliver motivational support for all students. MTSS refers to the use of tiered levels of intervention. The MTSS framework is grounded in prevention theory and originates from the public health literature. Multi-tiered systems have been applied to educational settings in the form of Response to Intervention (RTI) and positive behavior intervention and supports (PBIS). The MTSS model establishes an integrated approach to addressing the academic, behavioral, and social needs of all students, thereby recognizing the transactional nature of these domains. This model is developed to prevent learning and behavior problems from occurring as well as to provide a framework for quickly supporting students for whom primary prevention efforts are insufficient (Kauffman & Brigham, 2009). This proposed model allows to work efficiently and effectively to coordinate the availability of and access to a cascade of supports. This model is particularly efficient as it is a systems-level approach to addressing students' diverse needs and creating a context for professional collaboration. It also supports teachers by providing structure, time, and resources for planning and implementing the model. An adopted model depicting primary, secondary, and tertiary supports to assist students with increasing levels of intensity according to need offers transparency and enhances communication and collaboration (Lane, Oakes, & Menzies, 2014).

Evaluation is a key factor in the successful implementation of motivational support in classrooms. Teachers should evaluate their own practices and the effects on student motivation as well as their student's motivational needs on an on-going basis. Therefore, a school-based team would essentially be a collective agreement between teachers, parents and administrators focused on student's motivational needs as well as academic and behavioral needs. Ultimately, the goal of the school-based team to ensure positive educational outcomes for students and accountability checks would be met. Additional intervention research on systematic and collaborative decision-making with regard to motivational support would further this area of study.

Conclusion

Motivational decline in middle school is a concern that has received less attention in educational research. However, there is an existing body of literature that provides context for the necessary conditions for supporting student motivation. Educators' confidence in the current motivational conditions of classroom environments is based on the strongly supported literature on student motivation; nevertheless, we are less familiar with the prevalence of implementation and the success at the middle school level. This multiple case study provided an opportunity to examine the phenomenon of teachers' motivational support and explore the differences and similarities in beliefs about motivation, teachers' observations as expressed needs, and teachers' instructional strategies that support students' individual needs for autonomy, competence, and relatedness. Teachers play a special role in supporting individual needs regardless of the level of expressed needs. Each case helped to understand the role teachers play in supporting student needs in middle school classrooms.

Theoretical notions shared between literature on SDT, high-quality teacher-student relationship and transactional models of development provide the framework for satisfying student's basic psychological need for autonomy, competence and related through need-supportive teaching practices and positive interpersonal relationships. Teachers are encouraged to reframe how they view the students' academic, behavioral and emotional engagement and underlying motivational needs.

Teachers “admit that they need and want more help motivating students (p. 28)”, and need systematic and concrete ways to address motivation in their classroom. For this reason, I hope that the examples shared in this research will help teachers make effective classroom applications of motivational support to the classroom for every student regardless of teaching efficacy, perceived motivational level of the student, and support from the home environment. To that end, teachers can be a catalyst for influencing student motivation. Teachers can play a key role in impacting motivational levels across the years. The results of this study reflect a step in the right direction toward addressing motivation in middle school.

Appendix A: Online Questionnaire: Teacher Perceptions of Need Support

Dear Classroom Teacher:

The purpose of my dissertation is to examine how teachers provide differential need-support and create motivationally supportive classroom environments for ALL students. Obtaining feedback from practicing teachers is vital to this project. Let your voice be heard. I appreciate you taking the time to complete the following questionnaire. The questionnaire will gather demographic data to assist in further analysis. It should take no more than 15 minutes of your time to complete. There are 5 sections.

Participation in this study is strictly voluntary and your responses will remain confidential. Responses will not be identified by individual. All responses will be compiled together and analyzed as a group. The research data will be used in partial fulfillment in my doctoral program at University of Nevada, Las Vegas and may be made available in journal publications.

Clicking on the “Begin Survey” box indicates that you consent to participate in the questionnaire. You may decline to answer any questions that make you uncomfortable. You are aware there are no direct benefits to you as a participant in this study, but the data will expand knowledge of perceptions and professional practice. You have the right to withdraw participation at any time.

By not clicking on the “Begin Survey” box indicates that you do not consent to participate in the study and do not want to proceed. Please understand this will not affect you in any way.

For questions or concerns regarding the questionnaire, please contact Cherie Gibson, at (248) 943-3782 or by gibsonc8@unlv.nevada.edu. The principal investigator, Dr. Gwen Marchand can be reached at 895-4303. If you have questions about your rights as a research subject you may contact the UNLV Office of Research Integrity – Human Subjects at 702-895-2794, toll free at 877-895-2794, or via email at IRB@unlv.edu.

Your assistance in completing the questionnaire is greatly appreciated.

Sincerely,

Cherie Gibson
Student Investigator

SECTION 1: NEED SUPPORTIVE TEACHING PROVISIONS/PERCEIVED IMPORTANCE

1a. To what extent do you make provisions of Need-Supportive Teaching in your classroom?

- ☐ Never
- ☐ almost never
- ☐ sometimes
- ☐ almost always
- ☐ always

1b. Which provisions of **autonomy-support** do you typically use/practice/implement in your classroom?
(Adapted from Reeve & Jang, 2010-11 Autonomy-Supportive Instructional Behaviors)

- ☐ Display patience and spend time listening
- ☐ Provide Feedback
- ☐ Give students choice
- ☐ Allow students time to work on problems in their own way
- ☐ Allow students' interests and preferences to guide their classroom activity
- ☐ Provide explanatory rationales
- ☐ Provide praise as informational feedback
- ☐ Offer hints
- ☐ Be responsive to student-generated questions
- ☐ Communicate perspective-taking statements
- ☐ All of the above

1c. Which provisions of Involvement do you typically use/practice/implement in your classroom?
(Adapted from Reeve et al., 2006; Wubbels et al, 2005)

- ☐ Show affection toward students
- ☐ Express attunement

- ☐ Dedicate personal resources (e.g. time, attention and energy)
- ☐ Be accessible to students
- ☐ Convey warmth, care and respect toward students
- ☐ Maintain close physical proximity to students
- ☐ All of the above

1d. Which provisions of structure do you typically use/practice/implement in your classroom? (Adapted from Jang, Reeve & Deci, 2010; Dever & Karabenick, 2011; Stroet et al, 2013)

- ☐ Provide guidance and help
- ☐ Give encouragement
- ☐ Provide instructional feedback
- ☐ Offer clear and detailed expectations and instructions
- ☐ Establish Order
- ☐ Scaffold skill-building tasks
- ☐ All of the above

Degree of importance of motivational support

1. How important are these factors to student motivation and for supporting students' needs
 - ☐ Very Important
 - ☐ Important
 - ☐ Somewhat Important
 - ☐ Not Important

SECTION 2: IMPLEMENTING NEED-SUPPORTIVE TEACHING PRACTICES

1. Which factors facilitate or help you engage in this practice?

Please select the TOP items. You may select UP TO FIVE.

- ☐ I have the knowledge and skills needed to engage in this practice
- ☐ The training and experiences I received while in undergraduate and/or graduate school

- ☐ Professional development, mentoring, supervision and resources I receive through my school district
 - ☐ I have adequate time in my schedule and resources to engage in this practice
 - ☐ I have access to technology (e.g. computers, software, devices) to support this practice
 - ☐ Assessment and intervention materials are available to me to support this practice
 - ☐ Buy-in and support from school administrators and district supervisors with whom I work
 - ☐ Buy-in and support from parents/families with whom I work
 - ☐ I have positive relationships with students
 - ☐ Existing policies and procedures support my engagement in this practice (e.g. character education, district expectations/guidelines)
 - ☐ I have an organized and effective school-based team to support motivational practice within my school
 - ☐ Behaviors
 - ☐ Pacing charts
 - ☐ I have support from colleagues
 - ☐ Not Applicable – There are no facilitators that support students’ needs
 - ☐ Other (if facilitator not listed, please specify)
-

2. Which factors hinder or act as barriers for you to effectively supporting individual student needs and engaging in this practice?

Please select the TOP items. You may select UP TO FIVE.

- ☐ I do not have adequate knowledge and skills to engage in this practice
- ☐ I do not believe the practice would be effective if implemented
- ☐ I do not have enough time in my schedule to engage in the practice
- ☐ Climate at my school is not conducive to the practice (e.g. negative atmosphere, teacher burnout)
- ☐ The practice is not a priority in my school
- ☐ Lack of buy-in and support from administrators and supervisors with whom I work
- ☐ Lack of buy-in from parents/families
- ☐ Lack of an organized and effective school-based team to support motivational practice within my school
- ☐ I do not have access to technology
- ☐ Lack of appropriate assessment and intervention materials
- ☐ Limited professional development, mentoring, supervision and resources are provided to me through my school district
- ☐ I did not receive training and experience relative to this practice while in undergraduate and/or graduate school
- ☐ Not applicable – There are not barriers that hinder this practice

☐ Other (if barrier not listed, please specify)

SECTION 3: TEACHER EFFICACY /TRAINING/DEMOGRAPHICS

A number of statements about organizations, people, and teaching are presented below. The purpose is to gather information regarding the actual attitudes of educators concerning these statements. There are no correct or incorrect answers. We are interested only in your frank opinions. Your responses will remain confidential.

INSTRUCTIONS: Please indicate your personal opinion about each statement by circling the appropriate response at the right of each statement.

KEY: 1=Strongly Agree 2=Moderately Agree 3=Agree slightly more than disagree
4=Disagree slightly more than agree 5=Moderately Disagree 6=Strongly Disagree

- | | |
|---|-------------|
| 1. The amount a student can learn is primarily related to family background. | 1 2 3 4 5 6 |
| 2. If students aren't disciplined at home, they aren't likely to accept any discipline. | 1 2 3 4 5 6 |
| 3. When I really try, I can get through to most difficult students. | 1 2 3 4 5 6 |
| 4. A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement. | 1 2 3 4 5 6 |
| 5. If parents would do more for their children, I could do more. | 1 2 3 4 5 6 |
| 6. If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson. | 1 2 3 4 5 6 |
| 7. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly. | 1 2 3 4 5 6 |
| 8. If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty. | 1 2 3 4 5 6 |
| 9. If I really try hard, I can get through to even the most difficult or unmotivated students. | 1 2 3 4 5 6 |
| 10. When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment. | 1 2 3 4 5 6 |

DEMOGRAPHIC INFORMATION

Gender: Male or Female

GRADE LEVEL:

CLASS SIZE:

TEACHING EXPERIENCE (length in years):

EDUCATIONAL LEVEL: Bachelors Masters Masters + PhD

PROFESSIONAL DEVELOPMENT/TRAINING EXPERIENCE

To what extent have you been trained in the following components of Self-Determination Theory (SDT) and support for students' basic psychological needs for autonomy, competence and relatedness:

- ☐ Professional Development offered by the school district,
- ☐ College courses,
- ☐ Self-studied books and professional journals,
- ☐ Conferences,
- ☐ Webinars and Internet,
- ☐ Teaching practices and observation of colleagues

Appendix B: Teacher Interview Protocol

Part One

1. What role do teachers play in motivation in school?
2. How does motivation change for adolescents?
3. On average, how many students in your class would you consider “unmotivated”?
4. What has been your experience working with highly motivated students and disaffected/less motivated students?

Part Two

1. What systems (e.g. individual, classroom school-level) should be in place for motivating students?

Need-Support

1. Which indicators do you receive from students that suggest need for more support?
2. How do you adjust your instructional practices to support students that require more support or less support?
3. How do you evaluate your own motivational support?
4. What undermines students’ motivation?
5. Which practices do you think are the most successful?
6. To what extent do you consider the influences of culture, background and individual characteristics in providing motivational support to all students?

Think about a student that you considered as less motivated.

1. How do you support that student’s need?
2. What does high level of need look like?
3. How do you know when that student needs a higher level of support?
4. What student behaviors do you see?

Think about a student that you considered as more motivated.

1. How do you support that student’s need?
2. What does high level of need look like?
3. How do you know when that student needs a different level of support?
4. What student behaviors do you see?

Teacher-Student Relationships

1. In general, what steps do you take to build relationships with your students?
2. How do you build trust with your students?
3. How do you create opportunities for student collaboration?
4. How do you show every student that you value their opinion?

5. How do you create a classroom environment where students feel safe in taking chances?

General

1. How can teachers better address motivational decline?
2. Do you have any recommendations for motivating students, in addition to the ideas discussed earlier?
3. If you had to mentor a new teacher, what would you tell that person about motivation in the classroom?

Appendix C: Video Prompts and Written Response Protocol

Steps for video selection and embedding

1. YouTube was the primary source for videos
2. Search Term(s): middle school classroom observation
3. Sampling Technique: Purposive sampling was used to find representative videos of classrooms
4. Criterion: screen-shot primarily focused on students, a variety of observable student behaviors, video clarity and volume, and allowable/permission to use, realistic in nature, excluding videos with only words or PowerPoint presentations, caricatures and animations
5. Selected three videos that represent high, average, low motivation (refer to literature for accurate characterizations)
6. Downloaded and edited in video media app (i.e. PowerDirector) to shorten the length (in minutes): Video #1 (1:39), Video #2 (3:30), Video #3 (2:51)
7. Uploaded to SurveyMonkey, embed hyperlink. Each video was assigned a question with three prompts seen below

Live questionnaire procedure for questions 17-19

Teachers were asked to watch a video then answer three questions then proceed to the following prompts in the same manner. A targeted student was identified by red arrow.

Instructions (verbatim): Please watch the video prompts keeping in mind the targeted student designated by the red arrow. Answer each question following the prompt before proceeding to the next video. Videos will last up to 5 minutes.

Video: <https://www.youtube.com/embed/8sm1ZXQzXXo?frameborder=0&allowfullscreen>

Open-ended written response protocol

Considering Target Student #1 please answer the following questions:

1. How would you describe the students' level of expressed need (high, typical, or low)?
2. What student behaviors do you see?
3. How would you do to support that student?

Considering Target Student #2 please answer the following questions:

1. How would you describe the students' level of expressed need (high, typical, or low)?
2. What student behaviors do you see?
3. How would you do to support that student?

Considering Target Student #3 please answer the following questions:

1. How would you describe the students' level of expressed need (high, typical, or low)?
2. What student behaviors do you see?
3. How would you do to support that student?

UNLV
EXEMPT RESEARCH STUDY
INFORMATION SHEET

Department of Educational Psychology and Higher Education

TITLE OF STUDY: Teachers' Perceptions of Motivational Support in Secondary Classrooms

INVESTIGATOR(S) AND CONTACT PHONE NUMBER: Gwen Marchand and Cherie Gibson, (702) 895-4303

The purpose of this study is to examine teacher perceptions of motivational support necessary for supporting students' individual needs and creating motivationally supportive environments.

You are being asked to participate in the study because you meet the following criteria: In-service general or special education teacher currently teaching in middle school classrooms.

If you volunteer to participate in this study, you will be asked to do the following: complete an online questionnaire and participate in an individual interview. If you wish to volunteer, please proceed to the questionnaire at: <http://www.surveymonkey.com/>.

This study includes only minimal risks. The study will take 90 minutes your time across two sessions. You will not be compensated for your time.

For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office of Research Integrity – Human Subjects at 702-895-2794, toll free at 877-895-2794, or via email at IRB@unlv.edu.**

Your participation in this study is voluntary. You may withdraw at any time. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Participant Consent:

- ☐ Yes, I have read the above information and agree to participate in this study. I am at least 18 years of age. (By clicking here, you will be directed to the questionnaire.) Print a copy of this form for your records.
- ☐ No, I do not want to participate at this time.

Appendix E: Recruitment Brochure



Department of Educational Psychology and Higher Education

Calling all exemplar middle school teachers



Are you interested in studies involving student motivation?

Are you willing to share your own classroom experiences and instructional practices?

You are invited to participate in a research study conducted by Cherie Gibson, Doctoral Student through the University of Nevada, Las Vegas. The purpose of this study is to examine teacher perceptions of motivational support necessary for supporting students' individual needs and creating motivationally supportive environments. The attachment (informed consent) explains the details of the study and your role. Please click the link below to accept or decline participation. If you decide to participate, you will complete a questionnaire and be interviewed. Participation in this study would take 90 minutes of your time across two sessions. Please follow the link below to learn more.

<http://dissertationstudygroupteachersupport@googlegroups.com>

Thank you for your time. Contact Cherie Gibson at gibson8@unlv.nevada.edu or Dr. Marchand at gwen.marchand@unlv.edu for any questions.

Appendix F: Recruitment Letter to Administrators



Dear Principal/School Leader/Administrator:

My name is Cherie Gibson. I am a school psychologist working locally in the greater Cincinnati area. I am conducting research as a requirement of University of Nevada Las Vegas for a Doctorate in Educational Psychology. To begin my study, I am polling district administrators to gather names of teachers who utilize highly motivational practices in their classrooms. Your part in this study will be to recommend a teacher (or teachers) who you know to utilize good motivational practices and who involve themselves in the lives of their students. Your recommendation will possibly lead to my interviewing these teachers to gain insights on good motivational practices. I will keep your recommendations confidential. No one will know who recommended any teacher for the study.

I would consider it a great privilege to have you recommend someone who will be a possible participant in my doctoral research project data collection. However, in the event that you do not wish to make a recommendation, I have enclosed a recruitment brochure with details about the research project along with contact information. Please share this information with your staff at your convenience.

If you would like to recommend someone for my study, please provide the teacher's name(s) via email (gibsonc8@unlv.nevada.edu) or phone (248) 934-3782. I will contact them to see if they are willing to participate in the study. There will be no compensation for your recommendation except for my gratefulness to you for lending to the field of educational research and helping to motivate future students to achieve academic success. Please feel free to contact me regarding any concerns about this request. I would be happy to answer any further questions.

Sincerely,

Cherie Gibson, M.A., NCSP
Doctoral Student
University of Nevada Las Vegas
Educational Psychology

Enclosures

Appendix G: Email Invitation to Teachers



Dear Fellow Colleagues,

We are conducting research with teachers employed in large, urban school districts and would like to ask for your assistance by participating in this short questionnaire. The purpose of this study is to examine teacher perceptions of motivational support. You have been selected because of your important role in teaching and shaping students' education. Participation involves the completion of an online questionnaire and shared reflections of motivational practices that have worked well with your students.

The information you provide will be used to inform research on how to create motivationally supportive classroom environments for ALL students. Please be aware, there are no direct benefits to you as a participant in this portion of the study, but the data will expand knowledge of perceptions and professional practice. By completing this questionnaire, you indicate your consent to participate in this portion of the study.

I hope that you will find about 15 minutes to complete this survey. To participate, click the link [Take the Survey](https://www.surveymonkey.com/r/3LR5CL9) OR copy and paste the URL to your browser:
<https://www.surveymonkey.com/r/3LR5CL9>

At the conclusion of the questionnaire, you will have an opportunity to participate in a brief interview by phone or online at your convenience and earn a \$25.00 gift card to Amazon. After you submit your contact information, someone will contact you to schedule the interview at a time suitable for you. For questions or concerns regarding the questionnaire, please contact Cherie Gibson, at [\(248\) 943-3782](tel:2489433782) or gibsonc8@unlv.nevada.edu.

Thank you for your participation.

Sincerely,

Cherie Gibson
Department of Educational Psychology and Higher Education

Appendix H: IRB Exempt Notice



UNLV Social/Behavioral IRB - Exempt Review Exempt Notice

DATE: February 12, 2016
TO: Gwen Marchand, PhD
FROM: Office of Research Integrity - Human Subjects
PROTOCOL TITLE: [790031-1] Teacher Perceptions of Motivational Support In Secondary Classrooms
ACTION: DETERMINATION OF EXEMPT STATUS
EXEMPT DATE: February 12, 2016
REVIEW CATEGORY: Exemption category # 1 & 2

Thank you for your submission of New Project materials for this protocol. This memorandum is notification that the protocol referenced above has been reviewed as indicated in Federal regulatory statutes 45CFR46.101(b) and deemed exempt.

We will retain a copy of this correspondence with our records.

PLEASE NOTE:

Upon final determination of exempt status, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI - HS and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials. The official versions of these forms are indicated by footer which contains the date exempted.

Any changes to the application may cause this protocol to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced protocol has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI - HS of its closure.

If you have questions, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 702-895-2794. Please include your protocol title and IRBNet ID in all correspondence.

Office of Research Integrity - Human Subjects
4505 Maryland Parkway . Box 451047 . Las Vegas, Nevada 89154-1047
(702) 895-2794 . FAX: (702) 895-0805 . IRB@unlv.edu

Appendix I: Revised Teacher Interview Protocol (8/10/16)

Part One

Reconfirm Demographics (Script: According to your survey responses, you teach at (grade level) at (School Name) with your average class size of (number)

How would you describe the area where your school is located – city/urban, suburban, rural?

Where did you receive teaching credentials (undergrad and graduate programs)

How do you evaluate your own motivational support?

What undermines students' motivation?

To what extent do you consider the influences of culture, background and individual characteristics in providing motivational support to all students?

Part Two

(Script: This next section attempts to gauge how you come to understand students' motivational needs)

Low level need-support

Think about a student that you considered highly motivated and autonomous

4. *What behaviors do you observe with the particular student that would indicate that he or she is "highly motivated" and engaged in school tasks?*
5. How do you support that student's needs?
6. How do you know when that student needs more or less support? Which indicators do you receive from students that suggest need for more support?

High level of need-support

Think about a student that you considered as less motivated, less engaged in school tasks.

1. *What behaviors do you observe with the particular student that would indicate that he or she is "highly motivated" and engaged in school tasks?*
2. How do you support that student's needs? Which practices do you think are the most successful?
3. How do you adjust your instructional practices to support students that require more support or less support? How do you know when that student needs more or less support? Which indicators do you receive from students that suggest need for more support?

Part Three

Teacher-Student Relationships

6. In general, what steps do you take to build relationships with your students?
7. How do you build trust with your students?
8. How do you create opportunities for student collaboration?
9. How do you ensure that each student, regardless of achievement or ability, feels important and necessary in class?
10. How do you show every student that you value their opinion?
11. How do you create a classroom environment where students feel safe in taking chances?

Appendix J: Member Checking

Script: I created a profile that describes you as a teacher based on the survey, interview and observations (Tiffany only). I'll read it to you. Please let me know if I misunderstood something you said. Feel free to correct me of any misinformation.

1. How does the profile sound accurate?
2. Is there anything I should correct, change or clarify?
3. Would you like to elaborate on anything?
4. Did I understand this in the same way you meant it?

Appendix K: Case Study Protocol

1. Background
 - a. Research on motivation in middle school
 - b. SDT, Classroom interactions, NST, TSRQ
 - c. Research questions to be addressed
2. Design
 - a. Embedded multiple-case study
 - b. Unit of analysis – middle school teachers
3. Case Selection
 - a. Criteria for case selection - middle school teachers: in-service, teaching an academic subject area that involves reading, access to technology (i.e., email and internet), knowledge and experience using online video-conferencing tools for ease of use
4. Case Study Procedures
 - a. Recruitment, case selection, survey administration, video prompts, semi-structured interviews, data transformation, analysis, reporting
5. Data Collection
 - a. documents, online questionnaire, written responses, interviews
6. Analysis
 - a. open & emergent coding, pattern matching, categorizing (2 levels), qualitative
 - b. cross case analysis, componential analysis, thematic analysis
7. Validity Checks
 - a. triangulation of multiple sources, interview and survey responses
 - b. case study protocol and chain of evidence (case study tactics)
8. Limitations
 - a. Observational studies
 - b. vetting of videos
 - c. representative sample of middle school teachers
 - d. district level vs school level data
9. Reporting
 - a. individual case profiles
 - b. cross case analysis
 - c. Discussion by research question
10. Timeline (See table)
11. Appendices

Appendix L: Coding Schemes

Initial Codes & Categories (Observed Behaviors)

Category	ANSWERS/Student discourse	INTERACTION	DISENGAGED
Definition	Things said, written or done in reaction to teacher instruction or interaction	Reciprocal action or influence between the teacher and student, peers	Detached from classroom activities
Initial codes	Questions answered	Verbal interaction	Not engaged
	Justification for answers		
	Difficulty answering		
	One-word answers		
	Write down response		
	Shares his answer		
	Answering questions		

Category	SPEAKING/student discourse	DIFFICULTY	PERSONALITY
Definition	Ways student convey information or express thoughts and feelings in spoken language	Hard to accomplish or understand	Student characteristics or qualities
Initial codes	Verbal interaction	Difficulty starting tasks	Reluctant
	Doesn't want to share	Difficulty answering	Reserved
	Not speaking	Difficulty	shy

		understanding tasks	
	Speaking loudly		Unsure
	Repeated responses		Look lethargic
	Spoke when called		Lacked eye contact
	Responded using complete thoughts		
	Speaking to others		

Category	EYE CONTACT		
Definition	Meaningful sign of nonverbal communication in reaction to teacher interaction/instruction		
Initial codes	Great eye contact		
	Avoid looking up		

Category	COMPLETE	THOUGHTS	STUDENT ACTIONS
Definition	Doing something related to academic work	Process of thinking	Behaviors that carry out a certain action
Initial codes	Complete the work	Complete thoughts	React to praise
	Complete thoughts	Big ideas	Listen to feedback
	Complete tasks		Participated
			Interact with teacher

Category	ENGAGED/Engagement	INTERACTION	LESSON
Definition	Involvement in learning or participation	Reciprocal action or influence between the teacher and student, peers	Instruction given at a time
Initial codes	Engaged in learning	Participated	Took ownership of lesson
	Chose ways to engage	Didn't interact with others	Confidently delivers lessons
		Student interactions	

Category	LEADER	STUDENT ACTIONS	SKILLS
Definition	Responsibility of o Student who commands a group or activity or position	Behaviors that carry out a certain action	Particular ability to do something well
Initial codes	Leadership skills	Played	Modeled teaching behaviors
	Class leader	Made noises	Confidently delivers lessons
		Circulating	Using procedures
		Speaking to others	Knowledgeable about strategies
		Participated	Ease with implementing lessons
		Modeled teaching behaviors	Leaderships skills
		Delivered lessons	
		Used strategies	

Additional Single Codes

Confidently			
Choice			
ownership			

Initial Codes & Categories (Instructional Strategies) by rating

High

Category	PRAISE	ENCOURAGE LEADERSHIP	INQUIRE
Definition	Expression of approval or compliment	Student who commands a group or activity or position	Ask for information from some to better understand interests and experiences
Initial codes	Praise him	Give leadership roles	Ask to mentor others
	Give positive praise	Ask to mentor others	Speak with students about experiences
		Build leadership skills	Find out things they enjoy
		Help train others	
		Lead group	

Category	ALLOW STUDENT CENTERED	FACILITATE GROUPS	TEACHER ACTIONS
Definition	Learning experiences and educational approaches aimed to develop student autonomy and independence	Putting students together for a structured activity	Pedagogy that promotes student learning and facilitate responsible behavior
Initial codes	Self-paced	Pairing activities	Ask to mentor others

	Give Self-directed exploration	Encourage him to interact with others	Challenge him
	Let students own their own learning		Give opportunities to shine
	Incorporate decision-making		Let students own their own learning
			Speak with students about experiences
			incorporate decision-making
			Pairing activities
			Encourage him to interact with others
			Find out things they enjoy

Additional Single Codes

Lessons	Decision-making	Learning	
Opportunities	Experiences		
Interact	Enjoyment		

Average

Category	INTEREST	JOBS	GROUPS/COOPERATIVE
Definition	Attentiveness to student preferences, Assessment of student interests	Tasks assigned to students to demonstrate they are capable of your expectations	Putting students together for a structured activity
Initial codes	Probe personal interest	Classroom jobs	Assign to group

	Find out interest		Pair up with others
	Speak toward interest		Create opportunities to engage with others

Category	OPPORTUNITIES	CHALLENGE	PROBE
Definition	Makes affordances such as time, options, possibilities	Invitation to engage in learning	Explore or examine interests and skills
Initial codes	Provide opportunity	Push him to achieve	Find out interests
	Create opportunities to engage with others	Challenge him	Probe personal interest
			Probe skills

Additional Single Codes

Relate to real world	Learning	Experience	Pair
Student directed learning	Engage		

Low

Category	FIND OUT	INTEREST	GETTING TO KNOW STUDENTS
Definition	Probe or ask	Assessment of student interests	Obtaining information about student interests, experiences, background
Initial codes	Find interests of student	Find interests of student	Get to know him

	Use questioning techniques	Connect interests to lessons	Ask about interests and experiences
	Find out what he is good at	Use interest survey	Find out where he comes from
	Find out what he's interested in	Find what he's interested in	Interact with him outside of the classroom or assignment
	Find out what excites him and build on it	Have conversations about his interests	
	Find out where he comes from	Ask about interests and experiences	
	Ask about interests and experiences		
	Use Interest survey		
	Get to know him		

Category	INTERACT	CHOICE	GROUP
Definition	Reciprocal action or influence between the teacher and student, peers	Act of selecting or making a decision	Putting students together for a structured activity
Initial codes	Interact with him outside of the classroom or assignment	Give choice of activities	Assign to task in a group
	Interact with him	Give choice of partner	Get him actively involved
		Student decision making	
	,		

Additional Single Codes

Provide positive feedback	Choice	Interaction	Experiences
Build on excitement	Learning	Lessons	Conversation
			Student decision-making

Category	CONFIDENCE	CONNECTION TO LESSON	NEGATIVE BEHAVIORS
Definition	self-reliance on one's own abilities and qualities	Responses or actions during a period of instruction or learning	
Initial codes			

Appendix M: Chain of Evidence

Research Questions	Kind of Data Collected	Analysis	Findings
What are teachers' beliefs about student motivation and sources of motivation?	interviews, questionnaires	Pattern Matching	Theme 1
How efficacious are teachers with providing individualized motivational support for students?	interviews, questionnaires	Narrative analysis	Theme 2
How do teachers know when to provide support and what type of motivational support students need?	interviews, written responses, questionnaire	Pattern Matching, Open and Emergent Coding, Componential Analysis Thematic Analysis	Themes 3, 4, 5, 6
How do teachers conceptualize their role in supporting students' motivation?	interviews, written responses,	Pattern Matching, Thematic Analysis, Componential Analysis	Theme 7

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Curriculum Vitae

Cherie M. Gibson, M.A., NCSP

5412 Mason Grand Drive Mason, Ohio 45040

(248) 943-3782

chereemg@gmail.com

Education

B.S.	Grand Valley State University Allendale, Michigan Psychology/Special Education major	2001
M.A. +62	Wayne State University Detroit, Michigan School and Community Psychology major	2004
Ph.D.	University of Nevada-Las Vegas Las Vegas, Nevada Educational Psychology Foundations	Anticipated Spring 2017

Certifications and Licensure

Ohio Department of Education Professional License Pupil Services	Active
Nationally Certified School Psychologist (NCSP)	Active
Autism Diagnostic Observation Schedule™ (ADOS™) Certification	Active
State of Nevada School Psychologist Certificate	Expired
State of Michigan Provisional Teaching Certificate	Expired
Elementary K-5 all subjects (K-8 all subjects, self-contained classroom)	
Endorsements in Cognitive Impairments and Emotional Disturbance	

Professional Experience

Lebanon City Schools | Lebanon, Ohio

Certified School Psychologist (August 2015 – Present)

- Full-time employment providing psycho-educational services to Lebanon High School, Warren County Vocational School and local parochial schools.
- Facilitate evaluation team reports utilizing multiple diagnostic instruments and curriculum-based measures to determine eligibility under IDEA.
- Participate in collaborative team problem-solving meetings.
- Deliver professional development workshops for intervention specialists and non-public/parochial schools.
- Participate in District Equity Team to develop comprehensive district-wide anti-harassment, anti-discrimination plan.

Hamilton County Educational Service Center | Cincinnati, Ohio

Contract School Psychologist (February 2015 – May 2015)

- Full-time employment shared between Winton Woods and Lebanon City Schools
- Facilitated evaluation team reports utilizing multiple diagnostic instruments and curriculum-based measures to determine eligibility under IDEA.
- Evaluated and implemented Section 504 plans.
- Participated in collaborative team problem-solving meetings.

Clark County School District | Las Vegas, Nevada

School Psychologist (August 2006 – January 2015)

- Conducted psycho-educational evaluations of students referred for learning and/or emotional concerns utilizing multiple diagnostic instruments and curriculum-based measures to determine eligibility under IDEA funding categories.
- Write multidisciplinary team reports and participate in team planning meetings.
- Coordinate early childhood Child Find Project afterschool assessments as the team lead of an outsourced assessment team.
- Collaborate with Response to Intervention (RTI) problem-solving teams to analyze benchmark data, develop, implement and monitor scientifically-based interventions. Designed and implemented interventions and positive behavior supports.
- Consult with practicing school psychologists and peers to help work through complex eligibility decisions as a region-based Autism Consultant.
- Collaborate with bilingual psychologists regarding English Language Learners in efforts to prevent overrepresentation.

Detroit Public Schools | Detroit, Michigan

School Psychologist (2004 –2006)

- Participated in collaborative intervention assistance process between parents, teachers and support staff using problem solving for intervention development.

- Provided evaluations and assessments
- Delivered several special education presentations for parents and teachers.

Detroit Public Schools | Detroit, Michigan

Special Education Teacher (2002 – 2004)

- Provided direct specialized instruction to middle school students with cognitive impairments and learning disabilities in a classroom setting.
- Developed and implemented Individualized Education Programs (IEP)
- Directed paraprofessionals in assisting students.

Professional Development/Training

Youth Mental Health First Aid (YMHFA) Training

Project AWARE: Substance Abuse and Mental Health Services Administration (SAMHSA) | Lebanon, Ohio

Equity, Diversity, and Culturally Responsive Practices Training

The Great Lakes Equity Center (GLEC) | Indianapolis, Indiana

CHAMPs Coaches Training

Clark County School District | Las Vegas, Nevada

NASP PREPaRE: School Crisis Prevention and Intervention Training

Clark County School District | Las Vegas, Nevada

National Association of School Psychologist (NASP) National Conventions

Chicago, Seattle, Orlando, San Antonio

Nevada Association of School Psychologist Summer Series

Las Vegas, Nevada

Special Education Administration Specialist Certification Program

Wayne State University | Detroit, Michigan

Publications

Gibson, C., Marchand, G., & Putney, L. (unpublished). Supporting motivational needs of boys at risk of school failure in single-sex classrooms: an exploratory case study.

Preventing School Failure.

Professional Presentations

- Gibson, C. (2016). *Designing IEP goals from NWEA Measures of Academic Progress (MAP) assessment results*. Presented to special education department in Lebanon City Schools, Lebanon, Ohio.
- Gibson, C. (2013). *AIMSweb Staff Development Teacher Training*. Presented to school faculty in Clark County School District, Las Vegas, Nevada.
- Gibson, C. (2010). *Signs of Suicide (SOS) school-based training*. Presented to teachers in Clark County School District, Las Vegas, Nevada.
- Gibson, C., Thompson, S. & Somers, C. (2004). *Research on parental engagement in support of Senate Bill 307*. Presented to Michigan Senate Education Committee in Lansing, Michigan.

Affiliations/Professional Memberships

- National Association of School Psychologists (NASP)
- National Education Association (NEA)

References upon request

ⁱ All names of people and places are pseudonyms