

## DOCUMENT RESUME

ED 395 907

SP 036 706

AUTHOR Herbster, Douglas L.; And Others  
 TITLE Comparing University Students and Community College Students Learning Styles and Myers-Briggs Type Indicator (MBTI) Preferences.  
 PUB DATE Feb 96  
 NOTE 11p.; Paper presented at the Annual Meeting of the Association of Teacher Educators (St. Louis, MO, February 24-28, 1996).  
 PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.  
 DESCRIPTORS \*Cognitive Style; College Students; Community Colleges; Comparative Analysis; Higher Education; \*Learning Strategies; Liberal Arts; Measures (Individuals); \*Personality Assessment; \*Personality Measures; Physical Education; Predictive Validity; Predictor Variables; \*Preservice Teacher Education; Science Education; Secondary Education; Social Studies

IDENTIFIERS \*Myers Briggs Type Indicator; \*Perceptual Preference; Preservice Teachers

## ABSTRACT

This document reports on a study to determine if there is a pattern between specific learning styles and Myers-Briggs Type Indicator preferences. The learning style inventory used for the study, "The Teaching and Learning Styles Survey for Adolescents (TLC)," is based on Jungian style preferences--thinker, feeler, sensor, and intuitor--each of which has distinctive characteristics that can be translated into behavior and perceptual preferences. The Myers Briggs Type Indicator (MBTI) is a personality assessment based on four aspects of human personality: how people interact with the world and direct their energy--extrovert vs. introvert; the kind of information naturally noticed--sensing vs. intuition; how decisions are made--thinking vs. feeling; and whether one prefers to live in a more structured way (making decisions) or in a more spontaneous way (taking in information)--judging vs. perceiving. The TLC inventory and the MBTI were administered to 71 community college science students and 119 teacher education students at a four-year university who were preparing to teach a variety of subjects on the secondary level. Analysis of the scores for both groups revealed that the TLC preference was predominantly thinker, and the MBTI profile of the majority of students is introvert, sensing, thinking, and judging. TLC and MBTI preferences are detailed for students in social sciences, mathematics, English, foreign languages, music, and physical education. The findings indicate that there are patterns between different areas of the TLC and the Myers-Briggs. Based on the study results, the recommendation is made that teachers at all levels should give a variety of inventories to their students to determine learning styles. (ND)

COMPARING UNIVERSITY STUDENTS AND  
COMMUNITY COLLEGE STUDENTS LEARNING STYLES  
AND MYERS-BRIGGS TYPE INDICATOR (MBTI) PREFERENCES

Douglas L. Herbster, Ed. D.  
Professor of Education  
Montana State University  
Bozeman, Montana 59717

Elsa Price, Ed. D.  
Science Department  
Wallace College  
Dothan, Alabama 36303

Virginia R. Johnson, Ed. D.  
School of Education  
University of Alaska  
Anchorage, Alaska 99508

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND  
DISSEMINATE THIS MATERIAL  
HAS BEEN GRANTED BY

*D. Herbster*

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)

Paper presented at the Association of Teacher Educators' Annual Meeting, St. Louis, Missouri, February, 1996.

COMPARING UNIVERSITY STUDENTS AND  
COMMUNITY COLLEGE STUDENTS LEARNING STYLES  
AND MYERS-BRIGGS TYPE INDICATOR (MBTI) PREFERENCES

This study in testing students in learning styles and Myers-Briggs Type Indicator (MBTI) was conducted in a four-year college in Montana and a two-year community college in Alabama. We were interested in testing to determine if there is a pattern between specific learning styles and Myers-Briggs Type Indicator preferences.

One of the accepted concepts in education today is the importance of learning styles. There are many different learning styles inventories administered to students and teachers across the nation. Much has been written about this concept. The specific learning style we have chosen to use for the study was one which was originated by Virginia Johnson, Ed.D., Professor of Secondary Education from the University of Alaska at Anchorage. She has used this instrument extensively.

Following is her own description of Dr. Johnson's learning style.

Survey Instrument

Because no adequate survey based on the theories of Carl Jung existed for adolescents, The Thinking and Learning Styles for Adolescents (TLC) was developed in 1982, and revised and updated in 1992. The survey was tested and revised based on

student responses and reactions to the survey items. The first form of the survey was used to study seventh and eighth grade students' responses to different instructional methods in science (1986). A second study was conducted to determine culture and gender differences in seventh and eighth grade students (1988).

A twenty-four item self-report instrument, The Thinking and Learning Styles Survey for Adolescents, (TLC), (Johnson, 1988, 1992) identifies students' Jungian style preferences. These styles, Thinker, Feeler, Sensor, and Intuitor each have distinctive characteristics that can be translated into behavior and perceptual preferences. There is a high correlation of the description of the Jungian styles and the neuropsychologist. In Frames of Mind: The Theory of Multiple Intelligences, Howard Gardner proposed and described seven mathematical, kinesthetic, musical and two personal intelligences: inter-personal and intra-personal. With one exception, musical intelligence, all of the other intelligences match the descriptions of one of the Jungian characteristics and behaviors which, combined with other information on development and potential intelligence, can be used to predict thinking preferences and classroom behavior and instructional needs.

On the assumption that individuals will exhibit the behaviors of the styles they choose and avoid those that they don't choose, a student's behavior and learning styles can be predicted from his/her survey scores.

### Description of Styles:

- Thinker:** logical, sequential, rule oriented  
**Indicated intelligences:**  
 logical/mathematical  
 transformational linguistic
- Feeler:** verbal, socially interactive, sensitive  
**Indicated intelligences:**  
 expressive linguistics  
 interpersonal-social
- Sensor:** action, experiential learner, competitive  
**Indicated intelligences**  
 kinesthetic-fine and gross motor
- Intuitior:** curious, wants to know why, uses mental images  
**Intelligences**  
 spatial  
 intra-personal-introspective

### Description of the Myers-Briggs Type Indicator

The Type system of personality assessment is based on four basic aspects of human personality; how we interact with the world and where we direct our energy; the kind of information we naturally notice; how we make decisions; and whether we prefer to live in a more structured way (making decisions) or in a more spontaneous way (taking in information). We call these aspects of human personality dimensions because each one can be pictured as a continuum between opposite extremes, like this:

How we interact with the world and where we direct our energy

(E) Extraversion \_\_\_\_\_ Introversion (I)

The kind of information we naturally notice

(S) Sensing \_\_\_\_\_ Intuition (N)

How we make decisions

(T) Thinking \_\_\_\_\_ Feeling (F)

Whether we prefer to live in a more structured way (making decisions) or in a more spontaneous way (taking in information)

(J) Judging \_\_\_\_\_ Perceiving (P)

Simple Definition of Each Term of the Myers Briggs Survey

- (E) Extroverts. Prefer the outer world.
- (I) Introverts. Prefer the interworld.
- (S) Sensing. Gathering data by means of the five senses.
- (N) Intuitive. Focuses on implications and inferences.
- (T) Thinker. Uses logic to make decisions.
- (F) Feeler. Makes decisions on what they perceive correct.
- (J) Judging. Live in an orderly world.
- (P) Perceiving. Live in a spontaneous or flexible world.

Results of the survey

Dr. Elsa Price surveyed and administered the TLS inventory and the Myers Briggs inventory to 71 students. These students were primarily science students. This will probably explain that most of these students scored highest in the thinker category.

Dr. Price gave the inventories to 71 students at a community college. Since Dr. Price's responsibility is working with students whose emphasis is in science, we classified all of these students as science students. No distinction was made to the specific instances or specialty of science. Dr. Herbster administered the inventories to 119 secondary education students at a four-year university. They were preparing to teach social studies, English, foreign language, music, and physical education. Following is the summary of the scoring of both community college students and four-year university students.

## Code for Learning Style (TLC) Inventory:

TH = Thinker  
 F = Feeler  
 S = Sensor  
 I = Intuitor

## Code for Myers Briggs (MBTI) Inventory:

E = Extroverts  
 I = Introverts  
 S = Sensing  
 N = Intuitive  
 T = Thinker  
 F = Feeler  
 J = Judging  
 P = Perceiving

## Community College N = 71

		E	I	S	N	T	F	J	P
T	62	24	38	50	12	49	13	47	15
F	3	2	1	1	2	0	3	0	3
S	2	2	0	2	0	1	1	1	1
I	4	3	1	1	3	1	3	0	4

## University N = 119

		E	I	S	N	T	F	J	P
T	44	14	30	29	15	33	11	28	16
F	38	30	8	26	12	6	32	17	21
S	10	7	3	9	1	7	3	7	3
I	27	17	10	6	21	5	22	9	18

		E	I	S	N	T	F	J	P
SOCIAL STUDIES N = 25									
T	6	2	4	4	2	4	2	4	2
F	10	8	2	7	3	1	9	2	8
S	1	1	0	1	0	1	0	1	0
I	8	4	4	2	6	2	6	3	5
MATH N = 16									
T	10	3	7	6	4	8	2	7	3
F	2	1	1	2	0	0	2	0	2
S	3	2	1	2	1	3	0	1	2
I	1	1	0	0	1	0	1	0	1
ENGLISH N = 25									
T	5	2	3	4	1	3	2	4	1
F	11	7	4	8	3	2	9	4	7
S	1	1	0	1	0	1	0	1	0
I	8	6	2	3	5	3	5	2	6
FOREIGN LANGUAGE N = 10									
T	5	2	3	4	1	4	1	3	2
F	1	1	0	1	0	0	1	0	1
S	1	1	0	1	0	1	0	1	0
I	3	2	1	1	2	0	3	0	3
GENERAL SCIENCE N = 21									
T	11	3	8	7	4	9	2	8	3
F	7	5	2	4	3	2	5	1	6
S	1	1	0	1	0	1	0	1	0
I	2	2	0	0	2	0	2	0	2
MUSIC N = 9									
T	2	0	2	1	1	2	0	2	0
F	4	3	1	1	3	0	4	1	3
S	1	0	1	1	0	1	0	0	1
I	2	1	1	0	2	0	2	0	2
PHYSICAL EDUCATION N = 15									
T	5	2	3	3	2	3	2	4	1
F	6	4	2	2	4	0	6	2	4
S	2	1	1	2	0	0	2	0	2
I	2	1	1	0	2	0	2	0	2



### Findings.

1. In both the Community College science students and the university science students, learning style (TLC) was predominantly thinker. In the Myers-Briggs (MBTI), the majority of students are introverts, sensing, thinking, and judging.
2. Students majoring in social studies scored highest in TLC feelers and with the Myers-Briggs (MBTI), scored highest in extroverts, feeling, perceiving.
3. Math students scored highest in TLC as thinkers. With the Myers-Briggs (MBTI) they were equally divided between introverts and extroverts and scored highest in thinking.
4. Students majoring in English on TLC were highest in feeler and on Myers-Briggs (MBTI) highest in extroverts and perceivers.
5. Foreign language students in the TLC scored highest in thinker. In Myers-Briggs (MBTI) sensing, and were equally divided between thinking and feeling.
6. Music majors on the TLC scored highest in feeler. In the Myers-Briggs (MBTI) were highest in intuitive, feelings, and perceiving.
7. Physical Education majors were equally divided on the TLC between thinkers and feelers. On the Myers-Briggs (MBTI) they were highest in feelings.

### Conclusions

The following conclusions can be drawn from this study.

1. The patterns of community college students and university students in science were very similar.
2. There is a pattern between different areas of the TLC and the Myers-Briggs (MBTI).
3. People who scored highest in the TLC Thinker category scored highest on the Myers-Briggs (MBTI) sensing, thinking, judging and introverts.
4. People who scored highest in the TLC Feeler category scored highest in Myers-Briggs (MBTI) extrovert, sensing, feeling, and perceiving.
5. People scoring highest in the TLC Sensor category scored highest in Myers-Briggs (MBTI) extrovert, sensing, thinking, and judging.
6. People scoring highest in the TLC Intuitor category scored highest in Myers-Briggs (MBTI) extrovert, sensing, thinking, and judging.

### Recommendations

1. Further study with more students in different teaching fields should be given to determine if the same tendencies of likenesses and differences occur.
2. Teachers at the elementary, secondary, and university level should give a variety of inventories to their students to determine learning styles.

## BIBLIOGRAPHY

- Cano, Jamie. "Focus on Teaching." Agricultural Education Magazine, Sept., 1992.
- Johnson, Virginia R. "Thinking and Learning Style Preference Survey for Adolescents." 1993.
- Luft, Vernon. "Effective Teaching." Agricultural Education Magazine. Nov., 1993.
- McRobbie, Campbell, J. "Cognitive Styles and Cognitive Structures." Science Education, April, 1991.
- Rasanen, Leila. "Girls and the Learning of Physical Concepts." European Education. Fall, 1992.
- Marshak, David. "The Role of Learning/Study Skills in 'Re-Inventing' Secondary Schools." NASSP Bulletin, November, 1992.
- Myers, Isabel Briggs. Introduction to Type: A Description of the Theory and Application of the Myers-Briggs Type Indicator. Palo Alto, Calif.: Consulting Psychologists Press, 1987.
- Reynolds, Jim and Martin Gerstein. "Learning Style Characteristics: An Introductory Workshop." ClearingHouse, Nov.-Dec., 1992.