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CREATING A NEW TEACHER AUTONOMY MEASURES AND ITS EFFECTS ON TEACHER JOB SATISFACTION

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This work is dedicated to my grandparents Jerry and Donnie Williams, without whom I would be lost. Everything I am and have accomplished is because of your unconditional love and support.

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Abstract

The purpose of this study is to develop a new framework for describing teacher autonomy as a perception in relation to the educational context using the five dimensions of instruction, curriculum design, working relationships, professional development, and standardization which may lead to greater job satisfaction. Eight hundred fifty Pre-K to 12th grade teachers were sent a new instrument, the Five Dimensions of Teacher Autonomy Scale (FDTAS) with items concerning teacher autonomy as a perception and the Teacher Jos Satisfaction Questionnaire (TJSQ; Lester, 1987) measuring teacher job satisfaction. Several types of demographic data was also collected. Both Exploratory and Confirmatory Factor Analyses were conducted to determine the factor structure of the teacher autonomy measure. A multiple regression analysis was performed to determine if teacher autonomy as a perception predicts job satisfaction. The results indicated (a) that a three factor structure best fit the data, and (b) teacher autonomy as a perception was a significant predictor of teacher job satisfaction. Results provide implications and future research for teacher autonomy.

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Chapter 1:Introduction

Education in the United States is controlled by standardized mandates for scripted curriculum and high stakes testing based on changes to federal laws (Nichols, Glass, & Berliner, 2006). Teachers may focus on standardized tests, pacing calendars, and state-adopted textbooks to meet the federal requirements to maintain funding in the schools and ensure administrator success (Barksdale-Ladd & Thomas, 2000; Hunt, 2012). Following a scripted curriculum may affect instructional flexibility, freedom from instructional choices, and the ability to teach content using different methods and skills (Morton-Rose, 2013; Pearson, 1995; Smith, 2003). These challenges can be viewed as affecting teacher autonomy.

Conceptualizations of Teacher Autonomy

Teacher autonomy has been defined in different ways since the mid-90s often focusing on one aspect, "choice", or the identifying "characteristics" of autonomous teachers (Aoki, 2000; Benson, 2001; Little, 1995, Smith, 2003). Additionally, "teacher autonomy is a means of encouraging and strengthening the power of teachers in the personal or professional sense, not just as a buffer against pressures exerted on the teacher" (Friedman, 1999, p.60). This flexibility gives teachers the perception of control over their work environment by increasing their professional status (Bogler, 2001; Pearson & Moomaw, 2006), leading to greater levels of job satisfaction (Sabina, Okibo, Nyang'ay, & Ondima, 2015).

Teachers who possess a high degree of autonomy tend to schedule their own work, make job related decisions, maintain control over curricular decisions (Friedman, 1999; Sabina, et al., 2015), form collegial relationships to accomplish tasks outside the classroom (Frase & Sorenson, 1992), work independently with little administrator oversight, initiate new instructional activities, and feel free to change existing work procedures to adapt to changing conditions and

situations (Friedman, 1999). In contrast, teachers who possess a low degree of autonomy are more likely to be dissatisfied with the job, isolate within the classroom (Friedman, 1999; Aytac, 2020; Sugrue & Mertkan, 2017; Spear, Gould, & Lee, 2020), make fewer independent decisions (Friedman, 1999), and have a reduced sense of professionalism or authority in the classroom (Wills & Sandholtz, 2009). Teachers with lower autonomy are often dissatisfied with the job, have higher absenteeism, lower productivity, loss of interest, lower levels of commitment (Baykara & Orhan, 2020), and higher rates of turnover (Baykara & Ohran, 2020; Ingersoll, 2001; Johnson & Birkeland, 2003).

Researchers further conceptualize teacher autonomy describing it as a decision-making ability or perception. Teacher autonomy as a decision-making ability allows teachers with higher levels of autonomy the authority to make decisions regarding work procedures and conditions affecting the work environment (Friedman, 1999) while teachers with higher levels of autonomy as a perception investigate changes in instructional strategies, support for curriculum selections, creation of collaborative work environments, inclusion in professional development experiences, and policy standardization (Blasé & Kirby, 2009; Pearson, 1995; Pearson & Hall, 1993; Friedman, 1999; Strong & Yoshida, 2014) impacting job satisfaction (Baykara & Orhan, 2020).

Conceptualizations of Teacher Job Satisfaction

Teacher job satisfaction is defined as "teachers' affective reactions to their work or to their teaching role" (Skaalvik & Skaalvik, 2011, p.1030). Lopes and Oliveira (2020) found teacher job satisfaction is essential for teachers' school effectiveness and students' academic success. Thus, teacher job satisfaction is affected by the perception of the working conditions, wages, career opportunities, and the organizational environment of the school (Aytac, 2020).

Teachers prefer to schedule their own work and make job related decisions with little supervision (Sabina, Okibo, Nyang'au & Ondima, 2015). Teachers report higher levels of job satisfaction in a school when they are involved in the decision-making process and have a good working environment (Sabina, Okibo, Nyang'au, & Ondima, 2015). A few characteristics that can increase teacher job satisfaction include control over classroom decisions, student behavior, and student teacher ratio (Wright, 2020). Teachers with high levels of job satisfaction are actively engaged in the classroom, participate in professional development experiences, and are less likely to miss work (Aytac, 2020).

In contrast, McConnell (2017) stated high levels of student misbehavior, low workplace safety, lack of administrative support, limited classroom resources, low teacher input into decisions affecting the school, and inadequate opportunities for professional development may lead to job dissatisfaction. Baykara and Orhan (2020) reported job dissatisfaction can lead to job absenteeism, high turnover rates, demoralization, and polarization in relation with other employees and principals, which leads to reduced productivity in schools.

For this study, teacher autonomy was defined as the ability to utilize the flexibility and freedom to make curricular and instructional choices in the classroom (Aoki, 2000; Benson, 2001; Little, 1995; Sehrawat, 2014; Smith, 2000; Wills & Sandholtz, 2009) while considering external demands and pressures (i.e. laws and standardized requirements) (Brunetti, 2001; Rudolph, 2006) placed on them by the profession. Further defining teacher autonomy as a perception allows the researcher to investigate changes in instructional strategies, support for curriculum selections, creation of collaborative work environments, inclusion in professional development experiences, and policy standardization (Blasé & Kirby, 2009; Pearson, 1995; Pearson & Hall, 1993; Friedman, 1999; Strong & Yoshida, 2014) as it impacts job satisfaction

(Baykara & Orhan, 2020). Although this definition provides a description of teacher autonomy, it fails to provide the operationalization of teacher autonomy in context. This can be done by using the five dimensions of instruction, curriculum design, working relationships, professional development, and standardization. Combining the conceptual and operational definition of teacher autonomy may provide a new framework for describing teacher autonomy in the future which may lead to improvements in job satisfaction. Thus, the theoretical framework for this study is how teacher autonomy as a perception affects all areas of the educational experience.

Statement of the Problem

Researchers have been attempting to define teacher autonomy for over 20 years (Aoki, 2000; Benson, 2001; Little, 1995; Sehrawat, 2014; Smith, 2000; Wills & Sandholtz, 2009). For this study, the researcher will investigate teacher autonomy as a perception operationalized across the five dimensions and the effect on job satisfaction. To accomplish this, two instruments were disseminated to participants; a new instrument (created by the researcher), the Five Dimensions of Teacher Autonomy Scale (FDTAS), and the Teacher Job Satisfaction Questionnaire (TJSQ; Lester, 1987). Measuring teacher autonomy as a perception and its effect on job satisfaction may increase teacher retention and improve the educational environment.

Purpose of the Study

The purpose of this study was to develop a new framework for describing teacher autonomy as a perception in relation to the educational context using the five dimensions of instruction, curriculum design, working relationships, professional development, and standardization which may lead to greater job satisfaction. To accomplish this, a new instrument was created, the FDTAS, as the current instruments used to measure teacher autonomy, Teacher Autonomy Scale (TAS; Pearson & Hall, 1993) and the Teacher-Work Autonomy Scale (TWA;

Friedman, 1999) were reviewed and denoted as inadequate due to changes in the field over the past several years.

Two widely accepted teacher autonomy scales were researched as relevant to this study prior to creating the new instrument; TAS (Pearson & Hall, 1993) and TWA (Friedman, 1999). Individual items in each instrument were reviewed for comprehensiveness. TAS (Pearson & Hall, 1993) items primarily describe teacher autonomy as a perception while TWA (Friedman, 1999) items predominately focus on decision-making ability. The TAS scale (Pearson & Hall, 1993) included items to describe two of the five dimensions while additional item creation was required. The TWA scale (Friedman, 1999) included items describing three of the five dimensions with additional item creation required. The researcher was required to create items in four of the five dimensions, as instructional autonomy was covered adequately by the TAS. The new instrument, FDTAS, was constructed by (adding thirteen new items) to provide adequate coverage of the newly proposed framework for teacher autonomy. Additionally, all items were reworded to ensure item consistency and comprehensiveness.

The Teacher Job Satisfaction Questionnaire (TJSQ) instrument was used to measure teacher job satisfaction (Lester, 1987). This instrument focuses on teacher job satisfaction in the educational context (Lester, 1987). The TJSQ covers a wide range of job characteristics such as supervision, colleagues, working conditions, pay, responsibility, classroom processes and procedures, promotion and advancement, job security, and recognition (Lester, 1987). These job characteristics relate directly to the five dimensions supporting the new theoretical framework proposed in this study.

Research Questions

The following research questions will be investigated:

1. Does FDTAS measure teacher autonomy as a perception?
    a. Does FDTAS have 5 factors in the solution?
    b. If not, how many factors are there in the FDTAS model and how does it measure teacher autonomy as a perception?
2. In what ways do the factors correlate with the external criterion measure of teacher job satisfaction?

Summary

Teacher autonomy as a perception is a complex construct that has been difficult to define. For the past 20 years, researchers have proposed a variety of conceptual definitions describing autonomy as a "choice" or by identifying "characteristics" of autonomous teachers (Aoki, 2000; Benson, 2001; Little, 1995, Smith, 2003). Teachers described as autonomous have the freedom and flexibility to make decisions in the classroom, choose curriculum for their classrooms, work closely with administrators and principals to collaborate in the school setting, support educational standards, and follow policies set by federal laws (Sehawart, 2014). Autonomous teachers gain the trust of other educators allowing them to work independently, initiate new instructional activities, and adapt to changing conditions in the schools (Friedman, 1999).

Lacking in the current accepted definitions is the ability to operationalize teacher autonomy as a perception in the educational context. This can be done by using the five dimensions of instruction including curriculum design, working relationships, professional development, and standardization. Combining the accepted conceptual definitions with the operational constructs affecting teacher autonomy can provide a new framework for describing teacher autonomy which may lead to improvements in job satisfaction.

Key Definitions

Teacher Autonomy is defined as the ability to utilize the flexibility and freedom to make curricular and instructional choices in the classroom (Aoki, 2000; Benson, 2001; Little, 1995; Sehrawat, 2014; Smith, 2000; Wills & Sandholtz, 2009) while considering external demands and pressures (i.e. laws and standardized requirements) (Brunetti, 2001; Rudolph, 2006) placed on them by the profession.

Teacher Autonomy as a Perception is defined as the perception teachers possess regarding control over their work environment and the educational context (Pearson and Hall. 1993).

Teacher Job Satisfaction is defined as "teachers' affective reactions to their work or to their teaching role" (Skaalvik & Skaalvik, 2011, p.1030)

Five Dimensions is defined as a concise construct of teacher autonomy situated in the educational context. The Five Dimensions include instructional autonomy (Pearson & Hall, 1993), curriculum autonomy (Fleming, 1998), principal/administrator relationship (Hoy, Tarter, & Witkoskie, 1993), professionalism and empowerment (Short, 1994), and policy (Ingersoll, 1996).

Instructional Autonomy is defined as the ability to choose the learning goals, activities, and methods for instruction in the classroom and the sequence of instruction (Pearson & Hall, 1993; Pearson & Moomaw, 2006; Wengrowicz, 2014).

Curriculum Autonomy is defined as the ability to make textbook, worksheet, or activity page choices based on current learning standards, principal/administrator suggestions, and professional experience (Fleming, 1998).

Principal/Administrator Relationship is defined as the openness to collaborate and accept suggestions and feedback, both positive and negative, regarding the educational experience (Hoy, Tarter, & Witkoskie, 1992; Tarter, Sabo, & Hoy, 1995).

Professionalism and Empowerment is defined as taking responsibility for personal development and growth (Short, 1994; Wills & Sandholtz, 2009), supporting the working conditions of teachers (Pearson & Moomaw, 2006), and resolving any challenges or difficulties encountered (Short, 1994).

Policy is defined as the laws and standards set forth by the federal and state governments impacting the planning and resource allocation in the educational environment (Ingersoll, 1996).

Chapter 2: Literature Review

Introduction

Mandates for teaching using standardized curriculum and high stakes testing permeate today's educational environment (Nichols, Glass, & Berliner, 2006). Teachers are required to use mandated curriculum when developing assignments to teach students (Barksdale-Ladd & Thomas, 2000; Hunt, 2012). Teachers' instructional flexibility, curricular decision-making, and professionalism are affected when these mandates are the focus of education (Pearson, 1995) affecting teacher autonomy (Pearson & Moomaw, 2006).

Teacher autonomy may be described as "…a teacher's power in the planning and implementing of the teaching activities but also to his or her involvement and participation in the decision-making process" (Ozturk, 2011, p.117). This freedom to make curricular and instructional decisions in the classroom (Wills & Sandholtz, 2009) allows them to manage their classrooms (Pearson & Moomaw, 2006) with a sense of freedom improving job satisfaction (Sabina, Okibo, Nyang'ay, & Ondima, 2015).

Teacher autonomy has been defined in different ways. Although it is commonly discussed, ambiguity exists when attempting to define the construct. Teacher autonomy often describes high or low autonomy in teachers. Highly autonomous teachers are viewed as engaged and independent while teachers with low levels of autonomy are viewed as disengaged or interdependent (Pearson & Moomaw, 2006).

Highly autonomous teachers are allowed to schedule their own work and maintain control over curricular decisions (Friedman, 1999; Sabina, et al., 2015). These teachers often form collegial relationships to accomplish tasks (Frase & Sorenson, 1992), work independently free from administrator oversight, initiate new instructional activities, and change existing work

procedures when appropriate (Friedman, 1999). When teachers feel they have autonomy over their classrooms, they experience increased perception of their professional status (Bogler, 2001), maintaining greater levels of job satisfaction. Therefore, the amount of autonomy experienced plays a role in teacher retention (Stockard & Lehman, 2004; Strong, 2011), job satisfaction (Aytac, 2020), and performance in the classroom (Blasé & Kirby, 2009).

Teachers with low levels of autonomy are dissatisfied with the job and isolate within the classroom (Friedman, 1999; Aytac, 2020; Sugrue & Mertkan, 2017; Spear, Gould, & Lee, 2020). A teacher with low autonomy makes few independent decisions or only make decisions regarding technical matters that do not affect the basic principles or procedures of the job (Friedman, 1999). Teachers who experience a decrease in their autonomy experience a reduced sense of professionalism and elimination of authority in the classroom (Wills & Sandholtz, 2009). Additionally, when a teacher is dissatisfied with the job, higher absenteeism, lower productivity, loss of interest, and lower levels of organizational commitment occur (Baykara & Orhan, 2020).

Teacher autonomy is also described as a decision-making ability or perception. The authority one uses to make changes in the classroom and curriculum can be defined this way. Teacher autonomy as a decision-making ability allows the teacher to make decisions regarding the procedures and conditions used in teaching while teacher autonomy as a perception uses a variety of instructional strategies and creates collaborative work environments in the classroom (Blasé & Kirby, 2009; Pearson, 1995; Pearson & Hall, 1993; Friedman, 1999; Strong & Yoshida, 2014).

Researchers have been using these definitions, as well as others, for over 20 years in order to better conceptualize this construct (Aoki, 2000; Benson, 2001; Little, 1995; Sehrawat,

2014; Smith, 2000; Wills & Sandholtz, 2009). This conceptualization of teacher autonomy is rooted in the foundations of Social Cognitive Theory (SCT) interconnected with Self-Determination Theory (SDT).

Social Cognitive Theory

Social Cognitive Theory (SCT) is classified as a transaction between cognitive, behavioral, and environmental factors (Bandura, 1997; Khudzari, Halim, Lokman, & Othman, 2019). With SCT, a few crucial factors may influence an individual's behavior, including self-efficacy, outcome expectancies, goals, and socio-structural factors (Conner & Norman, 2005; Khudzari, Halim, Lokman, & Othman, 2019). Social Cognitive Theory is based on four primary assumptions: behavior is purposeful or goal directed, individuals are self-reflective, people are capable of self-regulation, and triadic reciprocal determinism using behavioral, personal, and environmental determinants (Bandura, 1989; Khudzari, Halim, Lokman, & Othman, 2019; Motl, 2007). Behavioral factors suggest goals are largely determined by an individual's behavior (Khudzari, Halim, Lokman, & Otheman, 2019). Personal factors are in the form of cognitive, affective, and biological events (Bandura, 1997; Khudzari, Halim, Lokman, & Othman, 2019). Finally, the environmental determinants include the robust influence environment (nurture) has on both personality development and behavior (Khudzari, Halim, Lokman, & Othman, 2019).

Erlich & Russ-Eft (2011) recognized the effects of self-efficacy as the primary component of Social Cognitive Theory which affects a persons' confidence to achieve goals. "Self-efficacy is the belief that one is capable of successfully performing a given task" (Ford, Lavigne, Fiegener, & Si, 2020, p.267). Self-efficacy helps explain how individuals experience their environments (Bandura, 1986; Ford, Lavigne, Fiegener, & Si, 2020). As a perception, self-efficacy can be considered an interpretation of oneself based upon the processing of information

(Bandura, 1997). According to SCT, self-efficacy is derived from four main sources: mastery experiences, vicarious experiences, verbal persuasion, and arousal (Ford, Lavigne, Fiegener, & Si, 2020). These sources can be used by teachers to assess autonomy in the classroom and the school.

Self-Determination Theory

Self-determination theory (SDT) as applied to an educational setting primarily focuses on the social conditions that facilitate or hinder human flourishing (Ryan & Deci, 2017). According to SDT, there are two types of behaviors, those that are intentionally chosen by fulfilling one's intrinsic or extrinsic needs or those that are not deliberately chosen (Deci & Ryan, 1980; Ryan & Deci, 2017). Intrinsic motivation is an instinctive need for competence and self-determination and the regulation of this intrinsically motivated behavior by interest and the process of seeking and conquering challenges (Deci & Ryan, 1983). Intrinsically motivated individuals follow their interests, accept challenges from the world around them, attend to and are involved with the activity at hand, and are generally free of the pressure associated with external controls (Deci & Ryan, 1983; Ryan & Deci, 2017). In contrast to intrinsic motivation, extrinsic motivation concerns behaviors where there is an externally imposed reward or punishment for performing such behaviors (Ryan & Deci, 2017).

SDT focuses on psychological needs and these needs are specifically defined as "…nutrients that are essential for growth, integrity, and well-being" (Ryan & Deci, 2017, p.10). Ryan and Deci (2017) assert these psychological needs must be satisfied for psychological interest, development, and wellness to be sustained. Like physical needs, these needs are said to be tangible in that their denial or satisfaction has clear and measurable functional effects, effects obtained regardless of one's subjective goals or values. To the extent as they are needs, thwarting

or deprivation of any of them will lead to observable decrements in growth, integrity, and wellness, irrespective of whether they are valued by the individuals or their cultures (Ryan & Deci, 2017). The three basic psychological needs are competence, relatedness, and autonomy.

Competence refers to the basic need for an individual to feel effective and able to master a task (Ryan & Deci, 2017). According to Ryan and Deci (2017), competence can affect a wide range of behaviors, from playing a video game to scientists studying the laws of the universe. However, competence can be diminished especially when challenges are too difficult and negative feedback is prevalent (Ryan & Deci, 2017). Relatedness concerns people feeling socially connected and cared for by others and includes not only belonging and feeling significant among others, but also feeling oneself as giving or contributing to others (Ryan & Deci, 2017). The final need is autonomy. According to Ryan and Deci (2017), autonomy is the need to self-regulate one's experiences and actions. This occurs when behaviors are self-endorsed or overall align with the authentic interests and values of the individual. Teacher autonomy is a part of the three basic psychological needs for teachers. SDT states that if the degree to which one of these three basic needs are not supported, it will have a detrimental impact on the wellness in that setting (Ryan & Deci, 2017). Therefore, the lack of autonomy in the classroom has a detrimental effect on teachers' wellbeing.

Interconnectivity of Social Cognitive and Self-Determination Theories

Garrin (2014) proposes a model of interrelation between Bandura's Social Cognitive Theory (SCT) and Self-Efficacy and Self-Determination Theory (SDT) highlighted at length by Ryan and Deci (2000). As such, Mastery, Confidence, and Competence are fundamental attributes of Bandura's work, while Competence, Autonomy, and Relatedness are key attributes of SDT. Accordingly, beliefs play a critical role in the extent to which individuals perceive their

own competence and ability to master a particular behavioral domain (Bandura, 1997). Mastery and competence are directly tied to these perceptions of self-efficacy (Bandura, 1997). Concurrently, SDT promotes constructs of competency, autonomy, and connectedness/relatedness as a mechanism for promoting the motivations that in turn lead to SCT and self-efficacy (Garrin, 2014). Further, Ford, Lavigne, Fiegener, & Si (2020) posit self-efficacy judgments are closely tied to perceptions of autonomy and competence. Thus, an individual's analysis of a job task includes an assessment of perceived resources and constraints involved in completing it and the perceptions the individual has regarding the control over the situation or the autonomy perceived by the individual.

Autonomy

Autonomy utilizes an understanding of metacognition, strategic competence, reflection, choice, decision-making, and perception in order for individuals to create an environment where successful outcomes and an integrated sense of self can be achieved (Andrade & Bunker, 2009). One aspect of autonomy, metacognition, involves the planning and monitoring of thought processes to regulate thinking and self-awareness in any environment. Individuals use metacognition to bring awareness to their thinking processes in order to approach things in different ways (Pirsl, Popovska, & Pirsl, 2013). Additionally, strategic competence is utilized as a general ability for individuals to carry out a task using higher level thinking processes and self-awareness to complete the task in the most effective manner.

The strategic competence is a compensatory competence available when other self-monitored competency areas are lacking. Individuals can access the areas where successes have occurred to support task or goal completion (Castillo, 2013). Reflection is an activity based on personal beliefs which are logically and rationally accessed to analyze experiences and the

environment where the experiences occur. In autonomous individuals, reflection utilizes the understanding of the environment to make the connections between the self and the context in which the self is developing the skills to be used in the environment (Noormohammadi, 2014). Additionally, individuals who have a strong sense of oneself as an initiator of actions and behaviors rely on choice (Bao & Lam, 2008).

Choice provides individuals with the freedom to make decisions leading to successful outcomes (Burchardt, Evans, & Holder, 2013). Decision-making is defined as a process where individuals possess an ability to identify a problem or goal, create problem solving activities based on personal perspectives to complete the task. Decisions may be individually created, collaborated across groups, or collected from multiple sources prior to the implementation of the process (Prilandita, McLellan, & Tezuka, 2017).

Autonomy is also viewed as a perception. The belief that individuals possess the power and freedom of setting goals and priorities to determine the order and pace in which the tasks are executed (Runhaar, Konermann, & Sanders, 2013). The perception of autonomy varies as some view it as freedom from authority, while others struggle with the concept of isolation and lack of support (Pearson & Moomaw, 2006). Individual autonomy relies on the combination of psychological ideas to support self-awareness and personal growth (Runhaar, Konermann, & Sanders, 2013). The concept of autonomy is relevant to all occupations, however, the concept of teacher autonomy is continuously evolving.

The Teacher Autonomy Construct

Researchers have been defining teacher autonomy for over 20 years. Teacher autonomy has been defined using words such as capacity, freedom, responsibility, choice, willingness, knowledge, attitudes, perception, and decision-making (Aoki, 2000; Benson, 2001; Friedman,

1999; Huang, 2005; Pearson & Hall, 1993; McGrath, 2000; Smith, 2000). These words often overlap with little consensus on one definition of teacher autonomy.

Teacher autonomy can be further conceptualized by describing teacher autonomy as a perception or as a decision-making ability. Pearson and Hall (1993) described teacher autonomy as a perception stating teacher autonomy is the perception teachers possess regarding whether they can control their work environment. Friedman (1999) described teacher autonomy as a decision-making ability stating a teacher with a high level of autonomy works independently and is free to make decisions concerning work procedures to adapt them to changing conditions and situations. Conversely, a teacher with low autonomy does not make any independent decisions (Friedman, 1999). Aoki (2000), Benson (2001), Little (1995), and Smith (2000) suggested teacher autonomy involves choice, freedom, skills, and/or responsibility to make choices in the learning environment (Sehrawat 2014). While Brunetti (2001) and Rudolph (2006) stated teacher, autonomy is the ability to control one's own teaching, focusing less on the demands or pressures from others. Although these definitions provide insight into the growth of teacher autonomy, they fail to operationalize the construct in the educational context.

For this study, teacher autonomy was defined as the ability to utilize the flexibility and freedom to make curricular and instructional choices in the classroom (Aoki, 2000; Benson, 2001; Little, 1995; Sehrawat, 2014; Smith, 2000; Wills & Sandholtz, 2009) while considering external demands and pressures (i.e. laws and standardized requirements) (Brunetti, 2001; Rudolph, 2006) placed on them by the profession as it effects job satisfaction (Baykara & Orhan, 2020). Describing teacher autonomy in this way provides a contextual definition however it fails to operationalize a measureable construct of teacher autonomy. This can be done by using the five dimensions of instruction, curriculum design, working relationships, professional

development, and standardization. Combining the conceptual and operational definition of teacher autonomy may provide a new framework to describe teacher autonomy as a perception in the educational context.

How Teacher Autonomy Affects Education

A highly debated issue in the United States concerns teachers' ability to manage the classroom while juggling testing expectations (Nichols, Glass, & Berliner, 2006). The pressure for student performance on tests compromises instructional practice and changes the views of teaching as professionals who can make decisions regarding instructional practices (Nichols, Glass, & Berliner, 2006). Teachers may be required to spend more time on content areas that are tested while neglecting untested subject areas (Abrams, Pedulla, & Madaus, 2003). Teachers are directed to focus on test preparation to improve scores (Barksdale-Ladd & Thomas, 2000; Lee, Dedrick, & Smith, 1991; Pearson, 1995; Sentovich, 2004). Research asserts this pressure on test performance may influence teachers ability to be flexible in their instruction decreasing job satisfaction (Nichols, Glass, & Berliner, 2006; Wills & Sandholtz, 2009).

Some school districts direct teachers to use scripted curriculum based on standardized tests (Barksdale-Ladd & Thomas, 2000) while others search for teachers who create curriculum focused on tested subject areas to improve or maintain high test scores (Sehrawat, 2014). The perception of teachers who work in schools where flexibility is supported believe they can utilize their professional knowledge and judgement (Sehrawart, 2014; Willis & Sandhotlz, 2009) to perform the job (Wills & Sandholtz, 2009) leading to increased job satisfaction and teacher autonomy (Sehrawat, 2014).

An autonomous teacher feels personal responsibilities to develop themselves and their classroom using a variety of tools (Sehrawart, 2014). When teachers are given autonomy in the

classroom appropriate teaching methods are discovered, planning lessons by establishing learning goals occurs, and empowering students to manage the classroom experiences is expected (Andrade & Bunker, 2009; Antoniazzi, 2010).

Teachers with choices such as selecting teaching materials and learning activities, setting goals and the pace of instruction, and participating in professional development thrive in the classroom, creating an autonomy supportive culture (Andrade & Bunker, 2009; Austin, Guay, Senecal, Fernet, & Nouwen, 2013). Autonomy supportive cultures afford teachers the ability to choose and have a voice and point of view in important matters related to the curriculum and classroom; policy standards are intact while creativity is supported (Abad & Sheldon, 2008; Alivernini & Lucidi, 2011; Blasé & Kirby, 2009). Therefore, teacher autonomy as a perception can be described as the control teachers feel they have over their working environment (Pearson & Hall, 1993), which can include collaborating with other teachers (DeNicola, 2015), making decisions regarding curriculum (Jiang, 2005), and being allowed the freedom to make their own instructional choices in the classroom (Brunetti, 2001), leading to increased teacher job satisfaction.

How Teacher Autonomy Affects Teacher Job Satisfaction

Teacher job satisfaction is defined as "teachers' affective reactions to their work or to their teaching role" (Skaalvik & Skaalvik, 2011, p.1030). Additionally, Zembylas and Papanastasiou (2004) refer to teacher job satisfaction as a teacher's affective relationship between what the teacher wants from teaching and what he/she perceives it is offering to him/her. Research states teacher perceptions of autonomy play a role in teacher job satisfaction (Dincer, 2019; Okibo, Nyang'au, & Ondima, 2015; Perie and Baker, 1997). Dincer (2019) suggests teacher autonomy and job satisfaction have a bidirectional relationship. More

specifically, "…when teachers feel autonomy-support in their educational settings, they become more satisfied with their jobs and work efficiently, which in turn relates to education quality and teacher autonomy" (Dincer, 2019, p.13). Perie and Baker (1997) state teacher autonomy is associated with higher teacher job satisfaction. A study by Sabina, Okibo, Nyang'au, and Ondima (2015) describes teachers who perceive they have autonomy in the classroom describe increased levels of job satisfaction. In contrast, teachers who perceive they lack autonomy in the classroom report decreased levels of job satisfaction (Charters, 1986)

Teachers who perceive they have the autonomy and freedom to collaborate with other teachers, are supported by their principals and administration (Ismail, 2012; Richards, 2003; Skaalvik & Skaalvik, 2011), and have the ability to make decisions related to pedagogy describe higher levels of job satisfaction (DeNicola, 2015; Postholm and Waege, 2016). Teachers who participate in curriculum decisions (Jiang, 2005; Pearson & Moomaw, 2006) including reforming curriculum to meet their needs (Ismail, 2012), describe higher levels of job satisfaction (Jiang, 2005). Finally, teachers who have the instruction flexibility (Worth & Van den Brande, 2020), teaching to their own values (Ismail, 2012; Perie & Baker, 1997), and designing and implementing their own activities report higher levels of job satisfaction (Brunetti, 2001; Skaalvik & Skaalvik, 2014).

Teacher autonomy may also negatively affect job satisfaction (Charters, 1986; Dincer, 2019; Ismail, 2012; Wright, 2020). Classroom size, student behavior, and extra pressures placed on the teacher by principals, curriculum standards, or laws/regulations may lead to less job satisfaction (Wright, 2020). Teachers who do not feel valued or understand the needs of students are further dissatisfied at work (Wright, 2020). Dincer (2019) reports national policies and laws which require mandated curriculum and lead to minimum control over the classroom

environment hinder teacher levels of autonomy, affecting teacher job satisfaction. Furthermore, teachers who are dissatisfied with the mandated curriculum timelines feel there is little time left for other teaching opportunities (Dincer, 2019). Being forced to use mandated textbooks and lesson plans led to additional areas of teacher dissatisfaction (Dincer, 2019). Also, principals who are perceived as limiting teacher autonomy by not affording teachers to make decisions about instruction and classroom management led to less job satisfaction (Charters, 1986; Ismail, 2012). Teacher job satisfaction may be affected by instructional autonomy, curriculum autonomy, the principal/administrator relationship, professionalism and empowerment, and current educational policies/requirements.

The Five Dimensions Model of Teacher Autonomy

Since the mid-90s teacher autonomy has been defined in various ways primarily focusing on the aspect of "choice" or identifying "characteristics" (Aoki, 2000; Benson, 2001; Little, 1995, Smith, 2003).). Individual autonomy relies on the combination of psychological ideas to support self-awareness and personal growth (Bao & Lam, 2008). Individuals who have a strong sense of self are viewed as the initiator of actions and behaviors, relying on choice to make decisions (Bao & Lam, 2008; Burchardt, Evans, & Holder, 2013). Autonomous teachers possess the power and freedom to set goals and priorities to determine the order and pace in which the tasks are executed in the classroom (Runhaar, Konermann, & Sanders, 2013).

Teacher autonomy is defined as the ability to utilize the flexibility and freedom to make curricular and instructional choices in the classroom (Aoki, 2000; Benson, 2001; Little, 1995; Sehrawat, 2014; Smith, 2000; Wills & Sandholtz, 2009) while considering external demands and pressures (i.e. laws and standardized requirements) (Brunetti, 2001; Rudolph, 2006) placed on them by the profession. Viewing teacher autonomy as a perception or decision-making ability

further describes autonomy as the ability to control the learning environment (perception; Pearson & Hall, 1993) or the ability to affect the learning environment (decision-making; Friedman, 1999). Although these definitions provide a foundation to understand teacher autonomy, they fail to provide a description for operationalizing teacher autonomy in the context of education. Utilizing the five dimensions, provides the means for describing teacher autonomy in context. Additionally, viewing teacher autonomy as a perception as it relates to instruction, curriculum design, working relationships, professional development, and standardization may lead to a greater understanding of the impact teachers have on education (Friedman, 1999, Pearson & Hall, 1993; Pearson & Moomaw, 2006; Wills & Sandholtz, 2009). Further, investigating the theoretical framework of teacher autonomy as a perception is important to describe the effect teachers' have over their learning environment even when requirements and laws govern the field.

Theoretical Construct of the Five Dimensions

The Five Dimensions may be key to developing a new framework for describing teacher autonomy as a perception situated in the educational context. The Five Dimensions include instructional autonomy, curriculum autonomy, principal/administrator relationship, professionalism and empowerment, and policy. Instructional autonomy is the ability for teachers to make decisions regarding their classrooms and the freedom to make choices on how to teach students (Pearson & Moomaw, 2006). Instructional autonomy occurs when teachers can choose the learning goals, activities, and methods for instruction in the classroom, plan the sequence of instruction, and modify outcome responses (Pearson & Hall, 1993; Pearson & Moomaw, 2006; Wengrowicz, 2014). Curriculum autonomy is a little more specific than instructional autonomy in that it is the amount of power a teacher has in determining what students will learn (Morgado

& Sousa, 2010). Curriculum autonomy presents teachers with the ability to make choices based on current learning standards, principal/administrator suggestions, and the degree to which teachers rely on experience and professional expertise to make curriculum decisions (Fleming, 1998). Principal/administrator support is an important aspect of teacher autonomy as it involves principals/administrators who listen and are open to teachers' suggestions, give praise frequently, and give criticism constructively (Hoy, Tarter, & Witkoskie, 1992; Tarter, Sabo, & Hoy, 1995). Principal/administrator support transpires when teachers are provided with choices, given positive feedback, and given a meaningful rationale for curriculum decisions, promoting empowerment (Abad & Sheldon, 2008; Austin, Guay, Senecal, Fernet, & Nouwen, 2013; Assor, Kaplan, Feinberg, & Tal, 2009). Professionalism/empowerment arises when teachers can use specialized expertise to make decisions in the classroom while taking responsibility for personal development and growth (Short, 1994; Wills & Sandholtz, 2009). Teacher professionalism is defined as the movement to improve the status of teachers, training, and working conditions of teachers (Pearson & Moomaw, 2006). Teacher empowerment is the ability for teachers to be able to take the initiative for their own growth and resolve their own problems (Short, 1994). Finally, policies affect teacher autonomy in that most are test driven and teachers are directed to teach a certain curriculum in a certain way (Selwyn, 2007; Adoniou, 2012). Policy affects teacher autonomy when teachers have minimal input into school policy, planning, and resource allocation depending on principals/administrators to make the decisions (Ingersoll, 1996).

Instructional Autonomy

Instructional autonomy is teachers' ability to control, decide, and modify things regarding their teaching and environment (Pearson & Hall, 1993; Wengrowicz, 2014). More specifically, instructional autonomy can be defined as the ability and freedom to choose learning goals,

materials, activities and methods, plan the sequence of instruction, establish rules of behavior in the classroom and make decisions during instruction (Pearson & Moomaw, 2006; Wengrowicz, 2014). According to Pearson and Moomaw (2006), teachers who possess instructional autonomy can decide the "what" and "how" to teach a particular subject or topic or at least take part in the decision-making process. For example, teachers may be given manuals to standardize their teaching and detail exactly what, when, and how they are supposed to teach a certain subject (Benson, 2010; Selwyn, 2007). Some teachers believe they should have the ability to adjust their teaching based on their students' needs as well as utilize the methods they learned while obtaining their degree (Adoniou, 2012).

Curriculum Autonomy

Curriculum autonomy requires input from teachers. The decision-making ability of teachers is removed with scripted curriculum controlling how a teacher presents the content; not allowing for interpretation of the content based on their past training and knowledge (Adoniou, 2012). Instructional autonomy concerns what and how teachers teach, while curriculum autonomy is the power given to teachers or governing bodies at the school or school district level to determine what students will learn (Morgado & Sousa, 2010). Curriculum autonomy gives teachers the power to make decisions in the process of developing curriculum by giving them the ability to define priorities, adapt the national curriculum based on students' needs, and include topics considered as important for students at a local or otherwise defined level (Morgado, 2003 as cited in Morgado & Sousa, 2010). One example of a lack of curriculum autonomy for teachers is when schools or districts make curriculum decisions to determine the content to be taught, the pace of instruction, and the activities or exercises to use in the classroom, largely without inputs from the teachers themselves (Benson, 2010).

Principal/Administrator Support

The teacher and principal/administrator relationship can aid or hinder a teacher's level of autonomy. Principal/administrator support is defined as principals/administrators who listen and are open to teachers' suggestions, give praise genuinely and frequently, and give criticism sparingly but constructively (Hoy, Tarter, & Witkoskie, 1992; Tarter, Sabo, & Hoy, 1995). Principals/administrators who question teachers' professional knowledge and ability to appropriately instruct creating the teaching of a "one-size fits all" curriculum are less supportive than those who allow for freedom of instruction (Morton-Rose, 2013).

Principals/administrators who are less concerned with centralization allow for greater decision-making around curriculum, textbooks, staffing, budget, discipline, and other issues, leading to stronger autonomy in the schools and the teachers within those schools (Leaks, 2013). Supportive principals/administrators respect teachers as professionals and demonstrate a personal and professional interest in the well-being of their teachers (Hoy, Tarter, & Witkoskie, 1992). Creating a climate of trust, respect, and open communication and advocating for teacher autonomy in the schools are key to the principal/administrator relationship (Fitzgerald & Theilheimer, 2013).

Professionalism and Empowerment

Professionalism and empowerment are additional aspects of teacher autonomy. Teacher professionalism is the movement to improve the status of teachers, training, and working conditions of teachers (Pearson & Moomaw, 2006). Ingersoll (1996) utilized the term teacher authority as a characteristic used to distinguish professionals from other occupations. Authority is the teachers' ability to influence school decisions concerning key educational issues (Ingersoll, 1996). Characteristics of professionalism include knowledge based on theory, mastery of

knowledge through extended specialized training, a high level of autonomy in performance tasks, and a code of ethics that guides behavior (Leicht & Fennell, 2001 as cited in Wills & Sandholtz, 2009). Professionals use their specialized expertise in making decisions about their work (Wills & Sandholtz, 2009). The expertise teachers possess may be a crucial factor because teachers often deal with unique and problematic situation that "preclude formulaic solutions" (Wills & Sandholdtz, 2009). "Freedom from judgment or discretion in performing work is an intrinsic component of professionalism" (Friedson, 2001). Professionals exercise their control over how their work should be completed rather than being overly directed by supervisors or managers (Wills & Sandholtz, 2009). This autonomy allows teachers to make curriculum and instructional decisions to meet the needs of the students in their classrooms, including decisions which may not be universally applicable (Wills & Sandholtz, 2009). Teachers believe they should have the ability to be autonomous decision makers as teaching involves complex and changing situations (Wills & Sandholtz, 2009). To deal with these complex situations, proficient teachers utilize their professional knowledge and make decisions based on theory and reasoned judgment (Wills & Sandholtz, 2009).

Empowerment is the ability for teachers to be able to take the initiative for their own growth and to resolve their own problems (Short, 1994). Individuals who are empowered believe they have the knowledge and skills to deal with a situation and resolve or improve it (Short, 1994). Short (1994) found there were six dimensions of teacher empowerment which include: involvement in decision-making, opportunities for professional development, teacher status, teacher self-efficacy, autonomy, and teacher impact. The first dimension of empowerment involves the participation of teachers in decisions that directly affect their work (Short, 1994). These decisions may involve budgets, teacher selection, scheduling, and curriculum (Short,

1994). One key element of empowerment is providing teachers with a significant role in decision-making (Short, 1994). If teachers believe their participation in decision making is not genuine and does not have an impact, then their level of empowerment dissipates (Short, 1994).

Professional growth refers to teachers' perceptions that their school "gives them the opportunity to grow and develop professionally, to learn continuously, and to expand one's own skills through the work life of the school" (Short, 1994, p. 490).

As a part of empowerment, teacher status includes perceptions teachers possess concerning professional respect from colleagues and feel others respect their knowledge and expertise (Short, 1994). The fourth dimension of empowerment is self-efficacy. Teachers with self-efficacy perceive they have the skills and ability to help students learn, are proficient in building effective lessons for students, and can affect changes in student learning (Short, 1994).

The fifth dimension of empowerment is autonomy. Teachers who believe they have some control over certain aspects of their work life is the autonomy part of empowerment (Short, 1994). More specifically, teachers may have control over scheduling, curriculum, choice of textbook and instructional planning (Short, 1994). The last dimension of empowerment is teacher impact. Teachers who perceive they have power and influence on school life is known as teacher impact (Short, 1994). Teacher impact may also be influenced by feedback from colleagues (Short, 1994).

Policy

Educational policies like the Every Student Succeeds Act (ESSA) propose ways to improve education, but these policies are a one-size-fits-all approach that is test driven (Selwyn, 2007). Policies are implemented in schools and teachers are directed to teach a certain way to prepare students for standardized tests (Adoniou, 2012). When administrators do not take a one-

size-fits-all approach to learning where teachers are required to teach certain learning objectives for students to pass standardized tests, autonomy support occurs (Selwyn, 2007). Creating an autonomy supportive culture should not be confused with providing teachers complete independence. The goal should be to create a state of interdependence between teachers, principals/administrators, and policies providing teachers with the authority to make decisions in the classroom and educational institution (Andrade & Bunker, 2009; Ingersoll, 1996).

Defining the Five Dimensions and teacher autonomy as a perception provide a comprehensive way to operationalize teacher autonomy. However, providing connections of the Five Dimensions: instructional autonomy, curriculum autonomy, principal/administrator relationship, professionalism and empowerment, and policy (Pearson & Moomaw, 2006) to teacher autonomy as a perception (Pearson & Hall, 1993) can help create a comprehensive understanding of teacher autonomy.

Teacher Autonomy as a Perception

Perception can be defined as an objective reality where individuals use existing knowledge to define responses and assign meanings to experiences (Woolfolk, 2001). Perception influences how the information that enters working memory is organized and utilized. This organization permits individuals to create a "reality" for each interaction. The "reality" is contrived, being unique to everyone; sometimes adequate other times inadequate depending on environment. The objective reality is influenced by the attitude and behaviors of the individual (teacher) and the climate (educational environment) (Pearson & Hall, 1993).

Teacher perception of the educational environment and work responsibility involves heightened emotions. Teachers formulate attitudes as a response to these emotions by forming unique meanings to classroom situations, assignments, and other situational attributes (Demuth,

2013; Wong, Hui, & Law, 1998). Teachers adjust their attitudes and behaviors through an interactive, social learning process throughout the school year while working with others to make decisions. The social learning process affects instruction, curriculum choices, communication with principals/administrators, willingness to participate in professional development, and the ability to implement policies as designed in the classroom (Wong, Hui, & Law, 1998).

Teacher perception is influenced by instructional decisions and policies that effect classroom management (Demuth, 2013; Eggen & Kauchak, 2001). Perceptions of diminished control over instructional decisions, as well as subject matter importance changes based on outside influences (Archbald, 1994). The ability to increase instructional time is often mitigated by various factors such as high stakes testing requirements. High stakes testing influences teacher's perception of control over the instructional decisions and content they are allowed to teach (Fitchett, Hafner, & Lambert, 2014). Teachers are forced to choose between the outside influences in lieu of their teaching experiences leading to borderline or limited conditional perceptions based on principal/administration regulations (Demuth, 2013; Fitchett, Hafner, & Lambert, 2014; Pearson, 1995; Runhaar, Konermann, & Sanders, 2015).

Teachers' perceptions of administrator and principal support influences adaptation and performance in the classroom (Eyal & Roth, 2010). The availability of resources provided by the principal/administrator establishing a positive school environment and culture influences teacher perception of effectiveness (Johnson, 1992; Ma & MacMillan, 2001; Runhaar, Konermann, & Sanders, 2015). Teachers perceive a sense of autonomy when principals/administrators communicate clearly and demonstrate empathy and trust in teachers to make decisions in their classrooms (Blomeke & Klein, 2013). Principals/administrators display this trust by creating a culture of professionalism and empowerment (Pearson, 1995; Pearson & Moomaw, 2006). A

movement to upgrade the status of teachers from managed novice to qualified authorities is termed teacher professionalism (Pearson & Moomaw, 2006). Researchers agree elevating teachers to a status of a professional empowers them by giving them a sense of autonomy, enhancing the perception they are in control in the classroom (Pearson & Hall, 1993; Pearson & Moomaw, 2006). Elevating teacher professionalism provides an enhanced perception of control over their classroom (Pearson, 1995; Pearson & Hall, 1993). Balancing teacher freedom with teacher responsibility to maintain and support educational policies cultivates teacher autonomy (Feldmann, 2011).

Central control policies prevent teachers from making instructional decisions and prevents teachers from following their own beliefs and experiences (Archbald & Porter, 1994; Feldmann, 2011). Policies with high stakes testing limit teachers' flexibility and inhibits the creativity of teachers and students by detracting from opportunities to explore and discover, develop critical thinking, and further personal growth (Jones, Jones, & Hargrove, 2003; Olivant, 2015). Schools that perform poorly on high stakes testing focus more on raising test scores than learning; emphasizing test scores on reading and math while reducing subjects such as music and art (Mock, Moorman, & Lewis, 2006; Olivant, 2015).

Perception of Instructional Autonomy

Preparing students to take standardized tests, utilizing scripted curriculum, adapting to state-adopted textbooks, and working with pacing calendars affect instructional autonomy as a perception. Perception of instructional autonomy is defined as a teacher's perceived level of autonomy including the evaluation of their ability and authority to decide the course content, course coverage, and timeline for delivery of the content (Wengrowicz, 2014). Instructional autonomy can also be defined as the perception teachers have regarding whether they can control

their own work environment (Pearson & Hall, 1993). Olivant (2015) found mandates from the district to follow pacing calendars to prepare students for testing exacerbated teachers' perceptions of a lack of autonomy by trying to force a "one-size-fits-all" approach to teaching. When teachers perceive their autonomy is being taken away and they must follow the mandates from the district, their sense of professionalism falters (Olivant, 2015).

Like the effect on teacher decision-making, using scripted curriculum affects the teachers' perception of autonomy. Olivant (2015) reported teachers perceive the mandated pacing calendars for certain subjects to inhibit and constrain. Along with the pacing calendars, teachers' perceptions of autonomy are further constrained when a state testing schedule is added to the calendar (Olivant, 2015). Teachers perceive scripted curricula and standardized testing as causing disconnection to the students (Olivant, 2015). A scripted curriculum affects teachers' ability to help each student individually. Teachers perceive the requirement to teach a particular standard on a particular day as limiting ability to respond to each student's individual needs (Olivant, 2015). Selwyn (2007) reported teachers felt as if they were helping students hit the learning goals identified by the state than getting to know them and helping them to learn based on developmental needs. Therefore, teachers who feel they possess instructional autonomy can support students' needs (Wengrowicz, 2014).

In contrast, some teachers do not perceive scripted teaching practices as controlling or inhibiting, but instead embrace the concept. One English teacher in Hong Kong stated even though the "Schemes of Work" were restrictive, it did not bother her to use them (Benson, 2010). She stated it was easier to listen and take orders than to make decisions (Benson, 2010). This same teacher also believed it was beneficial for all teachers to teach out of the same textbook for standardization. She believed it was too time consuming for each teacher to organize and create

lessons from scratch (Benson, 2010). Similarly, science teachers in South Africa used the Learner Support Manual (LSM) because they believed it was easy to use and did not want to spend the time to create new lessons even though they had some latitude to do so (Stoffels, 2005).

Teacher perceptions of instructional autonomy is affected when they are preparing students to take standardized tests, instead of teaching concepts. Some teachers perceive preparing students to take standardized tests disconnects them from autonomy and professionalism because testing requirements emphasize scripted curriculum which regiments the teaching strategies utilized to improve test scores (Olivant, 2015). Teachers perceive high stakes testing as negatively affecting the ability to foster creativity and creative thinking in the classroom because the requirements to conform and comply with the mandates is done at the expense of teacher autonomy (Olivant, 2015). Teachers also perceive standardized tests inhibit them to be good teachers and negatively affect the students by forcing teach-to-the-test instruction (Adoniou, 2012; Barksdale-Ladd & Thomas, 2000).

The requirements of a scripted curriculum and preparing students for standardized tests can lead teachers to feel as if they have little to no control on what they teach in the classroom which could lead to job dissatisfaction. Teachers felt dissatisfied because what they are told to teach is in direct conflict with what they were taught in college (Adoniou, 2012). One teacher felt she was not able to use the learning strategies and techniques she learned in college, and she felt she could not teach in a way she believed would help her students succeed (Adoniou, 2012). Another teacher felt teachers were pressured to push students through the reading levels without checking for comprehension (Adoniou, 2012). Other teachers suggested changes or alternative methods to teaching and the suggestions were dismissed leading to teachers believing their

expertise and opinions did not matter (Adoniou, 2012). Teachers believe they possess the knowledge and skills to make informed decisions on the pace of instruction and the learning approaches used in the classroom (Selwyn, 2007). Teachers feel as if they should be in control of teaching to make informed decisions on the learning strategies used in their classroom (Adoniou, 2012).

Perception of Curriculum Autonomy

Curriculum autonomy is also affected by a teachers' perception of the amount of curriculum control they possess. Curriculum autonomy as a perception is defined as the amount of control and decision-making ability a teacher perceives they have about the curriculum taught in the classroom (Archbald & Porter, 1994). Teachers' perception of control increases as the standardization of curriculum decreases (Archbald & Porter, 1994). The manner in which teachers experience scripted curriculum depends upon their perceptions of autonomy, how often they are monitored by administrators, how much they deviate from the curriculum, and the desire to meet students' needs (Carl, 2014). Another perception of curriculum autonomy is when teachers are not allowed to meet students' needs because they do not have an opportunity to aid in the decision of the curriculum (Carl, 2014; Ozturk, 2012). The curriculum provided is based on a set of standards required by grade level, tested at least once a calendar year as federal standardized tests (Selwyn, 2007).

Teachers perceive standardized testing as a factor in their lack of curriculum autonomy. Teachers stated they had to make decisions to manipulate daily, weekly, or yearly calendars to deal with the pressure to focus on standardized test subjects to the detriment of other material and subjects (Fitchett, Heafner, & Lambert, 2014; Palmer & Rangel, 2011). Standardized tests focus on specific subjects such as math, reading, and science, rarely accounting for elective or

creative topics (Olivant, 2015). Scripted curriculum, where the primary focus is on preparing students for standardized tests, can be perceived as constraining to a teacher's curriculum autonomy. Teachers perceive high stakes testing and related policies as disconnecting them from teaching and student learning (Olivant, 2015). The testing mandates are a barrier for teachers' perceived ability to foster creativity by focusing on standardized curriculum and regimented teaching strategies designed to improve test scores (Olivant, 2015). In one example, elementary school bilingual teachers perceived a loss of control over curriculum-related decision-making due to the pressures of high-stakes testing (Palmer & Rangel, 2011). In this circumstance, teachers stated they must choose between preparing students for the tests or provide appropriate instruction (Palmer & Rangel, 2011).

The amount of time to prepare students for testing also plays a role in what subjects or topics teachers can teach. Fitchett, Heafner, and Lambert (2014) studied the amount of time teachers taught social studies in elementary school. In states without standardized social studies tests, teachers were more likely to teach social studies when they perceived they had greater control over working conditions. On the other hand, teachers in states with standardized social studies tests reported a decrease in the level of perceived autonomy (Fitchett, Heafner, & Lambert, 2014). Teachers perceive what they were teaching in a substantially constrained classroom based on state testing policies (Fitchett, Heafner, & Lambert, 2014). Other teachers perceive the amount of time spent on the standardized curriculum and preparing for the test decreases the amount of time they are able to meet with students (Olivant, 2015). Some teachers believe standardized tests favor students with certain learning styles but alienate those with different learning styles (Olivant, 2015).

Preparing students for tests when scripted curriculum is provided can lead to teachers feeling they do not have a voice or any decision-making ability. Some teachers felt the scripted curriculum does not prepare students to take standardized tests and treats teachers as if they are not capable of making sound decisions based on their knowledge of curriculum, students, and student development (Selwyn, 2007). Teachers reported not having the ability to make curriculum decisions made them feel as if their opinions and skills did not matter (Selwyn, 2007; Stewart, 2012). Teachers feel since they have the knowledge of curricula and student learning they believe they are able to make curriculum decisions (Selwyn, 2007). New or novice teachers perceive the lack of curriculum control as constraining because they are not able to teach with the strategies and techniques they learned in college (Adoniou, 2012). Selwyn (2007) found similar results when he interviewed preservice teachers who observed inservice teachers. Preservice teachers believed they would not be given the opportunity to teach using the skills they learned in school (Selwyn, 2007). Preservice teachers perceived the scripted curriculum as constraining in which "…the teacher's role is to read what is on the page, at the appointed day and time, and to insist students parrot back the appropriate response" (Selwyn, 2007, p.131). While some teachers perceived they would not be able to use the skills learned in college, others believed they were not teaching in a way that met each student's needs.

Teachers who are not afforded the opportunity to make decisions and choices regarding the curriculum perceive the needs of the students not being met (Carl, 2014; Ozturk, 2012). Some teachers are teaching to a test when the students have already mastered the skills on the test (Carl, 2014). Teachers did not believe the test met the needs of the students since they already possessed the skills on the test (Carl, 2014). Other teachers believe the required curriculum does not meet the needs of all of the students (Carl, 2014). Prescribed curriculum is

often written for low level students and therefore the teachers felt more advanced students do not learn anything. The teachers believed the curriculum was also boring and repetitive for advanced students (Carl, 2014). When teachers perceive the curriculum does not meet the learning needs of the students, they feel inadequate as teachers affecting their level of job satisfaction (Adoniou, 2012).

Perception of Principal/Administrator Support

Not all teachers perceive autonomy in the same manner. Some view autonomy as the ability to make decisions in the classroom while others view it as a way for principals to avoid their duties as administrators who support instructional strategies (Frase & Sorenson, 1992). For those who view it as being isolated, autonomy may lead to dissatisfaction of the job. Teachers perceive uni-directional and top-down communicating policies originating from principals/administrators minimizing their overall power and minimizing their voices in influencing policy (Stewart, 2012). A top-down authoritative approach creates an adversarial relationship between teachers and administrators influencing the teacher perception of principal/administrator support (Stewart, 2012).

The perception principals and administrators listen to teachers can be beneficial. However, some administrators review teachers' lesson plans and pressure teachers to use methodologies and teaching strategies considered non-engaging by the teachers themselves (Stewart, 2012). Teachers who receive this oversight feel as if they have no decision-making ability in the classroom due to the constant pressure from administrators. One teacher whose students continued to meet the school's benchmarks and passed the end of course test felt so much pressure and anger from administrators for deviating from the scripted curriculum that she eventually left the job (Stewart, 2012).

However, principals/administrators can maintain teachers' commitment to the school when teachers perceive they have meaningful organizational involvement or the ability to make decisions (Ma & MacMillan, 1999). Sometimes teachers perceive they can make decisions concerning their schools when they do not. Teachers believed they had the ability to make decisions in one of the four following areas: student discipline and student governance, grading and scheduling, physical planning, and curriculum (Case, 1993). Teachers perceived that most of their decisions were made quickly, with not enough time to discuss and make the appropriate decision (Case, 1993).

Some teachers perceived the lack of time to make decisions was due to a lack of administrative support (Case, 1993). In other instances, teachers possessed the appearance of decision-making power, but the decision had already been made by an administrator (Case, 1993). Teachers believed their principal was dishonest in communicating that teachers possessed decision-making power, however, teachers felt as if they were forced into making decisions rapidly, they did not believe in (Case, 1993).

Leadership style may play a role in the principal/administrator relationship. There are several different types of leadership styles with transformational, transactional, and laissez-faire being the most common (Deluga, 1990; Eyal & Roth, 2010; Eagly, et al., 2003). The transformational leadership style involves "establishing oneself as a role model by gaining the trust and confidence of followers" (Eagly, et al., 2003, p. 570). Transformational leaders are not satisfied with the status quo and are constantly developing better processes (Eagly et al., 2003). Transactional leaders differ from transformational leaders in they "appeal to subordinates' self-interest by establishing exchange relationships with them" (Eagly et al., 2003, p.571). Transactional leaders manage subordinates by using external rewards and punishments (Eagly et

al., 2003). Laissez faire leadership style is described as “passive leaders who are reluctant to influence subordinates or give direction (Deluga, 1990, p.192). Laissez faire leaders differ from transactional and transformational by disengaging from their subordinates. They do not provide feedback to their employees and rarely describe responsibilities (Deluga, 1990).

The leadership style of principals and/or administrators may affect the motivation, well-being, autonomy, and job satisfaction of teachers (Eyal & Roth, 2010). Principals and/or administrators possessing a transactional leadership style engage in controlling practices such as monitoring teacher behavior and demanding compliance with the school or district policies negatively impacting motivation (Eagly, et al., 2003). Teachers who work for transactional leaders are more likely to miss work or suffer from stress due to the constant criticism (Eagly, et al., 2003). Principals and/or administrators who are transactional leaders constantly explain teacher responsibilities and correct teachers for failing to meet objectives leading to less job satisfaction (Eagly, et al., 2003). Finally, autonomy is affected as teachers as less likely to work independently and trust their own decisions regarding the classroom (Eagly, et al., 2003).

Principals with a laissez faire leadership style may make it easier for teachers to possess autonomy, but they do not provide direction for teachers impacting their motivation to participate in work experiences (Deluga, 1990). Laissez faire leaders focus less on standards and laws as they are worried about upsetting their teachers. This lack of direction may lead to decreased job satisfaction and higher absenteeism as the teacher may not understand their role or responsibility in the educational environment (Deluga, 1990). Laissez faire leaders provide little guidance or positive reinforcement to teachers (Deluga, 1990), causing teachers to question their instructional strategies in the classroom, leading to decreases in autonomy as well.

Transformational leadership is the most desirable leadership style for principals and administrators. Principals and/or administrators who are transformational leaders gain teachers' trust (Eagly et al., 2003) aiding teachers in determining their mission, motivating them to understand their role in the educational space (Eyal & Roth, 2010). When principals demonstrate a transformational leadership style, teachers perceive this as personally empowering, leading to greater job satisfaction (Eyal & Roth, 2010). Teachers with higher levels of job satisfaction are less likely to miss work or have health problems (Davis & Wilson, 2000). Autonomy is also affected as they are empowering their teachers to see the organizational vision, importance of the standards and laws, and collaborate on the learning experiences (Eyal & Roth, 2010).

Leadership style is not the only contributor to perceptions of autonomy. Blomeke and Klein (2013) found the level of autonomy reported by teachers depended on trust. Teachers who perceive the relationship with their principal as one with mutual trust and respect are more likely to be engaged in activities beneficial to the school (Runhaar, Konermann, & Sanders, 2013). When principals communicate priorities clearly, the teachers perceive more appraisals (Blomeke & Klein, 2013). Principals who engaged in behaviors teachers perceived as personally empowering, the more teachers believe they had choices in how they completed their work and they perceived they were making a greater impact in the classroom through their efforts (Davis & Wilson, 2000).

Supportive principals have a clear mission for the school and encourage teachers to discuss instructional matters (Cannata, 2007). When teachers perceive principals are supportive, they reported higher levels of engagement and teacher community, regardless of the type of school (traditional public school or charter) (Cannata, 2007). Support from principals and administrators leads to greater levels of job satisfaction (Eyal & Roth, 2010).

Perception of Professionalism and Empowerment

Professionalism as a perception is defined as teachers' perceptions of recognition for high performance and the ability to make decisions based on their knowledge (Pearson & Moomaw, 2005). The loss of teacher autonomy and the increase in administrative work may make teachers feel as if their skills are not valued (Runhaar, Konermann, & Sanders, 2013), and in turn perceive administrators do not view them as professionals (Ingersoll, 1994).

Teachers who felt as if they had the ability to participate in the decision-making process concerning policies, leads to a sense of professionalism (Stewart, 2012). Teachers who perceived their relationship with administrators as positive had higher satisfaction with their professional role (Ma & MacMillan, 1999). In other words, the teachers felt more like professionals when they had a positive relationship with their administrators, leading to increased levels of job satisfaction (Ma & MacMillan, 1999).

On the other hand, teachers felt being directed to teach or prepare students for standardized tests as de-professionalizing to them as teachers (Barksdale-Ladd & Thomas, 2000). Teachers perceived time constraints and other pressures related to testing and pacing calendars impeded on their autonomy and professionalism (Olivant, 2015). Teachers perceive standardized tests as eroding their professionalism as they focus on standardized practices and eliminate their ability to make decisions about curriculum and instruction (Wills & Sandholtz, 2009).

Some teachers feel discouraged by being told to "teach to the test" when they believe it goes against their ethics, particularly if they feel they cannot teach their students in the ways they feel are the most beneficial for learning to occur (Adoniou, 2012). Teachers also felt that administrators were not treating teaching as a profession and that they cannot do their jobs

(Barksdale-Ladd & Thomas, 2000). When this happens, some teachers feel as if administrators are taking away their pride while administrators believe the only way to make teachers teach the standards is to use high pressure tactics (Barksdale-Ladd & Thomas, 2000).

With many decisions being made for them by principals and administrators, teachers feel highly de-professionalized (Stewart, 2012). Teachers feel as if they are supposed to be experts in learning and when they are not included in making decisions regarding their own classrooms, they feel as if their education and experience are not valued or relevant (Ingersoll, 1994). Teachers believe that possessing the ability to make decisions or retaining some modicum of control over curriculum decisions may be beneficial for them to use and apply their professional knowledge (Morgado & Sousa, 2010). One teacher stated that this made him feel more like a professional because he understood why the decisions were made (Stewart, 2012). If teachers did not participate in making decisions, they viewed the information from administrators as slanted and did not understand why the decisions were made (Stewart, 2012). Likewise, teachers felt as though they are treated as civil servants for the administrators/district instead of autonomous professionals due to the policies put in place which generate more pressure but little time to accomplish needed outcomes (Steen-Olsen & Eikseth, 2010). Teachers feel they are professionals and believe they should be allowed to make decisions regarding teaching and learning strategies based on their knowledge of children and curriculum (Selwyn, 2007). Teachers feel if they gain new knowledge that is meaningful, they expand their gamut of teaching options, and this allows them to decide how to disseminate this knowledge to their students (Dierking & Fox, 2012).

One way to increase teacher professionalism is with professional development opportunities for teachers. The ability to attend training or professional development courses is

perceived as important to teachers as they feel valued by allowing them to make pedagogical decisions (Wengrowicz, 2014). By developing professional teachers and recognizing teaching as a profession may mitigate teachers' lack of job satisfaction, motivation, empowerment, and stress (Pearson & Moomaw, 2006). Teachers believe the opportunity to participate in professional development activities is integral in maintaining teachers' job satisfaction, especially when it involves interaction with fellow teachers (Runhaar, Konermann, & Sanders, 2013).

Empowerment as a perception is defined as the belief an individual possesses the skills and knowledge to act on a situation and improve it (Short, 1994). The ability to make decisions that directly affect one's classroom may promote empowerment (Farrell & Weitman, 2007). Teacher empowerment may falter if teachers are not involved in the decision-making process. Teachers were told they had decision-making powers and told they would feel more empowered, but they actually did not have that power (Case, 1993). Empowered teachers feel they are the qualified experts in the classroom because they possess expertise in specialized fields, they feel they have a right to organize their instruction, and they feel they can set the rules in the classroom (Pearson & Moomaw, 2005). Strong and collaborative leadership within a school may lead to creative and innovative changes in the curriculum which may lead teachers to feeling empowered. This empowerment leads teachers to believe they are in a trusting community where they can share their vision and values about education (Adoniou, 2012). Teachers who felt empowered perceived a higher sense of professionalism (Pearson & Moomaw, 2005).

When teachers gain new meaningful knowledge, they consider to be useful, they expand their repertoire of instructional options which provides them with more options in what they do and how they do it (Dierking & Fox, 2012). When teachers can choose, they feel more powerful

(Dierking & Fox, 2012). There are many things that can make teachers feel disempowered. For example, in one school the teachers could not agree on what should be taught and this impeded on student learning (Dierking & Fox, 2012). As a result, many teachers had to reteach certain lessons, in order to maintain or regain alignment with what the other teachers taught. Also, teachers feel the contradictory and conflicting policies take power away from teachers (Dierking & Fox, 2012). One teacher stated that she feels she teaches to the test even though the criteria do not make sense (Dierking & Fox, 2012). Finally, teachers also felt disempowered by being directed to use certain techniques or methods in class. This was an impediment and restricted the amount of time teaching a certain subject (Dierking & Fox, 2012).

Perception of Policy

Teachers perceive policies as impeding on their sense of autonomy because they feel they have no control over what they teach or how they teach (Olivant, 2015). Teachers perceive the policies put in place at school as containing time constraints and pressures associated with standardized testing as well as the use of pacing calendars as eroding their levels of autonomy and professionalism (Olivant, 2015). Pressure from testing policies may make teachers feels as if they must skip subjects or topics in order to prepare students for standardized tests (Palmer & Rangel, 2011). Some teachers perceive the implementation of policies as the reason they have no control over their teaching. The strict adherence to policies may make teachers feel as if they are not able to take responsibility for the learning outcomes in the classroom (Adoniou, 2012). Teachers feel as if policies are being implemented solely to improve school results on standardized testing (Adoniou, 2012). Another teacher believed the school administrators were too controlling as they wanted to know exactly what she was doing every day to prepare her students for standardized testing (Adoniou, 2012).

Teachers perceive these policies as not meeting the needs of their students (Adoniou, 2012). Teachers feel that since they have no role in the creation of school policies, they feel they cannot tailor their instruction to meet the individual needs of their students (Stewart, 2012). Teachers feel as if they have no ability to shape policies because they are communicated in a manner that silences any discussion or dialogue (Stewart, 2012). Policies that are communicated in a top-down manner makes teachers feel as if they have no ability to provide any input and that they have no control over their teaching leading to more job dissatisfaction (Stewart, 2012). Some teachers feel they should be involved in the decisions about policies because they believe they would be more likely to understand the rationale behind them improving morale in the classroom (Stewart, 2012).

Operationalizing the Five Dimensions Model of Teacher Autonomy

Conceptualizing teacher autonomy as a construct begins by developing a theoretical framework to understand teacher perception in relation in the educational context which may lead to greater job satisfaction. To accomplish this task, research must be conducted using an instrument to measure teacher autonomy across the five dimensions. Two predominant instruments, created over 20 years ago, have traditionally measured teacher autonomy, the Teacher Autonomy Scale (TAS; Pearson & Hall, 1993) and the Teacher-Work Autonomy Scale (TWA; Friedman, 1999).

The Teacher-Work Autonomy scale (TWA; Friedman, 1999) and the Teacher Autonomy Scale (TAS; Pearson & Hall, 1993) measure autonomy differently. TWA (Friedman, 1999) predominantly measures the decision-making ability of teacher autonomy while the TAS (Pearson & Hall, 1993) focuses on the perception of teacher autonomy. Each instrument has items which measure components of the Five Dimensions of teacher autonomy, however, neither

instrument adequately represents the individual dimensions in relation to autonomy as a perception. Therefore, creating a new instrument was required to adequately operationalize the construct. The Five Dimensions Teacher Autonomy Scale (FDTAS) was created by combining the previously mentioned scales as well as creating new items to cover each dimension.

Teacher-Work Autonomy Scale

The TWA scale is used to measure teacher autonomy as predominately a decision-making ability (Friedman, 1999). The final instrument includes 31 items which measure teacher autonomy using a 5-point Likert scale. The measure is widely accepted as a valid and reliable measure of teacher autonomy in educational research (Friedman, 1999).

Development and Psychometric Properties

Friedman (1999) sampled 12 elementary schools using a computer-aided sampling procedure. From those schools, all teachers were given the opportunity to complete the survey. A total of 156 teachers completed the survey (Friedman, 1999). The Appropriate Teacher-Work Autonomy (ATA) was created before the Teacher-Work Autonomy scale (TWA; Friedman, 1999). The Appropriate Teacher-Work Autonomy scale (ATA; Friedman, 1999) was created in two stages. The first stage involved creating scale items and designing the research instrument while the second stage involved data collection and analysis (Friedman, 1999). “During the first stage, 52 teachers and principals, participating in an in-service program on school autonomy procedures, were given three tasks by the researchers: (a) to write down all functioning areas within the school for which autonomous behavior may be relevant (b) to describe in detail the specific activities within the functioning areas mentioned in (a), and (c) to suggest and formulate different levels of desired autonomy for teachers” (Friedman, 1999, p.63). The reports produced by teachers and principals were content analyzed. Two research assistants analyzed the materials

produced by the teachers and principals using common content analysis methodology (Fox, 1969). The analysis was conducted in stages. In the first stage the research assistants were instructed to read all the teachers' and principals' statements and place them in semantic categories (Friedman, 1999). The second stage the research assistants were asked to assign each statement to its relevant category. Their work was done independently of each other (Friedman, 1999). In the next step, seven experienced teachers and principals were asked to serve as expert judges to evaluate the research assistants' results attained in the content analysis process (Friedman, 1999). Based on the findings in the first stage the major areas of teacher work autonomy were formulated, and a pool of teacher autonomous behavior items were generated (Friedman, 1999). Items were then drawn from a pool at random to create a scale for measuring teacher autonomy (Friedman, 1999).

In the second stage of the study, anonymous questionnaires were mailed to 420 teachers in 12 elementary schools selected randomly (Friedman, 1999). Of these, 162 (39%) teachers returned the completed forms with six forms being discarded due to missing data (Friedman, 1999). These teachers' background variables such as gender, age, years of experience and educational level were compared against the Ministry of Education published data of elementary school teachers' background variables to examine how well the sample represented teachers in Israel (Friedman, 1999). The comparison of data indicated a good match between teachers' gender, educational level, age, and years of experience (Friedman, 1999).

The final version of the ATA (Friedman, 1999) was a 32-item scale divided into six subscales named: establishing school identity and praxis, teaching and achievement evaluation, parental involvement, staff development, extracurricular subjects, and curriculum change and development (Appendix D). The ATA measured the degree to which certain teacher activities

should be performed autonomously by teachers. The items were rated on a five-point Likert scale: 1 (no autonomy), 2 (scant autonomy), 3 (moderate autonomy), 4 (high autonomy), and 5 (complete autonomy) (Friedman, 1999).

A study was conducted where the ATA was modified into a new measure called the Teacher-Work Autonomy (TWA) scale. This scale measured teachers' perceptions of their existing perceived autonomy as opposed to their desired level of autonomy on the ATA. The TWA was created from the ATA's structure. Items were reviewed for phrasing and revised to measure the concept of teacher sense of autonomy.

The Teacher-Work Autonomy scale (Friedman, 1999) was created 6 years after the Appropriate Teacher-Work Autonomy scale (ATA). The TWA was created to address the need to build a scale to measure teacher-perceived sense of extant autonomy at school (Friedman, 1999). A field study was conducted throughout the academic year. A research assistant visited each school, explained the purpose of the study to teachers, distributed the questionnaires, and personally collected the completed anonymous forms. The return rate for the completed questionnaires was close to 80% (Friedman, 1999). The TWA contained 42 items and was basically the same instrument as the Appropriate Teacher-Work Autonomy scale, with several changes (ATA; Friedman, 1999). First, item phrasing was reviewed and revised, mainly to suit the concepts of teacher sense of autonomy as established with the ATA (Friedman, 1999). Second, teachers were asked to report the level of existing perceived autonomy instead of the desired level of autonomy by marking the degree to which each item described the situation in their own schools. The range of optional answers was from 1 (not at all) to 5 (always) (Friedman, 1999).

To review the item properties, a factor analysis of the data indicated that three items were deleted due to high skewness and kurtosis and another eight items were deleted from the scale due to low item-factor structure coefficients on all four factors (below .30). Only factors with an eigenvalue greater than 1 were selected. The four factors accounted for 48.6% of the variance in the scale items and were labeled as follows: Factor 1: Student Teaching and Assessment consisted of 10 items regarding: classroom practice of student attainment evaluation, norms for student behavior, physical environment, different teaching emphases on components of mandatory curriculum, Factor 2: School Mode of Operating consisted of 7 items regarding establishing school goals and vision, budget allocations, school pedagogic idiosyncrasy, and school policy regarding class composition and student admission, Factor 3: Staff Development consisted of 6 items regarding determining the subjects, time schedule, and procedures of in-service training of teachers as part of the general school practice, and Factor 4: Curriculum Development consisted of 8 items regarding introducing new "homemade" or "imported" curricula by the teachers and introducing major changes in existing formal and informal curricula (Friedman, 1999). An oblique rotation was used to view the correlation between the different factor structures. Correlation coefficients among factors are in Table 1: Correlation Coefficients Among Factors on the TWA Scale.

Table 1. *Correlation Coefficients Among Factors on the TWA Scale*

Factor	1	2	3
2	.11	—	—
3	.22	.23	—
4	-.44	-.39	-.33

The final version of the Teacher-Work Autonomy Scale consists of 31 items with a Likert scale from 1 (not at all) – 5 (always) to assess teacher's levels of existing perceived teacher autonomy (Appendix E). Sample items include: "Teachers establish student achievement evaluation criteria" (Factor 1: Student Teaching and Assessment), "Teachers make decisions on school expenditures" (Factor 2: School Mode of Operating), "Teachers decide on the location and timetable for their in-service training courses" (Factor 3: Staff Development), and "Teachers initiate and develop completely new curricula" (Factor 4: Curriculum Development) (Friedman, 1999). Cronbach's coefficients for the whole scale as well as all four factors were .91, .85, .80, .84, and .86, respectively. The Cronbach alphas indicate this instrument is highly reliable.

Strong and Yoshida (2014) replicated Friedman's study of the TWA with different results. A total of 477 teachers in Michigan completed the survey, 241 elementary and 233 secondary. An exploratory factor analysis on both the elementary and secondary samples was conducted to determine the appropriate fit of the data. Items were deleted if the factor loadings were below .40. Several analyses were performed, but none fit Friedman's (1999) four factor structure. Instead, Strong and Yoshida (2014) found a four-factor solution fit the elementary sample after all seven items from the school mode of operations factor were deleted using Varimax rotation and two items were deleted because they did not meet the .40 criteria. The factors for the elementary sample include Factor 1: Curriculum (8 items); Factor 2: Professional Development (5 items); Factor 3: Student Assessment (5 items); and Factor 4: Classroom Management (4 items). Therefore, the TWA for the elementary sample was adequate with only 24 of the 31 items. The Cronbach alpha for the entire scale for the elementary sample was .87, as well as all four factors .80, .81, .89, and .64, respectively. The fourth factor fell below the .70

criteria, however all items that loaded on this factor were found to be appropriate and were kept in the survey (Strong & Yoshida, 2014).

A five-factor solution best fit the data for the secondary sample after one oblique rotation. The factors for the secondary sample include Factor 1: Curriculum (8 items); Factor 2: Professional Development (7 items); Factor 3: Student Assessment (3 items); Factor 4: Classroom Management (4 items); and Factor 5: Schoolwide Operations (6 items). A total of 5 items were deleted as they did not meet the .40 criteria for inclusion. The Cronbach alpha for the entire scale for the secondary sample was .82, as well as all four factors .75, .63, .78, .88, and .65, respectively. The second and fifth factors fell below the .70 criteria, however all items that loaded on both factors were found to be appropriate and were kept in the survey (Strong & Yoshida, 2014). Strong and Yoshida (2014) did not report the correlation coefficients among the factors.

Teacher Autonomy Scale

The TAS was created to measure teacher's perception of autonomy (Pearson & Hall, 1993). The final instrument includes 18 items which measure teacher autonomy using a 4-point Likert scale. The TAS is a valid and reliable instrument used to measure teacher autonomy (Pearson & Hall, 1993).

Development and Psychometric Properties

Two studies were conducted to create The Teaching Autonomy Scale (TAS; Pearson & Hall, 1993). The purpose of the two studies was to develop and validate an instrument for measuring teaching autonomy, which is the perceptions that teachers have regarding whether they can control their work environment (Pearson & Hall, 1993). The first study focused on creating a psychometrically sound instrument by refining and shortening the 35-item scale

(Pearson & Hall, 1993). The purpose of the second study was to administer the instrument to a new sample to determine reliability and construct validity and to determine the utility of the instrument by investigating the relationships between perceptions of teachers' autonomy and gender, age, teaching experience, highest degree held, and grade level most often taught (Pearson & Hall, 1993). Those variables were selected to determine the generalizability of the instrument and to examine its sensitivity to group differences (Pearson & Hall, 1993).

The original 35-item scale was developed by Hall (the second author) at the University of South Florida in the summer of 1988. The items were first tested on 12 faculty members within the College of Education. Each faculty member responded to the scale twice with the first from a perception of an educator who was high in autonomy, and the second time from a perception of an educator who was low in autonomy (Pearson & Hall, 1993). Responses for each item were tallied for the 12 faculty members to determine if the items were sensitive to the responses of the attribute (Pearson & Hall, 1993).

The 35-item survey was originally called the Teaching Environment Scale and it contained questions of a split positive and negative nature on teacher perceptions of autonomy using a 4-point Likert scale (Pearson & Hall, 1993). Data was gathered on 74 practicing teachers that represented all grade levels. The teachers were all enrolled in a graduate measurement course at the University of South Florida (Pearson & Hall, 1993). Students responded to the items using a scale ranging from 1 (definitely true) to 4 (definitely false). The 4-point scale was used to eliminate a neutral option, and those items that were stated positively were recoded to reflect high scores on the attribute (Pearson & Hall, 1993).

For the second study, the instrument was renamed the Teaching Autonomy Scale (TAS; Appendix F) and teacher demographic variables were included on the instrument cover sheet

including gender, age, years of teaching experience, highest degree earned, and teaching level most often taught (elementary, middle, or high school) (Pearson & Hall, 1993). “The items on the scale were designed to elicit the degree to which teachers perceive they have autonomy in the following areas: (a) selection of activities and materials, (b) classroom standards of conduct, (c) instructional planning and sequencing, and (d) personal on-the-job decision-making” (Pearson & Hall, 1993, p.174). Eleven of the items reflected high autonomy and the remaining 9 items reflected low autonomy. A 4-point Likert scale was used with categories ranging from 1 (definitely true), 2 (more or less true), 3 (more or less false), to 4 (definitely false) (Pearson & Hall, 1993). A total of 370 public school teachers who worked in Pasco County, Florida during the 1989-1990 academic year were recruited for this study (Pearson & Hall, 1993). Of the 204 respondents, 22 were elementary teachers, 37 were middle school teachers, and 145 were high school teachers (Pearson & Hall, 1993).

TWA and TAS Combined

Dawson and Hennessey (2016) suggested combining the TWA and TAS Instrument to explain the complex construct of teacher autonomy (Friedman, 1999; Pearson & Hall, 1993). The researchers hypothesized by combining these instruments a complete view of teacher autonomy as a perception situated in the educational context would be discovered. An EFA was conducted based on this premise. The final instrument included 49 items which measured teacher autonomy using a 4-point Likert scale.

Development and Psychometric Properties

Dawson and Hennessey (2016) melded the TWA and TAS into one overall measure of teacher autonomy (Appendix G). The TWA measures high autonomy as independent work and the initiation of activities and the TAS measures teacher perceptions of autonomy in the work

environment which were considered basic descriptions of teacher autonomy. It was theorized, combining the measures would provide a more complex definition of teacher autonomy. All items from the TWA were modified into "I" statements because the original items refer to teachers in general as well as to ensure the wording on both measures were consistent. The total number of items for the combined scale was 49 items. The TWA used a 5-point scale from 1 (not at all) to 5 (always), while the TAS used a 4-point scale from 1 (definitely true) to 4 (definitely false). The combined measure used a 5-point scale from 1 (strongly disagree) to 5 (strongly agree).

The sample for this study consisted of 303 K-12 teachers currently employed around the United States. An exploratory factor analysis was conducted and produced a five-factor solution that best fit the data. To determine the factor structure the following criteria were used: eigenvalues greater than 1, scree plot, and factor loadings greater than or equal to .30. A total of 42 items were retained. Seven items were excluded from the analysis (six items were eliminated from TWA and one item from TAS); six for low loadings and one due to cross loading. The reliability for the entire scale was .93. The five factors explained 46% of the variance. The Cronbach alpha was .92, .80, .80, .70, and .79 for all five factors respectively (Dawson and Hennessey, 2016). For factor correlations see Table 2: Correlation Coefficients Among Factors on the Combined Measures.

Table 2. *Correlation Coefficients Among Factors on the Combined Measures*

Factor	1	2	3	4
2	.63	1.00	—	—
3	.28	.35	1.00	—

4	.42	.27	-.01	1.00
5	.30	.37	.22	.26

The five factors explained unique, common characteristics to better understand teacher autonomy. Factor 1 consisted of items primarily from the TAS. This factor contained items reflecting teachers who oversee their own classroom; therefore, the name of the factor is Leader of Own Classroom. Teachers who managed their classroom despite outside educational policies, practices, and expectations loaded on this factor (Appendix G). Factor 2 contains more items from the TWA and these items describe the level of creativity each teacher possesses in their classroom. This factor is called the Innovator of Own Classroom. Teachers who loaded on this factor implied being creative in the classroom was essential (Appendix G). Factor 3 contains only items from the TWA and the items on this factor are about the level of commitment and investment teachers possess in their school's growth. This factor is titled Investor of School's Growth and Development. Funding and composition of the classroom were primary goals of teachers on factor 3 (Appendix G). Four items loaded on Factor 4. Although this factor contained the least statements, the uniqueness of the items was important to retain as a factor. The items on this factor describe teachers as the disciplinarian of the students in their classroom. The factor is named Authoritarian of the Classroom (Appendix G). Behavior management was the driving focus of teachers on this factor. Factor 5 contains only items from the TWA. These items assess the teachers' interest in their own growth and development. This factor is called Personal Growth and Development (Appendix G). Teachers on this factor focused on statements where making decisions regarding their own professional development was essential (Dawson & Hennessey, 2016).

The TWA (Friedman, 1999) and the TAS (Pearson & Hall, 1993) do not operationalize teacher autonomy as it is in the literature. Both the TWA (Friedman, 1999) and the TAS (Pearson & Hall, 1993) do not contain enough items to measure teacher autonomy as a perception and decision-making ability in relation to the five dimensions. Therefore, the TWA (Friedman, 1999) and the TAS (Pearson & Hall, 1993) need to be expanded to operationalize the full construct of teacher autonomy. The research questions for this study will measure whether or not the new items created operationalize the full teacher autonomy construct.

Teacher Job Satisfaction Questionnaire

The goal of the Teacher Job Satisfaction Questionnaire (TJSQ; Lester, 1987) was to create a psychometrically sound instrument to assess teacher job satisfaction. The final instrument includes 66 items which measure teacher job satisfaction using a 5-point Likert scale. This measure is considered to be a valid and reliable instrument used to measure teacher job satisfaction (Lester, 1987).

Development and Psychometric Properties

Lester (1987) sampled teachers from New York City, Westchester, Nassau, and Suffolk counties in New York state. From the four geographic locations, two school districts were randomly selected using a table of random numbers (Lester, 1987). Within each of the eight school districts an elementary, junior high school, and high school were randomly selected (Lester, 1987). A total of 1600 instruments were distributed across the eight school districts, with 631 anonymously returned and only 620 were deemed usable (Lester, 1987). Demographic data were also collected on the following teacher characteristics: age, sex, marital status, total years of teaching experience, years in school district (seniority), educational level, tenure, and union affiliation (Lester, 1987).

Prior to creation of the TJSQ, Lester (1987) did a thorough study of the concepts, theories, and methodologies related to job satisfaction. In order to create a taxonomy to develop the instrument, the theories of Herzberg and Maslow were researched as sources of job satisfaction (Lester, 1987). The theories discussed by Herzberg and Maslow contained specific concepts that correspond to the job characteristics logically found in the educational setting and identified in the construction of this instrument (Lester, 1987).

At first a pool of 120 items was generated that reflected the job characteristics that were identified as the initial stage of the instrument development process (Lester, 1987). The different job characteristics or factors which might account for teacher job satisfaction were identified as: advancement, autonomy, colleagues, creativity, pay, recognition, responsibility, school policies, security, supervision, work itself, and working conditions (Lester, 1987).

Next, the items and definitions of the job characteristics were presented to a panel of judges considered to be experts in the field for content validation where a modified Q sort was completed (Lester, 1987). Items with less than 80% agreement were either rewritten or rejected (Lester, 1987). Then the items were edited into a form geared specifically for teachers in an educational setting (Lester, 1987). All items that had vaguely defined words (e.g., several, most, usually), words with double meanings, emotionally loaded words, double negatives, and unclear words were eliminated which resulted in clear, concise, and direct statements of no more than 20 words (Lester, 1987). Approximately 50% of the items are positively worded and 50% are in a negative form to avoid response set bias (Lester, 1987). The TJSQ was designed using a 5-point Likert scale: 1 (strongly disagree), 2 (disagree), 3 (undecided), 4 (agree), and 5 (strongly agree) (Lester, 1987). The TJSQ was created for the unfavorable responses to be reverse scored

therefore a low score represents low job satisfaction and a high score represents high job satisfaction (Lester, 1987).

Factor analysis was used as an exploratory technique to aid in the discovery of underlying factors and patterns among variables for the development and refinement of the TJSQ (Lester, 1987). In order to obtain a stable factor solution, Lester (1987) used five to 10 subjects multiplied by the number of variables in the factor analysis. Therefore, a random sampling procedure was used to produce a sample of 620 subjects (Lester, 1987). Listwise deletion (the default missing data option) was used to exclude the missing data and the number of cases used in the factor analysis and for reliability was 526 (Lester, 1987).

The initial principal factor analysis extracted 16 original factors. Multiple factor analyses were run until nine interpretable factors with eigenvalues equal or greater than 1.0 were extracted using an orthogonal varimax solution (Lester, 1987). There were nine total interpretable factors: Supervision, Colleagues, Working Conditions, Pay, Responsibility, Work Itself, Advancement, Security, and Recognition (Lester, 1987). To confirm the factor solution, an equimax rotation of principal factoring with iteration and an oblique rotation of principal factoring without iteration were generated and the results were almost identical (Lester, 1987). Items with factor loadings of less than .30 were eliminated (Lester, 1987).

The nine-factor solution was also cross-validated using a split-sample technique. A random sample was generated using SPSS (.60 of N = 620) and the factor solution was repeated using principal factoring with iteration using a varimax rotation (Lester, 1987). The results indicated factors 2 through 8 were confirmed, however, factors 9 (Recognition) and 1 (Supervision) merged (Lester, 1987). Lester (1987) stated factor 9 was the most understated

factors with only three items, and was included because it is an important conceptually and is supported by the literature. The final number of items was 66 (Appendix I).

The nine factors are described as follows:

Factor 1: Supervision consisted of 14 items regarding two aspects of supervision: supervisory behavior and interpersonal relationships. Sample items include: "My immediate supervisor provides assistance for improving instruction" for the supervisory behavior aspect and "My immediate supervisor turns one teacher against another" for the interpersonal relationships with the supervisor aspect (Lester, 1987). Factor 2: Colleagues consisted of 10 items regarding group outcomes and goal interdependence. Colleagues are defined as the "…teaching work groups and social aspects of the school setting. The teachers in the work group give and receive support and receive support and seek cooperation in the achievement of a common purpose or goal" (Lester, 1987, p. 227). A sample item: "My colleagues stimulate me to do better work" (Lester, 1987).

Factor 3: Working Conditions consisted of 7 items regarding the environmental characteristics of the teaching situation. This factor refers to the physical conditions of the working environment as well as the aspects of the school organization as defined and communicated by its administrative policies. A sample item: "Physical conditions in my school are unpleasant" (Lester, 1987). Factor 4: Pay consisted of 7 items referring to the annual income which may serve as an indicator of recognition and achievement, or of failure. A sample item: "Teacher income is adequate for normal expenses" (Lester, 1987).

Factor 5: Responsibility consisted of 8 items which cover three different aspects of this factor: accountability for one's own work, student-teacher relationship, and participation in school policies. Sample items include: "I am responsible for planning my daily lessons"

(accountability for one's own work), "Teaching provides me the opportunity to help my students learn" (student-teacher relationship), and "I try to be aware of the policies of my school" (participation in school policies) (Lester, 1987). Factor 6: Work Itself consisted of 9 items relating to daily tasks, creativity, and autonomy. The Work Itself factor can be classified as the job of teaching or the tasks related to the job. More specifically, "it involves the freedom to institute innovative materials and to utilize one's skills and abilities in designing one's work (creativity) as well as the freedom to experiment and to influence or control what does on in the job (autonomy) (Lester, 1987, p. 230). Sample items include: "The work of a teacher consists of routine activities", "Teaching discourages originality", and "I do not have the freedom to make my own decisions" (Lester, 1987).

Factor 7: Advancement consisted of 5 items regarding the opportunity for promotion (Lester, 1987). A sample item: "Teaching provides me with the opportunity to advance professionally" (Lester, 1987). Factor 8: Security consisted of 3 items regarding the stability or instability within the school organization, more specifically the school's policies regarding tenure, seniority, layoffs, pension, retirement, and dismissal (Lester, 1987). A sample item: "I am afraid of losing my teaching job" (Lester, 1987). Finally, Factor 9: Recognition consisted of 3 items regarding the attention, appreciation, prestige, and esteem of supervisors, colleagues, students, and parents (Lester, 1987). A sample item: "I receive full recognition for my successful teaching" (Lester, 1987).

The Alpha coefficient for the sample (N = 526) was .93. The Cronbach alpha for each factor is in Table 3: Coefficients of Internal Consistency of the Teacher Job Satisfaction Questionnaire. The reliability for the overall scale and each individual factor could be considered acceptable (Lester, 1987).

Table 3. *Coefficients of Internal Consistency of the Teacher Job Satisfaction Questionnaire*

Factor	Alpha
Supervision	.92
Colleagues	.82
Working conditions	.83
Pay	.80
Responsibility	.73
Work itself	.82
Advancement	.81
Security	.71
Recognition	.74

Lacking in the current accepted definitions is the ability to operationalize teacher autonomy as a perception in the educational context. This can be done by using the five dimensions of instruction including curriculum design, working relationships, professional development, and standardization. Combining the accepted conceptual definitions with the operational constructs affecting teacher autonomy can provide a new framework for describing teacher autonomy which may lead to improvements in job satisfaction.

Research Questions

The following research questions will be investigated:

1. Does FDTAS measure teacher autonomy as a perception?
    a. Does FDTAS have 5 factors in the solution?
    b. If not, how many factors are there in the FDTAS model and how does it measure teacher autonomy as a perception?
2. In what ways do the factors correlate with the external criterion measure of teacher job satisfaction?

Hypotheses

The following are the hypotheses for this study.

1. Hypothesis 1: The Five Dimensions of Teacher Autonomy Scale (FDTAS) will result in 5 factors, one for each of the five dimensions:
    a. Instructional Autonomy
    b. Curriculum Autonomy
    c. Principal/Administrator Relationship
    d. Professionalism and Empowerment
    e. Policy
2. Hypothesis 2: Teacher autonomy is related to teacher job satisfaction.
    a. Hypothesis 2a: Teachers who perceive they have instructional autonomy will be more satisfied with their jobs. Lasseter (2013) found instructional autonomy was the main reason for teacher job satisfaction. In fact, instructional autonomy was the leading source of job satisfaction for beginning teachers in a study by Lam and Yan (2011).
    b. Hypothesis 2b: Teachers who perceive they have curriculum autonomy will be more satisfied with their jobs. Jiang (2005) reported teachers who have the ability to participate in curriculum reform or have a say about the curriculum in the classroom have higher levels of job satisfaction than teachers with no input in curriculum reform.
    c. Hypothesis 2c: Teachers who perceive they have a supportive relationship with their principal/administrator will be more satisfied with their jobs. Perie and Baker (1997) found teachers who received more administrative support had

higher levels of job satisfaction. Furthermore, Conley and You (2017) reported teachers who perceived they had administrative support, had a clear vision, and were recognized as professionals were less likely to leave the teaching profession and led to job satisfaction.

d. Hypothesis 2d: Teachers who perceive they are treated as professionals and feel empowered will be more satisfied with their jobs. Pearson and Moomaw (2006) found higher levels of job satisfaction in teachers are associated with a high degree of professionalism and empowerment. Teachers also reported a higher level of job satisfaction when they have autonomy over their professional development goals (Worth and Van den Brande, 2020).
e. Hypothesis 2e: Teachers who perceive they have a say in developing policies for their school will be more satisfied with their jobs. Worth and Van den Brande (2020) found the most successful schools allow teacher input in developing policies that affect the school and the students in the classroom.

Summary

Researchers have struggled to define teacher autonomy for over 20 years. Lacking in the current accepted definitions is the ability to operationalize teacher autonomy as a perception in the educational context. Developing a new theoretical framework to describe teacher autonomy as a perception in relation to the educational context using the five dimensions of instruction, curriculum design, working relationships, professional development, and standardization. Combining the accepted conceptual definition of teacher autonomy with the operational constructs affecting teacher autonomy can provide a new framework for describing teacher autonomy leading to increased job satisfaction.

Chapter 3: Methodology

The purpose of this study is to develop a new framework for describing teacher autonomy as a perception in relation to the educational context using the five dimensions of instruction, curriculum design, working relationships, professional development, and standardization which may lead to greater job satisfaction. Although previous research has been conducted using the two widely recognized instruments Teacher Autonomy Scale (TAS; Pearson & Hall, 1993) and the Teacher-Work Autonomy Scale (TWA; Friedman, 1999), the instruments fail to situate teacher autonomy within the education context.

The researcher posits one way to rectify this is by examining teacher autonomy as a perception operationalized across the five dimensions; instructional autonomy, curriculum autonomy, principal/administrator support, professionalism and empowerment, and policy in order to understand the effect these dimensions have on job satisfaction. The new instrument, The Five Dimensions of Teacher Autonomy Scale (FDTAS) was constructed by combining items from the TAS and TWA scales with newly created items in order to adequately cover all dimensions. Additionally, TAS and TWA items were reworded when necessary to ensure item consistency in language.

The following research questions will be investigated:

1. Does FDTAS measure teacher autonomy as a perception?
    a. Does FDTAS have 5 factors in the solution?
    b. If not, how many factors are there in the FDTAS model and how does it measure teacher autonomy as a perception?
2. In what ways do the factors correlate with the external criterion measure of teacher job satisfaction?

Procedures and Sample

Location

Teachers from Oklahoma, Nebraska, and throughout the United States participated in this study. Solicitation for participation occurred by using social media (Facebook) and by downloading the teacher email lists located on the state department of education websites. PK-12 grade teachers in Oklahoma and Nebraska were contacted through direct email. For the 2021-2022 academic school year in Oklahoma, there are 94 K-8 (kindergarten through 8th grade) elementary school districts, 415 K-12 (kindergarten through 12th grade) independent districts with a total of 509 total public-school districts (Oklahoma State Department of Education, 2021). Oklahoma school districts are comprised of 1,783 traditional schools with 962 elementary schools, 306 middle schools/junior highs, and 449 high schools (Oklahoma State Department of Education, 2021). For the 2021-2022 academic school year, Nebraska school districts are comprised of 1,212 schools with 67 pre-kindergarten only schools, 693 elementary schools (PK-8), 143 middle schools (4th-8th), 184 secondary schools (7-12), and 125 high schools (9-12) (Nebraska Department of Education, 2021).

Sample

A total of 43,917 PK-12 grade teachers were employed in Oklahoma, (Oklahoma State Department of Education, 2021) while 38,681 were employed in Nebraska (Nebraska Department of Education, 2021). All teachers were asked to participate in this study, following a convenience sampling strategy. Convenience sampling allows for easy access to a readily available pool of participants (Tabachnick & Fidell, 2007). Demographics collected included age, gender, annual income, education level, race/ethnicity, teacher type, certification areas and type, certification obtained and taught, grade(s) taught, subject(s) taught, Title I school status,

percentage of students on free/reduced lunch, number of years teaching, number of years teaching at current school, grade levels included at current school, number of students currently enrolled at school, and the city where the school is located. Teachers who participate in this study were provided an incentive, the opportunity to win a $25.00 Amazon gift card. Ten participants were randomly drawn using a random number generator and gift cards were emailed to participants selected during the drawing.

Procedures

Oklahoma and Nebraska PK-12 teachers, along with teachers who were invited on social media (Facebook) participated in the study. A public email list of teacher was downloaded from the Oklahoma State Department of Education and Nebraska Department of Education's websites. Teachers were emailed regarding the purpose of the study and were asked to participate in the study. A sample of the email text is provided (Appendix A).

Teachers who read the email and agreed to participate clicked on an online survey URL and a link to the researchers Facebook page through a recruiting post with the option to share the content through the social media platform. The recruiting post included information on the study, as well directions for accessing the online survey (Appendix B). The researcher also requested friends and family share the post as a means of crowdsourcing teachers.

Online Survey

The survey data was collected electronically via Qualtrics. When participants clicked on the URL to participate in this study, they were directed to an IRB-approved information sheet and consent form. The information sheet explained the procedures for completing the survey, the total expected time to complete the survey, and the information regarding the incentive drawing. Upon agreement to continue with the study, an informed consent form was provided. The teacher

were required to check an agreement box in order to continue with the survey. If a teacher selected, “I agree” to participate in the study, the survey began. If a teacher selected, “I disagree” the survey loaded a thank you page and exited out of the platform.

Teachers who participated in the study were subjected to minimal risk, harm or discomfort than what would be encountered daily when completing surveys or questionnaires. The potential for finger strain or eye strain related to working on a computer was the only risk in the study. Teachers who participated in the study also did not receive any direct benefits, however, there are implications for this research to inform the field of teacher autonomy as it relates to job satisfaction.

Data Collection

All Oklahoma and Nebraska public-school teachers were solicited by email to participate in this study. The email introduced the researcher and explained the purpose of the study. It further explained the time the survey was available (2 weeks) as well as the length of time required to complete the survey (approximately 10 minutes). The survey was also advertised on social media networks to gain more responses from teachers across the nation.

Instruments

The Teacher-Work Autonomy Scale (TWA; Friedman, 1999) and the Teacher Autonomy Scale (TAS; Pearson & Hall, 1993) have been used to operationalize teacher autonomy since the late 1990s. Each scale has been used to describe autonomy in various ways. In 2016, a research study combined the TWA (Friedman, 1999) and TAS (Pearson & Hall, 1993) instruments to determine if the combination of items led to a comprehensive definition of autonomy. The findings from the study indicated there is still a gap in the operationalization of teacher

autonomy in the educational context as changes in the field have occurred in the past several years.

The Five Dimensions of Teacher Autonomy Scale

Researchers have been attempting to define teacher autonomy for over 20 years. Two commonly used conceptualizations include describing teacher autonomy as a decision-making ability or a perception (Friedman, 1999; Pearson & Hall, 1993). Although both descriptions of teacher autonomy may be relevant, for this study conceptualizing teacher autonomy as a perception allows the researcher to investigate changes in instructional strategies, support for curriculum selections, creation of collaborative work environments, inclusion in professional development experiences, and policy standardization (Blasé & Kirby, 2009; Pearson, 1995; Pearson & Hall, 1993; Friedman, 1999; Strong & Yoshida, 2014) as it impacts job satisfaction (Baykara & Orhan, 2020).

To operationalize the theoretical construct, two widely accepted teacher autonomy scales were researched as relevant to this study; TAS (Pearson & Hall, 1993) and TWA (Friedman, 1999). After review, the instruments were deemed not comprehensive enough for this study. Upon review, the research determined the TAS scale (Pearson & Hall, 1993) required creation of items in two of the five dimensions while the TWA scale (Friedman, 1999) needed items in three of the five dimensions created. Therefore, a new instrument was constructed by combing the TAS and TWA scales and creating new items. The new instrument was called the Five Dimensions of Teacher Autonomy Scale (FDTAS). The researcher created items for four of the five dimensions, as instructional autonomy was covered adequately by the TAS, as well as reworded the items to ensure item consistency and comprehensiveness of the statements. The final, newly constructed instrument consisted of 26, 5-point Likert scale items.

Table 4: TWA in Relation to the Five Dimensions and perception lists each of the four items from the TWA (Friedman, 1999) operationalizing teacher autonomy as a perception in context. For curriculum autonomy there was one item. Professionalism and empowerment included two items and policy was measured with one item. Instructional autonomy and principal/administrator relationship did not have items from the TWA (Friedman, 1999).

Table 4. *TWA Items in Relation to the Five Dimensions and Perception*

Instructional Autonomy	Curriculum Autonomy	Principal/Administrator Relationship	Professionalism & Empowerment	Policy
	I introduce changes and modifications into the formal curriculum.		I introduce new extracurricular items into the school.	I establish student achievement evaluation criteria.
			I contrive unique topics for the social cultural and general enrichment activities of students.	

Table 5: TAS Items in Relation to the Five Dimensions and Perception lists each item from the TAS (Pearson & Hall, 1993) operationalizing teacher autonomy as a perception in context. There are seven items for instructional autonomy. Two items for policy. Curriculum autonomy, principal/administrator relationship, and professionalism and empowerment do not have any items (Pearson & Hall, 1993).

Table 5. *TAS Items in Relation to the Five Dimensions and Perception*

Instructional Autonomy	Curriculum Autonomy	Principal/Administrator Relationship	Professionalism & Empowerment	Policy
What I teach in my class is determined, for the most part, by myself.				My job does not allow for much discretion on my part.
I follow my own guidelines on instruction.				The scheduling of use of time in my classroom is under my control.
I am free to be creative in my teaching approach.				
The evaluation and activities used in my class are selected by people other than myself.				
My teaching focuses on those goals and objectives that I select myself.				
I seldom use alternative procedures in my teaching.				
I have little say over the scheduling of use of time in my classroom.				

Table 6: New Items in Relation to the Five Dimensions provides the linkages between teacher autonomy as a perception and the educational context. Thirteen additional items were

created to cover the constructs. No additional items were required for instructional autonomy. Four items were created for curriculum autonomy and principal/administrator relationship. Three new items were required for professionalism and empowerment. Policy required the creation of two items.

Table 6. *New Items in Relation to the Five Dimensions and Perception*

Instructional Autonomy	Curriculum Autonomy	Principal/Administrator Relationship	Professionalism & Empowerment	Policy
	I focus on the curriculum and standardized testing, with little time to meet my students' needs.	The principal allows me to make my own decisions in my classroom.	I make decisions regarding how to teach based on my knowledge.	Policies impede upon my ability to teach what I want.
	With scripted curriculum, it is difficult to utilize the teaching techniques I learned in college.	My principal supports the instructional decisions I make in the classroom.	I am treated as a professional by the principal.	I have input regarding the policies implemented at my school.
	I believe the standardized curriculum does not meet the needs of the students.	The principal includes me in decisions regarding the school.	My skills as a teacher are not valued.	
	I possess knowledge of curricula and students learning; therefore, I should make curriculum decisions.	The principal empowers me to make my own changes in the classroom.		

The items listed in Tables 3-5 were used to create the new instrument, the Five Dimensions Teacher Autonomy Scale (FDTAS). Four items from the Teacher-Work Autonomy

scale (TWA; Friedman, 1999) and nine items from the Teacher Autonomy Scale (TAS; Pearson & Hall, 1993) were adapted and combined with 13 new items to create the FDTAS (Table 6). A Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure teacher autonomy as a perception.

Table 7. *The Five Dimensions Teacher Autonomy Scale Item Map*

FIVE DIMENSIONS	TWA	TAS	NEW	TOTAL
	PERCEPTION			
Instructional Autonomy	0	7	0	7
Curriculum Autonomy	1	0	4	5
Principal/Administrator Relationship	0	0	4	4
Professionalism & Empowerment	2	0	3	5
Policy	1	2	2	5
TOTAL	4	9	13	26

The Teacher Job Satisfaction Questionnaire

The Teacher Job Satisfaction Questionnaire (TJSQ; Lester, 1987) focuses on teacher job satisfaction in the educational context (Lester, 1987). The TJSQ covers a wide range of job characteristics such as supervision, colleagues, working conditions, pay, responsibility, classroom processes and procedures, promotion and advancement, job security, and recognition (Lester, 1987). The final instrument consisted of 66, 5-point Likert scale items.

Table 8: Coefficients of Internal Consistency of the Teacher Job Satisfaction Questionnaire provides a list of the Cronbach alpha for the 9 factors included in the TJSQ. The

reliability for the overall scale and each individual factor could be considered acceptable (Lester, 1987).

Table 8. *Coefficients of Internal Consistency of the Teacher Job Satisfaction Questionnaire*

Factor	Alpha
Supervision	.92
Colleagues	.82
Working conditions	.83
Pay	.80
Responsibility	.73
Work itself	.82
Advancement	.81
Security	.71
Recognition	.74

Data Analysis

Factor Analysis

Factor analysis is a useful research tool used to develop and validate measurement instruments (Yang, 2005). “The fundamental principle of factor analysis is to explain correlations among a larger number of observable variables by identifying or confirming underlying factors that explain these correlations” (Yang, 2005, p.183). “Therefore, the mutual correlation of variables can be explained by their common dependence on a latent variable or factor” (Yang, 2005, p. 183). Factor analysis helped the researcher determine the number of constructs underlying the set of items, to explain the variation among the variables by condensing the variables into smaller constructs, and to define the meaning of factors presented in an instrument (Yang, 2005). The sample size (n=850) was split in half, sample A and sample B (n=425 per sample) in order to run separate analyses. First, a Confirmatory Factor Analysis (CFA) was conducted on sample A to test the theory that there are five factors derived from the

FDTAS. The CFA did not produce an acceptable model fit, therefore an Exploratory Factor Analysis (EFA) was conducted with sample A. A CFA was then conducted with sample B to confirm the factor structure from the EFA.

Exploratory Factor Analysis (EFA) was conducted after the first CFA did not produce an acceptable model fit with five factors. An EFA is used for scale development or "when there is little theoretical basis for specifying a priori the number and patterns of common factors" (Hurley et al., 1997 as cited in Hayton, Allen, & Scarpello, 2004). EFA is used when a researcher wants to discover the number of factors influencing variables and to analyze which variables go together (Yong & Pearce, 2013). The difference between Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) is with EFA the researcher does not have a predetermined number of underlying dimensions of the structure before conducting the actual factor analysis (Yang, 2005).

EFA was utilized to describe and summarize data by grouping variables with similar properties into a factor without imposing any preconceived notions (Tabachnick & Fidell, 2007). The EFA was used to determine the factor structure of FDTAS. The factor structure and power was also evaluated.

When running an Exploratory Factor Analysis (EFA) the first step is to determine the number of factors to retain. The eigenvalues and the scree plot were utilized to make these decisions. An eigenvalue of greater than 1 was required in order to retain the factors (Costello & Osborne, 2005). The scree test was examined to ensure the factors were appropriate for the factor structure (Costello & Osborne, 2005). Factors with less than three variables and item loadings less than .40 are viewed as undesirable, but may be retained if they support the theoretical construct (Yong & Pearce, 2013).

When reviewing the data, the researcher checked the patterned relationship among the variables using the correlation matrix (Yong & Pearce, 2013). Variables with a lack of a patterned relationship or with low correlation coefficients ($r < +/- .40$) were removed (Yong & Pearce, 2013). Additionally, correlations above $r = +/- .90$ were not indicated. The next step involved reviewing Bartlett's Test of Sphericity had a significance level $p<.05$ to confirm the data was suitable for data reduction (Yong & Pearce, 2013). The next step was to review the Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy where the cutoff was between .8 and 1 indicating the sampling is adequate to perform factor analysis (Yong & Pearce, 2013).

Reviewing the Total Variance Explained table helps determine the number of significant factors to retain. Reviewing the scree plot and the Rotation Sums of Squared Loadings which show the eigenvalues and the variance after rotation was completed (Yong & Pearce, 2013). The researcher than determined the model was a good fit by looking at the summary of the percentage of the non-redundant residuals in the Reproduced Correlation Matrix. The model was reviewed and determined a good fit with less than 50% of the non-redundant residuals with absolute values that are greater than .05 (Yong & Pearce, 2013). The Reproduced Correlation Matrix and the original Correlations Coefficients Matrix was also compared and there were small residuals between the two matrices (Yong & Pearce, 2013). Finally, the Factor Matrix and the Rotated Factor Matrix were reviewed for the factor loadings. To help with interpretability, the extracted factors were rotated orthogonally and obliquely (Brown, 2015). Promax rotation resulted in a 3-factor solution.

A Confirmatory Factor Analysis (CFA) was conducted following the EFA to confirm the model. CFA was used to assess the measurement model validity occurs to support the empirical

research previously conducted (Tabachnick & Fidell, 2007). Conducting a CFA after the EFA allowed the researcher to attempt to replicate the EFA factor structure.

CFA uses traditional statistical methods to determine best fit, also known as goodness of fit statistics. Specifically, the chi-square test was used to determine expected versus observed covariances (**Suhr, 2006**). The Comparative Fit Index (CFI) was used to account for the sample size assuming all latent variables were uncorrelated, comparing the sample covariance matrix with the null model (Hu & Bentler, 1999). CFI values range from 0 to 1 with a larger value indicated a better model fit. Another fit statistic is the Tucker Lewis Index (TLI) which ranges between 0 and 1 with values greater than 0.90 indicating a good fit (**Suhr, 2006**).

Root Mean Square Error of Approximation (RMSEA) was used with CFA. RMSEA is another goodness of fit statistic that determines how well the model would fit the population covariance matrix, using unknown but optimally chosen parameter estimates (Byrne, 1998). RMSEA values range from 0 to 1 with a smaller value indicating a better model fit. According to Hu & Bentler (1999) a RMSEA value of 0.06 or less is an acceptable model fit. Therefore, the chi-square statistic and Tucker-Lewis index, also known as the Bentler and Bonnett's non-normed fit index (TLI[NNFI]), RMSEA, and CFI was calculated (Sun, 2005).

If the CFA model proves to be a bad fit, there are many reasons as to why this can occur. The first reason could be some items are cross loading on more than one factor (Brown, 2015). Cross loading items will be removed from the analysis in hopes of improving the model fit. One statistic frequently used to identify areas of misfit in CFA are residuals (Brown, 2015). Standardized residuals can have positive and negative values. A positive standardized residual indicates that the model's parameters underestimate the zero-order relationship between the two indicators to some degree (Brown, 2015). Additionally, large positive standardized residuals may

indicate that additional parameters are needed in the model in order to account for the covariance between the indicators (Brown, 2015). On the other hand, a negative standardized residual indicates that the model's parameters overestimate the relationship to some degree (Brown, 2015). Since standardized residuals are roughly interpreted as z scores, the z-score values that correspond to conventional statistical significance levels are often used as cutoffs (Brown, 2015). Sample size plays a key role in the size of the standardized residual but also the cutoff score utilized (Brown, 2015).

Regression

The second type of analysis utilized was multiple regression. Multiple regression was used to predict the level of job satisfaction based on the perceived level of each of the five dimensions of teacher autonomy. Multiple regression is used to study the relationship between a single dependent variable and one or more independent variables (Tabachnick & Fidell, 2007) or to understand the relationships between variables (Frost, 2019). For multiple regression analysis, two types of effects will be reported, the main effect and the interaction effect. The main effect describes the relationship between the independent variables (i.e., the five dimensions) and the dependent variable (i.e., teacher job satisfaction) that does not depend on the value of other variables in the model (Frost, 2019). An interaction effect explains the relationship between the independent variables (i.e., the five dimensions) and the dependent variable (i.e., teacher job satisfaction) that depends on the value of at least one other independent variable in the model (Frost, 2019).

Together coefficients and p-values will be reviewed to determine which relationships in the model are statistically significant and the nature of those relationships (Frost, 2019). The coefficients symbolize a variable's effect and describe the magnitude and direction of the

relationship between each independent variable and the dependent variable (Frost, 2019). The regression coefficient also indicates whether there is a positive or negative relationship between each independent variable and dependent variable (Frost, 2019). The coefficient value also explains how much the mean of the dependent variable changes given a one-unit shift in the independent variables while holding other variables in the model constant (Frost, 2019; Tabachnick & Fidell, 2007). P-values will be reviewed and they indicate whether the relationships are statistically significant (Frost, 2019; Tabachnick & Fidell, 2007). The hypotheses for the independent variables are:

Null hypothesis: The coefficient for the independent variable equals zero (no relationship).

Alternative hypothesis: The coefficient for the independent variable does not equal zero. If the p-value for a variable is less than the significance level, the data provides enough evidence to reject the null hypothesis for the entire population (Frost, 2019). Common significance levels are 0.05 (Frost, 2019; Rubinfeld, 2000). On the other hand, if the p-value is greater than the significance level reveals there is not enough evidence in the data to conclude the coefficient does not equal zero (Frost, 2019). Confidence intervals were reviewed and are derived from a sample and provides a range of values that likely contains the unknown value of a population parameter (Frost, 2019; Tabachnick & Fidell, 2007). The range of a confidence interval reveals the precision of the estimate with the narrow ranges suggesting a more precise estimate (Berger & De La Riva Torres, 2014; Frost, 2019).

Several goodness-of-fit statistics were run. The first statistic to review is R^2 and it helps determine how well the model fits the data (Frost, 2019; Tabachnick & Fidell, 2007). R^2 is equals the variance explained by the model divided by the total variance (Frost, 2019). Usually,

the larger the R^2, the better the regression model fits the data (Frost, 2019; Tabachnick & Fidell, 2007). However, that is not always the case a good model fit can have a low R^2 and a biased model can have a high R^2 (Frost, 2019). Next, the Adjusted R-squared and the predicted R-squared will be reviewed. As Frost (2019) explains, "the protection that adjusted R-squared and predicted R-squared provide is critical because too many terms in a model can produce results you can't trust" (p.126). The adjusted R-squared adjusts for the number of terms in the model and its value increases only when the new independent variable improves the model fit more than expected by chance alone. The predicted R-squared is used to determine how well a regression model makes predictions and it aids in determining whether the regression model overfit or has an excessive amount of terms (Frost, 2019).

Another goodness-of-fit statistic is the standard error of regression. The standard error of regression provides the absolute measure of the typical distance the data points fall from the regression line (Frost, 2019). Standard error of regression is more precise in determining how far the data points are from the regression line on average (Frost, 2019). Additionally, the F-test of overall significance will determine whether the linear regression model provides a better fit to the data than a model that contains no independent variables (Frost, 2019). The p-value for the F-test will be compared to the significance level and if the p-value is less than the significance level, then the data provide evidence that the regression model fits the data better than a model with no independent variables (Frost, 2019; Tabachnick & Fidell, 2007).

There are several possible issues that can affect a regression analysis. Outliers may skew the regression solution and affect the precision of estimation of regression weights (Osborne & Waters, 2002; Tabachnick & Fidell, 2007). Checking for outliers will occur either prior to the

regression being run or by reviewing the residuals analysis after the regression is run and outliers will be excluded from analysis (Tabachnick & Fidell, 2007).

Another potential issue is multicollinearity which occurs when independent variables in a regression model are correlated (Berger, 2014; Frost, 2019; Tabachnick & Fidell, 2007). To resolve multicollinearity the variance inflation factor (VIF) may need to be utilized. The VIF identifies the correlation between the independent variables and the strength of that correlation (Frost, 2019). Frost (2019) further states the value of 1 indicates there is no correlation between the independent variables and values between 1 and 5 suggest a moderate correlation but not severe enough to consider corrective measures.

Summary

A descriptive and in-depth discussion of the methods involved in operationalizing teacher autonomy and how teacher autonomy effects teacher job satisfaction is presented in this chapter. All PK-12 teachers in the states of Oklahoma and Nebraska will be recruited for this study. The data will be collected through an online survey utilizing Qualtrics. First an EFA with various goodness-of-fit indices will be completed and then a CFA will be conducted to confirm the results from the EFA to aid in defining a factor structure to create a comprehensive model to define teacher autonomy and add the current literature on teacher autonomy. Finally, several regression analyses will be run to determine if there is a relationship between the five dimensions of teacher autonomy and teacher job satisfaction.

Chapter 4: Results

The purpose of this study was to develop a new framework for describing teacher autonomy as a perception in relation to the educational context using the five dimensions of instruction, curriculum design, working relationships, professional development, and standardization which may lead to greater job satisfaction. This was accomplished by using the FDTAS and TSJQ instruments to collect data from teachers in Oklahoma, Nebraska, and through social media.

The goal of the study was to answer the following research questions:

1. Does FDTAS measure teacher autonomy as a perception?
    a. Does FDTAS have 5 factors in the solution?
    b. If not, how many factors are there in the FDTAS model and how does it measure teacher autonomy as a perception?
2. In what ways do the factors correlate with the external criterion measure of teacher job satisfaction?

Demographic and 5-point Likert scale data was collected by administrating an electronic survey through soliciting teacher responses using email. All negatively worded items were reverse scored. Data was analyzed using three statistical techniques, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Linear Multiple Regression. Results from the study are interpreted below.

Descriptive Statistics

A total of 1,083 alternative and traditionally certified PK-12 teachers started this survey with 850 teachers completing all items in the instrument. To ensure the most robust outreach to

classroom teachers in the targeted of Oklahoma and Nebraska, email listings from their respective Departments of Education were used to distribute the participation opportunity to 73,471 teachers. The age range of participants was 23 to 75, with a mean age of 44. One-hundred and seventy-three males, 674 females, and 3 other (did not select a gender) individuals completed the survey. The majority of the teachers, 85.7% were White/Caucasian (Table 9).

Table 9. *Biographical Demographics*

Biographical Variables	*n*	%
Gender:		
Male	173	20.4%
Female	684	79.3%
No Response	3	0.3%
Race:		
White/Caucasian	725	85.3%
African American	23	2.7%
Hispanic	18	2.1%
Asia/East Asia/Asian Indian	3	0.4%
Native American/Alaskan Native	35	4.1%
Hawaiian Native/Pacific Islander	3	0.4%
Middle Eastern	1	0.1%
Other/Multi-Racial	42	4.9%
Age:		
18-29	115	14.1%
30-41	236	29.0%
42-53	263	32.3%
54-65	176	21.6%
Over 65	24	3.0

The majority of the teachers possess a Bachelor's degree (252) or a Master's degree (381). Most of the teachers had an annual income over $40,000 (671). Full-time teachers make up 97.2% of the responses (Table 10: Education and Occupation Demographics).

Table 10. *Education and Occupation Demographics*

Education and Occupation Variables	*n*	%
Education:		
Associate's Degree	3	0.4%
Bachelor's Degree	252	29.6%
Some Master's courses	132	15.5%
Master's Degree	383	45.1%
Some Doctoral courses	40	4.7%
Doctoral Degree	15	1.8%
Other	23	2.7%
Salary:		
Less than $20,000	1	0.1%
$20,000 - $25,000	6	0.7%
$26,000 - $30,000	11	1.3%
$31,000 - $35,000	36	4.2%
$36,000 - $40,000	124	14.6%
Over $40,000	671	78.9%
Type:		
Full-time	820	96.5%
Substitute	2	0.2%
Other	24	2.8%

Table 11. *Certification Demographics*

Certification Variables	Traditional Cert		Alternative Cert	
	n	%	*n*	%
School Level:				
Early Childhood	173	20.4%	14	1.6%
Elementary Education	351	41.3%	26	3.1%
Special Education	138	16.2%	20	2.4%
Speech/Language Pathology	3	0.4%	0	0.0%
Subject Level*:				
Core Subjects				
English	116		18	
English as a Second Language	60		18	
Math	83		19	
Reading	67		6	
Science	82		16	
Social Studies	121		22	
Fine Arts				
Fine Arts	74		10	
Foreign Language	25		2	
Physical Education	44		6	
Electives				
Business	30		9	
Career Education	26		7	
Career Technology	32		8	
Computer Science	10		2	
Journalism	11		3	

*Note: Multiple certifications may be held by same teacher.

Table 11: Certification Demographics provides information regarding certification at the school level, as well as by subject. Elementary education teachers responded most often (44.4%) followed by early childhood education (23.0%), special education (18.8%), secondary education (14.6%), and speech/language pathology (0.4%). Additionally, multiple certifications are held by these teachers. The majority of teachers are traditionally certified, with fewer teachers receiving alternative certification. The most common certifications held for secondary education teachers are, Social Studies (121), English, (116), Math (83), and Science (82). The least common certifications for secondary teachers are in Journalism (11) and Computer Science (10).

Table 12: Teacher demographics provides an overview of respondent information regarding total years teaching, years teaching at current school, grade level taught, and subjects taught. Over half of the teachers, 59.9% have taught for 11 years or longer. The most common responses for teaching at the current school was 2-4 years (285) and 11 or more years (246). PreK to 5th grade teachers made up 67.0% of the responses with high school (9th-12th grade) being the lowest amount of participants, 0.1%. The basic subjects (defined in Table 3) were the most common subjects taught (387) with 262 teachers teaching multiple subjects.

Table 12. *Teacher Demographics*

Teacher Variables	*N*	%
Total Years:		
1 year or less	4	0.5%
2-4 years	116	13.7%
5-7 years	123	14.5%
8-10 years	97	11.5%
11 or more years	509	59.9%
Years at Current School:		
1 year or less	49	5.8%

Teacher Variables	*N*	%
2-4 years	285	33.5%
5-7 years	161	18.9%
8-10 years	109	12.8%
11 or more years	246	28.9%
Current Taught:		
PreK to 5th	329	39.0%
6th to 8th	170	20.0%
9th to 12th	238	28.0%
Other	106	12.5%
Current Subject(s)*:		
Core Subjects	387	45.5%
Fine Arts	81	9.5%
Special Education	55	6.5%
Electives	37	4.4%
Multiple Subjects	262	30.8%

*Note: Current Subject(s) categories are defined as Subject Level in Table 11.

The majority of teachers were located in Nebraska and Oklahoma (99.1%). The teachers stated the schools where the teachers in the sample taught were 28.6% elementary, 17.6% middle/junior high school, 25.8% high school, and 27.6% multiple grade levels (such as PreK-12 or PreK-8). Small, 29.8% (400 students or less) and large, 27.6% schools (over 1,000 students) were represented most often. Approximately 75% of the teachers reported their schools offered free or reduced lunches and were Title I schools (Table 13).

Table 13. *School Information*

School Variables	*N*	%
State		
California	1	0.1%
Michigan	1	0.1%
Nebraska	344	40.5%
Oklahoma	498	58.6%
South Carolina	1	0.1%
Texas	2	0.2%
Utah	1	0.1%
Grade Levels at School:		
PreK to 5th	223	28.6%
6th to 8th	150	17.6%
9th to 12th	219	25.8%
Other	235	27.6%
Total Students:		
Less than 100	29	3.4%
101-400	223	26.4%
401-600	182	21.6%
601-800	115	13.6%
801-1,000	70	8.3%
Over 1,000	225	26.7%
Free and Reduced Lunches:		
Yes	644	75.8%
No	117	13.8%
Title I:		
Yes	612	72.0%
No	229	26.9%

Differences by State

The majority of the participants in this study (n=842) were from Nebraska (n=344) and Oklahoma (n=498). Since the majority of the participants in this study were from Nebraska and Oklahoma (99.1%), several independent samples t-tests were run to determine if there were any significant differences in annual income, education level, race/ethnicity, Title I school status, whether students are on reduced lunch, total years teaching, and gender by state.

The results indicate there are several significant differences between the two states. First, there was a significant difference in annual income with Nebraska teachers (M=5.82, SD=.654) making more money than Oklahoma teachers (M=5.61, SD=.710); t(839)=4.389, p = 0.000. There was also a significant difference in education level with the majority of Nebraska teachers (M=3.78, SD=1.107) possessing Master's degrees and the majority of Oklahoma teachers (M=3.15, SD=1.155) possessing Bachelor's degrees; t(838)=7.886, p = 0.000. There was also a significant difference between the states with both Nebraska (M=1.30, SD=1.447) and Oklahoma teachers reporting their race/ethnicity as predominantly white (M=2.20, SD=3.300); t(836)=-4.746, p = 0.000. Title I school status produced a significant difference between the states with the majority of Nebraska teachers (M=1.38, SD=.485) and Oklahoma teachers reporting their school is a Title I school (M=1.20, SD=.403); t(831)=5.621, p = 0.000. There was also a significant difference between teachers who reported whether reduced lunches were offered at their school between Nebraska (M=1.25, SD=.433) and Oklahoma (M=1.09, SD=.282); t(752)=6.220, p = 0.000. There was a significant difference in gender for Nebraska (M=1.75, SD=.431) and Oklahoma, with both states with an overwhelming majority of female respondents (M=1.82, SD=.384); t(837)=-2.346, p = 0.010. Finally, there was a significant difference in total years teaching with the majority of Nebraska teachers (M=4.25, SD=1.116) having more

experience in the classroom than Oklahoma teachers(M=4.12, SD=1.156); t(839)=1.704, p = 0.04.

Differences in Subsamples

After analyzing the demographic data, the entire sample was randomly split in half using the SPSS split file function. Both samples contained 425 randomly selected cases, see Table 14. Since the sample was randomly split, several independent samples t-tests were run to determine if there were any significant differences in gender, total years teaching, annual income, education level, race/ethnicity, Title I school status, and whether students are on reduced lunch by the two subsamples.

Table 14. *Demographics by Subsample*

Subsample	OK	%	NE	%
1	241	56.7%	180	42.4%
2	257	60.5%	164	38.6%

Note: OK=Oklahoma; NE=Nebraska

The results indicate there are two significant differences between the two subsamples. First, there was a significant difference in gender with the first subsample (M=1.78, SD=.415) and the second subsample (M=1.81, SD=.392); t(845)=-1.125, p = 0.024. There was also a significant difference in total years teaching with the first sample (M=4.10, SD=1.176) and the second sample (M=4.23, SD=1.107); t(847)=-1.618, p = 0.037.

However, there was not a significant difference between the two subsamples in regards to several variables. First, there was not a significant difference between the first subsample (M=5.70, SD=.702) and the second subsample and annual income (M=5.69, SD=.689); t(847)=-

.212, p = .648. There was also not a significant difference between the first subsample (M=3.35, SD=1.116) and the second subsample (M=3.45, SD=1.233) with regard to education level; t(846)=-1.226, p = 0.132. Race/ethnicity was not significantly different from the first subsample (M=1.82, SD=2.695) and the second subsample (M=1.83, SD=2.758); t(844)=-0.088, p = 0.917. Title I school status was not significantly different from the first subsample (M=1.28, SD=.449) and the second subsample (M=1.26, SD=.442); t(839)=0.478, p = 0.339. Finally, there was not a significant difference between the first subsample (M=1.17, SD=.373) and the second subsample (M=1.14, SD=.349) in offering reduced lunch; t(759)=0.935, p = 0.062.

First Confirmatory Factor Analysis

Since I theorized the FDTAS to have five factors, I first carried out a Confirmatory Factor Analysis (CFA) using my first subsample (n=425). The data was randomly split into equal halves using the split file function in SPSS. The analysis was performed using AMOS 26, whereby parameters were estimated using maximum likelihood estimation. I evaluated the fit of the model using several goodness of fit measures. Traditionally, the chi-square goodness of fit index is used to test whether a significant discrepancy exists between the covariance matrix implied by a model and that which is observed based on the data (Kline, 2016). Since the chi-square goodness of fit test is highly sensitive to sample size, other indices are typically utilized for evaluation of fit. The Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI) are two of the most commonly reported comparative fit indices which compare fit of a model against that of a null or independence model (Schumacker & Lomax, 2016). Values ≥ .90 for these indices are generally regarded as indicative of an acceptable model fit (Whittaker, 2016). In addition to these indices, I also considered the Root mean-square error of approximation (RMSEA). This is considered an absolute fit index with zero indicating ‘perfect fit’ and values greater than zero

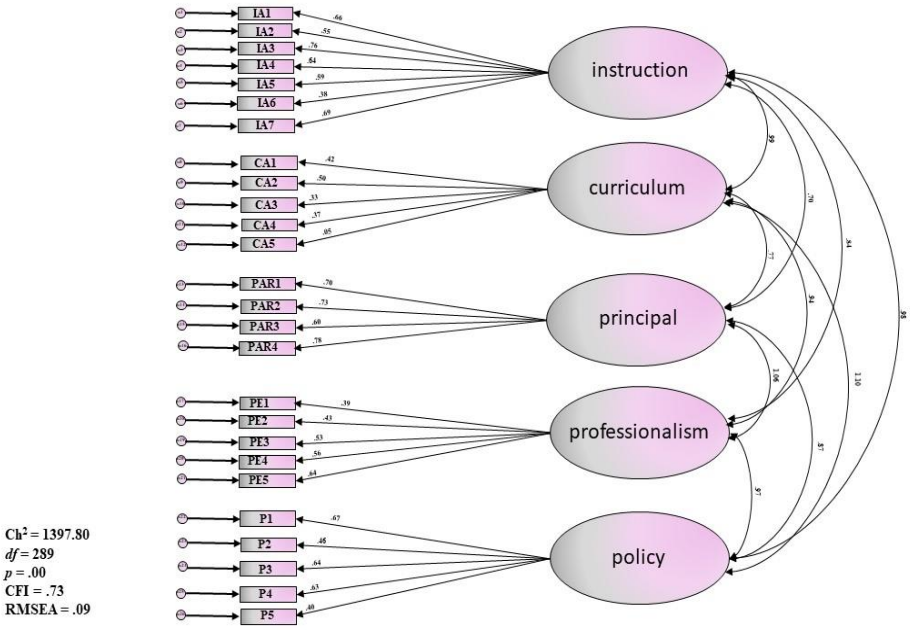
indicating worse fit (Kline, 2016). An RMSEA value up to .05 is generally considered indicative of close fit of a model to the data. Values up to .08 (Brown & Cudek, 1993; as cited by Whittaker, 2016) indicate an acceptable fitting model. A value greater than .10 (Hu & Bentler, 1999) is regarded as indicating a poor fitting model.

Table 15 below contains the model fit statistics for the tested five factor model. Based upon the goodness of fit criteria laid out above, the five factor model was not a good fit to the data. The CFI and TLI values exceeded conventional values indicative of acceptable fit. The RMSEA value associate with the five factor model suggested mediocre to poor fit.

Table 15. *Model fit statistics*

Model	χ^2 goodness of fit test	CFI	TLI	RMSEA
Five-factor	$\chi^2(289)=1387.80$, $p<.001$	.73	.68	.09

Figure 1. *5 Factor Solution for Teacher Autonomy as a Perception*

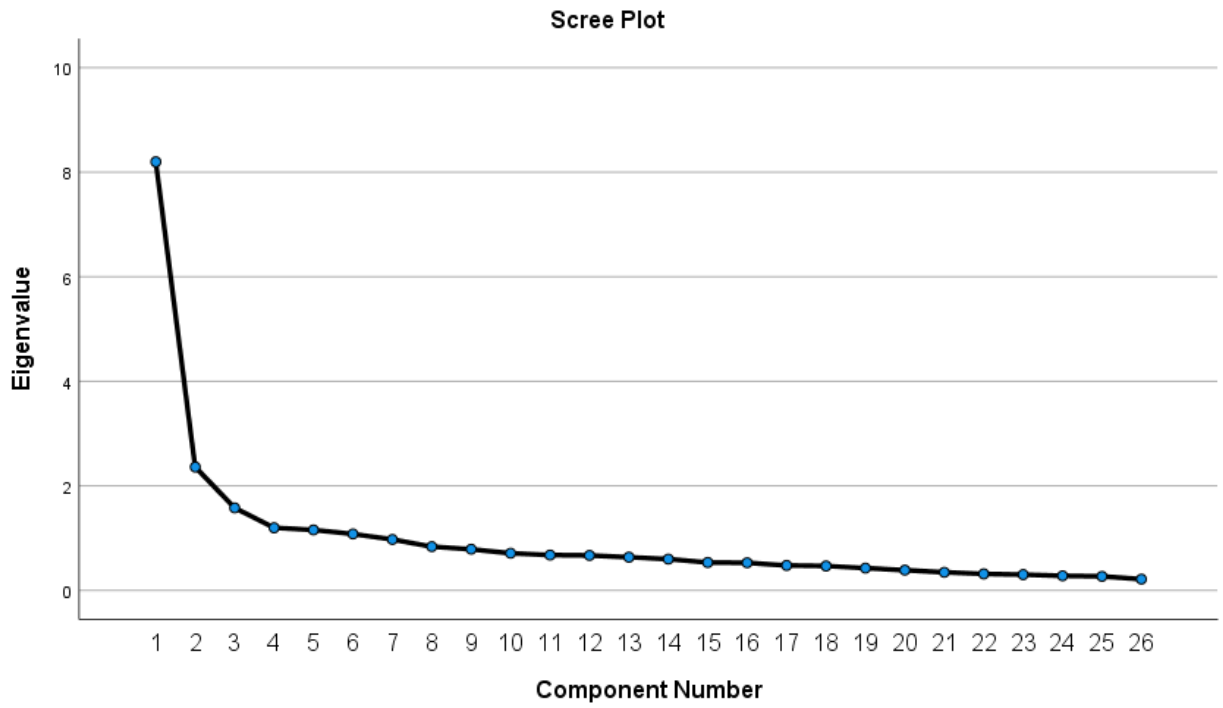


Exploratory Factor Analysis

Since the confirmatory factor analysis of the five factor model was a poor fit to the data, I performed a principal components factor analysis on the Five Dimensions of Teacher Autonomy Scale (FDTAS) on my first sub-sample (n=425) to ascertain the number of factors that account for the interrelationships among the items or if the interrelationships are better accounted for by a different factor model. This analysis was performed using SPSS 28. To decide on the number of factors to retain from my analysis, I (a) consulted the eigenvalues associated with an initial PCA extraction (using Kaiser's criterion of 1.0 for factor retention), (b) examined the scree plot of the eigenvalues associated with that initial extraction, and (c) considered the results of a parallel analysis I conducted using the parallel analysis engine found at **https://analytics.gonzaga.edu/parallelengine/**. [Parallel analysis is performed by comparing the observed eigenvalues from one's data against the eigenvalues of randomly generated correlation

matrices, assuming the same sample size and number of measured variables.] Given that the use of the eigenvalue cutoff rule of 1.0 often leads to over-factoring, I placed greater weight on the results from the scree plot and the parallel analysis. Using the eigenvalue cutoff of 1, my analysis suggested retention of six factors. However, the scree plot and the parallel analysis results (using the 95th percentile of randomly generated eigenvalues) provided consistent evidence favoring retention of a three-factor solution. The eigenvalues and percentage of variance accounted for by the three-factor solution was as follows: factor 1: eigenvalue = 8.241 (% of variance accounted for = 31.695%); factor 2: eigenvalue = 2.902 (% of variance accounted for = 11.161%); factor 3: eigenvalue = 1.334 (% of variance accounted for = 5.131). Altogether, the retained factors accounted for approximately 48% of the variation in the original items.

Figure 2. *Scree Plot for EFA*



Upon deciding on the three-factor solution, I forced a three-factor solution and then performed Promax rotation on the extracted factors to improve their interpretation. I interpreted

the three factors using a loading criterion of .40 in consultation with the pattern matrix. Of the 26 items in the original scale, two were not considered during interpretation due to loading differential across factors < .10. See Table 16 containing the loadings of the 24 items that were retained for interpretation. The two items that were not retained are also included at the bottom of the table.

Table 16. *Exploratory Factor Analysis Three Factor Solution for Teacher Autonomy as a Perception*

	Factor Loadings				
	1	2	3	Scale	Dimension
What I teach in my class is determined, for the most part, by myself.	**0.83**	-0.24	0.04	TAS	IA
I follow my own guidelines on instruction.	**0.78**	-0.17	-0.10	TAS	IA
My teaching focuses on goals and objectives that I select myself.	**0.76**	-0.15	-0.03	TAS	IA
I make decisions regarding how to teach based on my knowledge.	**0.69**	0.11	-0.16	FDTAS	PE
I am free to be creative in my teaching approach.	**0.64**	0.14	0.14	TAS	IA
I contrive unique topics for the social cultural and general enrichment activities of students.	**0.62**	0.06	-.0.13	TWA	PE
I introduce changes and modifications into the formal curriculum.	**0.62**	0.01	-0.16	TWA	CA
The principal allows me to make my own decisions in my classroom.	**0.58**	0.39	-0.12	FDTAS	PAR

	Factor Loadings				
	1	2	3	Scale	Dimension
My job does not allow for much discretion on my part.	**0.55**	0.05	0.25	TAS	P
I establish student achievement evaluation criteria.	**0.55**	0.05	-0.04	TWA	P
The evaluation and activities used in my class are selected by people other than myself.	**0.52**	-0.18	0.39	TAS	IA
The scheduling of use of time in my classroom is under my control.	**0.50**	0.05	0.29	TAS	P
I introduce new extracurricular items into the school.	**0.46**	0.17	-0.15	TWA	PE
I focus on the curriculum and standardized testing, with little time to meet my student's needs.	**0.40**	-0.03	0.27	FDTAS	CA
I seldom use alternative procedures in my teaching.	**0.40**	0.07	-0.03	TAS	IA
I am treated as a professional by the principal.	-0.13	**0.86**	-0.03	FDTAS	PE
The principal/administration includes me in decisions regarding the school.	-0.10	**0.82**	0.02	FDTAS	PAR
I have input regarding the policies implemented at my school.	-0.19	**0.74**	0.13	FDTAS	P
My principal supports the instructional decisions I make in the classroom.	0.21	**0.71**	-0.10	FDTAS	PAR

	Factor Loadings				
	1	2	3	Scale	Dimension
The principal empowers me to make my own changes in the classroom.	0.29	**0.69**	-0.08	FDTAS	PAR
My skills as a teacher are not valued.	0.03	**0.66**	0.22	FDTAS	PE
With scripted curriculum, it is difficult to utilize the teaching techniques I learned in college.	-0.09	-0.10	**0.72**	FDTAS	CA
I believe the standardized curriculum does not meet the needs of the students.	-0.16	0.13	**0.65**	FDTAS	CA
Policies impede upon my ability to teach what I want.	0.23	0.12	**0.55**	FDTAS	P
I possess knowledge of curricula and student learning; therefore I should make curriculum decisions.	0.49	-0.11	-0.57	FDTAS	CA
I have little say over the scheduling of use of time in my classroom.	0.40	0.06	0.43	TAS	IA
Eigenvalue	8.24	2.90	1.33		
% of Total Variance	31.69%	11.16%	5.13%		
Total Variance			**47.98%**		

Note: TAS = Teaching Autonomy Scale; TWA = Teacher Work-Autonomy scale; FDTAS = Five Dimensions of Teacher Autonomy Scale; IA = Instructional Autonomy; CA = Curriculum Autonomy; PAR = Principal/Administrator Relationship; PE = Professionalism and Empowerment; P = Policy.

Factor 1, named *Instructional Choice*, consisted of 15 items and represented a mixture of items from the TAS, TWA, and FDTAS. This factor contains items describing teachers with

instructional autonomy and the control they possess over instructional decisions. These items reflect teachers' who possess flexibility in the classroom. Teachers who manage their classrooms despite the outside educational policies, practices, and expectations loaded on this factor as well. Sample items include "What I teach in my class is determined, for the most part, by myself", and "I make decisions regarding how to teach based on my knowledge."

Professional Choice, Factor 2, consists of 6 items. The items in this factor were created by the researcher and are unique to the FDTAS instrument. These items describe teacher's perception of being treated as a professional and an expert in the classroom. Sample items from this factor include "I have input regarding the policies implemented at my school", and "The principal empowers me to make my own changes in the classroom."

Factor 3, *Academic Choice*, contains 3 items and consists of items mainly from the FDTAS. Items on this factor explain how teachers enhance the school environment. Sample items from this factor are "Policies impede upon my ability to teach what I want", and "I believe the standardized curriculum does not meet the needs of the students."

Table 17 contains the factor correlation matrix for the factors associated with my three factor solution. The factor correlations ranged from a low of .41 to a high of .50, indicating that the three autonomy factors were all substantially correlated with each other. The strongest observed relationship (r=.50) was between the *Professional Choice* and *Academic Choice* factors.

Table 17. *Factor Correlation Matrix*

Factor	1	2	3
1	—	.41	.41
2	.41	—	.50

3	.41	.50	—

Subscale reliabilities

In the interest of completeness, I computed Cronbach's alphas for the total scale and subscales for my measure. Cronbach's alpha for the full scale was .90. Cronbach's alpha for the subscales (without consideration of the excluded items based on the factor analytic results) were as follows: *Instructional Choice* (15 items, α = .88), *Professional Choice* (6 items, α = .86), and *Academic Choice* (3 items, α = .60).

Confirmatory Factor Analysis

I carried out Confirmatory Factor Analysis (CFA) using my second subsample (n=425) in order to further evaluate the fit of the three-factor solution derived from my exploratory factor analysis. This analysis was performed using AMOS 26, whereby parameters were estimated using maximum likelihood estimation. I evaluated the fit of the model using several goodness of fit measures such as the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root mean-square error of approximation (RMSEA). Items appeared in AMOS in the same order as Table 16. At first, running the three-factor solution from the EFA was not a good fit to the data (See Table 18). The CFI and TLI were below the .90 cutoff and the RMSEA was suggesting a mediocre to poor fit. Therefore, I reviewed each factor loading and deleted two low correlating items with the *Instructional Choice* factor, instruction 13 (.37) and 15 (.39) from the first factor, *Instructional Choice*. However, this did not improve the model fit (x^2=1054.28, *df* = 206, p<.001, CFI=.80, TLI=.78, RMSEA=.10).

Next I reviewed the error covariances to investigate any high values. Excessively large error covariances between items indicate imprecise parameter estimates and are associated with

low power to detect the parameter as statistically significant from zero (Brown, 2015). There are no specific guidelines available to assist in determining the magnitude of error variances in a given data set (Brown, 2015). This is because the size of standard errors is determined by the metric of the indicators and latent variables but also in part by the size of the actual parameter estimate (Brown, 2015). Error variances are the portions of variance in each measurement that do not covary with the latent factor (Brown, 2015). Smaller factor loadings can result in larger error variances and this variance is unexplained by the latent variable. I determined there were four error relationships that needed to be covaried. The high error relationships had a covariance of 30 or above and were between variables u1 & u3, u10 & u12, u16 & u17, and u17 & u18. This improved the model fit, (x^2=777.35, *df* = 202, p<.001, CFI=.87, TLI=.85, RMSEA=.08), but the CFI and TLI were still below the acceptable threshold of $\geq .90$.

In order to try and further improve the model fit, I reviewed the standardized residual covariances to determine which items should be deleted. Standardized residual covariance values should not be greater than 1.96 (Brown, 2015). There were a total of eight items that were deleted, seven from *Instructional Choice* (Items 1, 7, 9, 11, 13, 14, and 15) and one from the *Professional Choice* (Item 6) factor. This improved model fit considerably (see Table 18). One of the error covariances was deleted with the items (u1 & u3), and a total of three error covariances remain in the final model. The final three-factor model contained a total of 16 items. The first factor *Instructional Choice* contains 8 items, *Professional Choice* has five items, and *Academic Choice* has only three items.

Table 18. *Model fit statistics*

Model	χ^2 goodness of fit test	CFI	TLI	RMSEA
Original Three-factor	$\chi^2(249)=1183.50$, $p<.001$	.79	.77	.09
Revised Three-factor	$\chi^2(98)=318.17$, $p<.001$	.92	.91	.07

Figure 3. *3 Factor Solution for Teacher Autonomy as a Perception*

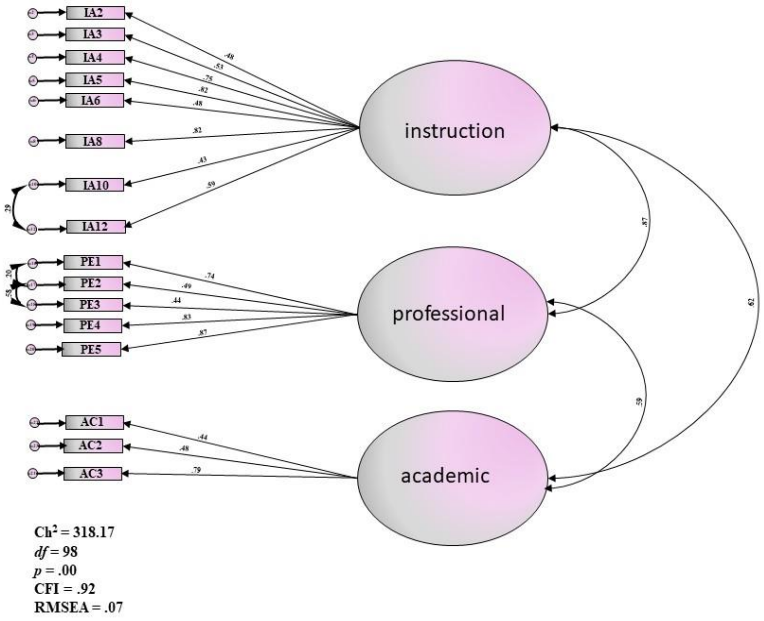


Table 19. *Final Items for the 3 Factor Solution for Teacher Autonomy as a Perception*

Item	Standardized Regression Weight	Scale	Dimension
Instructional Choice			
I follow my own guidelines on instruction.	0.48	TAS	IA

Item	Standardized Regression Weight	Scale	Dimension
My teaching focuses on goals and objectives that I select myself.	0.53	TAS	IA
I make decisions regarding how to teach based on my knowledge.	0.75	FDTAS	PE
I am free to be creative in my teaching approach.	0.82	TAS	IA
I contrive unique topics for the social cultural and general enrichment activities of students.	0.48	TWA	PE
The principal allows me to make my own decisions in my classroom.	0.82	FDTAS	PAR
I establish student achievement evaluation criteria.	0.43	TWA	P
The scheduling of use of time in my classroom is under my control.	0.59	TAS	P
Professional Choice			
I am treated as a professional by the principal.	0.74	FDTAS	PE
The principal/administration includes me in decisions regarding the school.	0.49	FDTAS	PAR
I have input regarding the policies implemented at my school.	0.44	FDTAS	P

Item	Standardized Regression Weight	Scale	Dimension
My principal supports the instructional decisions I make in the classroom.	0.83	FDTAS	PAR
The principal empowers me to make my own changes in the classroom.	0.87	FDTAS	PAR
Academic Choice			
With scripted curriculum, it is difficult to utilize the teaching techniques I learned in college.	0.44	FDTAS	CA
I believe the standardized curriculum does not meet the needs of the students.	0.48	FDTAS	CA
Policies impede upon my ability to teach what I want.	0.79	FDTAS	P

Note: TAS = Teaching Autonomy Scale; TWA = Teacher Work-Autonomy scale; FDTAS = Five Dimensions of Teacher Autonomy Scale; IA = Instructional Autonomy; CA = Curriculum Autonomy; PAR = Principal/Administrator Relationship; PE = Professionalism and Empowerment; P = Policy.

Subscale reliabilities

In the interest of completeness, I computed Cronbach's alphas for the total scale and subscales for final 3 factor structure. Cronbach's alpha for the full scale was .88. Cronbach's alpha for the subscales (without consideration of the excluded items based on the factor analytic results) were as follows: *Instructional Choice* (8 items, $\alpha = .83$), *Professional Choice* (5 items, $\alpha = .84$), and *Academic Choice* (3 items, $\alpha = .59$).

Multiple Regression

Following the EFA and CFA, a linear multiple regression was conducted to determine if the 3 factors associated with my measure of teacher autonomy might differentially predict teacher job satisfaction. The job satisfaction variable was the dependent variable and the three factors of teacher autonomy (*Instructional Choice, Professional Choice, and Academic Choice*) were the independent variables. The adjusted R^2 = .407 with the R^2 = .409. This indicates the linear regression explains 41% of the variance in the data.

The F-test has the null hypothesis that the model explains zero variance in the dependent variable. The F-test is highly significant, F(3, 769) = 177.419, p< .0005, therefore the assumption can be made that the model explains a significant amount of the variance in job satisfaction. The analysis also indicates there is a significant intercept. The *Instructional Choice* coefficient is significant which can be interpreted as for every 1-point decrease with the *Instructional Choice* factor, teacher job satisfaction decreases by .03 points. This result is unexpected and may be related to elementary and secondary teachers being in the same analysis.

The *Professional Choice* coefficient was also significant, therefore for every 1-point increase with the *Professional Choice* factor, the teacher job satisfaction increases by .24 points. This indicates that teachers who are included in making decisions regarding the school and feel as if they are treated as professionals by their principals their level of job satisfaction increases. The *Instructional Choice and Professional Choice* are both significant predictors. By comparing the standardized coefficients, the *Professional Choice* predictor (beta = .650) has a higher impact than *Instructional Choice* (beta = -.072). The *Academic Choice* coefficient was not a significant predictor of job satisfaction (Table 20).

Table 20. *Teacher Autonomy as a Perception as a Predictor of Job Satisfaction*

Variable	Zero-Order *r*				β	*SE*	B
	AvgInstr	AvgProf	AvgAcad	AvgJS			
AvgInstr		.514	.409	.284	-.072*	.014	-.060
AvgProf			.439	.636	.650*	.012	.533
AvgAcad				.309	.053	.011	.046
					Intercept = 2.509		
Mean	3.59	3.52	2.63	3.28			
SD	0.73	0.83	0.85	0.30	$R^2 = 0.41$		

*p<.05

The multiple regression does not have an issue with multicollinearity as all of the variables were above > 0.1. The normality of the residuals was reviewed next and it indicates the points follow a normal, diagonal line with no strong deviations and this indicates the residuals are normally distributed.

Summary

The first CFA did not produce an acceptable model fit. Therefore, an EFA was conducted on the FDTAS and indicated a three factor solution best fit the data. A total of 24 items were retained with the reliability of the entire scale was .90. The three factors were *Instructional Choice* (15 items), *Professional Choice* (6 items), and *Academic Choice* (3 items). Then a CFA was conducted to test the model fit of the EFA with the overall model indicating a good fit, with a total of 16 total items retained. Finally, a multiple regression was conducted with teacher job satisfaction and the three teacher autonomy factors. The *Instructional Choice* and *Professional Choice* variables were statistically significant and predicted job satisfaction.

Chapter 5: Discussion

The purpose of this study was to develop a new framework for describing teacher autonomy as a perception by using the five dimensions of instruction, curriculum design, working relationships, professional development, and standardization which may lead to greater job satisfaction. The data from the Exploratory Factor Analysis (EFA) and the Confirmatory Factor Analysis (CFA) suggest the operationalization of teacher autonomy as a perception is still ambiguous. Furthermore, the results from the Multiple Regression show a significant relationship between teacher autonomy as a perception and teacher job satisfaction.

First Confirmatory Factor Analysis

A confirmatory factor analysis was conducted on the first subsample to determine if the hypothesized five dimensions resulted in five separate factors. The results from the CFA indicated the five factor solution was a poor fit, (x^2=1387.80, df = 289, p<.001, CFI=.73, TLI=.68, RMSEA=.09). The five dimensions of teacher autonomy as previously hypothesized, proved not to be a good fit to the data. The CFI and TLI goodness of fit indices were below the ≥ .90 threshold indicating an acceptable model fit. The RMSEA value indicated a mediocre to poor fit, therefore an exploratory factor analysis was run to learn the structure of the measure.

Exploratory Factor Analysis

It was hypothesized the Five Dimensions of Teacher Autonomy Scale (FDTAS) would measure teacher autonomy as a perception with five distinct factors representing each of the five dimensions. An exploratory factor analysis (EFA) was conducted to determine the best model fit. After reviewing the scree plot and running a parallel analysis and reviewing the scree plot, it was determined a 3 factor solution best fit the data. The reliability of the entire scale as well as the three factors was acceptable and the three factors described 48% of the variance. The

correlations between each factor were moderate with *Professional Choice* and *Academic Choice* having the strongest relationship.

The three factors were named: *Instructional Choice, Professional Choice, and Academic Choice*. The word "choice" was selected as a part of each of the three factor titles as it is how teacher autonomy was defined for this study, as an essential characteristic of teacher autonomy. Furthermore, choice provides individuals with the freedom to make decisions which may lead to successful outcomes (Burchardt, Evans, & Holder, 2013).

The *Instructional Choice* factor had a total of 15 items with eight from the TAS (Pearson & Hall, 1993), four from the TWA (Friedman, 1999), and three from the FDTAS written for this specific study. As classified from the FDTAS, six items were to measure instructional autonomy, two curriculum autonomy, one principal/administrator relationship, three professionalism and empowerment, and three from policy. First, as stated earlier, the *Instructional Choice* factor contains six of the seven items from the instructional autonomy section of the FDTAS and all of these items were derived from the Teaching Autonomy Scale (TAS; Pearson & Hall, 1993). This is both in line and contradicts the findings from Pearson and Hall (1993). It is in line with Pearson and Hall (1993) because three of the items in the *Instructional Choice* factor from the FDTAS measure general teaching autonomy on the TAS or what is referred to as instructional autonomy in this study. It contradicts Pearson and Hall (1993) as two of the items from the *Instructional Choice* factor were classified as measuring curriculum autonomy on the TAS, but on the FDTAS these items measure instructional autonomy. Therefore, this adds to the ambiguity of how teacher autonomy is defined. To one researcher an item such as "What I teach in my class is determined, for the most part, by myself," measures instructional autonomy, but to another it measures curriculum autonomy. Perhaps a clearer definition that clarifies the distinction between

instructional autonomy and curriculum autonomy could help researchers create a stronger way to operationalize the construct of teacher autonomy.

The distinction between instructional autonomy and curriculum autonomy was not the only issue with the *Instructional Choice* factor. Other items that loaded on this factor came from professionalism and empowerment, principal/administrator relationship, and policy from the FDTAS. Since most of the items in the *Instructional Choice* factor derived from two previously established instruments, the TAS (Pearson & Hall, 1993) and the TWA (Friedman, 1999), it suggests their definitions of autonomy have some common characteristics. Nevertheless, the researcher posited these items should have loaded on different factors.

However, the second and third factors from the FDTAS, *Professional Choice* and *Academic Choice*, are markedly different from the first factor *Instructional Choice*. First, both of the factors consist of only new items from the FDTAS written by the researcher. The second factor *Professional Choice* contains six items. As classified from the FDTAS, three items were originally written to measure principal/administrator relationship, two professionalism and empowerment, and one policy. These items concern principals/administration including teacher in decisions affecting the school and empowering teachers to make changes in their classrooms, having input in the policies implemented at the school, and being treated as a professional by the principal.

The third factor, *Academic Choice*, had the fewest number of items with three. Again, all of these items were newly written items by the researcher. As classified from the FDTAS, two items were to measure curriculum autonomy, and one policy. These items refer to teachers who have issues with the standardized curriculum, policies that dictate what they teach, and having little say on when they teach certain subjects in the classroom. It is also important to note that all

items on this factor were negatively worded and therefore the factor could reflect method effects (Brown, 2015). More research should be conducted to determine if this is a true factor in operationalizing teacher autonomy as a perception. Additional items should be written for this factor and ensure there are an equal amount of positively and negatively worded items.

Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was conducted to confirm the three-factor structure from the EFA model. At first the three-factor solution was not an acceptable model fit. The correlations of the items were reviewed and two items were deleted due to low correlations with the factor. The model was retested and still did not produce a good fit to the data. Next, the error covariances were reviewed for high values. There were several error relationships that were covaried. This improved the model fit, but the TLI value was still below the acceptable threshold of ≥ .90. In order to further improve model fit, the standardized residual covariances were reviewed to determine items that needed to be deleted. There were a total of six items deleted, five from *Instructional Choice* and one from *Professional Choice*. This improved the model fit considerably. The chi-square goodness of fit test indicated to reject the null of an exact-fitting model. The Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI) were both above the threshold of ≥ .90, which indicates an acceptable model fit. The Root mean-square error of approximation (RMSEA) also suggested an adequate fit. The reliability of the entire scale as well as the three factors was acceptable. The final model contained eight items for the *Instructional Choice* factor, five items for *Professional Choice,* and three items for *Academic Choice*.

Multiple Regression

After the CFA, a linear multiple regression was conducted to determine if the three factor solution of teacher autonomy proposed in the final CFA model predicted teacher job satisfaction.

The F-test is significant, thus the assumption was made that the model explained a significant amount of variance in teacher job satisfaction. The *Instructional Choice* coefficient was significant which translates to for every 1-point decrease with the *Instructional Choice* factor, teacher job satisfaction decreased by .03 points. The beta weight was also reviewed (beta = -.072) which indicated a weak relationship between teacher job satisfaction and teacher autonomy and could be due to elevated power. However, this was a surprising result as one would assume teachers who were given the choice to teach what they want, when they want, and were allowed to be creative in their teaching approach would be more satisfied with their jobs. This may be the result of the differences found between elementary school teachers and secondary school teachers. Pearson and Moomaw (2005) found a statistically significant difference for general teacher autonomy between elementary and middle school teachers and elementary and high school teachers, but not between middle and high school teachers. This suggests there is a difference between levels of autonomy between elementary school and secondary school teachers. Rudolph (2006) states elementary education has a more tightly scripted curriculum and programming than secondary education. Further, "elementary school teachers have to follow more strict guidelines in curriculum and disciplinary actions as compared to their counterparts in middle or high school" (Moomaw, 2005, p.78). Elementary schools do not possess a wide variety of curricular options, therefore teachers must follow the scripted curriculum and instruction with very little flexibility (Strong, 2011). Additionally, secondary teachers "possess greater freedom than elementary teachers due to departments or teams that have the authority and responsibility to choose textbooks, pace and assessments in order to handle more complex secondary curriculum such as honors program, vocational training, and college entrance exam preparation" (Strong, 2011, p.35-36).

Another significant result was the *Professional Choice* coefficient; for every point increase with the *Professional Choice* factor, teacher job satisfaction increased by .24 points. The beta weight was also reviewed (beta = .650) which indicated a weak relationship between teacher job satisfaction and teacher autonomy. As stated previously, the *Professional Choice* factor concerns items describing principals/administrators who include teachers in the decisions regarding the school and its policies, principals who treat teachers as a professional and expert in the classroom, and empowering teachers' to make their own instructional decisions in the classroom. This result was not unexpected as Pearson and Moomaw (2005) reported teachers who experienced greater job satisfaction also had a high degree of professionalism and empowerment. Ma and MacMillan (1999) found similar results by teachers' who were treated as a professional by the principal/administration as they reported higher levels of job satisfaction. Furthermore, empowering and treating teachers as a professional enables them to make the curricular and instructional decisions needed to meet the diverse needs of the students in their classrooms (Wills & Sandholtz, 2009), and teachers who were empowered report higher levels of job satisfaction (Klecker & Loadman, 1996).

Theoretical Implications

I theorized there would be five distinct factors that would further operationalize teacher autonomy as a perception, however, five factors were not found. Instead, a three-factor solution best fit the data. This is similar to results found by (Moomaw, 2005; Rudolph, 2006; Strong & Yoshida, 2014) in that teacher autonomy is a complex and ambiguous construct.

Even though five factors were not found from the analyses, the results suggest all five dimensions still play a role in operationalizing teacher autonomy as a perception. The final CFA three-factor solution contains items from all five dimensions: instructional autonomy with three

items, curriculum autonomy two items, principal/administrator relationship four items, professionalism and empowerment three items, and policy with four items. This suggests principal/administrator relationship and policy are two of the more important dimensions since they both had the most items of the five dimensions. But, some aspects of instructional autonomy, curriculum autonomy, and professionalism and empowerment are embedded within the final three-factor structure as well. This further adds to the ambiguous nature of teacher autonomy. Pearson and Moomaw (2005) add to the complexity of operationalizing teacher autonomy as one teacher may view autonomy as a way to gain freedom from interference or supervision (principal/administrator relationship), but another may view it as the freedom to develop collegial relationships (professionalism) and the ability to accomplish tasks beyond the classroom (empowerment).

On the other hand, Strong and Yoshida (2014) state teacher autonomy is difficult to define and the more broad definition can include terms such as independence and control (Pearson & Moomaw, 2005), a decision-making ability (Friedman, 1999), and discretion (Rudolph, 2006). Further adding to its complexity, teacher autonomy may occur in the classroom or the entire school. Classroom autonomy includes teachers who are in charge of the day-to-day pedagogy (instructional and/or curriculum autonomy) which schoolwide autonomy is where teachers have input in discipline policy (policy), school budget, performance standards (instructional and/or curriculum autonomy), and content of professional development (professionalism and empowerment) (Sentovich, 2004).

As seen by the wide range of definitions surrounding teacher autonomy, each of the five dimensions are embedded within. Since there is no consensus on how to define or operationalize

teacher autonomy, more research needs to be conducted to further explore if the five dimensions play a key role its operationalization.

Practical Implications

Principals/administrators should already be aware of the challenges facing teachers today and they can help further a teacher's sense of autonomy by allowing teachers freedom in the classroom. Principals/administrators influence "interactions among the staff, teachers' feelings of being valued for their work, and the sense of substantive involvement in the operation of the school" (Ma & MacMillan, 1999, p.40). To increase autonomy in teachers, principals should encourage teachers to interact and help one another as well as give them praise for a job well done. Furthermore, principals should create a culture of collegiality and collaboration to increase teacher autonomy, which in turn leads to higher levels of job satisfaction (Ma & MacMillan, 1999).

Additionally, the teacher and principal/administrator relationship can aid or hinder a teacher's level of autonomy. A principal who listens and is open to teacher suggestions, gives praise genuinely and frequently and gives criticism when appropriate is influential in promoting teacher autonomy (Hoy, Tarter, & Witkoskie, 1992; Tarter, Sabo, & Hoy, 1995). One way to squash autonomy is principals/administrators questioning a teachers' professional knowledge and not allowing them the ability to teach based on the concepts they learned in college. Principals who question a teacher's professionalism and require them to use a "one-size fits all" curriculum are less supportive than those who allow for freedom of instruction (Morton-Rose, 2013). Even if the curriculum is scripted, allowing teachers to teach it in their own creative approach gives teachers confidence and the perception they have autonomy.

Finally, supportive principals/administrators respect teachers as professionals and demonstrate a personal and professional interest in the well-being of their teachers (Hoy, Tarter, & Witkoskie, 1992). It is important for principals to create a climate of trust, respect, and open communication with their teachers (Fitzgerald & Theilheimer, 2013). This climate of trust depends upon principals/administrators who are willing to take on challenges and innovate which in turn allows for teacher autonomy to flourish (Fitzgerald & Theilheimer, 2013).

Job Implications

Frequent news reports indicate teachers are leaving the classroom at an alarming rate (Zamarro, Camp, Fuchsman, & McGee, 2021). In fact, when asked at the beginning of 2021, nearly one-quarter of teachers indicated a desire to leave the profession at the end of the school year. This was higher than the national average of 16% before the pandemic (Zamarro, Camp, Fuchsman, & McGee, 2021). Furthermore, teachers stated they had to switch instructional models (their method of teaching) at least once during the 2020-2021 school year (Zamarro, Camp, Fuchsman, & McGee, 2021). This suggests the amount of autonomy teachers might have possessed before the pandemic may have changed once the pandemic began. It also suggests the relationship between autonomy and the three factors and teacher jobs satisfaction may be more related than previously thought. A more structured look at these relationships would enable decision makers to consider overall work environments and choice as a teacher retention measure.

Instrumentation Limitations

There are several limitations related to this research study. First, is the number of items on the FDTAS. The scale consisted of 26 items with each of the five dimensions containing 4 to 7 items each, instructional autonomy (7 items), curriculum autonomy (5 items), principal

administrator relationship (4 items), professionalism and empowerment (5 items), and policy (5 items). If the FDTAS had more items for each of the five dimensions it would further explore the definition of teacher autonomy as a perception and could lead to additional factors being discovered. In future studies, approximately 25-50 items should be written for each of the five dimensions.

Another limitation concerns the third factor *Academic Choice*. This factors contains a total of three items and all of the items are negatively worded. This could be due to method effects or correlated residuals that are associated with negatively worded items (Brown, 2015). In the future, more research should be conducted to determine if *Academic Choice* is a true factor in operationalizing teacher autonomy as a perception. One way to determine if *Academic Choice* is a true factor is to write more items for this factor and ensure there are an equal amount of positively and negatively worded items.

Sampling Limitations

While convenience sampling is appropriate into exploration of this topic, two foundational concerns suggest further research should strive to have more diversity with respect to race, gender, and geographical locations. In addition, homogeneity and/or the disaggregation of specific groups would be also be desired. For example, separating classroom teachers who teach at the elementary level versus those who teach at the secondary level, because their instructional approach and reliance on state and national standards is likely differential. Additionally, individuals who are not full-time instructional staff, i.e., substitute teachers, speech language pathologist and other specialized personnel, should not be included.

Historical Limitations

Moreover, the global pandemic due to the COVID-19 virus may have skewed the results. For some teachers, the Fall 2021 semester may have been the first semester the students have been back in the classroom after being out for an extended period of time. A lot of teachers may have lost autonomy due to COVID and had to switch up their teaching methodology. Teachers may have had instructional practices that were changed due to COVID and may still be in recovery mode from being out of the classroom or in the classroom a limited amount for over a year. Some teachers might have little choice in how and what they teach in the current educational climate versus how teaching was before the global pandemic. Also, some teachers may have experienced additional mandates or lack of choice in the classroom with the COVID protocols in place.

Future Directions

There are several areas for future research. First, in investigating teacher autonomy as a perception, some researchers define it as a decision-making ability. In order to further understand the teacher autonomy construct as a whole, further research should be conducted on both teacher autonomy as a decision-making ability and as a perception. It could be that teacher autonomy is either a decision-making ability or perception or a combination of both.

In order to further investigate the possible differences in teacher autonomy, the sample should be separated by elementary school teachers and secondary school teachers. Separating teachers could show researchers since elementary school teachers and secondary teachers have a different approach to teaching, their need or level of autonomy may be different. This could lead to markedly different results in the factor structure and which items are retained.

Creating a more robust measure of teacher autonomy as a perception is another area for future research. To further explore the five dimensions and what role they play in teacher autonomy, more items should be written for each dimension. A total of 25-50 items per dimension should be written to ensure adequate coverage of each concept of the five dimensions. By creating more items, with an equal number of positively and negatively worded items for each dimension should lead researchers to further operationalize teacher autonomy.

Finally, with a more robust number of items, this study should be replicated with a more diverse sample. The majority of the teachers in the sample were from Oklahoma and Nebraska (99.1%), therefore teachers from other areas of the country should be included. Also, most of the teachers were White/Caucasian (85.3%) and female (79.3%). Having a more diverse sample with different races/ethnicities and a more even number of males and females could change the results altogether. Further research needs to be conducted to determine if there are any changes between the current sample in this study and a more diverse sample.

Conclusion

Teacher autonomy is still a complex and ambiguous construct. The addition of the five dimensions from the Five Dimensions of Teacher Autonomy Scale (FDTAS) further add to the complexity, but also inform researchers the five dimensions could further aid in the operationalization of teacher autonomy. Another important finding with teacher autonomy was that it was a significant predictor of job satisfaction. However, due to the significant negative result with the *Instructional Choice* factor and teacher job satisfaction, future samples should be separated by elementary school teachers and secondary teachers to determine if it is the reason for the negative result. More research should be conducted in order to expand the operationalization of teacher autonomy as a perception as it is still uncertain.

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Appendix A. Email to Teachers

Dear Teachers,

Hello! My name is Christi Dawson, and I am a doctoral candidate at The University of Oklahoma in the Educational Psychology program. During the Fall semester of 2021, I will begin research for my doctoral dissertation. I am studying Teacher Autonomy and its effects on Teacher Job Satisfaction. I am contacting you as my dissertation will require participation from teachers. My target dates for conducting the research are the beginning of October through the beginning of November. The research will be conducted using an online survey platform. The survey should take no longer than 20-30 minutes to complete.

If you are willing to participate in this study, please use the link below.

Please let me know if you have any questions.

Thank you so much for your time.

Christi Dawson
512-293-7614

Appendix B. Facebook Post

EVERYONE: Please consider taking the survey below and/or sharing the link through a direct message or sharing of this page. See below:

My name is Christi Dawson and I am doctoral candidate in the Educational Psychology Department at the University of Oklahoma. I am searching for volunteers who would be willing to participate in a research study targeting teachers from Pre-K to 12th grade. The study is titled "Creating a New Teacher Autonomy Measure and its Effects on Teacher Job Satisfaction." The purpose of this study is to determine if the instrument accurately measures teacher autonomy and how this new instrument may affect teacher job satisfaction. If you agree to be in this study, you will be asked to answer simple questions concerning your perceived level of autonomy as a teacher.

Participants who complete the survey will be offered the opportunity to enter a drawing for one of 10 Amazon.com gift certificates. You must be a teacher who currently teaches Pre-K through 12th grade to complete the survey.

Participating is entirely voluntary and anonymous. The survey will take approximately 10-15 minutes of your time. If you are willing to help me with this research, please follow the link below to answer the questions through Qualtrics (a secure server).

In an effort to collect responses from other teachers in real life settings, I am asking you to share this post or forward this survey link to other Pre-K through 12th grade teachers. Thank you for your time and consideration; your help in the completion of the survey and the recruitment process is greatly appreciated.

If you have any questions or concerns about the research, you may contact me at **christilea@ou.edu**.

Again, thanks so much!

The survey can be found here:

The OU IRB has approved the content of this advertisement but the investigator is responsible for securing authorization to distribute this message by social media. The University of Oklahoma is an Equal Opportunity Institution.

Appendix C. Demographics

1. Please enter your age (years): _____
2. Gender:
    a. Male
    b. Female
3. What is your annual income?
    a. Less than $20,000
    b. $20,000-$25,000
    c. $26,000-$30,000
    d. $31,000-$35,000
    e. $36,000-$40,000
    f. Over $40,000
4. Education Level (choose one, highest level attained)
    a. Associates Degree
    b. Bachelor's Degree
    c. Some Master's courses
    d. Master's Degree
    e. Some Ph. D or Ed. D courses
    f. Ph. D or Ed. D Degree
    g. Other _____
5. Race/Ethnicity: (select all that apply)
    a. White/Caucasian
    b. African American
    c. Hispanic
    d. Asian/East Asian/Asian Indian
    e. Native American/Alaskan Native
    f. Hawaiian Native/Pacific Islander
    g. Middle Eastern
    h. Other (please specify) _____
6. Teacher Type:
    a. Full-time
    b. Substitute
    c. Other _____
7. Check all your certification areas; Indicate if alternatively certified.
    a. Business
    b. Career Education
    c. Career & Tech
    d. Computer Science
    e. Early Childhood
    f. Elementary Education
    g. English
    h. English as a Second Language
    i. Fine Arts
    j. Foreign Language
    k. Journalism

l. Mathematics
m. PE/Athletics/Health
n. Reading
o. Science
p. Social Studies/Government
q. Special Education
r. Speech-Language Pathology
s. Other; Specify:_____

8. Please select all areas (in which you are certified) that you currently teach.
    a. Business
    b. Career Education
    c. Career & Tech
    d. Computer Science
    e. Early Childhood
    f. Elementary Education
    g. English
    h. English as a Second Language
    i. Fine Arts
    j. Foreign Language
    k. Journalism
    l. Mathematics
    m. PE/Athletics/Health
    n. Reading
    o. Science
    p. Social Studies/Government
    q. Special Education
    r. Speech-Language Pathology
    s. Other; Specify:_____
9. What grade(s) do you currently teach? (Please select all that apply)
    a. Pre-Kindergarten
    b. Kindergarten
    c. 1st
    d. 2nd
    e. 3rd
    f. 4th
    g. 5th
    h. 6th
    i. 7th
    j. 8th
    k. 9th
    l. 10th
    m. 11th
    n. 12th
10. What subject(s) do you teach? (Please select all that apply)
    a. Business
    b. Career Education

c. Career & Technology
d. Computer Science
e. English
f. English as a Second Language
g. Fine Arts
h. Foreign Language
i. Journalism
j. Math
k. PE/Athletics/Health
l. Science
m. Social Studies/Government
n. Special Education
o. Speech-Language Pathology
p. Other _____

11. Is your school considered a Title I school?
    a. Yes
    b. No
12. Are more than 50% of your students on free/reduced lunch?
    a. Yes
    b. No
    c. Do not know
13. How many years total have you been teaching?
    a. 1 year or less
    b. 2-4 years
    c. 5-7 years
    d. 8-10 years
    e. 11 or more years
14. How many years have you been teaching at your current school?
    a. 1 year or less
    b. 2-4 years
    c. 5-7 years
    d. 8-10 years
    e. 11 or more years
15. What grade levels are included in your school? (Select all that apply)
    a. Pre-Kindergarten
    b. Kindergarten
    c. 1st
    d. 2nd
    e. 3rd
    f. 4th
    g. 5th
    h. 6th
    i. 7th
    j. 8th
    k. 9th
    l. 10th

m. 11th
n. 12th

16. How many students are currently enrolled in the school where you are teaching?
    a. Less than 100
    b. 100-400
    c. 401-600
    d. 601-800
    e. 801-1000
    f. Over 1000
17. Please enter the city where your school is located. _____
18. Please select the state where your school is located.
    a. Alabama
    b. Alaska
    c. Arizona
    d. Arkansas
    e. California
    f. Colorado
    g. Connecticut
    h. Delaware
    i. Florida
    j. Georgia
    k. Hawaii
    l. Idaho
    m. Illinois
    n. Indiana
    o. Iowa
    p. Kansas
    q. Kentucky
    r. Louisiana
    s. Maine
    t. Maryland
    u. Massachusetts
    v. Michigan
    w. Minnesota
    x. Mississippi
    y. Missouri
    z. Montana
    aa. Nebraska
    bb. Nevada
    cc. New Hampshire
    dd. New Jersey
    ee. New Mexico
    ff. New York
    gg. North Carolina
    hh. North Dakota
    ii. Ohio

jj. Oklahoma
kk. Oregon
ll. Pennsylvania
mm. Rhode Island
nn. South Carolina
oo. South Dakota
pp. Tennessee
qq. Texas
rr. Utah
ss. Vermont
tt. Virginia
uu. Washington
vv. West Virginia
ww. Wisconsin
xx. Wyoming

Appendix D. Appropriate Teacher-Work Autonomy (ATA) Scale

Select the answer to the statement that best describes your experience as a teacher.

	No Autonomy	Scant Autonomy	Moderate Autonomy	High Autonomy	Complete Autonomy
1. Teachers decide on the school's pedagogical and social idiosyncrasy.					
2. Teachers decide on student classroom composition (heterogeneous or homogeneous classes) policy.					
3. Teachers decide on the class schedule policy.					
4. Teachers formulate criteria for student admission.					
5. Teachers formulate the school norms, code, and regulations.					
6. Teachers define the school's curricular goals and determine their order of preference.					
7. Teachers initiate interactions with external policy-making agencies (Board of Education, Municipalities, etc.).					
8. Teachers decide on classroom work procedures.					
9. Teachers determine norms and rules for student behavior.					
10. Teachers decide on means and procedures of evaluation student achievement.					
11. Teachers determine student achievement assessment criteria.					
12. Teachers decide on the physical classroom environment.					
13. Teachers establish modes of achievement monitoring (grades, verbal assessments, etc.).					
14. Teachers demarcate student behavior patterns and establish a punishment code.					
15. Teachers decide on parental collaboration modes.					
16. Teachers initiate meetings with parents to discuss instruction issues, reporting on achievements and so forth.					
17. Teachers initiate cultural activities with parents.					
18. Teachers decide on the subjects for their in-service training in general, broad fields of interest.					
19. Teachers decide on specific social and cultural topics for their in-service training.					

20. Teachers select topics for their in-service training programs based on predetermined school requirements.

21. Teachers select topics for their in-service training from existing, known programs.

22. Teachers choose the site and time for their in-service training.

23. Teachers select specific topics of enrichment activities for their students from existing programs.

24. Teachers select areas of general cultural activities from a program offered by the principal.

25. Teachers select the topics for the school's extracurricular activities.

26. Teachers select specific social-cultural activities for their students from existing, known programs.

27. Teachers add or delete topics for classroom instruction out of an authorized curriculum.

28. Teachers select teaching methods based on the needs of their students.

29. Teachers compose a curriculum based on their students' needs.

30. Teachers develop unique teaching methods based on student needs.

31. Teachers experiment with new instruction methods and aids.

32. Teachers experiment with new curriculum.

Appendix E. Teacher Work-Autonomy Scale (TWA)

Select the answer to the statement that best describes your experience as a teacher.

	Not at All	Seldom	Sometimes	Often	Always
1. I establish student achievement evaluation criteria.					
2. I determine practical techniques for student progress assessment.					
3. I decide on testing and scoring criteria for student achievement and assessment procedures.					
4. I determine the classroom physical environment.					
5. I select teaching materials from a known inventory.					
6. I decide on classroom work procedures.					
7. I determine norms and rules for student classroom behavior.					
8. I pick and use specific instruction subjects out of the mandatory curriculum.					
9. I reward deserving students without the need to get the principal's consent.					
10. I add or delete teaching subjects from the official curriculum.					
11. I make decisions on school expenditures.					
12. I make decisions on budget planning.					
13. I share responsibility for school finances.					
14. I am authorized to spend money on activities such as recreation and leisure.					
15. I decide on class timetable policy.					
16. I participate in focus groups to decide on curriculum matters for the whole school.					
17. I decide on student demographic class-composition policy.					
18. I decide on the location and timetable for their in-service training courses.					
19. I initiate topics for my professional development and in-service training.					
20. I decide on general criteria for my professional development.					

21. I select subjects for my in-service training sessions based on agreed upon criteria.

22. I determine my own enrichment general education programs.

23. I appoint the instructors for their in-service training and professional development programs.

24. I initiate and develop completely new curricula.

25. I initiate and administer new enrichment and cultural activities.

26. I contrive unique topics for the social cultural and general enrichment activities of students.

27. I devise new curricula, using new and old elements.

28. I formulate and try out innovative curricula.

29. I introduce new extracurricular items into the school.

30. I introduce changes and modifications into the formal curriculum.

31. I compose new learning materials for my students.

Appendix F. Teaching Autonomy Scale (TAS)

Select the answer to the statement that best describes your experience as a teacher.

	Definitely False	Mostly False	Mostly True	Definitely True
1. I select the teaching methods and strategies that I use with my students.				
2. I am free to be creative in my teaching approach.				
3. My job does not allow for much discretion on my part.				
4. In my class I have little control over how classroom space is used.				
5. The evaluation and assessment activities used in my class are selected by people other myself.				
6. I have little say over the scheduling of use of time in my classroom.				
7. The selection of student learning activities in my class is under my control.				
8. I seldom use alternative procedures in my teaching.				
9. The scheduling of use of time in my classroom is under my control.				
10. In my situation, I have only limited latitude in how major problems are resolved.				
11. Standards of behavior in my classroom are set primarily by me.				
12. I follow my own guidelines on instruction.				
13. What I teach in my class is determined, for the most part, by myself.				
14. The content and skills taught in my class are those that I select.				
15. My teaching focuses on those goals and objectives that I select myself.				
16. The materials that I use in my class are chosen, for the most part, by myself.				
17. In my teaching, I use my own guidelines and procedures.				
18. In my situation, I have little say over the content and skills that are selected for teaching.				

Appendix G. Combined TWA and TAS

Coefficients for the Exploratory Factor Analysis using Promax Rotation

Item	F1	F2	F3	F4	F5	Scale
The content and skills taught in my class are those that I select.	**.77**	.03	.16	-.12	-.18	TAS
What I teach in my class is determined, for the most part, by myself.	**.77**	.18	-.01	-.28	-.12	TAS
I follow my own guidelines on instruction.	**.72**	-.12	.13	.18	-.07	TAS
I decide on testing and scoring criteria for student achievement and assessment procedures.	**.70**	-.06	.12	-.22	-.06	TWA
My job does not allow for much discretion on my part.	**.67**	-.06	-.01	.02	.06	TAS
I am free to be creative in my teaching approach.	**.67**	.01	-.05	.20	.16	TAS
I select the teaching methods and strategies that I use with my students.	**.65**	.02	-.24	.11	.14	TAS
In my situation, I have little say over the content and skills that are selected for teaching.	**.64**	.10	.17	-.16	-.12	TAS
The materials that I use in my class are chosen, for the most part, by myself.	**.64**	.08	-.12	-.13	.09	TAS
In my teaching, I use my own guidelines and procedures.	**.62**	-.03	.03	.24	-.00	TAS
My teaching focuses on those goals and objectives that I select myself.	**.61**	-.04	.11	-.12	.03	TAS
The evaluation and assessment activities used in my class are selected by people other than myself.	**.59**	.04	-.08	-.01	-.10	TAS
I determine practical techniques for student progress assessment.	**.59**	-.02	-.03	.09	.16	TWA
I establish student achievement evaluation criteria.	**.58**	-.80	.07	-.09	.09	TWA
The selection of student learning activities in my class is under my control.	**.56**	.10	-.05	.19	.12	TAS
I decide on classroom work procedures.	**.52**	-.14	-.17	.04	.08	TWA
The scheduling of use of time in my classroom is under control.	**.50**	-.05	.23	.30	-.24	TAS
I have little say over the scheduling of use of time in my classroom.	**.38**	-.11	.06	.18	-.02	TAS
I decide on class timetable policy.	**.38**	.09	.23	.19	-.20	TWA
I determine my own enrichment general education programs.	**.31**	.15	-.01	.19	.13	TWA
I initiate and administer new enrichment and cultural activities.	-.19	**.83**	.06	.16	.00	TWA
I formulate and try out innovative curricula.	.17	**.67**	-.11	-.07	-.01	TWA
I initiate and develop completely new curricula.	.21	**.59**	.01	-.20	.11	TWA
I introduce new extracurricular items into the school.	-.09	**.54**	.07	-.01	.15	TWA
I introduce changes and modifications into the formal curriculum.	-.09	**.53**	.16	.20	-.00	TWA
I contrive unique topics for the social cultural and general enrichment activities of students.	-.04	**.47**	.06	.10	.10	TWA
I seldom use alternative procedures in my teaching.	.06	**.35**	-.04	.11	.01	TAS
I share responsibility for school finances.	.11	-.02	**.69**	-.16	.20	TWA
I make decisions on budget planning.	-.02	.01	**.63**	.03	.26	TWA
I appoint the instructors for their in-service training and professional development programs.	-.03	-.02	**.58**	-.02	.30	TWA
I am authorized to spend money on activities such as recreation and leisure.	-.03	.07	**.55**	.08	.04	TWA
I make decisions on school expenditures.	.12	.04	**.49**	-.03	.24	TWA
I decide on student demographic class-composition policy.	.04	-.08	**.43**	.20	.03	TWA
I determine the classroom physical environment.	-.15	.09	.12	**.84**	-.01	TWA

Item	F1	F2	F3	F4	F5	Scale
In my class, I have little control over how classroom space is used.	.08	-.03	.03	**.63**	-.08	TAS
I reward deserving students without the need to get the principal's consent.	-.13	.17	-.04	**.57**	-.04	TWA
Standards of behavior in my classroom are set primarily by me.	.24	.03	-.16	**.31**	.14	TAS
I select subjects for my in-service training sessions based on agreed upon criteria.	-.02	-.05	.14	.05	**.69**	TWA
I initiate topics for my professional development and in-service training.	.00	.20	.09	-.07	**.63**	TWA
I decide on the location and timetable for my in-service training courses.	-.05	-.02	.29	.02	**.56**	TWA
I decide on general criteria for my professional development.	.02	.10	.21	.03	**.49**	TWA
I participate in focus groups to decide on curriculum matters for the whole school.	-.06	.05	.12	-.04	**.43**	TWA

Note: Bold loadings indicate the item loads onto that factor. F1 = Leader of Own Classroom. F2 = Innovator of Own Classroom. F3 = Investor of School's Growth and Development. F4 = Authoritarian of the Classroom. F5 = Personal Growth and Development. TWA = Teacher-Work Autonomy Scale. TAS = Teacher Autonomy Scale.

Appendix H. Five Dimension of Teacher Autonomy Scale Items

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
Instructional Autonomy					
1. What I teach in my class is determined, for the most part, by myself.					
2. I follow my own guidelines on instruction.					
3. I am free to be creative in my teaching approach.					
4. The evaluation and assessment activities used in my class are selected by people other than myself.					
5. My teaching focuses on goals and objectives that I select myself.					
6. I seldom use alternative procedures in my teaching.					
7. I have little say over the scheduling of use of time in my classroom.					
Curriculum Autonomy					
8. I introduce changes and modifications into the formal curriculum.					
9. I focus on the curriculum and standardized testing, with little time to meet my student's needs.					
10. With scripted curriculum, it is difficult to utilize the teaching techniques I learned in college.					
11. I believe the standardized curriculum does not meet the needs of the students.					
12. I possess knowledge of curricula and student learning; therefore I should make curriculum decisions.					
Principal/Administrator Support					
13. The principal allows me to make my own decisions in my classroom.					
14. My principal supports the instructional decisions I make in the classroom.					
15. The principal/administration includes me in decisions regarding the school.					
16. The principal empowers me to make my own changes in the classroom.					
Professionalism and Empowerment					
17. I introduce new extracurricular items into the school.					
18. I contrive unique topics for the social cultural and general enrichment activities of students.					

19. I make decisions regarding how to teach based on my knowledge.

20. I am treated as a professional by the principal.

21. My skills as a teacher are not valued.

Policy

22. My job does not allow for much discretion on my part.

23. I establish student achievement evaluation criteria.

24. The scheduling of use of time in my classroom is under my control.

25. Policies impede upon my ability to teach what I want.

26. I have input regarding the policies implemented at my school.

Appendix I. Teacher Job Satisfaction Questionnaire

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. My immediate supervisor gives me assistance when I need help.					
2. My immediate supervisor praises good teaching.					
3. My immediate supervisor provides assistance for improving instruction.					
4. I receive recognition from my immediate supervisor.					
5. My immediate supervisor does not back me up.					
6. My immediate supervisor explains what is expected of me.					
7. My immediate supervisor is not willing to listen to suggestions.					
8. My immediate supervisor treats everyone equitably.					
9. My immediate supervisor makes me feel uncomfortable.					
10. When I teach a good lesson, my immediate supervisor notices.					
11. My immediate supervisor offers suggestions to improve my teaching.					
12. My immediate supervisor makes available the material I need to do my best.					
13. My immediate supervisor turns one teacher against another.					
14. I receive too many meaningless instructions from my immediate supervisor.					
15. I like the people with whom I work.					
16. I dislike the people with whom I work.					
17. My colleagues seem unreasonable to me.					
18. I get along well with my colleagues.					
19. I do not get cooperation from the people I work with.					
20. My colleagues stimulate me to do better work.					
21. My colleagues are highly critical of one another.					
22. I have made lasting friendships among my colleagues.					

23. My interests are similar to those of my colleagues.
24. My colleagues provide me with suggestions or feedback about my teaching.
25. Working conditions in my school are good.
26. Working conditions in my school are comfortable.
27. Physical surroundings in my school are unpleasant.
28. The administration in my school does not clearly define its policies.
29. The administration in my school communicates its policies well.
30. Working conditions in my school could be worse.
31. Working conditions in my school could be improved.
32. Teacher income is barely enough to live on.
33. Teacher income is inadequate for normal expenses.
34. Teaching provides me with financial security.
35. I am well paid in proportion to my ability.
36. Teacher income is less than I deserve.
37. Insufficient income keeps me from living the way I want to live.
38. Pay compares with similar jobs in other school districts.
39. I get along well with my students.
40. I try to be aware of the policies of my school.
41. I am not interested in the policies of my school.
42. I do have responsibility for my teaching.
43. My students respect me as a teacher.
44. I am responsible for planning my daily lessons.
45. Teaching provides me the opportunity to help my students learn.
46. I am not responsible for my actions.
47. Teaching discourages originality.

48. Teaching is very interesting work.
49. Teaching encourages me to be creative.
50. Teaching does not provide me the chance to develop new methods.
51. The work of a teacher consists of routine activities.
52. Teaching provides me the opportunity to use a variety of skills.
53. I am indifferent toward teaching.
54. I do not have the freedom to make my own decisions.
55. The work of a teacher is very pleasant.
56. Teaching provides a good opportunity for advancement.
57. Teaching provides an opportunity for promotion.
58. Teaching provides me with an opportunity to advance professionally.
59. Teaching provides limited opportunities for advancement.
60. I am not getting ahead in my present teaching position.
61. I am afraid of losing my teaching job.
62. Teaching provides for a secure future.
63. I never feel secure in my teaching job.
64. I receive full recognition for my successful teaching.
65. No one tells me that I am a good teacher.
66. I receive too little recognition.