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Myers-Briggs Type Indicator Personality

Characteristics of Beginning Trade and Industrial and Health Occupations Education Secondary
Teachers

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Abstract

The purpose of this study was to examine personality type preference profiles of health occupations education and trade and industrial secondary education teachers. The Myers-Briggs Type Indicator (MBTI) was used to gather personal data and categorize personality type profiles. The four major MBTI type components were: ESTJ, ESFJ, ISFJ, and ISTJ. A majority of the trade and industrial education teachers had a preference for ESTJ personality type. There was an even distribution of MBTI personality types (ESTJ, ESFJ, ISFJ, and ISTJ) among health occupations education teachers. Both health occupations education and trade and industrial teachers were more likely to have a preference for sensing and judging. Respondents with an associate degree and a master's degree reported a preference for thinking.

Introduction and Theoretical Framework

It is universally accepted that the teacher is the most important component of education. School improvement efforts and/or educational reform will most likely not happen until effective teachers are regarded as the most important entity. The current emphasis on educational reform in our nation's schools should be forcing us to examine the personality of effective teachers (Sikora, 1997). Personality is defined as all the relatively stable and distinctive styles of thought, behavior, and emotional responses that characterize a person's ability to adapt to surrounding circumstances (Maddis, 1976; Mischel, 1976). For the purpose of the study, personality type is defined as an identifiable pattern in the manner that an individual prefers to perceive and make judgment.

Personality Type Theory of Carl Jung

The Swiss psychologist, Carl Jung centered his theory of personality as a complex network of interacting systems that strive toward eventual harmony with oneself and one's environment. He believed that human behaviors, through seemingly random and unorganized, are really quite consistent and orderly, and are a function of different ways in which people prefer to use their perception and judgment (Myers, 1962). Perception was understood to be the ways people become aware of the environment, other people and occurrences, while judgment was considered the method employed by people to form conclusions about experiences perceived (Jung, 1933a).

According to Jung, both perception and judgment consist of two contrasting functions. The two functions of perception are sensing (S), which reflects the use of five senses to establish what exists, and intuition (N), the use of the unconscious as a way of indirectly perceiving through insight and associations that exists. The two functions are thinking (T), a decision making process utilizing an analytical, objective consideration of the situation, and feeling (F), a decision making process which includes heavy consideration to the personal or social values and merits of the situation.

Jung (1933b) further identified two complementary attitudes or orientations toward life. These he described as extraversion (E) and introversion (I). Extraversion is an attitude in which the person is oriented to the outer world of people and things. Introversion is an attitude in which the person is drawn to the inner world of thoughts and ideas. Jung believed that the attitudes and the functions combine to affect how individuals relate to the world and to other people. (McClain, 1987).

Studies have shown that individuals identified as having particular combinations of these functions, (E) or (I); (S) or (N); (T) or (F); exhibit predictable preferences toward certain occupational or academic choices (Kuder, 1968; Campbell & Hansen, 1981; Barrett, Sorensen & Hartung, 1985).

The Work of Myers and Briggs

Because of the implied importance of judgment and perception in the extensive writings of C. G. Jung, Isabell Briggs-Myers and Katherine Briggs added these two preferences in the development of the Myers-Briggs Type Indicator (MBTI) (Myers, 1962). As a fourth index of the MBTI, the two preferences of perception (P) and judgment (J) help to explain certain identifiable behaviors and attitudes toward the surrounding world (Myers & McCaulley, 1985). Individuals possessing a preference for judgment are concerned with making decisions either through logical, objective analysis (thinking-judgment), or through impassioned subjective appraisal (feeling-judgment) (Myers, 1980).

In all, there are sixteen type variables in the MBTI, each possessing its own unique qualities of personality. An individual's basic preferences can be identified by taking the MBTI. Once established, interpretive data could help promote a more constructive use of the differences among individuals (Kroeger & Thuesen, 1989). Each of the 16 types was written by combining the letters that identified the basic preference from each of the four indices (e.g., ESFJ, INTP).

Purpose and Objectives

The present study was undertaken to develop and examine personality type preference profiles of beginning secondary technical education teachers in West Virginia. Given the potential impact which personality type has on teacher effectiveness and educational success of learners, it is important that

baseline data be developed and maintained about the personality preferences of beginning technical education teachers. Specific research objectives for this study included:

1. To determine personality preferences of beginning trade and industrial and health occupations education secondary teachers using the Myers-Briggs Type Indicator (MBTI).
2. To determine mean preference scores for MBTI preferences based on selected variables (gender, educational attainment, age, and vocational content area).

Research Methodology

The target population for this study consisted of all beginning secondary technical education teachers ($N = 34$) employed by the West Virginia Department of Education during the 1998-1999 school year. Participants' names were obtained from three regional teacher educators. Vocational content areas included in the study were health occupations and trade and industrial education teachers. The nature of this study required the entire population of interest be included in the sample.

True (1989) recommends the use of nonprobability saturation sampling when the population is very small or when it is essential to include everyone—as it is for the national census. However, caution is warranted in generalizing the results beyond the accessible sample.

Instrumentation

The MBTI Form G was used to determine each teacher's personality type preference. The MBTI is a 126-item forced choice questionnaire designed to elicit an individual's preference on four dichotomous scales or dimensions which allow separate indices for the four basic preferences of extraversion (E) or introversion (I), sensing (S) or intuition (N), thinking (T) or feeling (F), profile and judging (J) or Perception (P) (Foster & Horner, 1988; Myers & McCauley, 1985; Plessman, 1985; Schultz, 1985; Vogt & Holder, 1988). The four personality dimensions or indices based on Jung's theory of attitude (extraversion and introversion) and functions (perception and judgment are (Foster & Horner, 1998; Keirsey & Bates, 1984; Lawrence, 1982; Myers & McCauley, 1985):

1. EI Index: **Extraversion (E)** Active involvement with people as a source of energy. Perception and judgment are focused on people and things. **Introversion (I)** A preference for solitude to recover energy. Perceptions and judgment are focused on concepts and ideas. Seventy-five percent of the general population prefer an extraverted orientation, while 25% prefer an introverted one.
2. SN Index: **Sensing (S)** Receiving or gathering information directly through use of the five senses. **Intuition (I)** Perceiving things indirectly, through hunches or a “sixth sense.” Represents the unconscious incorporation of ideas or associations with outside perceptions. Three-fourths (75%) of the general population report a sensing preference, while the remaining one-fourth (25%) prefer intuition as a means of perceiving and gathering information.
3. TF Index: **Thinking (T)** Drawing conclusions based on a logical process using impersonal and objective facts. **Feeling (F)** Drawing conclusions based on personal values and subjective observations. The general population is divided fairly evenly between a preference for thinking (50%) and feeling (50%).
4. JP Index: **Judgment (J)** A preference to live in a structured, orderly, and planned fashion. **Perception (P)** A preference to live in a more spontaneous and flexible fashion. Fifty percent of the general population report to be judging, while the other half report a preference for perception.

The judgment-perception index was not explicitly identified by Jung. Rather, this type scale was developed by Myers and Briggs to explain and identify an individual’s dominant and auxiliary functions (Plessman, 1985).

The JP reference has two uses. First, it describes identifiable attitudes and behaviors to the outside world. Second, it is used, in conjunction with EI, to identify which of the two preferred functions is the leading or dominant function and which is the auxiliary.

The recognition and development of facts about the JP junction are a major contribution of Briggs and Myers to the theory of psychological types. (Myers & McCaulley, 1985, p.13)

Validity. Since the MBTI was designed to implement Jung's theory of psychological type, its validation has generally been in the form of demonstrating relationships and outcomes predicted by theory.

Construct validity of the MBTI has been investigated by several researchers. Carlyn (1977) reports that numerous correlational studies indicate that "... a wealth of circumstantial evidence has been gathered and results appear to be quite consistent with Jungian Theory" (p. 469).

Myers and McCaulley (1985) give detailed results of research completed on each of the four dichotomous indices included on the MBTI. Significant correlations ($p = .01$) with other scales reflecting behavioral manifestations were present which tend to confirm construct validity. Willis (1984) best summarizes the studies on construct validity by stating that, "Examination of data on individual MBTI scales demonstrates the behavior and attitudes which the MBTI appears to tap, suggesting a strong argument for construct validity" (p. 488).

Content validity has been tested on numerous personality measures including SAT performance, selected Strong Vocational Interest Blank Scales, and the Edwards Personal Preference Schedule. Through factor analysis, using these instruments, the MBTI has been found to be consistent with theoretical predictions (Myers & McCaulley, 1985).

Correlations ranging from the .50's to the .70's with other similar construct measures have been found through comparative testing (McCaulley, 1981).

Reliability. Internal consistency reliability estimates have been computed on type categories using split half scores. Using three separate studies from the Center for Applications of Psychological Type (CAPT) data base, items were paired which most resembled each other and correlate most significantly. Correlations ranging from .73 to .92 were found to exist consistently throughout age groups and from .43 to .94 on samples differing by education and achievements. Myers and McCaulley (1985) concluded that "the reliabilities are consistent with those of other personality instruments, many of which have longer scales than the MBTI" (p. 165). Reliability tends to remain stable up to twenty-five omissions for Form G.

Test-retest reliability estimates of type categories have been examined by several researchers. Correlations of continuous scores from ten studies with intervals from four to five weeks produced reliability coefficients of .77 to .93 for EI, .78 to .92 for SN, .56 to .91 for TF, and .63 to .89 for JP (Myers & McCaulley, 1985).

Carskadon (1979) reported test-retest reliability scores on Form G at seven weeks intervals for male and female students. The following scores were indicated for each scale: EI, .79 for males, .86 for females; SN, .84 for males, .87 for females; TF, .48 for males, .87 for females; JP, .63 for males, .80 for females.

Data Collection

The instrument (MBTI) was administered during the 1998 Summer Workshop for Beginning Technical Education Teachers. Three regional teacher educators and the department chair in technical education from West Virginia University Institute of Technology were responsible for administration of the MBTI. Results were returned along with an interpretation of individual participant results provided by a certified MBTI interpreter.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS Version 8.0 for Windows). Descriptive statistics were used to summarize the data.

Results

Table 1 depicts categorical information about the respondents. The respondents included more male (61.8%) beginning technical education teachers than female (38.2%). From this sample of beginning technical education teachers, slightly more than one-fifth (23.6%) had completed a bachelor's degree and higher. Teachers with an associate degree or less represented slightly more than three-fourths (76.4%) of the teachers.

Ratio data regarding the respondents was reported in Table 2. The mean age of respondents was 40.08 ($SD = 7.01$). Beginning technical education teachers in this study indicated that they had some work experience prior to teaching with a mean of 17.41 years ($SD = 8.63$).

Table 3 displays the distribution of beginning technical education teachers from the present sample among 10 of the 16 MBTI personality types. The four major MBTI type components were: ESTJ (32%), ESFJ (18%), ISFJ (12%), and ISTJ (9%). A majority (over 30%) of the trade and industrial education teachers had a preference for ESTJ type personality. There was an even distribution of MBTI personality types (ESTJ, ESFJ, ISFJ, and ISTJ) among health occupations education teachers.

Variables of Interest

Table 4 indicates clarity of preferences as perceived by respondents for selected variables. Male respondents had a “clear preference” ($M = 23.19 - 27.19$) for sensing and judging respectively. Female respondents also reported a “clear preference” for sensing and judging (30.84 and 27.00). Respondents within the 50 – 59 age bracket had a “clear” to almost “very clear preference” for judging ($M = 40.00$) as compared to the other three MBTI indices (EI, SN, and TF). Recipients with an associate degree and a master’s degree reported a “moderate” to “very clear preference” for thinking ($M = 19.50 - 41.00$).

Discussion and Conclusions

The four MBTI personality types – ESTJ, ESFJ, ISFJ, and ISTJ – accounted for over two-thirds of the respondents of beginning technical education teachers. Individuals with these psychological types are often seen as practical and realistic. They tend to solve problems by

relying on past concrete experiences and prefer organization and structure. Preference for six MBTI types (ENTP, INTP, ISTP, ENFJ, ENTJ, and ESTP) was consistently low. A large proportion of trade and industrial education teachers reported a preference for extraversion-sensing-thinking-judging (ESTJ). These results were consistent with findings from previous studies (Barrett, 1991, McClain & Horner, 1988; Sikora, 1997).

Trade and industrial education teachers were more likely to have characteristics of ESTJs. This finding suggests that trade and industrial education teachers in this study were likely to be:

- Practical and realistic; and
- Systematic and pragmatic.

Health occupations education teachers had an even distribution of MBTI personality types (ESTJ, ESFJ, ISFJ, and ISTJ). This finding suggests that health education teachers in this study were likely to be:

- Practical and realistic;
- Warm, sympathetic, and helpful;
- Personable, cooperative, and tactful;
- Concrete and specific; and
- Logical and analytical.

In this study, only 22% of the health occupations education teachers had a preference for ESTJ. This finding appears to be somewhat similar to a study reported by Hicks and Gable (1998/1999). In their study, (Hicks and Gable, 1998/1999) health occupations education teachers only represented a mere 25.4% of ESTJs. Other studies reported that persons who chose teaching as a career usually have a preference for ESFJ (Myers, 1962; Lawrence, 1982; Myers & McCaulley, 1985). However, only 22% of this study's health occupations education teachers revealed a preference for ESFJ. Hicks and Gable (1998/1999) reported that only 16.9% of the health occupations education teachers in their study preferred ESFJ. Myers found

in her nursing study that Sensing, Feeling, and Judging individuals were most interested in nursing.

Both health occupations education and trade and industrial teachers were more likely to have a preference for SN and JP indices. According to Myers and McCaulley (1985), the SN index is designed to reflect a person's preference between two opposite ways of perceiving; one may rely primarily upon the process of sensing (S), which reports observable facts or happenings through one or more of the five senses; or one may rely more upon the less obvious process of intuition (N), which reports meanings, relationships and/or possibilities that have been worked out beyond the reach of the conscious mind.

The findings on the JP index is consistent with Myers and McCaulley's theory. Myers and McCaulley (1985) reported that the JP index is designed to describe the process a person uses primarily in dealing with the outer world. A person who prefers judgment (J) has a reported a preference for using a judgment process (either thinking or feeling) for dealing with the outer world. A person who prefers perception (P) has reported a preference for using a perceptive process (either S or N) for dealing with the outer world.

Health occupations education and trade and industrial teachers were more likely to have a preference for thinking. This finding suggests that the TF index affects choices as to which kind of judgment to trust when one needs or wishes to make a decision (Myers & McCaulley, 1985).

Recommendations

1. A replication of this study should be conducted with a larger sample size.
2. Teacher educators should provide prospective beginning secondary technical education teachers with ample opportunity to use all types of learning strategies and to strengthen those types which are not normally preferred.
3. Inservice training programs on personality type should be developed to assist beginning secondary technical education teachers in understanding their own personality preferences,

and the preferences of their students. Such an understanding could allow teachers to improve their instructional competencies which could in turn improve the learning outcomes of their students.

4. Further research should be done to determine if occupational experience have any influence on personality type population frequencies within trade and industrial and health occupations education profession.

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Table 1.

Categorical Demographic Information (N = 34)

Variable of Interest	Frequency	Percent
Gender:		
Female	13	38.2
Male	<u>21</u>	<u>61.8</u>
	34	100.0
Highest Educational Level:		
High School Graduate	6	17.6
Trade/Technical/Training	4	11.8
Some College (no degree)	8	23.5
Associate Degree	8	23.5
Bachelor's Degree	6	17.6
Master's Degree	<u>2</u>	<u>6.0</u>
	34	100.0
Occupational Career Field (as classified by MBTI):		
(before entering teaching)		
Architecture/Engineering	4	11.8
Art/Design Music	2	6.0
Business	1	3.0
Science	3	8.8
Medicine/Health Services	9	26.2
Machine Trade	6	17.6
Structural Work	7	20.6
Processing	<u>2</u>	<u>6.0</u>
	34	100.0
Level of Job Satisfaction:		
(before entering teaching)		
Very Satisfied	23	67.6
Somewhat Satisfied	10	29.4
Somewhat Dissatisfied	<u>1</u>	<u>3.0</u>
	34	100.0

Table 2.

Ratio Demographic Information (N = 34)

Variable of Interest	Mean	Std. Dev.
Age (years) Range 27-56	40.08	7.01
Years employed (in pervious occupation) Range 5-40	17.41	8.63

Table 3.

Distribution of Selected Beginning Technical Education Teachers by MBTI Type and Content Area

MBTI Type	Teachers by Content Area					
	All Teachers (N = 34)		Health Occp. Edu. (n = 9)		Trade and Ind. Edu. n = 25	
	N	%	n	%	n	%
ESTJ	11	(32)	2	(22)	9	(36)
ESFJ	6	(18)	2	(22)	4	(16)
ISFJ	4	(12)	2	(22)	2	(8)
ISTJ	3	(9)	2	(22)	1	(4)
ENTP	2	(6)	0	(0)	2	(8)
INTP	2	(6)	0	(0)	2	(8)
ISTP	2	(6)	0	(0)	2	(8)
ENFJ	1	(3)	1	(11)	0	(0)
ENTJ	1	(3)	0	(0)	1	(4)
ESTP	1	(3)	0	(0)	1	(4)

Note. ^a Percentages are rounded to the nearest full point; therefore, totals may not equal 100 percent.

Table 4.

Continuous Scores and Distribution of MBTI^a Preferences as Perceived by Participants for Selected Variables (N = 34)

Variable of Interest	n	Preference for EI	Preference for SN	Preference for TF	Preference for JP
		<u>M</u> <u>SD</u>	<u>M</u> <u>SD</u>	<u>M</u> <u>SD</u>	<u>M</u> <u>SD</u>
Gender:					
Male	21	<u>19.00</u> 12.09	<u>23.19</u> 17.96	<u>19.57</u> 12.65	<u>27.19</u> 15.43
Female	13	<u>16.23</u> 9.67	<u>30.84</u> 14.31	<u>17.46</u> 16.31	<u>27.00</u> 14.09
Age:					
25-29	1	<u>37.00</u> 0.00	<u>33.00</u> 0.00	<u>37.00</u> 0.00	<u>35.00</u> 0.00
30-39	17	<u>14.17</u> 10.63	<u>23.35</u> 17.61	<u>18.64</u> 13.95	<u>25.70</u> 15.74
40-49	12	<u>19.83</u> 10.17	<u>25.33</u> 16.37	<u>20.33</u> 14.80	<u>24.16</u> 14.15
50-59	4	<u>23.50</u> 11.47	<u>38.50</u> 15.00	<u>10.00</u> 8.86	<u>40.00</u> 6.21
Education:					
High school grad.	6	<u>23.66</u> 12.24	<u>29.00</u> 20.06	<u>17.00</u> 16.54	<u>24.66</u> 9.41
Trade and Technical	4	<u>21.00</u> 13.36	<u>32.50</u> 19.48	<u>24.50</u> 14.17	<u>35.50</u> 5.74
Some college and no degree	8	<u>16.00</u> 11.16	<u>27.75</u> 16.69	<u>12.50</u> 9.18	<u>28.75</u> 19.31
Associate degree	8	<u>11.75</u> 10.95	<u>18.75</u> 17.87	<u>19.50</u> 12.99	<u>19.00</u> 16.42
Bachelor's degree	6	<u>23.33</u> 6.62	<u>24.33</u> 14.06	<u>16.66</u> 12.73	<u>33.00</u> 9.54
Master's degree	2	<u>11.00</u> 8.48	<u>33.00</u> 16.97	<u>41.00</u> 19.80	<u>26.00</u> 24.04
Vocational Content Area:					
Health Occupations Education	9	<u>19.00</u> 10.09	<u>29.66</u> 13.92	<u>13.22</u> 13.32	<u>28.77</u> 13.39
Trade and Industrial Education	25	<u>17.56</u> 11.69	<u>24.84</u> 17.88	<u>20.76</u> 13.89	<u>26.52</u> 15.38
For Entire Population:	34	<u>17.94</u> 11.16	<u>26.11</u> 16.86	<u>18.76</u> 13.95	<u>27.11</u> 14.72

Note. The preference score limits are: slight 1 to 9, moderate 11 to 19, clear 21 to 39, and very clear 41 or higher. The cutoff points were established by Isabel Myers; they should be treated as approximations, not precise division points.

^aMBTI components: EI = Extraversion, Introversion; SN = Sensing, Intuition; TF = Thinking, Feeling; JP = Judging, Perception.