This study examined the personality types of emergency certification teachers as predictors of classroom management and self-efficacy beliefs. Participants were 120 teachers pursuing teacher certification through an emergency permit teacher education program at a mid-sized Texas university. They all held at least a Bachelor’s degree, were in their first year of teaching, and were pursuing teacher certification. All were assigned to a public school mentor. Each respondent completed a demographic form and three questionnaires: the Myers-Briggs Type Indicator, the Attitudes and Beliefs on Classroom Control Inventory, and the Hoy and Woolfolk (1993) Revised Teacher Efficacy Scale. Data analysis indicated that there was a limited relationship between personality and classroom management and efficacy beliefs. For the small effect observed, however, extraversion versus introversion was the salient personality variable, and relationships were in expected directions. Marginal score reliabilities may have attenuated the observed effects. Emergency certification teachers tended to be more extraverted, and they also tended to report higher teaching efficacy. (Contains 27 references.) (SM)
Personality Type as a Predictor of Teaching Efficacy and Classroom Control Beliefs in Emergency Certification Teachers

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Abstract

The present study focused on the personality types of emergency certification teachers as predictors of classroom management and self-efficacy beliefs. Results indicated limited relationship between personality and management and efficacy beliefs. For the small effect observed, however, extraversion v. introversion was the salient personality variable and relationships were in expected directions. Marginal score reliabilities may have attenuated the observed effects.
Personality Type as a Predictor of Teaching Efficacy and Classroom Control Beliefs in Emergency Certification Teachers

Teacher efficacy has surfaced as a variable often linked with effective teaching and learning (cf. Henson, in press; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). As Woolfolk and Hoy (1990) noted, "Researchers have found few consistent relationships between characteristics of teachers and the behavior or learning of students. Teachers' sense of efficacy ... is an exception to this general rule" (p. 81). Given the potential value of the construct, many researchers have linked teacher efficacy to a variety of school variables. Specifically, some have examined the relationship between self-efficacy and teachers' classroom management activities, such as facilitating small group discussion and persisting with students (Gibson & Dembo, 1984; Podell & Soodak, 1993).

One of the important issues in education today is the ability of teachers in public schools to successfully use classroom management strategies (cf. Emmer, Evertson, Clements, & Worsham, 1997; Evertson, Emmer, Clements, & Worsham, 1997; Martin, Yin, & Baldwin, 1998). Because classroom management issues are generally high on the list of teachers' concerns about education (Johns, MacNaughton, & Karabinus, 1989; Woolfolk, 1998), the relationships between teachers' classroom
management and self-efficacy beliefs may speak to ways in which an individual's expectation for success (efficacy) relates to classroom management behavior.

Furthermore, little research has examined the relationship between teacher efficacy and classroom management beliefs and personality types of teachers. Because personality is pervasive in its influence on human experience (Ryckman, 1989), it is relevant to examine its relationship to important teaching variables, such as efficacy and classroom management.

Some research has highlighted types of personalities that tend to teach in the secondary public school system. Erdle, Murray, and Rushton (1985) found that specific personality traits of teachers are reflected in classroom instruction, especially through the teacher's use of various instructional strategies and material. They also found that a positive relationship existed between individual personality constructs and learning styles.

Often the Myers-Briggs Type Indicator (MBTI) has been used to measure personality in these studies. Grindler and Straton (1990) found that the MBTI results could be used to help teachers develop different teaching methods and more readily accept materials and technology. Studies indicate that extroverted, stable, and tough-minded personalities tend to be more receptive to the use of new ideas such as the use of
computers (Grant & Cambre, 1990; Katz, 1992). It is possible that these personality types may also exhibit higher self-efficacy.

Knupfer (1989), in a study with elementary education majors using the MBTI, concluded that a "sensing" individual desired direct access to information and technology but that an "intuitive" type was cautious and needed some prior training before initiating any new strategies or multimedia procedures. However, intermediate/secondary teachers who are "Intuitive/thinking" types (or those educators who are creative, analytical, logical, and imaginative) tend to be more receptive to using various strategies and technology than "sensory" types who are practical, realistic, and sociable (Katz, 1992; Smith, Munday, & Windham, 1993; Sudol, 1991). "Sensory/feeling" types of teachers are interested in examining meanings and relationships and are least likely to be comfortable with the use of newer methodologies and technology than other personality types (Grindler & Straton, 1990; Smith, Munday, & Windham, 1993). These personality types speak directly to teachers with propensity toward various efficacy and classroom control orientations.

Purpose

The present study focused on the personality types of teachers and their classroom management and self-efficacy
beliefs. There is little information on the identification of personality types as they relate to self-efficacy beliefs and effective management strategies, and what teachers are most or least likely to incorporate them into instructional practice. Therefore, we examined whether personality types could serve as predictors of teaching efficacy and both instructional and people management beliefs. Further, we investigated these variables in the context of emergency certification teachers who are relatively new to the teaching profession. The relationships examined may inform our understanding of personality and instructional practice in alternative certification teachers.

Method

Participants and Procedures

Participants included 120 teachers pursuing teacher certification through an emergency permit teacher education program at a mid-sized university in Northeast Texas. Participants had held at least a Bachelors degree, were in their first year of teaching, and were pursuing teacher certification. The emergency permit teachers were assigned a public school mentor teacher, must complete a certification program within three years that includes university course work, and received regular visits from university supervisors.

Three questionnaires and a demographic form were administered during regularly scheduled class times. The
teachers' age indicated the non-typical nature of the participants as compared to traditional preservice teachers (20-25: 34.2%, 26-30: 19.2%, 31-35: 7.5%, 36-40: 10%, 41-45: 12.5%, 46-50: 7.5%, 51-55: 4.2%, 56+: 5.0%). Most taught in high school (56.7%) or middle school (32.5%) with smaller numbers teaching elementary school (4.2%) or across levels (5.9%). However, the teachers predominantly expressed their preferred choice of certification as secondary level (80.8%) with much fewer desiring grades 4 – 8 (12.5%), K – 4 (4.2%), or multiple (2.4%) certifications. Participant ethnicity was 76.7% White, 18.3% African-American, and 5.0% Hispanic.

Instrumentation

Myers-Briggs Type Indicator (MBTI). The MBTI (Form G, 1993) was used as a measure of personality type. The MBTI is a widely used personality inventory with positive evidence of construct validity for its scores (Thompson & Borrello, 1994). MBTI scores represent four theoretically based psychological types grounded in Jung’s (1971/1921) personality theory, each of which is a function of bipolar personality characteristics. In the present study, four scale scores were created by subtracting one of the bipolar dimensions from the other, yielding continuous scores representing which bipolar dimension is predominantly held and to what degree (Extraversion - Introversion, Sensing - Intuition, Thinking - Feeling, and Judging - Perceiving). As an
example, one participant received an Extraversion score of 23 and an Introversion score of 4. The Extraversion v. Introversion scale score was 19 (23-4), representing a strong tendency toward Extraversion (Introversion tendencies, and the other personality tendencies listed second above, would be represented by negative scores and strength by absolute value of the score).

Attitudes and Beliefs on Classroom Control Inventory (ABCC). We used the ABCC (Martin, Yin, & Baldwin, 1998) to assess classroom control orientation. The ABCC includes 26 items with a 4-point Likert scale and proposes to measure three orthogonal dimensions of classroom management control: instructional, people, and behavioral management. Each scale was derived to assess a continuum of control (cf. Glickman & Tamashiro, 1980; Wolfgang, 1995) ranging from interventionist to interactionalist to non-interventionist, with interventionists expressing the greatest need/desire to control and manipulate the classroom environment. According to Martin et al. (1998, p. 7), the instructional management scale (14 items) "includes aspects such as monitoring seatwork, structuring daily routines, and allocating materials;" the people management scale (8 items) "pertains to what teachers believe about students as persons and what teachers do to develop the teacher-student relationship;" and the behavioral management scale (4 items) "includes setting
rules, establishing a reward structure, and providing opportunities for student input.”

Hoy and Woolfolk’s (1993) revised Teacher Efficacy Scale. We used Hoy and Woolfolk’s 10-item shortened version of the Teacher Efficacy Scale (TES; Gibson & Dembo, 1984), which originally had 16 items. The teachers responded to a 6-point Likert scale anchored at “strongly agree” and “strongly disagree.” The revised TES purports to measure two orthogonal dimensions: general teaching efficacy and personal teaching efficacy. However, recent research has suggested that the general teaching efficacy really assesses something of an external versus internal locus of control orientation, rather than outcome expectancy, which was the original intent of the scale (Coladarci & Fink, 1995; Guskey & Passaro, 1994; Henson, Bennett, Sienty, & Chambers, 2000; Tschannen-Moran et al., 1998). Therefore only the 5-item personal teaching scale was used as a measure of a teacher’s reported confidence in his or her ability to positively impact student learning. The unweighted mean of these items were used as scale scores in subsequent analyses.

Data Analysis

The ABCC and revised TES were submitted to principal components analysis to examine factorial structure. Factor scores were saved and used as dependent variables in subsequent analyses.
analyses. Canonical correlation analysis was used to examine whether personality variables are predictive of personal teaching efficacy, instructional management, and people management factor scores.

Results

Factor and Reliability Analyses

**ABCC.** The interitem correlation matrix of the ABCC was submitted to a principal components analysis to evaluate factorial structure. Nine eigenvalues were greater than one but the scree plot suggested two factors. Two factors were retained and rotated to the oblimin (delta = 0) criterion. The interfactor correlation was near zero (r = .03), so an orthogonal solution (varimax) was used (Pedhazur & Schmelkin, 1991). The two factors corresponded to the instructional and people management factors and explained 25.20% of the correlation matrix variance. The expected third factor, behavioral management, was problematic and did not possess strong internal structure. The low coefficient alpha for scores on this scale (alpha = .12) also pointed to this dynamic.

Using a .35 criterion, three of the four behavioral management items had substantial coefficients on the people management factor, indicating that these factors may actually assess the same construct. This finding is consistent with Henson and Roberts' (2001) confirmatory factor analysis of the
ABCC, which also suggested unity between these factors. Factor scores for the instructional and people management factors were created via the regression method for use in subsequent analyses. Coefficient alphas for instructional and people management (including the three items from behavioral management) scores were .73 and .68, respectively. Descriptive statistics for the observed variables are reported in Table 1.

__Insert Table 1 about here__

**Personal teaching efficacy.** The interitem correlation matrix for the five personal teaching efficacy items from Hoy and Woolfolk's (1993) revised version of the Teacher Efficacy Scale (Gibson & Dembo, 1984) were also submitted to principal components analysis. Two eigenvalues greater than one were observed but the scree plot indicated a clear one-factor solution. One personal teaching efficacy factor was extracted that explained 45.3% of the correlation matrix variance (coefficient alpha = .68). Personal teaching efficacy factor scores were created via the regression method for use in subsequent analyses.

**Predicting Management and Efficacy Beliefs with Personality**

A canonical correlation analysis was conducted with the four personality scale variables used as predictors of the instructional management, people management, and personal...
teaching efficacy factor scores as criterion variables. Table 2 presents the canonical results.

Only the first function explained a substantive portion of variance between the variable sets with a squared canonical correlation of 8.53%. The full model was not statistically significant using the Wilks' lambda criterion, $F(12, 299.26)=1.46$, $p=.135$. The small effects observed across the functions indicated little shared variance between the variable sets. However, the effect for the first function was considered substantive in the context of this research and is reported here. The second and third functions were not interpreted.

Examination of the standardized canonical function coefficients and structure coefficients indicate that this effect was largely due to the extraversion v. introversion continuum in the predictor set and personal teaching efficacy and people management in the criterion set. Further, extraversion was positively related to personal teaching efficacy but negatively related to people management beliefs.

**Discussion**

The present findings point to a limited relationship between personality and efficacy and classroom management beliefs as measured here. Only the first function in the canonical correlation analysis yielded an effect of any substance and it was small at 8.53%. This small effect was
primarily due to the relationship between extraversion v.
introversion as a predictor of personal teaching efficacy and
classroom management.

The canonical results indicate that emergency certification
teachers that tended to be more extraverted, also tended to
report higher teaching efficacy. Because the extraversion scale
in the MBTI measures a certain level of self-confidence, this
finding is consistent with the theoretical expectation for self-
efficacy.

Further, extraversion was negatively related to people
management beliefs. Because high scores on the ABCC are
indicative of more interventionist management orientations,
increased extraversion tended to relate to more non-
interventionist perspectives.

In sum, it appears that personality may not be as strongly
related to efficacy and classroom management as expected. Of
course, the lack of relationship noted here may be due to the
current operationalization and measurement of the variables. The
score reliabilities of the three dependent measures were
marginal and may have attenuated the effects observed. With an
average alpha of .70, the maximum effect theoretically possible
for any two variables would be about 50% (Henson, 2001).

In this context, the 8.53% effect noted becomes more
relevant. Nevertheless, it appears that the extraversion v.
introversion continuum (secondarily, thinking v. feeling) is the salient personality type to the exclusion of the others. The relationships noted, however, were in expected directions. It is possible that increased extraversion in emergency certification teachers may lead to positive instructional practice as regards teaching efficacy and people management beliefs.
References


Table 1
Descriptive Statistics (n = 120)

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<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Scale/Range</th>
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</thead>
<tbody>
<tr>
<td>Extraversion v Introversion</td>
<td>2.48</td>
<td>13.07</td>
<td>54</td>
</tr>
<tr>
<td>Sensing v Intuition</td>
<td>2.73</td>
<td>14.95</td>
<td>57</td>
</tr>
<tr>
<td>Thinking v Feeling</td>
<td>2.45</td>
<td>12.59</td>
<td>51</td>
</tr>
<tr>
<td>Judging v Perceiving</td>
<td>.60</td>
<td>15.73</td>
<td>58</td>
</tr>
<tr>
<td>Instructional Management</td>
<td>3.11</td>
<td>.37</td>
<td>4 point</td>
</tr>
<tr>
<td>People Management</td>
<td>2.87</td>
<td>.43</td>
<td>4 point</td>
</tr>
<tr>
<td>Personal Teaching Efficacy</td>
<td>4.90</td>
<td>.80</td>
<td>7 point</td>
</tr>
</tbody>
</table>

Note. MBTI scale scores were created by subtracting the second personality dimension score from the first dimension score. Thus, a scale score of 0 would represent no tendency toward a dimension, positive scores would represent tendency toward the first dimension, and negative scores would represent tendency toward the second dimension.
Table 2

Canonical Correlation Solution for First Function

<table>
<thead>
<tr>
<th>Variable/Statistic</th>
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<th>$r_s^2$</th>
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<tr>
<td>INSTR</td>
<td>-.017</td>
<td>-.176</td>
<td>3.10%</td>
</tr>
<tr>
<td>PEOPLE</td>
<td>.628</td>
<td>.656</td>
<td>43.03%</td>
</tr>
<tr>
<td>PTE</td>
<td>-.751</td>
<td>-.778</td>
<td>60.53%</td>
</tr>
<tr>
<td>$R_c^2$</td>
<td></td>
<td></td>
<td>8.53%</td>
</tr>
<tr>
<td>EvI</td>
<td>-.837</td>
<td>-.884</td>
<td>78.15%</td>
</tr>
<tr>
<td>SvN</td>
<td>-.213</td>
<td>.138</td>
<td>1.90%</td>
</tr>
<tr>
<td>TvF</td>
<td>.433</td>
<td>.602</td>
<td>36.24%</td>
</tr>
<tr>
<td>JvP</td>
<td>.120</td>
<td>.241</td>
<td>5.81%</td>
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Note. Func. = standardized canonical function coefficient; $r_s$ = structure coefficient; $R_c^2$ = squared canonical correlation.
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