Teachers’ Autonomy in Today’s Educational Climate: Current Perceptions From an Acceptable Instrument

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This research evaluated the psychometric properties of Friedman’s (1999) Teacher Work-Autonomy Scale (TWA) to determine whether it was an acceptable instrument to measure U.S. teacher autonomy in the present educational context. A second purpose was to ascertain the current status of teachers’ perceptions of their autonomy from a sample of U.S. teachers. Four hundred seventy-seven teachers from three public schools in Michigan participated in this study for a response rate of 30%. Factor analysis confirmed the multifaceted nature of teacher autonomy; however, somewhat different factor structures were found for the elementary and secondary teachers in this study, in comparison to that of Friedman. The TWA, without major modifications, appeared to be a valid and reliable instrument for use with a U.S. secondary sample but with limitation with an elementary sample. Elementary and secondary teachers perceived autonomy in the different factors in identical order, but with significant differences between their scores. Differences in school structure and conceptions of autonomy may have contributed to grade-level discrepancies. The findings suggest that administrators may be able to enhance teacher autonomy by releasing some of their power to include teachers in school leadership, specifically in the two areas teachers perceived with lowest autonomy: school finances and professional development.

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CONCEPTIONS OF TEACHER AUTONOMY

Despite the difficulties in reaching consensus on a definition (Moomaw 2005; Rudolph 2006), research of teacher autonomy has identified several elements of the construct. The first is teacher autonomy’s areas of operation. LaCoe (2006), O’Hara (2006), and Rudolph (2006) categorized the areas in which teachers may exercise autonomy into six distinct aspects of curriculum, pedagogy, assessment, student behavior, classroom environment, and professional development. They appear to function in two ways: teaching pedagogy, or individual classroom operations (Blase and Kirby 2009; LaCoe 2006), and schoolwide autonomy, or management and planning for the overall school (Ingersoll 1994). Second, autonomy in decision-making allows teachers choice and determination in the critical issues surrounding their duties (Pearson 1995; Sentovich 2004). Teachers believe that they are the best qualified about classroom procedures, and thus should have considerable decision-making ability (Elmore 1987). Third, Brunetti (2001) claimed that autonomy is freedom from demands or pressure from other teachers or administrators. Such freedoms involve freedom to determine one’s work processes (Blasé and Kirby 2009), such as liberty in delivery of curriculum (Curren 2007). Fourth, autonomy is associated with control in the sense of latitude to do work (Ingersoll 1994, 1996; LaCoe 2006; Rudolph 2006). Sentovich (2004) viewed autonomous control as the teacher being “in charge” of classroom responsibilities. However, the substantial changes in education have probably reduced the extent of these forms of freedom. Teachers must now adhere to federal, state, and district procedures and accountability measures that did not exist to this obtrusive level earlier. As Deci and Ryan (2002) claimed, “freedom” now must occur within the borders of necessary constraints.

AUTONOMY AS A VALUABLE ELEMENT IN TEACHERS’ DAILY LIVES

Teachers appear to desire several workplace conditions, such as higher salaries (Horng 2009; Ingersoll 2001), greater resources for students (Stockard and Lehman 2004), high-quality school facilities (Horng 2009), class size (Guarino, Santibanez, and Daly 2006; Ingersoll 2001), a safe environment (Ingersoll 2001; Stockard and Lehman 2004), parent involvement (Johnson and Birkeland 2001), and community support (Ingersoll 2001). However, autonomy may be the most recurring element of all the desired workplace conditions. For example, teacher autonomy is perceived to affect teachers’ perception of their professional status and job satisfaction (Bogler 2001). Stockard and Lehman (2004) found that first-year teachers reported a sense of control and influence over their work environment was an important factor in their satisfaction on the job. Ma and MacMillan (1999)
found school leaders who provided freedom to teachers who can make critical decisions about the whole school were associated with satisfied teachers. Teacher autonomy is also a prominent workplace condition associated with teaching self-efficacy (Hodge 2002) and positive teacher attitudes and performance (Blase and Kirby 2009).

Furthermore, autonomy appears related to teacher retention (Guarino et al. 2006; Horng 2009; Ingersoll 2001; Johnson and Birkeland 2001). One of the most frequent themes from teachers who chose to stay in their schools was working with an administrator who provided teachers with control and support (Ingersoll 2001; Stockard and Lehman 2004). Greater autonomy granted to teachers, along with administrative support, was found to directly correlate to lower levels of teacher migration (Guarino et al. 2006).

A PARADOX AND POSSIBLE REASONS IN THE FINDINGS

Teachers have reported a perception of possessing high levels of autonomy (Einolf 2002; Garvin 2007; Rudolph 2006), even when they may feel restrictions from external sources (Archbald and Porter 1994; Herman and Golan 1991; Koretz, Barron, Mitchell, and Keith 1996). Control over the classroom, specifically in the area of instructional methods, is the area teachers reported as their highest level of autonomy (LaCoe 2006). Archbald and Porter (1994) found that teachers perceive an almost complete control over their classroom pedagogy.

Yet, a paradox has emerged from the research. Teachers who report little job autonomy desire greater levels, as do teachers who report near complete control of their classroom, desire even greater autonomy. LaCoe (2006) found that teachers reported the greatest degree of autonomy in their pedagogy but reported a desire for greater autonomy in curriculum selection (Blase and Kirby 2009; LaCoe 2006; Rudolph 2006), assessment (LaCoe 2006), and the pace or schedule of curricular content (Rudolph 2006). Such results generate the question: What are possible reasons for the need for more autonomy when teachers already appear to have a high level of it?

Changes to the Construct

The first possible reason may be the inconsistent conceptualizations and changes to the autonomy construct. Seminal research centered upon freedom as the conceptualization for teacher autonomy. Charters (1976), basing his work on Blauener’s (1964) analysis of freedoms on the job and Lortie’s (1969, 1973) analysis of teachers’ work components, claimed that teacher autonomy is freedom from any external interference, pressure, or control. However, two sources appeared to have
altered this initial definition. First, American education has faced tremendous change during the past several decades that, most likely, has significantly affected teacher autonomy (Hargreaves and Goodson 2006; Murphy and Seashore 1999; Selwyn 2007). Crawford (2001) and Bogler (2001) proposed that standardized testing and the accountability surrounding results have made teacher autonomy nearly irrelevant in today’s educational climate. Second, the increase in teacher autonomy research has produced such a broad understanding of the construct as to render it difficult to define, and practically ambiguous (Moomaw 2005; Pearson and Moomaw 2005; Rudolph 2006). Definitions of teacher autonomy now include, among many others, independence and control (Moomaw 2005), decision-making ability (Gawlik 2005; Lepine 2007), and discretion (Rudolph 2006). In addition, teacher autonomy may occur in either the classroom or whole school. Sentovich (2004) stated that classroom autonomy means teachers in charge of the day-to-day pedagogy and schoolwide autonomy means teachers exercising influence in such areas as discipline policy, school budget, performance standards, and content of professional development. Ingersoll (1994) claimed that teacher autonomy depends and may vary based simply on the activity in question. Such differences in definitions may lead to differences in how behaviors are interpreted thus leading to different results. For example, Lepine (2007) found that teachers who scored as perceiving high levels of autonomy described the same actions as teachers who perceived low levels of autonomy.

Rise in Accountability

The escalation of school accountability and the resultant pressure upon teacher autonomy may be a second reason for inconsistent findings. Public education in America has undergone dramatic changes during the last two decades. One of the most significant agents of change was the No Child Left Behind Act (NCLB) of 2001 that required states to develop a set of assessments by which to measure student progress. The stakes are high for this accountability: both federal funding and control are connected to a school’s and district’s annual yearly progress (AYP). States now require public schools to administer standardized tests such as Michigan’s Educational Assessment Program. These federal and state demands seem to have created a trickle-down effect upon local district policies and procedures. In an effort to meet accountability stipulations, many districts dictate precise state-standard-related curriculum to teachers. Furthermore, AYP grades and state testing scores are routinely published in newspapers. Communities are able to compare overall scores and averages of individual schools against other schools. Parents are also able to view their children’s grades and absences in real because of advances in technology.
These recent changes to education appear to have exerted significant pressure that appears to be transforming the construct of teacher autonomy. Teachers in public schools have always faced dilemmas in various aspects of their job—occupational conflict is not novel. However, increased accountability has introduced greater forces to the organizational need side of the equation. Wills and Sandholtz (2009) found that a school’s need to improve student scores on state tests led to increased instructional time in tested areas but decreased class time in all other areas. Administrators generally designate the content areas that are tested as nonnegotiable subjects to be covered during the day (Wills and Sandholtz 2009). A survey of teacher in states with high-stakes testing found that 41% of teachers felt significant enough pressure to raise test scores that they focused the majority of their time upon teaching toward the test (Abrams, Pedulla, and Madaus 2003). The pressure and stress surrounding these tests were viewed as constant (Barksdale-Ladd and Thomas 2000) and strong enough to change pedagogy (Abrams et al., 2003; Koretz et al. 1996).

Measurement of the Construct

The third possible reason for a paradox in the findings of teacher autonomy research may be the diversity in approach to measuring the construct. Four frequently used instruments have been developed to measure teacher autonomy that vary in their levels of including certain elements of teacher autonomy. The Sense of Teacher Work Autonomy (SAS; Charters 1976) focuses on the teacher’s belief about freedom from external interference, pressure, or control. The SAS defines all external constraint as anything originating from outside the classroom. The Teaching Autonomy Scale (TAS; Pearson and Hall 1993) asks teachers about their perceptions about whether they can control their work environment. The Self-Empowerment Index (SEI; Wilson 1993) measures the individual’s perceived personal, internal power. The SEI equates teacher autonomy with self-empowerment. Though the two constructs possess many commonalities, research generally considers them as two distinct constructs and thus the SEI’s validity as a test of autonomy is questionable. Finally, the Teacher Work-Autonomy Scale (TWA; Friedman 1999) measures when a teacher “works independently, initiates new activities, and is free to change existing work procedures in an effort to adapt them to changing conditions and situations” (Friedman 1999, 60, emphasis added).

The differences in conceptualizations produced different definitions and scale items. For example, TWA described high autonomy as independent work and initiation of new activities. This interpretation contrasts with the SAS description of high autonomy as a feeling of freedom to instruct in the classroom according to personal judgment. TWA views low autonomy as a lack of independent decisions; SAS views it as a feeling of constraint by external forces. The instruments solicit
teachers’ self-perceptions or feelings of their autonomy. The instruments use a Likert scale format. The instruments reported coefficient alphas for the entire instrument as follows: SAS (.90), TAS (.80), SEI (.88), and TWA (.91).

The instruments appear to have several limitations that do not necessarily preclude accurate measurement of the construct. Nevertheless, these limitations affect, to some degree, each instrument. First, the instruments were developed from 11 years (TWA) to 36 years (SAS) ago. The context of education has changed significantly in the last 10 years. The introduction of NCLB in 2002, accountability demands from the public, and technology advances have all drastically altered the context in which teachers work. Such change may affect the behaviors, actions, and even definition of teacher autonomy. Second, in using a Likert scale exclusively, the instruments limit the ability of the teacher to respond to, or to assess, his/her autonomy. Teachers must interpret their autonomy based only upon the specific conceptualization of autonomy as given in the instrument. Third, the standardization samples used limit their applicability to other teacher samples. For example, the TWA was completed in Israel raising the question of applicability to American teachers. The SAS was developed specifically for elementary school teachers, yet found significant difference in scores between kindergarten teachers and scores from teachers in grades 1–6. TAS found a significant difference in scores between middle school teachers and elementary and secondary teachers. Such discrepancies seem to cloud the ability of the scales to generalize to all grade levels.

When the four instruments are compared, the TWA presents the most promise in measuring autonomy in today’s environment in the United States. First, the TWA’s conceptualization of teacher autonomy as generating power for a teacher seems to capture the construct most fully. Friedman’s view of power assumed a proactive status for a teacher: initiation of ideas and the authority and freedom to change procedures to fit the circumstance. Such a concept encompasses the elements of decision-making, freedom and control. The four factors of TWA, Student Teaching and Assessment, School Mode of Operating, Staff Development, and Curriculum Development, also seem to summarize most fully the facets of teacher autonomy. More than any other instrument, TWA includes elements that measure teacher autonomy both in the classroom and in school-wide leadership.

Second, the TWA is the most recently developed instrument and appears to be more applicable to the recent changes to education than the other instruments, particularly the SAS (Charters 1976). For example, recent educational research has focused upon transformational and teacher leadership (Copland 2003; York-Barr and Duke 2004). Such leadership gives the teacher more authority in school-wide decision-making. TWA incorporates an analogous model through its concept of teacher autonomy as an expression of teacher power in both the classroom (pedagogy) and schoolwide (organizational) areas. SAS’s autonomy concept of freedom from external control appears obsolete in light of the many mandated external
controls in the form of NCLB and state testing. TAS’s teacher autonomy construct focuses only on control of work environment. Recent increased accountability expectations raise questions concerning teachers’ ability to control their environment. In contrast, TWA is the only instrument to be created based upon a conception that provides a freedom for teachers “to change existing work procedures in an effort to adapt them to changing conditions and situations” (Friedman 1999, 60). Thus, no matter what external change is produced, teachers with autonomy according to TWA will have ability and power to adjust and determine work processes.

Third, the TWA is the only instrument that purposefully included schoolwide issues as an aspect of teacher autonomy. The SAS, TAS, and SEI focused almost exclusively on the individual classroom and pedagogy of a teacher as autonomy’s sole domain. Individual classroom autonomy as an area of teacher autonomy does appear more often in literature and does afford teachers greater influence (Ingersoll 1994). However, to limit the construct only to the classroom is to potentially limit the accuracy of its measurement. Freidman viewed teachers as having autonomy to a degree in such schoolwide areas as allocation of resources, finances, and school objectives (Friedman 1999).

Fourth, the TWA presents the most evidence about the applicability of the instrument for all levels of teachers. The participants from its study came from both elementary and secondary schools. The TWA reported correlations for comparisons between elementary and secondary teachers for the four factors as .79, .94, .74, and .85 respectively. Finally, TWA used teachers and principals in the creation of the scale items. Fifty-two teachers and principals generated a list of areas and behaviors in which teachers exercise autonomy, from which its items were constructed. The other three instruments created their items only from the work of the researchers, absent of teacher contribution. By including teachers, TWA most likely increased its validity.

In short, TWA appears to be the most valid instrument to measure teacher autonomy. Its conceptualization of the construct and its four factors appear to encompass, more fully, teacher autonomy’s elements, as compared with the SAS, TAS, and SEI. The TWA seems most capable of capturing teachers’ perceptions of autonomy in the midst of recent educational changes in contrast to the seemingly static nature of the other instruments. However, TWA was created and tested using samples exclusively in Israel. The TWA has been used with United States samples, but never in its entirety. For example, Hodge (2002) created an instrument using only 11 questions of 31 questions from the TWA in combination with two other existing instruments. Other articles only referenced the TWA as a basis from which another instrument was created to measure teacher autonomy (Garvin 2007; LaCoe 2006; Rudolph 2006). The TWA’s limited use raises several questions concerning the applicability to other samples.

Thus, the primary purpose of this study is to determine the psychometric properties of the TWA with a sample of teachers from the United States. The
findings will be compared to Friedman’s original findings from 1999 to discuss ability of the instrument to measure teacher autonomy in light of the recent changes to education and the present educational context. A secondary purpose of this study is to ascertain a general sense of teachers’ perceptions of their autonomy in the current context of education. The research questions for this study are as follows:

1. Is the TWA valid and reliable within all levels of education as it purports to be with a U.S. sample of public school teachers?
2. What are current perceptions of teacher autonomy as measured with a sample of U.S. teachers?

METHODS

Population

The total population for this study was 1,589 full-time equivalency K–12 teachers currently employed by the three largest public school districts within a large county in Michigan (MC): elementary (n = 759); middle (n = 336); and high (n = 494). The position of teacher included, and was limited to, special education and classroom teachers. The county represents a range in demographic variety and consequently in school district variety. Due to the possibility of multiple answers from respondents, figures do not add to 100%. MC is similar in several significant demographic characteristics to those of the United States such as ethnic composition (MC: 75% White, 13% Black, 8% Asian, 4% Hispanic; US: 72% White, 13% Black, 5% Asian, 16% Hispanic); residents foreign-born (MC: 11%; US: 12%); and residents -living below the poverty level (MC: 14%; US: 14%; US Census Bureau n.d.). Table 1 presents more detailed information about the teachers and students from the three districts. Based upon agreements with school district representatives and teacher union officials, we did not ask teachers to identify with what school district they were employed, to maintain the anonymity of their responses given the nature of the questions in the survey instrument.

<table>
<thead>
<tr>
<th>District</th>
<th>Teachers</th>
<th>Students</th>
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<tbody>
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<td></td>
<td>E</td>
<td>M</td>
</tr>
<tr>
<td>1</td>
<td>477</td>
<td>226</td>
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<tr>
<td>2</td>
<td>131</td>
<td>62</td>
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<tr>
<td>3</td>
<td>151</td>
<td>48</td>
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</table>

Instrument and Data Analysis

The TWA is a 31-item measure designed for the assessment of levels of existing perceived teacher autonomy (Friedman 1999). The response format of the TWA is a Likert scale that provides five choices ranging from not at all (assigned a value of 1) to always (assigned a value of 5). Thus, the range of the TWA values for the total instrument in its original version of 31 items was from 31 to 155. From this study’s empirically tested TWA instrument, the resulting five scales ranged from 4–20 (for a scale with 4 items) to 8–40 for two scales with eight items. The TWA was developed in two phases. The first phase was the development of the individual items. Fifty-two teachers and principals generated lists of areas, actions, and desired levels of teacher autonomy. After analysis to create categories and pool the content, researchers randomly selected items. The result of this first stage was the Appropriate Teacher Work-Autonomy (ATA), a 32-item scale comprised of six subscales. The intent of this initial instrument was to measure the level of desired teacher autonomy. The second phase developed an instrument to measure teachers’ perceptions of their existing perceived autonomy. The ATA’s structure and items were used to create the TWA that specified four factors based upon responses from a sample of 650 teachers.

Validity: Factor Analysis and Principal Components Analysis

Friedman’s (1999) decision to describe the TWA with four factors was based upon analysis of several indices. Kaiser’s rule defined a factor as a component with an eigenvalue greater than 1 (Kaiser 1960). Initially, five factors were extracted from TWA items based upon the presence of five eigenvalues greater than 1. However, a scree test, which plots the eigenvalues and displays the point where the size drops dramatically, revealed only four significant factors. The residual correlation matrices for four and five factor solutions were compared. From this comparison, four factors were determined as the most appropriate description. Oblique and orthogonal rotations were also used in the factor analysis. Both solutions found similar variables to be correlated with the factors. The oblique rotation was determined to be the more interpretable of the two solutions, based in part on the unique correlations between factors and variables. Oblique rotation reported correlations of factor IV to the other three factors respectively as $r = -.44$, $r = -.39$, and $r = -.33$. Final analysis revealed that the four factors explained nearly 50% of the variance in the scale items. The definitions for the four factors, as provided by the TWA (Friedman 1999, 70), were as follows: (1) student teaching and assessment—classroom practice of student attainment evaluation, norms for student behavior, physical environment, different teaching emphases on components of mandatory curriculum; (2) school mode of operating—establishing school goals and vision, budget allocations, school pedagogic idiosyncrasy, and school policy regarding class composition and student admission; (3) staff development—determining the subjects, time
schedule, and procedures of in-service training of teachers as part of the general school practice; and (4) curriculum development—introducing new “homemade” or “imported” curricula by the teachers and introducing major changes in existing formal and informal curricula.

Procedure

Due to school policies, the superintendents or teacher union representatives sent e-mails to all teachers within the three school districts, asking for their participation in responding to a survey. The survey requested that participants identify themselves as elementary, middle, and secondary teachers, in addition to the TWA items. A follow-up e-mail was sent out the following week to all participants, regardless of whether they responded. A power analysis, based upon Kraemer and Thiemann’s (1987) calculations, with a power of .80 and a critical effect size of .2, determined the target sample size of 192 for each of the three levels. Four hundred seventy-seven teachers participated in the study for a return rate of 30%. The elementary level achieved the target, with 241 responses. Both the middle and high school levels did not achieve the target, with 81 and 152 responses, respectively. Four teachers did not report grade level. Combined, the middle and high school levels (secondary level) produced 233 responses. Therefore, analysis of the data did not examine three levels within schools, but rather the two samples that met the target sample size: elementary and secondary levels.

Data Analysis

**Factor Analysis.** Only teachers who responded to all the items in the survey were included in the factor analyses: elementary, 76 of 241; and secondary, 68 of 233. An exploratory factor analysis was used to determine an appropriate fit for the data of each sample of elementary and secondary teachers using SPSS, version 19.0. This study examined the factors through both oblique and orthogonal rotations to a simple structure in the same manner as Friedman’s original study. Orthogonal rotation was accomplished through the varimax, quartimax, and equamax methods. Oblique rotation was accomplished through oblimin. The extraction method used was principal component analysis. Factor analysis also used the Kaiser-Meyer-Olkin (KMO) test to determine sampling adequacy for sufficient item correlation. Analysis used only complete cases; omitted items and items marked as “undecided” were classified as missing and excluded from analysis.
**Reliability.** Reliability for the TWA was measured by Cronbach’s coefficient alpha, an “index of common-factor concentration” (Cronbach 1951, 331). Cronbach’s coefficient alphas for Friedman’s (1999) four factors were reported as .85, .80, .84, and .86, respectively. Similarly, Cronbach’s coefficient alpha was used to measure reliability in this study.

**Inferential Statistics.** A series of pair-wise $t$-tests for each pair of factor scores was used to determine significance between the means of the factor scores. The factor scores were computed by finding the mean of the items that loaded at .4 or above on each factor. The factor scores for each participant were calculated only if all of the items within a factor were rated. Hence, the number of participants included in the analysis for each factor varied from curriculum development ($n = 193$) to student assessment for elementary teachers ($n = 201$). The pair-wise $t$-tests required five separate comparisons for each level or a total of 10 comparisons. Due to large number of comparisons, the Bonferroni adjustment procedures were used to reduce the probability of finding a significant effect by chance and to limit the probability of a Type I error. This adjustment divided the alpha (.05) by the number of comparisons, 10, to produce an alpha of .005.

**EXTERNAL VALIDITY**

To test the validity of the TWA between elementary school teachers ($n = 241$) and secondary school teachers ($n = 233$), separate multivariate analysis of variance (MANOVA), with an alpha level of .05, examined the main effects (elementary and secondary levels) and the interactions of the factor scores among four dependent variables identified by the factor analysis: curriculum development, professional development, classroom management, and assessment. An alpha level of .05 was set for each test used in the MANOVA.

**RESULTS**

**Question One: Is the TWA Valid and Reliable Within All Levels, as it Purports to be with a US Sample?**

Factor analysis initially constrained the procedure to result in a four-factor solution for the elementary sample to confirm Friedman’s (1999) four-factor solution, produced by the Israeli sample. Analysis used three orthogonal and an oblimin oblique solution. None of the solutions produced a coherent four-factor solution. A second factor analysis without the constraint of four factors found no coherent solution for the elementary sample. The elementary sample was able to produce a coherent
### TABLE 2
Factor Loadings for the Elementary and Secondary Samples

<table>
<thead>
<tr>
<th>Survey item</th>
<th>Elementary Factor</th>
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<th>Secondary Factor</th>
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<tbody>
<tr>
<td>Q26: Create unique topics</td>
<td>.83</td>
<td>.80</td>
<td>Q25: Initiate and administer activities</td>
<td>.79</td>
<td>.77</td>
<td></td>
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<tr>
<td>Q28: Formulate innovative curricula</td>
<td>.78</td>
<td>.78</td>
<td>Q27: Devise new curriculum</td>
<td>.77</td>
<td>.77</td>
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<tr>
<td>Q29: Introduce extracurricular items</td>
<td>.72</td>
<td>.59</td>
<td>Q31: Compose new learning materials</td>
<td>.63</td>
<td>.43</td>
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<td>Q30: Introduce changes to curriculum</td>
<td>.46</td>
<td>.67</td>
<td>Q21: Select subjects for in-service</td>
<td>.85</td>
<td>−.82</td>
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<tr>
<td>Q20: Decide on criteria for in-service</td>
<td>.80</td>
<td>−.78</td>
<td>Q19: Initiate topics for in-service</td>
<td>.74</td>
<td>−.73</td>
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<td>Q18: Decide on location for in-service</td>
<td>.67</td>
<td>−.72</td>
<td>Q23: Appoint instructors for in-service</td>
<td>.66</td>
<td>−.67</td>
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<td>Q22: Determine teacher enrichment</td>
<td>—</td>
<td>−.42</td>
<td>Q17: Decide on class composition</td>
<td>.54</td>
<td>.54</td>
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<td>Q14: Authorized to spend money</td>
<td>x</td>
<td>−.42</td>
<td>Q7: Determine norms for class behavior</td>
<td>.80</td>
<td>.78</td>
<td></td>
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<tr>
<td>Q1: Establish student evaluation criteria</td>
<td>.77</td>
<td>.72</td>
<td>Q6: Decide on class work procedures</td>
<td>.75</td>
<td>.73</td>
<td></td>
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<tr>
<td>Q3: Decide on testing criteria</td>
<td>.75</td>
<td>.73</td>
<td>Q4: Determine class physical environment</td>
<td>.80</td>
<td>.79</td>
<td></td>
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<td>Q5: Select teaching materials</td>
<td>.54</td>
<td>.75</td>
<td>Q9: Reward deserving students</td>
<td>.59</td>
<td>.44</td>
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<td>Q8: Pick specific instruction subjects</td>
<td>.45</td>
<td>—</td>
<td>Q11: Make decisions on expenditures</td>
<td>x</td>
<td>.70</td>
<td></td>
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<td>Q15: Decide on class policy</td>
<td>x</td>
<td>.63</td>
<td>Q16: Decide curriculum for whole school</td>
<td>x</td>
<td>.63</td>
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<td></td>
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<tr>
<td>Q10: Add/delete teaching subjects</td>
<td>x</td>
<td>.56</td>
<td>Q17: Decide on class composition</td>
<td>x</td>
<td>.54</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Q12: Make decisions on budget planning</td>
<td>x</td>
<td>.45</td>
<td>Q13: Appoint instructors for in-service</td>
<td>.66</td>
<td>−.67</td>
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*Note.* Items that did meet the .40 criteria are indicated with a minus sign, −. Items not included in factor analysis are indicated with an ‘x’. Factor I = Curriculum Development. Factor II = Professional Development. Factor III = Student Assessment. Factor IV = Classroom Management. Factor V = Schoolwide Operations.

A four-factor solution only after all seven items of the school mode of operations factor were deleted using a Varimax rotation. The KMO index for this four-factor solution was .79, indicating the data were suitable for factor analysis. Table 2 presents the four factors—Factor I, curriculum; Factor II, professional development; Factor III, student assessment; and Factor IV, classroom management—and their loadings. Thus, the TWA for the elementary sample appeared appropriate with only 24 of the original 31 items.
Table 3 also presents the five-factor solution for the secondary sample that resulted after one oblique rotation was examined. Although the oblique oblimin solution was similar to Friedman’s factor analysis, two problems emerged. First, the two factors of staff development and school mode of operating did not clearly differentiate from each other. Second, the KMO index was low. Norusis (1994) suggested that any index below .70 may indicate an insufficient correlation between items. At the secondary level, the analysis produced a KMO index of .58. Two additional analyses demonstrated further difficulty of a four-factor solution. First, a scree plot indicated that five factors, rather than four, provided a better description of the results. Second, an additional factor analysis without the constraint of a four-factor solution produced a coherent five-factor solution for the secondary sample. The five factors aligned as follows: Factor I, curriculum; Factor II, professional development; Factor III, student assessment; Factor IV, classroom management; and Factor V, schoolwide operations. Five of the 31 items did not meet the .40 criteria for inclusion into the five-factor solution matrix as follows: Q8, teachers pick and use specific instruction subjects out of the mandatory curriculum; Q13, teachers share responsibility for school finances; Q14, teachers are authorized to spend money on activities such as recreation and leisure; Q17, teachers decide on student demographic class-composition policy; and Q22, teachers determine their own enrichment general education programs.

Cronbach’s coefficient alpha measured the internal consistency for the five-factor structure. Table 3 shows that all but one factor in the elementary sample and two factors in the secondary sample fell below the accepted criteria of .70. However, a further analysis that deleted each item one-by-one to examine its ability to fit in the factor solution revealed that all scale items were appropriate and should be included in the survey.
Question Two: What are Current Perceptions of Teacher Autonomy as Measured with a Sample of US Teachers in Michigan County?

Table 4 presents the means and standard deviations of the factor scores for the elementary and secondary samples. The largest mean differences were between classroom management and professional development (elementary = 1.64; secondary = 1.54). The smallest difference between the means of the factors was .36 within the elementary sample (student assessment and curriculum development) and .13 within the secondary sample (school-wide operations and professional development). All pair-wise t-tests for each factor score comparison within both the elementary and secondary samples were significantly different after the Bonferroni adjustment was applied to control for family-wide error. Furthermore, both the elementary and secondary samples ranked their perceptions of autonomy, according to the factor scores, in the same order from highest to lowest as follows: classroom management, student assessment, curriculum development, school-wide operations, and professional development.

The second research question for the analysis of teachers’ current perceptions was tested with a MANOVA, “Do mean scores on perceived teacher autonomy differ for elementary versus secondary teachers?” Table 4 presents the results from the MANOVA. Significant differences were found between elementary and secondary teachers on all four scales (Wilk’s Lambda = .77, p < .0005). Each test produced a power level greater than 50% and thus positive effects for each
case. Secondary teachers had significantly higher means than elementary in student assessment and curriculum development whereas elementary teachers were significantly higher in classroom management and professional development. The greatest difference between elementary and secondary teachers was on the student assessment scale ($\eta^2 = .16$).

**DISCUSSION**

**Suitability of the TWA for a US Sample**

Although the results of this study and Friedman’s shared similarities, some differences should be noted. Neither the elementary nor the secondary US samples produced a four-factor solution matching Friedman’s four-factor structure of the TWA. For a coherent solution to be found, each of the US samples required some changes to Friedman’s original structure. First, the US elementary sample produced a coherent solution only after an entire factor was deleted. Second, this study’s secondary sample produced a coherent five-factor solution as compared to Friedman’s four-factor solution. Finally, the five-factor solution for the US secondary sample deleted five of the original 31 items for failure to meet the criterion of inclusion in a factor. Two reasons may explain these differences with Friedman (1999).

*School mode of operating* items prevented the elementary sample from producing a coherent five-factor solution similar to the secondary sample. Grade-level differences in organization structure and procedures may be partly responsible. Elementary education tends toward a more tightly prescribed curriculum and programming than secondary education (Rudolph 2006). Moomaw (2005) concluded, “Elementary school teachers have to follow more strict guidelines in curriculum and disciplinary actions as compared to their counterparts in middle or high school” (78). State and district benchmarks often stipulate specific expectations for elementary students. Elementary schools do not possess as diverse curricular options as secondary schools. Thus, teachers must adhere to a more standardized curriculum, with marginal flexibility. In contrast, secondary schools offer teachers mechanisms such as departments, team teaching, and common planning periods that provide greater latitude and opportunity to engage in schoolwide decision making. Such features may have created a difference in structure between the levels that led to the items concerning school operations not clustering together for the elementary sample. Pearson and Hall (1993) claimed that school structure features like team teaching and common planning periods create grade-level disparity by providing secondary teachers “the opportunity to analyze and resolve work-environment problems and curricular concerns” (177). 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.
to handle the more complex secondary curriculum such as honors programs, vocational training, and college entrance exam preparation. The elementary teachers in this study’s sample likely did not have similar avenues to participate in school-wide operations, and thus their perception of autonomy measured by this factor produced a different result from the secondary teachers.

The secondary sample did produce a coherent factor solution using the school mode of operating factor, but three of its items were deleted. Items pertaining to school finances and class composition failed to sufficiently correlate with the factor. Both the elementary and secondary levels failed to produce a school mode of operating factor similar to Friedman’s model. This finding suggests that grade level may not be entirely responsible for differences between the two studies. Cultural differences between US teachers and Israeli teachers may have also influenced the TWA and contributed to discrepancies. Methodologically, Israeli teachers and principals provided Friedman with their perspectives of school areas in which autonomy operates and specific teacher activities within those areas. These descriptions were the basis for the TWA’s items. These educators necessarily brought their cultural background, biases and educational experiences into the item creation process. US teachers in this study most likely did not share identical biases and experiences, and thus a discrepancy from culture differences may have influenced the results. Friedman’s study also analyzed the data using groups with no parallel in the United States. Friedman claimed validity generalization with schools that the Israeli Ministry of Education classified as autonomous and non-autonomous, based upon level of national ministry control. The US Department of Education does not categorize its public schools in this way. A future investigation can help identify what may be common or uncommon in how schools in these two countries operate to help explain the differences found in the factor structures of the TWA for both the elementary and secondary samples.

Current Status of US Teachers’ Perspectives of Autonomy

Regardless of elementary or secondary levels, teachers rated classroom management as the factor with the highest degree of autonomy. These items measured how teachers operate their classes: the physical environment of the room, rules, rewards, and procedures. Autonomy in the classroom has maintained a high level by teachers from pre-NCLB research to the present. Prior research found the operation of individual classrooms to be the area in which teachers perceive having highest levels of autonomy (Blasé and Kirby 2009; LaCoe 2006) and teacher control (Archbald and Porter 1994). This study goes beyond confirming earlier findings. Most studies did not use an instrument with a broad measurement of the construct of autonomy or investigated differences among grade levels. Despite an
educational climate of intense change, this study found that teachers perceived their classroom as the highest area of autonomy regardless of level.

One explanation of the classroom as a place of steady teacher autonomy may be teachers’ beliefs in their professional ability to be independent in the classroom and school administrators’ support of this belief. Elmore (1987) found that teachers believed that they were the best qualified about classroom procedures, and thus should have considerable decision-making ability in this area. Teachers enter their profession to do exactly what the classroom management factor describes, manage a classroom. Teachers are entrusted to perform the vast majority of their classroom time instructing, interacting with students, and maintaining the classroom environment without supervision. Other nonclassroom tasks that may be assigned to them, such as designing the content of an in-service program, comprise a much smaller and, perhaps, from the teachers’ perspective, less important role.

Another explanation may be that the substance of the four items of classroom management are too difficult to standardize or are viewed as not as important as issues that have thus far been the attention of policymakers. For example, no state or federal law specifies the color or content of a bulletin board. State standardized tests do not demand teachers to reward students in a certain manner for appropriate behavior. However, each of the remaining 25 items on the TWA described tasks and behaviors are affected, to some degree, by recent educational changes and forces such as state standardized tests. These affected items contributed to significant contrasts in the perception of autonomy between elementary and secondary teachers in different areas.

Elementary and secondary teachers perceived autonomy in the different factors in identical order, but with significant differences between their scores. This finding confirmed prior research that found significant differences between grade level teachers in their perception of autonomy (Moomaw 2005; Pearson and Hall 1993). Several important distinctions emerged from both the factor and scale scores based on these differences.

The greatest disparity between elementary and secondary teachers in their perceived autonomy was assessment. The elementary factor structure included two items that the secondary did not: (Q5) “Teachers select teaching materials from a known inventory,” and (Q8) “Teachers pick and use specific instruction subjects out of the mandatory curriculum.” Different factor loadings for the levels could account for different conceptions of assessment for the levels. The inclusion of the two added items suggests that elementary teachers viewed assessment autonomy as a broader factor encompassing the ability to choose teaching materials. In contrast, the items in the secondary teachers’ factor seemed to limit assessment strictly to evaluation and scoring criteria.

A second distinction was found in professional development. Elementary teachers scored significantly higher than secondary teachers in scale scores in their perception of professional development. Factor loadings appeared to influence this
difference, as well. Items within the factor for both levels were identical with the exception of two items found only in the secondary factor: (Q14) “Teachers are authorized to spend money on activities such as recreation and leisure,” and (Q22) “Teachers determine their own enrichment general education programs.” The secondary conceptualization of professional development appeared more comprehensive than the elementary level because all elementary items were based solely on the terms “in-service” and “professional development.” Paradoxically, the broader concept may have contributed to lower scores for the secondary teachers in contrast to the elementary. Items 14 and 22 received some of the lowest mean scores of all items and were only .02 and .04 from deletion due to failed criterion. The inclusion of low-scoring items into the secondary factor structure may have lowered teachers’ overall score for professional development.

Secondary teachers’ perceptions of curricular autonomy were significantly higher than elementary teachers’ perceptions. Rudolph (2006) attributed differences in curriculum matters to the presence of team teaching and emphasis on critical thinking skills at the secondary level. Secondary teachers also likely perceived higher autonomy than elementary teachers in curriculum due to the multiple grade-level differences in school structure, procedure, and district demands.

Finally, classroom management showed the least magnitude of differences between grade levels. Elementary and secondary levels significantly contrasted only on the scale score, not the factor score. Furthermore, earlier research, as confirmed by this study, found all teachers to perceive control over their classroom as their highest level of autonomy (Archbald and Porter 1994; LaCoe 2006). These findings suggested that the contrast between levels for classroom management though statistically significant, may be in practice probably inconsequential.

Recommendations for Practice and Research

Administrators’ recognition of the challenges facing teacher autonomy in the United States today is the first step toward supporting autonomy in areas where it is resilient and developing it where it is not. Three issues surrounding teacher autonomy confront educators. First, this study confirmed the multifaceted nature of the construct. Teacher autonomy is not a singular general construct that appears uniformly in all aspects of the teachers’ daily lives. Autonomy appears to be strongest in teachers’ management of their classrooms but weaker in other areas. School leaders must acknowledge the different types of autonomy, and the extent to which they are operational, to more fully capitalize on its presence with teachers. Second, school structures distinct to grade level appear to affect teacher autonomy. Such differences imply greater responsibility upon building principals at various levels, rather than districtwide administrators for promoting autonomy if they desire to do so. Finally, political forces increasingly constrict teacher autonomy.
Educators are accountable to external forces and must work within the laws and expectations specific to their district. The challenge for today’s administrators is to foster teacher autonomy while contending with these powerful external forces.

A critical second step for administrators is to engage in a continual assessment of teacher autonomy. Hall and Hord (1987) claimed that a priority for school principals is to understand the practices and behaviors of their teachers. Teacher autonomy appeared to be an important element of successful schools (Blasé and Kirby 2009; Stockard and Lehman 2004). Educators must have a basic knowledge of the levels of their autonomy in their schools to most effectively develop this critical element. However, the multiple challenges to autonomy hinder accurate measurement of the construct. The TWA is one method to measure teachers’ perception of autonomy in a fluid environment. Hall and Hord, based upon the Concerns-Based Adoption Model, proposed stages of information gathering that create ongoing avenues for a principal to understand his faculty’s practices. Personal conversations and informal surveys are examples of such information gathering, and may provide a fuller appraisal of teacher autonomy. From these evaluations, administrators and teachers can then work together toward identifying specific areas that lack or withhold teacher autonomy.

Administrators do possess considerable influence upon teacher autonomy despite the forces outside their control. Classroom management may be the domain for teacher freedom, but administrators exert significant authority over the areas of school finance, curriculum, and professional development (Gawlik 2005). In many schools, teachers have little or no decision-making ability in these areas. Autonomy in such areas seems dependent upon administrators to share decision-making of those school operations. Principal and teacher autonomy appear to be complementary parts of an inverse relationship: the more control the principal holds for himself, the less control and power the teacher possesses (Gawlik 2005).

A teacher with autonomy possesses power. Administrators who desire to encourage teacher autonomy must assess, honestly, their own levels of power and control in their school. Some areas of autonomy naturally belong to administrators but many decisions or responsibilities are open to shared power. Silva, Gimbert, and Nolan (2000) described shared power between teacher and administrator, regardless of position, as “teacher leadership” (801). In the context of a teacher leadership model, administrators must actively seek to enhance teacher autonomy by releasing some of their power to include teachers in school leadership. Specifically, principals should provide teachers opportunity for leadership in the two areas teachers perceived with lowest autonomy: school finances and professional development. For example, even if a building’s professional development budget is set by a district’s central administration, principals can still seek to grant teachers leadership in setting the topics, and scheduling speakers. Greater autonomy in areas outside of teachers’ classrooms has potential to lead to other positive
developments associated with teacher leadership such as faculty collaboration and a strong commitment to school mission (Silva et al. 2000).

From the limitations of conducting this study, several opportunities for future research present themselves. First, the sample was limited to public schools in one Michigan county. Although the demographics of this county are similar to those of the United States as a whole, generalizations from this study must be done so cautiously. Public school districts across the United States vary in culture, leadership, and expectations. Such variations may significantly influence perception of autonomy. Different school contexts, such as charter and private schools, may also affect teachers’ perceptions of autonomy. Further investigation of the TWA and teacher autonomy in different areas of the United States and with charter or private schools may provide a more comprehensive assessment of the instrument and teachers’ perception of their autonomy. Second, this study combined middle and high school teachers into one sample. Although the two levels are similar in school structure, differences in behaviors and perceptions between middle and high school teachers have the potential to produce different factor structures. Analysis including the three distinct levels of elementary, middle, and high school levels will help bring clarity into future research. Third, analysis of the TWA in this study focused upon psychometric qualities with no investigation of culture’s specific effect upon the construct of teacher autonomy. National and ethnic differences in education seem to affect, to some degree, the TWA and teacher autonomy. These differences may also affect other aspects that appear to influence autonomy, such as grade-level differences. Future research should include a qualitative investigation into cultural differences and the effects upon autonomy. Finally, this study presented only the perceptions of current job autonomy. Although this information is helpful in assessing the environment for teachers in the current context, it also raises the question: Are teachers satisfied with their reported levels? If the structure of US public schools limits teacher autonomy in areas outside the classroom, teachers may feel less satisfaction in those areas. Additional research should include pairing current perceptions with desired levels to more fully present the status of teacher autonomy in the constantly changing educational climate. This research would also be helpful toward other investigations into grade-level differences and the specific applicability of the TWA to those levels. Exploring these issues will help complete a picture of how teachers do their work and how they feel about doing so. In this period of changing work expectations, promoting the conditions that foster autonomy may help maintain the motivation of teachers to perform in their capacity as professionals.

REFERENCES


