

**Personality Differences Between Navajo and Non-Indian College
Students: Implications for Instruction**
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Personality differences of Navajo college students are compared to those of non-Indian (mostly Caucasian) college students using the Myers-Briggs Type Indicator (MBTI). The data indicate that the majority of Navajo students are classified as introvert, while the majority of non-Indian college students are classified as extrovert. Additionally, the majority of both male and female Navajo students are classified as thinking. This is contrasted to the classification of non-Indian students where males show a similar preference, but females display a preference for feeling. In addition, Navajo students are more homogeneously typed than are non-Indian students. Implications for instructing Navajo students based on MBTI preferences are discussed.

Personality measures of non-Indian college students based on the Myers-Briggs Type Indicator (MBTI) have been identified and the results widely distributed. Based upon these findings a number of studies have been completed that have described the instructional methods most preferred by different types of students. To date, however, there is relatively little data available on Native American college students. The purpose of this paper is to report data on MBTI personality measures (called type preferences) of Navajo college students and to provide some guidelines based on research with non-Indian students as to instructional methods most likely to be preferred.

Methods

The MBTI is a questionnaire composed of forced-choice items and is based on the psychological theory of personality types developed by Jung (1923). This theory proposes that there are four basic dimensions of personality that influence how people perceive, think, feel and behave. Each dimension has two preferences that are polar opposites. An individual is thought to prefer one of these opposites, even though both would be used by all of us. The preferences are listed in Table 1. Form F of the MBTI was used to collect data.

The Navajo students described in this report were enrolled in Freshman and Sophomore level courses in Psychology, Reading, Human Relations, and General Business at the Tsaile Campus of Navajo Community College (NCC) between September 1982 and May 1985. NCC is the designated institution of higher education for the Navajo Nation and is comprised mainly of students who have been raised on the Navajo reservation. Approximately 70 percent of the entering students score below college level on reading, writing, or mathematics and are initially enrolled in at least one developmental studies course. A total of 164 students were sampled (46 male, 118 female). This ratio of male to female reflects the actual enrollment of students at the college.

Data are also described for traditional, non-Indian (mostly white) college students, that is college students of traditional age and academic background (highest grade completed 12-15 and age from 18-24 inclusive). These data are from the Center for Applications of Psychological

Type for MBTI response sheets submitted from March 1978 through December 1982 (Myers & McCaulley, 1985). Data were collected on 15,248 students (5632 male, 9616 female).

Table 1. The four dimensions of the Myers-Briggs Type Indicator (MBTI)

Dimension	Description
Extrovert (E) vs. Introvert (I)	Individuals preferring extroversion are oriented to the outside world of people and things; those preferring introversion are oriented to the inner world of ideas
Sensing (S) vs. Intuition (N)	Individuals preferring sensing tend to focus on details and actual experience; those preferring intuition tend to focus on the meanings and relationships of facts and on possibilities.
Thinking (T) vs. Feeling (F)	Individuals preferring thinking tend to make logical connections between ideas in an objective manner; those preferring feeling tend to focus on personal and group values in a subjective manner.
Judging (J) vs. Perceiving (P)	Individuals preferring judging focus on making decisions, obtaining closure and planning activities; those preferring perceiving focus on obtaining information, being flexible and open to new options.

Results

Navajo and non-Indian college students differ substantially on three of the four dimensions of the MBTI (see Table 2). With respect to the extravert/introvert dimension the majority of Navajo college students are classified as introvert (64.6 percent), while the majority of non-Indian college students are extrovert (57.2 percent). On the sensing/intuition scale the majority of both Navajo and non-Indian students are classified as sensing, although substantially more Navajo students selected this alternative than did non-Indian students (84.1 versus 60.3 percent, respectively). This is especially true for female students (Navajo = 89.0; non-Indian = 61.4 percent). On the thinking/feeling scale both male and female Navajo students are classified as thinking (82.6 and 60.2 percent, respectively). However, only the majority of non-Indian male students are classified as thinking (56.7 percent); the majority of non-Indian female students are classified as feeling (71.9 percent). With respect to the judging/perceiving dimension, the differences are not quite as sizable. The majority of both Navajo and non-Indian students are judging, although the Navajo students are more so (65.9 versus 55.1 percent, respectively).

The effects of these preferences in terms of MBTI types is shown in Table 3. For female Navajo students, four types account for 69.5 percent of the students (i.e., ISTJ = 27.1, ISFJ = 16.1, ISTP = 11.9, and ESTJ = 14.4). These same four types account for only 32.5 percent of female non-Indian students (ISTJ = 6.0, ISFJ = 12.3, ISTP = 6.7, and ESTJ = 7.5). In fact, the female non-Indian students are not nearly so homogeneous as the female Navajo students in that the four types with the largest percentage of students accounts for only 49.3 percent (ESFJ = 16.2, ISFJ = 12.3, ENFP = 12.3, and ESFP = 8.5).

For male Navajo students, three types account for 56.5 percent of the students (ISTJ = 26.1, ISTP = 15.2, and ESTJ = 15.2). As with the female students, the percentage of non-Indian male students accounted for by these same types is approximately half that figure (ISTJ = 10.6,

ISTP = 6.7, and ESTJ = 11.2). Again, the non-Indian male students are not as homogeneous in that only the two types of ESTJ and ISTJ each account for more than 10 percent of the students.

Table 2. Number of Navajo and non-Indian college students in each of the four dimensions of the Myers-Briggs Type Indicator

Dimension	Navajo			Non-Indian	
		N*	%	N*	%
Extrovert	Male	17	37.0	2951	52.4
	Female	41	34.7	5764	59.9
	Total	58	35.4	8715	57.2
Introvert	M	29	63.0	2684	47.6
	F	77	65.3	3852	40.1
	T	106	64.6	6533	42.8
Sensing	M	33	71.7	3289	58.4
	F	205	89.0	5909	61.4
	T	138	84.1	9198	60.3
Intuition	M	13	28.3	2343	41.6
	F	13	11.0	3707	38.6
	T	26	15.9	6050	39.7
Thinking	M	38	82.6	3194	56.7
	F	71	60.2	2699	28.1
	T	100	66.5	5894	38.6
Feeling	M	8	17.4	2438	43.3
	F	47	39.8	6917	71.9
	T	55	33.5	9355	61.4
Judging	M	27	58.7	2873	51.0
	F	81	68.6	5524	57.4
	T	108	65.9	8397	55.1
Perceiving	M	19	41.3	2759	49.0
	F	37	31.4	4092	42.6
	T	56	34.1	6851	44.9

Identifying Preferred Instructional Methods

In a summary of over 30 studies on learning preferences associated with MBTI types, Lawrence (1984) reported that individuals with different MBTI classifications prefer different types of learning activities (see Table 4). For example, introverted students prefer learning situations where they can primarily work individually and time is provided for internal processing, while extroverted students prefer working with a group and having discussions. Sensing students prefer tasks that call for going step-by-step while observing facts and specifics that relate to practical interests. On the other hand, students classified as intuitive prefer tasks that call for imagination and quickness of insight. Thinking students prefer to study objective material that has been logically organized by the teacher, whereas for feeling students, personal relationships and developing a rapport with the teacher are more important. Finally, judging students prefer to work in a steady, orderly way that results in closure or completion of

prescribed tasks, while perceiving students like to follow their impulses and work in a flexible, informal manner.

Table 3. Number of Navajo and non-Indian college students in each of the 16 personality types of the Myers-Briggs Personality Indicator

		Navajo College Students		Non-Indian College Students				Navajo College Students		Non-Indian College Students	
TYPE	SEX	N	%	N	%	TYPE	SEX	N	%	N	%
ISTJ	M	12	26.1	1587	10.6	ESTJ	M	7	15.2	633	11.2
	F	32	27.1	1578	6.0		F	17	14.4	724	7.5
ISFJ	M	1	2.2	353	6.3	ESFJ	M	1	2.2	371	6.6
	F	19	16.1	1179	12.3		F	7	5.9	1558	16.2
ISTP	M	7	15.2	380	6.7	ESTP	M	2	4.3	364	6.5
	F	14	11.9	213	2.2		F	3	2.5	246	2.6
ISFP	M	2	4.3	287	5.1	ESFP	M	1	2.2	304	5.4
	F	6	5.1	590	6.1		F	7	5.9	821	8.5
INTJ	M	3	6.5	243	4.3	ENTJ	M	2	4.3	303	5.4
	F	3	2.5	183	1.9		F	1	0.8	274	2.8
INFJ	M	1	2.2	165	2.9	ENFJ	M	0	0.0	208	3.7
	F	1	0.8	366	3.8		F	1	0.8	662	6.9
INTP	M	3	6.5	327	5.8	ENTP	M	2	4.3	347	6.2
	F	0	0.0	187	1.9		F	1	0.8	294	3.1
INFP	M	0	0.0	329	5.8	ENFP	M	2	4.3	421	7.5
	F	2	1.7	556	5.8		F	4	3.4	1185	12.3

Morgan (1977) provided some suggestions for instructional strategies for different types of students. She stated that ISTJs, ISFJs, ISTPs, and ESTJs tend to be linear learners that prefer a step-by-step approach to instruction. These types also prefer audiovisuals and the kinds of direct experience that would be available in labs and demonstrations. In addition, the IS types prefer to work alone, while the ES types prefer group projects, class reports, and team competition.

Roberts (1982) reported results of community college students' ratings of 13 instructional media by type that expand on the predictions of Morgan (1977). His study showed that ISTJs prefer labs and demonstrations, ISFJs prefer discussions and tutorials, ISTPs prefer demonstrations and labs, while ESTJs prefer lectures, labs, and demonstrations. Significantly, the instructional methods of reading, audio recordings, and field trips were not selected as preferred by any of these types.

Based on the above findings one might predict that IS types would do well in a self-paced computer assisted instruction program. However, an investigation of type preferences for this type of instruction showed that ISTJs, ISFJs, and ISTPs were among the most likely to drop out, although sensing types completing the program tended to do so at a significantly faster pace (Hoffman, Waters, & Berry, 1981). Otis (1972) also found that IS types dislike independent study.

McCaulley and Natter (1980) reported that IS students prefer using films or audiovisual aids and that ST students prefer watching television and reporting to a class on an assigned subject. ST students also report they like courses that are focused primarily on giving information.

Table 4. Learning preferences associated with dimensions of MBTI type

Extraversion	Introversion
<ul style="list-style-type: none"> • talking, discussion • psychomotor activity • working with a group 	<ul style="list-style-type: none"> • reading/verbal reasoning • time for internal processing • working individually
Sensing	Intuition
<ul style="list-style-type: none"> • tasks that call for carefulness, thoroughness and soundness of understanding • going step-by-step in guided activity • tasks that call for observing specifics • tasks that call for memory facts • demonstrations and labs • practical interests 	<ul style="list-style-type: none"> • tasks that call for quickness of insight and in seeing relationships • finding own way in new material • tasks that call for grasping general concepts • tasks that call for imagination • reading • intellectual interests (independent of intelligence)
Thinking	Feeling
<ul style="list-style-type: none"> • logical organization of teacher • objective material to study 	<ul style="list-style-type: none"> • personal rapport with teacher • learning through personal relationships
Judging	Perceiving
<ul style="list-style-type: none"> • work in steady, orderly way • formalized instruction • prescribed tasks • drive toward closure, completion 	<ul style="list-style-type: none"> • work in flexible way, following impulses • informal problem solving • discovery tasks • managing emerging problems

Summary and Conclusions

This paper has presented data on personality measures (MBTI type preferences) of Navajo college students who have been raised on the Navajo reservation. The results show that these Navajo students are substantially more introverted, sensing, and thinking than non-Indian college students and slightly more judging. It is especially significant that both male and female Navajo students prefer thinking, whereas non-Indian female students are more likely classified as feeling. In fact, a higher percentage of Navajo female students selected thinking than did non-Indian male students. The results also show that Navajo college students are much more homogeneous than are non-Indian students.

A summary of results from a variety of studies with non-Indian students suggests that Navajo students will prefer an instructional format that that might be called "enhanced lecture"; that is, a format that is primarily lecture with well-integrated use of audiovisual materials such as overhead transparencies, videotapes, films, and filmstrips. The lectures should be supplemented by labs and demonstrations for the majority of students (who are introverts) and small-group discussions for the minority of students (who are extroverts). The material to be learned should be organized by the teacher; the material should be presented in a step-by-step fashion and focus

on facts and details that relate to practical interests. Information should be presented in small units and closure on one set of objectives should be achieved before introducing new objectives.

Navajo students should also be provided with ample time to internalize questions before they are expected to respond. Incorporating writing assignments into the learning process (such as having students keep a journal (Bond & Magistrale, 1987) or write out their answers before answering) or extending the wait-time between asking a question and expecting an answer (Rowe, 1974) are some instructional methods that could be used to accomplish this.

Finally, although most Navajo students may prefer to work individually they probably will not relate well to self-paced individualized instruction. Rather they will likely respond better to situations where a teacher is setting goals, checking progress, and providing feedback on task completion. Computer assisted instruction, where information is normally presented in a logical, step-by-step fashion, may work well if it is not self-paced.

A number of issues need to be addressed in applying these findings. There is some controversy surrounding the advisability of matching teaching styles and learning styles (e.g., Dunn & Dunn, 1979; Gephart, Strother, & Duckett, 1980). Central to this controversy is whose responsibility is it to change: Should teachers change to accommodate students or should students change to accommodate teachers? An additional question is: Should students be taught using their preferred learning style or should students be encouraged to develop skills associated with non-preferred learning styles? Perhaps one way to address these questions is to ask another: Is the student presently learning successfully? For students who are not currently demonstrating successful achievement, such as many Native American and other minority students, it might be reasonable to ask teachers to be as flexible and adaptable as possible in addressing student needs and to specifically teach to student strengths. On the other hand, if students are being successful, then one might challenge students to develop non-preferred learning strategies.

A second issue to consider is the generalizability of these data. Are the present findings applicable only to college-level Navajo students who grew up on the reservation or can inferences be drawn that are applicable to non-reservation Navajo students or to Navajo students at high schools or even junior high schools on the reservation. One might expect that Navajo students who grow up in daily contact with the majority culture (that is, students who grow up off the reservation) will not show the same homogeneity of personality type as students in this study. Therefore, the findings of this study may be less appropriate when designing instruction for those students. However, data for approximately 30 Navajo students in reservation schools at the junior and high school level suggest that the relative percentages of the personality types at these levels is the similar to the Navajo college students in this study with the exception that there may be a slightly higher percentage of lower-level students who would be classified as ISTP. Therefore, the basic recommendations for teachers at the junior and senior high school levels would likely be very similar. There is certainly a need to gather additional data to corroborate these initial results. Because of language difficulties of students at the junior and senior high school levels it may be best to use the newly developed children's form of the MBTI when doing so.

In any case, the findings of this study should be implemented carefully. Not all classes will be composed of the same type of students and not all classes will conform to the "norm". For example, there are documented differences in personality types of non-Indian college students between science majors and art majors and one can expect to see similar differences among Navajo students. Rather these results and accompanying suggestions for teaching strategies should be considered as a starting point for considering how Navajo students might be

similar to or different from non-Indian students in terms of personality, preferred learning style, and preferred teaching methods.

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