EXPLORING FRESHMEN'S LEARNING STYLES IN THE ENGLISH CLASSROOM

Pei-Shih Chen

Central Police University General Education Center Assistant Professor

ABSTRACT

The purpose of this study was to explore college freshmen's learning styles using the Myers-Briggs Type Indicator (MBTI). MBTI is the instrument measuring learners' learning preferences. The combination of four dichotomous pairs, which are extraversion vs. introversion, sensing vs. intuition, thinking vs. feeling, and judging vs. perceiving, that were developed in Jungian theory, result in 16 types.

The study sample consisted of 85 students. Of this sample, 21 students were in two-year baccalaureate (BA) program, and 64 in four-year BA program. Analyses of data showed that the most common learning styles were ISTJ, a combination of introversion, sensing, thinking, and judging and ESTJ, a combination of extroversion, sensing, thinking, and judging.

Keywords: learning style, college freshmen

Introduction

Understanding how people acquire information and knowledge is always a focus in the field of education because teachers are responsible for student learning. Discovering ways of using such information in learning processing in school has been also an interest

for teachers. Researches have pointed out students learn best at matching with students' learning preferences (Li, Chen, & Tsai, 2008; Lau & Yuen, 2009).

In Taiwan, teacher-centered and test-oriented teaching methods have remained dominant. Teachers standing in front of the classroom give out lectures and students sitting on their chairs and taking notes are the most common scenes in the classroom. The traditional didactic instruction, however, only favors a small group of students. Others might easily feel bored of this teaching style and lack of motivations in learning (Chen, 2013). Therefore, the purpose of this study was to explore college freshmen's learning styles in the classroom using Myers-Briggs Type Indicator (MBTI). The results can be served as future reference for teachers.

Literature Review

Myers-Briggs Type Indicator (MBTI)

The idea of learning styles was first introduced by Western researchers and educators beginning in the 1950s and through the 1980s. The term "learning style" has a broad range of meaning. "Learning style" has been defined in many different ways according to researchers' instructional needs. In Curry's onion model of learning styles, a relationship is established between learning styles and the Myers-Briggs Type Indicator. The MBTI is a personality instrument used to measure learning preferences. In Curry's model, the MBTI is located at the center, insofar as the inner layer involves personality-related preferences that describe an individual's way of perceiving and judging information (Hickcox, 1995).

The Myers-Briggs Type Indicator (MBTI) has been used to determine learners' learning preferences in the field of education (Macdaid, McCaulley, and Kainz, 1986; Wu, 1997; Li, Chen, & Tsai, 2008; Chen, 2013). The combination of four dichotomous pairs, which consist of extraversion vs. introversion, sensing vs. intuition, thinking vs. feeling, and judging vs. perceiving, that were developed in Jungian theory, result in 16 types.

MBTI is a widely used psychological test that was developed by Katherine Cook Briggs and Isabel Briggs Myers, based on Jung's theory of psychological types. According to *Introduction to Type* by Myers (1998), Jung's perceiving mental functions describe how learners take in information. Jung's perceiving mental functions are Sensing (S) and Intuition (N). Sensing learners tend to be interested in direct or objective perceptions made through five senses - sight, sound, touch, taste, and smell. Intuitive learners favor subjective perceptions of the structures, and tend to be insightful and creative.

Thinking (T) and Feeling (F) are two Jung's judging mental functions, which mainly deal with ways of making decisions and how information is transformed into output. Thinking learners are interested in linking ideas together by making logical connections. Feeling learners, on the other hand, evaluate relative values to make decisions.

The two dichotomous pairs of attitudes are attitudes toward the world and attitudes toward mental functions, the former was developed by Jung and the latter was expanded by Myers and Briggs. Jung's attitudes toward the world are Extraversion (E) and Introversion (I). Extraverts prefer to get their energy the external world. This type of learner tends to be more friendly and outgoing. Introverts, on the other hand, are more

energized by the inner environment of mind and thoughts. This type of learner tends to be more reflective.

Judging (J) and Perceiving (P), attitudes toward the mental function later added by Myers and Briggs, are the last pair of the MBTI which reflect preferences for judging or perceiving mental functions. People with a stronger judging preference are more comfortable with planned and organized lifestyles. As for people score higher in perceiving, they prefer flexible and spontaneous ways of living.

Research about the MBTI

Myers, McCaulley, Quenk, & Hammer (1998) used the MBTI to find a significant relationship among variables such as academic performance, and student persistence. The study stated that students with stronger preferences for Sensing and Judging had a higher overall persistence to graduation rate. Preferences on Introversion, Intuition, and Judging predicted scores on the SAT. Preference of Judging predicted college grade point average. The results supported by Macdaid, McCaulley, and Kainz (1986) indicated that students with learning styles of ISTJ and ISFJ had the highest rate of graduation and students with learning styles of ESTP, ENTP, ISTP significantly more often had not graduated. Stronger preference in Extraversion as opposed to Introversion resulted in an increase in persistence, probably because the students' outward focus helped them to more easily adjust to the social and environmental demands of college life. Sensing as opposed to Intuition resulted in greater persistence into the sophomore year, probably because successfully getting through the first year of college requires taking in many new facts and information, such as the specific skills necessary to help their academic performance (Myers, McCaulley, Quenk, & Hammer, 1998). Moreover, one might also conclude that

our educational system and traditional testing methods tend to favor Judging learners and that college level professors tend to be Intuitive (Wu, 1997).

Methodology

This was a descriptive and exploratory study in exploring students' learning styles by using Myers-Briggs Type Indicator (MBTI). Curry (1987) ranked the MBTI with a strong rating for reliability and a good rating for validity. According to Myers, McCaully, Quenk, and Hammer (1998), the reliability of the MBTI questionnaires ranged from .82 to .86 (r_{E-I} = .82, r_{S-N} = .84, r_{T-F} = .83, r_{J-P} = .86) using a databank sample of 32,671. The coefficient alpha ranged from .91 to .92 using a national sample of 2,859. Test-retest product-moment correlations of meta-analysis ranged from .87 to .93 using a sample of 258 at the Public Utilities Company. As a result, the internal consistency of the four MBTI scales is high (Myers, McCaully, Quenk, & Hammer, 1998). The test-retest reliability of the MBTI shows consistency over time. In term of validity, a study by Carskadon and Cook (1982) using 118 introductory psychology students found that after receiving a packet of one-page type descriptions eight weeks after taking the MBTI, 50 % of the students chose the correct description of their learning type on their first pick.

The research sample was randomly selected to total 85 students at a university in the field of law enforcement in northern Taiwan. Students were enrolled in the two-year and four-year baccalaureate program. The collected data was transformed into codes for statistical and analytical purposes.

Students were required to complete the Traditional Chinese translation of Form M of the MBTI. The entire process required 15-25 minutes to complete and was administered

by the qualified researcher. Neither names nor student identification numbers were connected to the data. The data were analyzed using functions of the Statistical Package for the Social Sciences (SPSS) such as descriptive statistics.

Results

A total of 85 law enforcement students were invited to participate in the study. Of this sample, 21 students were in two-year baccalaureate (BA) program, and 64 in four-year BA program. Table 1 presents the frequency distribution of the students in the academic degree programs.

Table 1

Number of Students in different academic programs

Major	2-yr bachelor program	4-yr bachelor program
Police Administration		37
Criminal Investigation	21	
Public Security		15
Administrative Management		12
Total	21	64

In the two-year and four-year baccalaureate programs, the average age of enrollment was 25 to 45 and 18 to 22, respectively.

Table 2 indicate that the most frequent learning style preference for Taiwanese college student in the field of law enforcement were ESTJ (12.9%), a combination of extroversion, sensing, thinking, and judging and ISTJ (12.9%), a combination of introversion, sensing, thinking, and judging.

Table 2

Frequency Distribution of the MBTI Scores for Law Enforcement Students

Type	Frequency	Percent
ESTJ	**11**	**12.9**
ESTP	5	5.9
ESFJ	3	3.5
ESFP	3	3.5
ENTJ	4	4.7
ENTP	5	5.9
ENFJ	5	5.9
ENFP	9	10.6
ISTJ	**11**	**12.9**
ISTP	4	4.7
ISFJ	8	9.4
ISFP	5	5.9
INTJ	1	1.2
INTP	3	3.5
INFJ	5	5.9
INFP	3	3.5
Total	85	100.0

Note. $N = 85$, **Bold** represents the highest percentage among participating students.

As noted in Table 3, the law enforcement students in the sample preferred extraverted (52.9%), sensing (58.8%), thinking (51.8%), and judging (56.5%) modes of learning over introverted (47.1%), intuitive (41.2%), feeling (48.2%), and perceiving (43.5%) modes of learning, respectively.

Table 3

Dichotomous Scales for Law Enforcement Students

Dichotomous Scales	N	%
E	**45**	**52.9**
I	40	47.1
S	**50**	**58.8**
N	35	41.2
T	**44**	**51.8**
F	41	48.2
J	**48**	**56.5**
P	37	43.5

Note. **Bold** represents the highest percentage among participating students

Table 4 indicated that students who major in police administration preferred extraverted (51.4%), intuitive (51.4%), feeling (59.5%), and judging (54.1%) modes of learning over introverted (48.6%), sensing (48.6%), thinking (40.5%), and perceiving (45.9%) modes of learning, respectively.

Table 4

Dichotomous Scales for Students Major in Police Administration

Dichotomous Scales	N	%
E	**19**	**51.4**
I	18	48.6
S	18	48.6
N	**19**	**51.4**
T	15	40.5
F	**22**	**59.5**
J	**20**	**54.1**
P	17	45.9

Note. **Bold** represents the highest percentage among participating students

As shown in Table 5, students who major in public security preferred extraverted (53.3%), sensing (73.3%), thinking (80%), and perceiving (53.3%) modes of learning over introverted (46.7%), intuitive (26.7%), feeling (20%), and judging (46.7%) modes of learning, respectively.

Table 5

Dichotomous Scales for Students Major in Public Security

Dichotomous Scales	N	%
E	**8**	**53.3**
I	7	46.7
S	**11**	**73.3**
N	4	26.7
T	**12**	**80**
F	3	20
J	7	46.7
P	**8**	**53.3**

Note. **Bold** represents the highest percentage among participating students

Table 6 indicated that students who major in administrative management preferred extraverted (75%), intuitive (58.3%), feeling (58.3%), and judging (58.3%) modes of learning over introverted (25%), sensing (41.7%), thinking (41.7%), and perceiving (41.7%) modes of learning, respectively.

Table 6

Dichotomous Scales for Students Major in Administrative Management

Dichotomous Scales	N	%
E	**9**	**75**
I	3	25
S	5	41.7
N	**7**	**58.3**
T	5	41.7
F	**7**	**58.3**
J	**7**	**58.3**
P	5	41.7

Note. **Bold** represents the highest percentage among participating students

Table 7 showed that students who major in criminal investigation preferred introverted (57.1%), sensing (76.2%), thinking (57.1%), and judging (66.7%) modes of learning over extroverted (42.9%), intuitive (23.8%), feeling (42.9%), and perceiving (33.3%) modes of learning, respectively.

Table 7

Dichotomous Scales for Students Major in Criminal Investigation

Dichotomous Scales	N	%
E	9	42.9
I	**12**	**57.1**
S	**16**	**76.2**
N	5	23.8
T	**12**	**57.1**
F	9	42.9
J	**14**	**66.7**
P	7	33.3

Note. **Bold** represents the highest percentage among participating students

Discussions

The results showed that students of Police Administration, Public Security, and Administrative Management were more extraverted over introverted. The extraverted students often learn best through physical activities such as discussion or when in action. They like to study with others. The introverted students such as those who majored in Criminal Investigation learn best by pausing to think. They prefer to study alone at their own pace and need quiet for concentration.

In the results of sensing versus intuition, students who majored in Public Security and Criminal Investigation preferred sensing over intuition. Sensing students like hands-on experience and follow instructions. They would expect teachers to give out clear assignments. Intuitive students such as students majored in Police Administration and Administrative Management value what is original and like to create their own directions. They like theories rather than facts. They seek meanings and relationship.

Thinking students such as those who majored in Criminal Investigation and Public Security like their teachers to make logical presentations. They prefer objective material to study. Feeling types want to be able to relate to their learning personally. They learn best by being supported and appreciated. In class, they want their teachers to be able to establish personal support with them.

Judging students like those who majored in Police Administration, Criminal Investigation, and Administrative Management like to plan their work well in advance and work steadily toward goals. They prefer formal instructions and also want their teachers to be organized. In contrast, perceiving students value change and prefer to work spontaneously. They love to stay open to new information. They want their teachers to be

inspiring.

The study showed that the most frequent learning styles for Taiwanese college freshmen in the field of law enforcement were ISTJ (12.9%) and ESTJ (12.9%). These findings are supported by Tobacyk and Cieslicka (2000). Their study, using 107 Polish students, indicated that greater proportions of students preferred extraversion, sensing, thinking, and judging. Similar findings also found in the studies of Cooper & Miller (1991) and Carland & Carland (1987).

Students with a preference for ISTJ in learning tend to be introverted and depend primarily on sensing to gather and process information and on thinking to draw conclusions. People with such preferences are involved mainly with the inner world of experiences and ideas. They also pay more attention to facts and instructions. They make decisions through impersonal analysis and logic, and seek cause and effect. The common characteristics of people with ISTJ preferences are that they are quiet, serious, successful as a result of their thoroughness; they are practical, realistic, and responsible; they decide logically what should be done and work toward it steadily; and they take pleasure in making everything orderly and organized (Myers, McCaulley, Quenk, & Hammer, 1998).

An explanation might be using lectures is the main teaching method in Taiwan which is best suited for ISTJ learners. The preferences for sensing and judging learn best through a method of teacher-led question and answer with repetition and drill exercises which are the main teaching style in Taiwan. Teachers in Taiwan usually use drills, workbooks, lectures, and memorization in class. ISTJ learners preferred a structured learning environment. These types of students usually receive a higher score on quizzes or exams. This type of students usually gets rewarded with a higher grade point average.

Conclusion

The goal of this study was to explore Taiwanese college freshmen's learning styles determined by MBTI scores in the field of law enforcement. In planning an efficient and effective curriculum, educators must consider the individual differences of their students. A better understanding of learning preferences can be advantageous to teachers, students, schools, and even society. If teachers wish to reach these students and provide effective learning environments, they need to vary their teaching approaches. Teachers must be aware of individual differences to provide academic support accordingly. In addition, teachers, like students, can benefit from knowing their own strengths and weaknesses to better design lesson plans that promote critical thinking and stimulation. Students can benefit by being able to build on their own strengths and to work on their weaknesses in learning.

A school is responsible for providing students with knowledge and skills. The goal of education is to generate and train productive members of society with particular competences. The findings of this study provide information and knowledge that can improve curriculum and program design, lead to academic and social support, and ultimately enhance the learning outcomes of business college students. The information derived from the study can be used to adjust modes of teaching, arrange student participation, design student assignments, and seek other means to enhance learning. Turning students into assets of an institution begins with the schools' cooperation in providing sufficient faculty development, in promoting an awareness of students' learning styles, in holding supportive student orientations, and in offering effective career counseling to establish the foundation for the balanced social and intellectual life of an

institution. Schools that provide adequate support gain from making teachers and students assets of the institution and by generating revenue from retaining more efficient teachers and producing more effective students. Society in turn benefits from having effective and efficient people working in various fields, who contribute to the creation of a wealthy public and a harmonious society.

References

Carland, J. W., & Carland J. C. (1987). An investigation into the distinctions between cognitive styles of business and nonbusiness students. *Journal of Education for Business,* 68-71.

Carskadon, T. G., & Cook, D. D. (1982). Validity of MBTI type descriptions as perceived by recipients unfamiliar with type. *Research in Psychological Type, 5,* 89-94.

Chen, P. (2013). Analysis of the relationship between college students' and learning styles and their academic performance. *Proceedings of Conference of General Education and Teaching.* Taoyuan: Gueishan.

Copper, S. E., & Miller, J. A. (1991). MBTI learning style-teaching style discongruencies. *Educational and Psychological Measurement, 51,* 699-706.

Curry, L. (1987). *Integrating concepts of cognitive or learning styles: A review with attention to psychometric standards.* Ottowa, Ontario: Canadian College of Health Services executives.

Hickcox, L. K. (1995). Learning styles: A survey of adult learning styles inventory models. In R. R. Sims & S. J. Sims (Eds.), *The importance of learning styles: Understanding the implications of learning, course design, and education* (pp. 25-47). Westport, CT: Greenwood Press.

Lau, WWF, & Yuen, AHK. (2009). Exploring the effects of gender and learning styles on computer programming performance: implications for programming pedagogy. *British Journal of Educational Technology, 40*(4), 696-712.

Li, Y., Chen, P., & Tsai, S. (2008). A comparison of the learning styles among different nursing programs in Taiwan: implications for nursing education. *Nurse Education Today, 28,* 70-76.

Macdaid, G. P., McCaulley, M. H., & Kainz, R. I. (1986). Myers-Briggs Type Indicator atlas of type tables. Gainesville, FL: Center for

Applications of Psychological Type.

Myers, I. B. (with Kirby, L. K., & Myers, K. D.). (1998). *Introduction to type: A guide to understanding our results on the Myers-Briggs TypeIndicator* (rev. 6th ed.). Palo Alto, CA: Consulting Psychologists Press.

Myers, I. B., McCaulley, M.H., Quenk, N. L., & Hammer, A. L. (1998). *MBTI manual: A guide to the development and use of the Myers-Briggs Type Indicator.* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Tobacyk, J. & Cieslicka, A. (2000). Compatibility between psychological type and academic major in Polish university students. *Journal of Psychological Type, 54,* 22-30.

Wu, T. (1997). A study of learning styles of industrial education students at university in Taiwan Republic of China. *Educational Research and Information Bimonthly, 5*(5), 114-132.