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ABSTRACT

This study surveyed the personality types, as measured by the Personal Preferences Self-Descriptive Questionnaire (PPSDQ), of 226 preservice secondary teachers at a large, urban, public university. The study was designed to determine whether certain personality types gravitated to the teaching profession in secondary schools and to compare the results with results from other studies. Participating students completed the questionnaire during the fall of 1997, spring of 1998, and fall of 1998. Students from the fall of 1998 also specified their area of certification. Data analysis indicated that the results agreed with some prior research and disagreed with other prior research. The respondent group had an unusually large percentage of troubleshooters and more visionaries than found in previous research. The study group did not have an even distribution when classified by the 16 personality type combinations, and the distribution was statistically different from the national group. The study group had an unusually large number of introverts and intuitives compared to the national group and an unusually small number of extroverts and sensors. The analysis of the relationship between academic certification area and personality type was not statistically significant. (Contains 31 references.) (SM)

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Running Head: Secondary PPSDQ

MEASURING PERSONALITY TYPES OF SECONDARY PRE-SERVICE TEACHERS

ED 430 971

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A paper presented at the Annual Meeting of the Southwest Educational Research Association, January 23, 1999, San Antonio, TX. The authors would like to thank Dr. Linda Brant Collins for her suggestions on the statistical analysis.

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Abstract

The study of teacher personality types has been of interest to educational researchers for at least 40 years and there has been little research on specific grade and subject level teachers. The present study was designed to survey the personality types, as measured by the Personal Preferences Self-Descriptive Questionnaire (PPSDQ), of 226 pre-service secondary teachers at a large urban public university. Of these individuals, one hundred fourteen indicated teaching certification areas. The researchers' objectives were to determine if certain personality types gravitate to the teaching profession in secondary schools and to compare our results to results from other studies.

Measuring Personality Types of Secondary Pre-Service Teachers

The study of teacher personality types has been of interest to educational researchers for at least 40 years. There has been little research on specific grade and subject level teachers. The present study was designed to survey the personality types, as measured by the Personal Preferences Self-Descriptive Questionnaire (PPSDQ), of 226 pre-service secondary teachers at a large urban public university. Of these individuals, one hundred fourteen indicated teaching certification areas. Personality type indicators are used in counseling, team building, matching teaching and learning styles, and in career planning. The researchers' objective was to determine if certain personality types gravitate to the teaching profession in secondary schools.

Background of Personality Type Measures

Measures of normal variation in personality, called "psychological type," are frequently used in education (e.g., to identify learning styles) and counseling (e.g., in career counseling) and grew out of Jungian psychology. Carl Jung developed his topology of personalities over a 20 year period. His book, Psychological Types, was published in 1923 and differentiated eight typological groups. The basic dimension of Jungian theory focuses on whether individuals are Extraverted or Introverted (Read, Fordham, Adler, & McGuire, 1953-1979, vol. 7). Extraverts are more oriented to the social world, and recharge psychic energy by interacting with this world. Introverts, on the other hand, are more oriented to the inner world of ideas, and take directions from this world.

In 1973, what was to become an extremely popular measure (Myers & McCaulley, 1985) of Jungian types was first published by Katharine Briggs and her daughter, Isabel Myers, and called the Myers-Briggs Type Indicator (MBTI). Myers is given most of the credit for the current version of the theory (Bayne, 1995). Myers classified 16 "kinds of people" in terms of strengths on four pairs of preferences: (a) Extraversion vs. Introversion, (b) Sensing vs. iNtuition, (c) Thinking vs. Feeling, and (d) Judging vs. Perceiving. Jackson, Parker and Dipboyne (1996, p. 99) noted that "the MBTI is the most widely used personality instrument with between 1.5 and 2 million persons completing it each year."

Measures of type are popular in education and counseling, in part, because they measure normal variations in personality, and by definition most people are characterized by this sort of personality function. In short, measure of psychological types are among the most frequently used measures of personality (Thompson & Ackerman, 1994).

However, the MBTI has certainly provoked considerable psychometric controversy (Carlson, 1989; Kerlinger, 1986; McCaulley, 1991; Merenda, 1991). The measure has been criticized for the use of forced-choice or "ipsative" response format, which causes spurious negative correlations among items (Kerlinger, 1986, p. 463). And the measure has been criticized for yielding dichotomized types rather than continuous scores, and for not acknowledging that some people may have relatively neutral preferences on some dimensions.

An alternative measures of types has been developed by Thompson--the Personal Preferences Self-Descriptive Questionnaire (PPSDQ) (cf. Kier,

Melancon, & Thompson, 1998). The PPSDQ has undergone an iterative series of revisions across a series of samples (cf. Arnau, Thompson, & Rosen, 1997; Kier & Thompson, 1997; Melancon & Thompson, 1994, 1996; Thompson & Melancon, 1995, 1996a, 199b, 1997; Thompson & Stone, 1994). The PPSDQ has been designed to avoid the problems that have been ascribed to the Myers and Briggs' measure.

Background of Teacher Personality Types

There have been several research studies in recent years pertaining to teacher personality types. Sears and Kennedy (1997) identified personality profiles for 4,483 freshmen who expressed an interest in teacher education and then studied 886 students who had completed teacher preparation at any certification level. It was determined that S-F-J profile was the most common in students who had continued in elementary education. This trend was not evident in secondary education students which contradicted research by Lawrence (1979) that typed all education students by a single profile. Sears and Kennedy (1997) also found that the significant number of secondary teachers fit the N-T-J profile. Schurr, Ruble, Henriksen, and Alcorn (1989) studied the effect of personality types as well as other measures on National Teacher Examinations(NTE) and other tests scores. They found that sensing/judging types attained lower NTE scores than expected although they were the type which most often chooses the teaching profession. Student teachers who prefer intuition to sensing and feeling to thinking were more likely to have higher student teaching evaluations (Marso & Pigge, 1991).

Barrett (1991) studied 43 high school vocational teachers and found that S-F-P teachers had higher teacher effectiveness scores and N-F teachers were least effective. A longitudinal study of one hundred seventeen teachers was conducted by Pigge and Marso (1997) and it was determined that the majority of the participants were classified as J-E rather than P-I and that the S-N was evenly distributed. Teacher burnout was studied by Hughes, McNelis, and Hoggard (1987) and it was found that extraverted and sensing types worked better under pressure and that feeling and perceptual types suffered more stress. Cromwell (1996) found that the most frequent classification (19.5%) of 281 preservice participants was E-S-F-J and that the second largest group (14.3%) were classified as E-N-F-J.

An article by Clark and Guest (1995) designed to help administrators make better hiring decisions used personality types to classify teachers as catalysts(NF), visionaries(NT), troubleshooters(SP), and stabilizers (SJ). The present study will compare personality type results with several of the above findings and with findings by Myers and McCaulley(1985, 1992).

Method and Results

During the Fall 1997, Spring 1998 and Fall 1998, two hundred twenty-six preservice secondary students were administered the PPSDQ to measure personality type. Also, students (n=114) from Fall 1998 were asked to specify area of certification. These students were enrolled in field-based approaches courses which are taken during the semester prior to student teaching. The

students are required to observe at least 20 hours in a high school classroom and teach two lessons.

Table 1 presents the 16 personality types, the number of students in each and the individual cell contribution to the chi-square statistic. Each individual cell's contribution to the chi-square is then added to get the chi-square test statistic to determine goodness of fit to an even distribution. The expected count is 14.125 = (226/16) for each cell.

Table 1 - Personality types and chi-square contribution. n=226

ESTJ n=25 8.3728	ESTP n=8 2.6560	ESFJ n=9 1.8595	ESFP n=8 2.6560	ENTJ n=8 2.6560	ENTP n=13 0.0896	ENFJ n=14 0.0011	ENFP n=30 17.8418
ISTJ n=25 8.3728	ISTP n=15 0.0542	ISFJ n=15 0.0542	ISFP n=4 7.2577	INTJ n=17 0.5850	INTP n=7 3.5940	INFJ n=7 3.5940	INFP n=21 3.3460

Note. n = 25 = study group count
8.3728 = individual cell chi-square contribution

The calculated chi-square test statistic is 60.3347 which is highly statistically significant with a p-value < 0.0001. This means that the personality type variables do not have an even distribution. The most prevalent personality variables measured in the sample are ENFP, ESTJ, ISTJ, and ISFP.

The next analysis of the data compared the observed personality distribution to high school teachers nationally (n=603) to see if the study distribution compares to the national distribution using a chi-square analysis. Table 2 displays the personality type cells, the observed count and percent for the study, expected count and percent for the national group in parentheses, and individual cell contributions to the chi-square statistic.

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Table 2 - Personality Types and Counts

ESTJ n=25 11.1% (25.54) (11.3%) .00113	ESTP n=8 3.5% (2.49) (1.1%) 12.230	ESFJ n=9 4.0% (19.21) (8.5%) 5.426	ESFP n=8 3.5% (5.198) (2.3%) 1.510	ENTJ n=8 3.5% (9.718) (4.3%) .3037	ENTP n=13 5.8% (7.910) (3.5%) 3.275	ENFJ n=14 6.2% (19.89) (8.8%) 1.743	ENFP n=30 13.3% (25.76) (11.4%) .6964
ISTJ n=25 11.1% (26.89) (11.9%) .1333	ISTP n=15 6.6% (3.390) (1.5%) 39.762	ISFJ n=15 6.6% (23.96) (10.6%) 3.348	ISFP n=4 1.7% (5.650) (2.5%) .4819	INTJ n=17 7.5% (12.20) (5.4%) 1.8848	INTP n=7 3.1% (6.554) (2.9%) .03035	INFJ n=7 3.1% (17.40) (7.7%) 6.2178	INFP n=21 9.3% (14.24) (6.3%) 3.2114

Note. n = 25 = study group count
11.1% = percent of study group in this category
25.54 = expected count for category
11.3% = percent of national group in this category
.1333 = individual cell chi-square contribution

The total chi-square statistic is 78.74485 which is highly statistically significant with p-value < 0.0001, so the study group distribution is not the same as the national high school teacher group. The cells contributing most to this statistic are I-S-T-P and E-S-T-P which means that the study group demonstrated an unusual number of S-T-P personality types.

Table 3 compares the total group with national MBTI percentages by the eight personality variables. Looking at each row's chi-square statistic, it can be concluded that I, E, N, and S are highly statistically significant with each p-value < 0.0001. This shows that the study group has unusually large numbers of Introverts and iNtuitives and unusually small numbers of Extraverts and

evenly distributed between Introverted and Extraverted and between iNtuition and Sensing while the national group was three-fourths Extraverted and three-fourths Sensing.

Table 3 - Study Group vs. National Group with Personality Variables

	STUDY GROUP %	NATIONAL %	INDIVIDUAL X^2
I	49 (n=111)	25 (n=56.5)	52.07
E	51 (n=115)	75 (n=169.5)	17.36
N	52 (n=118)	25 (n=56.5)	65.90
S	48 (n=108)	75 (n=169.5)	21.97
T	52 (n=118)	50 (n=113)	0.2212
F	48 (n=108)	50 (n=113)	0.2212
P	47 (n=106)	50 (n=113)	0.4436
J	53 (n=120)	50 (n=113)	0.4336

The next Table 4 will compare percentages of total study group and certification areas with the general population and high school teacher population in four areas associated with educators. Keirsey and Bates (1984) identified the four temperaments to be Sensing Judgers (SJ), Sensing Perceivers (SP), Intuitive Feelers (NF) and Intuitive thinkers (NT). Clark and Guest (1995) renamed these to be: (a) Stabilizers (SJ) are traditionalists who make up the largest group of teachers, (b) Catalysts (NF) are the second largest group and are self-actualizers who are open to innovation and very participative but are not likely to quickly change, (c) Visionary (NT) make up only 10 to 16 percent of teachers and are leaders of dynamic change, and (d) Troubleshooters (SP) are free and impulsive and make up 7 to 13 percent of teachers. In Table 4 is also displayed for the academic disciplines (mathematics and science, English and foreign language, and social studies),

the observed counts, expected counts, and individual cell contributions to the chi-square statistic.

Table 4- Percentages by Temperament and Discipline

POPULATION	SJ	NF	NT	SP
General	38%	12%	12%	38%
Sec. Teacher	42%	34%	16%	7%
STUDY GROUP				
Total n=226	33%	16%	20%	32%
Math or Sci n=44	36% n=16 E=15.05 0.0599	25% n=11 E=15.05 1.089	21% n=9 E=6.97 0.5912	18% n=8 E=6.97 0.1522
Eng or Lang n=36	33% n=12 E=12.32 0.0083	44% n=16 E=12.32 1.099	17% n=6 E=5.68 0.0180	6% n=2 E=5.68 2.384
Social Study n=34	32% n=11 E=11.63 0.0341	35% n=12 E=11.63 0.0118	9% n=3 E=5.37 1.0459	24% n=8 E=5.37 1.2880

Note. 36% = percent of study group with math or science certification.
n=16 = study count in math or science
E=15.05 = expected count in math or science
0.0599 = individual cell chi-square contribution

The chi-square statistic is used to determine if there is a relationship between academic discipline and personality type. The statistic was not statistically significant; therefore, we cannot say there is a relationship between discipline and teacher personality type for this study. Interestingly, the total percentages in the study group were closer to the national percentages than to the national secondary teacher percentages. The study group had about half the percentage of NF's and about four times the percentage of SP's than the secondary national group.

Discussion and Conclusion

The results of the present study are useful to educational researchers and instructors of preservice teachers since these results agree with some prior research and disagree with some. Educational researchers (Clark & Guest, 1995; Keirsey & Bates, 1984) have identified four two-variable combinations which are associated with educators. These four combinations are: Stabilizers (SJ), Catalysts (NF), Visionary (NT), and Troubleshooters (SP). Our study group had percentages similar to the general population but not to secondary teachers determined by Clark and Guest (1995). We had an usually large percentage of SP's (32% compared to 7%) so maybe there will not be much trouble with these future teachers around but they will be free spirits. We had more NT's so we may have some future dynamic leaders. The SP and NT type students potentially offer teachers who can understand their students needs and respond to them.

When the study group was classified by the 16 personality type combinations, it was found that the study group did not have an even distribution. The personality types which contributed most to the variance were ENFP, ESTJ, ISTJ, and ISFP. Myers and McCaully (1992) reported that the percentage of ISTJ and ENFP stay constant at all levels of teaching which seems to disagree with some subsequent research and our study. ESFJ's are the most frequently appearing in elementary school teachers which agrees with our study since we had a small group of ESFJ's. Next, the personality types for the study were compared to a national group of secondary teachers. Our study

group's distribution was statistically different from the national group. The two cells which contributed most to the variance were ISTP and ESTP. It is interesting to note that we have an usually large number of STP types. Sensing types explore with their senses, accept realities and work with what is given them. Thinkers analyze the facts and come to a logical conclusion. Perceivers try to understand life rather than control it and are open to new experiences.

The study group percentages for the eight personality variables (I, E, N, S, T, F, P, and J) were compared to the national percentages using a chi-square test. The first four variables (I, E, N, and S) were found to be statistically significantly different from the national percentages. This shows that the study group had unusually large numbers of Introverts and iNtuitives and unusually small numbers of Extraverts and Sensors. Marso and Pigge (1991) found that student teachers who prefer intuition are evaluated higher by their supervising teachers. Myers and McCaulley (1992) found that there were more Extraverts teaching at the lower grade levels which agree with our study. The other four variables (T, F, P, and J) were evenly distributed at approximately 50% which is similar to the national group.

The last analysis was to determine if there was a relationship between academic certification area and personality type. The statistic was not significant; therefore, we cannot say there is a relationship for that part of the study. The SP group did contribute the most to the statistic since we have an usually high number of SP students. We will continue to analyze preservice teacher personality types and study implications for instruction and trends.

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