

# MATCHING STUDENT PERSONALITY TYPES WITH DIFFERENT LEARNING PREFERENCES

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## ABSTRACT

Educators play an important role in enhancing students' motivation levels through effective communication. It is important to acknowledge different students' personalities to design a more effective teaching method as a way to improve academic performance. The objectives of this paper are to 1) identify the characteristics of different personalities and their preferred learning preferences using the Myers Briggs Type Indicator (MBTI); 2) identify the most common combination of personality types among Pre-University students; 3) determine a more effective teaching approach based upon student personality types and learning preferences. The findings of this paper provide important pedagogical outcomes where effective teaching approaches can be used to complement different learning preferences while increasing the chances of academic success at Sunway College Johor Bahru.

*Keywords: Myers Briggs Type Indicator (MBTI), personality types, effective teaching approaches, learning preferences*

## INTRODUCTION

As a result of the lack of understanding of the connection between teaching and learning in real settings, teachers who engage in inappropriate teaching methodologies are often ineffective in the teaching and learning process. Both teachers and students perceive the root cause in different paradigms. From the teachers' perspective, ineffectiveness is derived from a lack of learning abilities. Students are likely to be regarded as not doing their level best, or showing no aptitude in their study. In contrast, the lack of requisite teaching qualities accounts for their failure. Teachers are often regarded as not being enthusiastic, or not employing the latest technology in their teaching methods.

However, educational researchers have shown that students are unique in their own ways, including the way they learn (Raven et al. 1993). Although students have the basic capability to learn, their learning capability is constrained by the same teaching method. Dunn (2009) cited that students learn in considerably different ways and certain students succeed only through selected teaching methods. Many researchers have proven that students whose learning styles are compatible with the teaching styles tend to retain information longer, apply it more effectively, learn more, and have a more positive attitude toward their study. The correlation between personality types and learning preference was discussed by Brown (2000). He argued that effective teaching methodologies are directly tied to the learner's underlying learning preferences which are derived from the personality-related variables in the learner. So, it is clear that learning preferences and personality types operate together. Blickle (1996) in a study analyzed the relation between personality traits, learning preferences, and performance among college students from different fields of study. His study showed a positive relationship between basic personality

traits and students' academic performance when preferred learning preferences were used in guiding students. Besides, Jesse et al. (2006) contended that students will achieve a higher level of academic performance and obtain a higher level of satisfaction when the teaching methods used correspond to their personality types.

This paper, through a review of related studies on the relationship between personality types and learning preferences, aims to shed more light on matching students' personalities with their learning preferences to enhance their learning curve.

## **INTERFACE BETWEEN PERSONALITY AND LEARNING PREFERENCES**

To understand better the connection between personality types and learning preferences, it would first be necessary to understand these terms.

### **PERSONALITY TYPES**

Mania (n.d) states that personality types refer to the psychological classification of different types of individuals. It affects one's preferences in life and determines how things are perceived in one's eyes. The construct for measuring personality type will be the Myers-Briggs Type Indicator (MBTI). The MBTI is an assessment to identify how an individual prefers to use his perception and judgment. It consists of the four principal psychology dimensions of personality types, that is extroversion, introversion (E or I), sensing or intuition (S or N), thinking or feeling (T or F) and perceiving or judging (P or J). The eight personality types from the MBTI are arranged in four dichotomous preference scales:

Table 1: Four Dimensions of Personality Types

Extroversion (E)	.....	Introversion (I)
Sensing (S)	.....	Intuition (N)
Thinking (T)	.....	Feeling (F)
Perceiving (P)	.....	Judging (J)

The extroversion or introversion dimension explains how people tend to focus their attention and get their energy when dealing with the world around them. The sensing and intuition dimension suggests how people take in information and ways that they become aware of things, people, events, or ideas, thinking or feeling dimension provides insight into the ways people evaluate and come to conclusions about information while the judging or perceiving dimension suggests the type of life style and work habits people prefer.

Table 2: Characteristics of the Eight Personality Types

<p style="text-align: center;"><b><i>Extroversion (E)</i></b></p> <ul style="list-style-type: none"> <li>- Is motivated by outside world.</li> <li>- Prefers interaction and social gathering</li> <li>- Enjoys wide variety and change in people relationships.</li> <li>- Acts first, think/reflect later.</li> </ul>	<p style="text-align: center;"><b><i>Introversion (I)</i></b></p> <ul style="list-style-type: none"> <li>- Is motivated internally.</li> <li>- Feels uncomfortable to participate in social activities.</li> <li>- Prefers one-to-one communication and relationships.</li> <li>- Thinks/reflects first, then acts.</li> </ul>
<p style="text-align: center;"><b><i>Sensing (S)</i></b></p> <ul style="list-style-type: none"> <li>- Mentally lives in the now, attending to present opportunities.</li> <li>- Uses five senses to take in information.</li> <li>- Has memory recall of facts and past events</li> <li>- Focuses on details and may ignore the big picture.</li> <li>- Is a concrete thinker.</li> </ul>	<p style="text-align: center;"><b><i>Intuition (N)</i></b></p> <ul style="list-style-type: none"> <li>- Mentally lives in the future, attending to future possibilities.</li> <li>- Processes information through patterns and impressions.</li> <li>- Emphasizes patterns, contexts, and connections.</li> <li>- Looks for the big picture and often ignore the details.</li> <li>- Is an abstract thinker.</li> </ul>
<p style="text-align: center;"><b><i>Thinking (T)</i></b></p> <ul style="list-style-type: none"> <li>- Utilizes rationality and logic when making a decision.</li> <li>- Naturally notices tasks and accomplishes work.</li> <li>- Has strongly held principles; values fairness over everything.</li> <li>- Accepts conflict as a natural and a normal part of relationships with people.</li> </ul>	<p style="text-align: center;"><b><i>Feeling (F)</i></b></p> <ul style="list-style-type: none"> <li>- Considers what is important to them and to others involved when making a decision.</li> <li>- Is naturally sensitive to people needs and reactions.</li> <li>- Judges situations and others based on feelings and extenuating circumstances.</li> <li>- Is unsettled by conflict; have almost a toxic reaction to disharmony.</li> </ul>
<p style="text-align: center;"><b><i>Perceiving (P)</i></b></p> <ul style="list-style-type: none"> <li>- Is comfortable moving into action without a plan; plan on-the-go.</li> <li>- Postpones action and seeks more data; gathering more information before making a decision.</li> <li>- Likes to multi task, have variety and mix work.</li> <li>- Is naturally tolerant of time pressure; work best close to the deadlines.</li> </ul>	<p style="text-align: center;"><b><i>Judging(J)</i></b></p> <ul style="list-style-type: none"> <li>- Plans many of the details in advance before moving into action.</li> <li>- Makes decisions too quickly before learning everything.</li> <li>- Focuses on task-related action; complete meaningful segments before moving on.</li> <li>- Works best and avoid stress when able to keep ahead of deadlines.</li> </ul>

(Source: Western Nevada College 2013, *Myers Briggs Types Indicators*)

Table 2 shows an overview of the traits of the eight personality types developed by the MBTI which can be used to understand the differences in characteristics for each personality type.

The various combinations of the four dimensions of personality types result in sixteen possible personality types designated by letters as shown in Table 3.

Table 3: Myers Briggs Type Indicator

<b>ISTJ</b> Introversion Sensing Thinking Judging	<b>ISFJ</b> Introversion Sensing Feeling Judging	<b>INFJ</b> Introversion Intuitive Feeling Judging	<b>INTJ</b> Introversion Intuitive Thinking Judging
<b>ISTP</b> Introversion Sensing Thinking Perceiving	<b>ISFP</b> Introversion Sensing Feeling Perceiving	<b>INFP</b> Introversion Intuitive Feeling Perceiving	<b>INTP</b> Introversion Intuitive Thinking Perceiving
<b>ESTP</b> Extroversion Sensing Thinking Perceiving	<b>ESFP</b> Extroversion Sensing Feeling Perceiving	<b>ENFP</b> Extroversion Intuitive Feeling Perceiving	<b>ENTP</b> Extroversion Intuitive Thinking Perceiving
<b>ESTJ</b> Extroversion Sensing Thinking Judging	<b>ESFJ</b> Extroversion Sensing Feeling Judging	<b>ENFJ</b> Extroversion Intuitive Feeling Judging	<b>ENTJ</b> Extroversion Intuitive Thinking Judging

(Source: Adapted from Jessee, O'Neill and Dosch 2006, p. 646)

The characteristics of the sixteen possible types of personality can be derived by combining the traits of each personality type. Each combination explains the students' personality types in greater depth. For instance, ISTJ indicates that an individual prefers introversion, sensing, thinking and judging. It must be noted that the combination of personality indicates preferences only - an ISTJ also uses extroversion, intuition, feeling and perception when it comes to decision making.

## LEARNING PREFERENCES

Learning preferences refer to a student's preferences in acquiring, retaining, processing and retrieving information in the classroom which could be used to analyse the student's strengths and weaknesses in his studies. According to Abbas (2012), learning preferences may vary depending upon one's perspective. It refers to how individuals perceive and process information in learning situations. Moreover, Stewart and Felicetti (1992) defined learning styles as those educational conditions under which a student is most likely to learn. It emphasizes how they prefer to learn rather than what they learn.

It is undeniable that both teachers and students will feel more comfortable in their learning process if the teacher can acknowledge the students' learning preferences and implement strategies that are most efficient for specific programme. The learning preferences of each of these personality dimensions are shown in Table 4. This table shows that each dimension of preference scales are different in terms of their learning preferences. For instance, an extrovert student tends to understand information by engaging in an activity, applying and discussing with others whereas an introvert student prefers to do work on his own

by reading silently and listening to others. Hence, teachers should incorporate their learning preferences into their teaching plan to provide a conducive learning environment for their students.

Table 4: Learning Preferences based on Myers-Briggs Personality Types

<i>Extroversion</i>	<ul style="list-style-type: none"> <li>- Takes part in group activities such as cooperative learning group.</li> <li>- Learns or memorises by moving activities.</li> <li>- Have discussions, dialog and debate.</li> <li>- Reads orally.</li> </ul>	<i>Introversion</i>	<ul style="list-style-type: none"> <li>- Does independent work.</li> <li>- Takes part in deductive learning.</li> <li>- Reads silently, listens to others and writing.</li> <li>- Observes reflectively.</li> </ul>
<i>Sensing</i>	<ul style="list-style-type: none"> <li>- Learns best with audio-visual materials (charts, graphs, diagrams, and flow chart).</li> <li>- Likes materials with real life example.</li> <li>- Prefers computer-assisted instructions and hands on activities.</li> <li>- Expects clear expectation and instruction.</li> <li>- Prefers step by step exposition.</li> </ul>	<i>Intuitive</i>	<ul style="list-style-type: none"> <li>- See the "whole" rather than in parts.</li> <li>- Likes impressions.</li> <li>- Prefers fast paced learning environment.</li> <li>- Carries out project creatively and innovatively (art projects, drawing, designing things).</li> <li>- Works well in self-instruction, both individually and with a group.</li> </ul>
<i>Thinking</i>	<ul style="list-style-type: none"> <li>- Learns best with sequentially organized material, timelines and diagram.</li> <li>- Expects clear course and topic objectives that are precise and action-oriented.</li> <li>- Prefers lecture and assignments.</li> </ul>	<i>Feeling</i>	<ul style="list-style-type: none"> <li>- Works in team as to develop relationship.</li> <li>- Has interpersonal connection.</li> <li>- Learns by appreciation (teacher feedback &amp; person-to-person communication).</li> </ul>
<i>Judgment</i>	<ul style="list-style-type: none"> <li>- Prefers detailed outline.</li> <li>- Likes to plan in advance.</li> <li>- Have structured lesson.</li> <li>- Is decisive.</li> </ul>	<i>Perception</i>	<ul style="list-style-type: none"> <li>- Is spontaneous.</li> <li>- Hse more choices in task.</li> <li>- Is flexible.</li> </ul>

(Source: Adapted from Montgomery & Groat 1998)

## METHODS

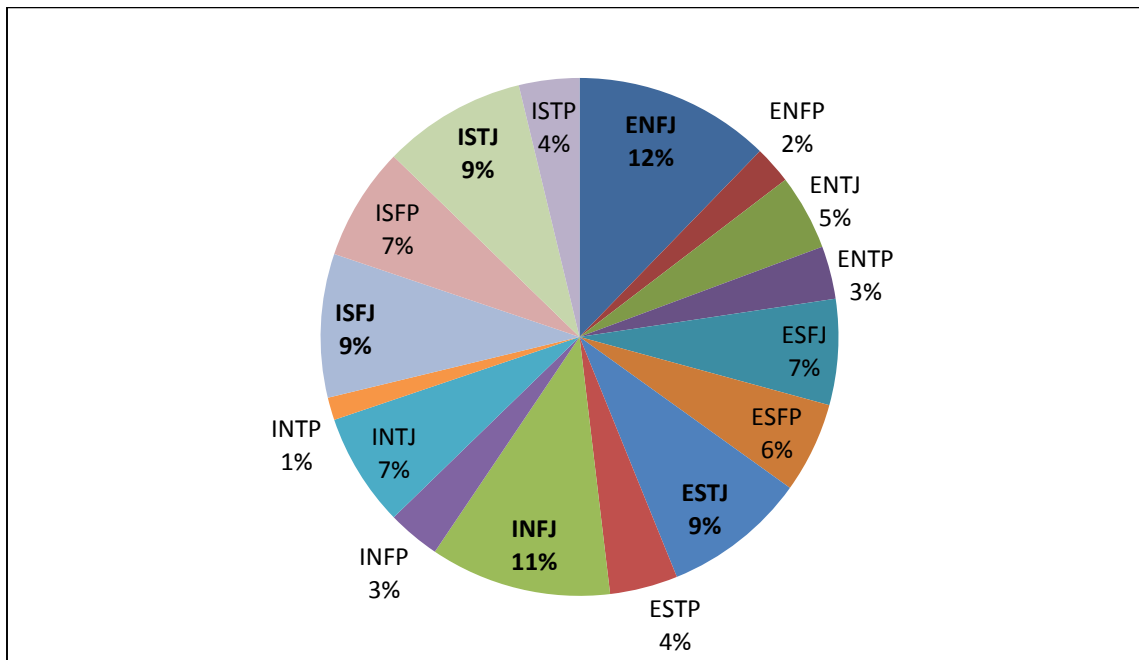
At the beginning of semester two in the 2013 academic year, a total population of 212 January and April intake students from Pre-University Programmes which consists of 120 Cambridge GCE A-Levels students (A-Levels), 60 Monash University Foundation Year students (MUFY), and 32 Australian Matriculation students (AUSMAT) were asked to take part in this study by taking the Myers-Briggs Type Indicator (MBTI).

The MBTI form (Human Metric, 2013) is a seventy three item survey where all respondents are required to answer all questions and choose which they agree most with from the given two responses in the survey. It is the most widely used personality instrument in the world as its results reflect innate psychology or mental disposition. Surveys were completed in the class and a report of each student's MBTI profile was generated and sent to their college email account. The results of all the students' survey were recorded in percentage based on the sixteen personality types. The most common personality types for different Pre-University programmes students were generated by combining the highest percentage of the four dimensions of personality types, either extroversion or introversion (E or I), sensing or intuition (S or N), thinking or feeling (T or F) and perceiving or judging (P or J). Then, preferred learning and teaching styles will be suggested in the discussion section based on students' profile and literature review.

These results, along with relevant literature review of similar research, will help educators to identify the most effective learning preferences among students. Moreover, educators are able to motivate their students and thus improve student performance.

## RESULTS

Figure 1: Distribution of Pre-University Students by MBTI Types



Among all the sixteen personality types in MBTI, ENFJ was the most common personality type as it represented by 12 per cent of all Pre-University students in Sunway College Johor Bahru. The ENFJ type tend to focus their energy outward on ideas and concepts, prefer to look for meaning and relationships in their observation, make decisions based more on personal value and prefer organization, decisiveness and closure when dealing with people (J). The second most common personality type was the INFJ (11 per cent) and this was followed by the ESTJ, ISFJ and ISTJ types (9 per cent). These three personalities characterized almost 50% of the respondents in the sample of the students.

Table 5: Distribution of Pre- University Students by 4 Dimensions of Personality Types

Personality Types	E	I	S	N	T	F	P	J
Percentage	48%	52%	54%	46%	46%	54%	39%	61%
Total	100%		100%		100%		100%	

The distributions of 4 dimensions of personality types for all Pre- University students are presented in Table 5. 61 per cent of the students are of the Judging (J) personality type while for Extroversion – Introversion (E-I) dimension, the result is almost identical. Besides, Sensing (S) is greater than intuition (N) personality and feeling (F) is greater than thinking (T) personality by 1.06 to 1 ratio. This data shows more introversion, sensing, feeling and judging students have been enrolled in Sunway College Johor Bahru compared to extroversion, intuitive, thinking and perceiving students.

Table 6: Distribution of different Pre-University Students by 4 Dimensions of Personality Types

Programmes	E	I	S	N	T	F	P	J
A-Levels	42%	58%	53%	47%	47%	53%	28%	72%
Total	100%		100%		100%		100%	
MUFY	60%	40%	60%	40%	52%	48%	48%	52%
Total	100%		100%		100%		100%	
AUSMAT	47%	53%	47%	53%	34%	66%	59%	41%
Total	100%		100%		100%		100%	

The most common combination of personality type for Cambridge GCE A-Levels students was ISFJ. This is consistent with the overall result stated in Table 5. This is due to the high number of respondents who participated in the survey which accounted for 57 per cent of the total number of respondents. ESTJ and INFP was the representative for the most common combination of personality types for Monash University Foundation Year and Australian Matriculation students.

## DISCUSSION

The most common personality type among all the Pre-University students (referring to figure 1), ENFJ, exhibited an extroversion, intuition, feeling and judging personality. ENFJs lead with good communication skills and warmth to gain cooperation towards meeting their individual ideals. Their feeling function drive them to seek harmony and they always take into consideration the feeling of others. The intuitive type *sees the big picture* and often misses or ignores the details of the information.

Therefore a simple and clear instruction is desirable for ENFJs to better guide them better on any task and assignment.

ENFJs are energized by teachers who take personal interest in them by giving them individual feedback. They greatly benefit if cooperative learning tools are used by putting them into a group or peer learning. ENFJs prefer to be taught the general concept before proceeding to the details and practical matters. In the quest for completing a task, they are good with tasks that appeal to their intellectual interests and call for grasping general concepts, seeing relationships, and using imagination. Judging students do best with advanced plans as they do not favour surprises. They expect their instructors to follow the course outlines and provide the objective and systematic steps to do an assignment.

The most common personality combination for Cambridge GCE A-Levels is ISFJ; the cautious, thoughtful, friendly and dependable type. They are willing to accept responsibilities beyond the call of their duty. They prefer to know the teacher's expectation, be provided with information and rely mainly on their senses to learn and to gather information. They genuinely care about people surrounding them and they often apply their value in solving problems.

ISFJs care about pleasing their teachers and appreciate personal coaching and compliments. They need to develop a personal rapport with the instructor and receive feedback and encouragement. Therefore, regular feedback to ISFJs will enable them to improve their learning capabilities. Due to their preference for introversion, they prefer to learn in a quiet environment that allows them to work with their own thoughts, through listening, observing, reading, and writing. Hands-on activities, computer-assisted instructions are welcomed due to the fact that they learn through their five senses. Instructions given to the ISFJ are expected to be clear and consistent to enhance their learning curve. ISFJs prefer to direct their energy and attention inward and receive energy from reflecting on their thoughts, memories and feelings. Introverts excel when they can work independently given sufficient time for them to allow them to think.

The representative personality for the MUFY students is the ESTJ. They are practical, realistic, matter-of-fact, traditional, and accountable. They are responsible and work hard to complete a task. They are often campus leaders and prefer traditional leadership styles. ESTJs take in information that is real and tangible. Sensing types like concrete facts, organization and structure. They are good at memorization and are relatively conventional. They love to talk, participate, organize, and socialize as a means to process their thoughts and ideas.

ESTJs thrive when they are allowed time to think things through by talking, such as in classroom discussions, or when working with another student. ESTJs benefit from a variety of ocular and audio simulation. The use of colour images and video teaching will easily get the attention of this group of students and improve their learning ability. Students want to know what is to be expected to appreciate their value using sensory experiences and examples. Thinking students will understand best when material is presented in a logical way. The use of rubrics will allow ESTJs to follow the lecture and assignments better to increase their understanding.

AUSMAT students (INFP) tend to be reserved, idealist, creative, sensitive and dedicated to those close to them. They are more comfortable staying alone and only interact with a selected group of close friends. Much of their energy is focused inward and characterized by intense feelings and strong values. INFPs typically rely on intuition and are more focused on the bigger picture rather than the tiny details. They make their decision more on their gut feeling. They dislike conflict and are often energized through appreciation and encouragement. When it comes to making decisions, INFPs like to keep their options open. They make the decision based more on personal values rather than logic. The characteristic of flexibility often delays their decision making when any of the situation changes.



INFPs are often skilled in language, but may prefer to express their thoughts and feelings through writing. Perceiving types want to know everything about each task, and often find it difficult to complete them. They work best in flexible ways and informal problem solving. They do not like structure, appreciate to be given choices and allowed to be creative in their work. However, their biggest problem is procrastination. Intuitive students thrive when they have opportunities to be inventive and original and to find ways to solve problems. They are more comfortable if they are not required to speak in class but are allowed to voluntarily contribute. Feeling students will work harder when they have developed personal relationships with their instructors and other students.

While the result only incorporated the selected, the most dominant combination of personality types in different Pre-University programmes, these results are not intended to imply the personality types for all Pre- University students.

## **FUTURE RESEARCH**

It is undeniable that each student has his own learning preference. This is important to keep in mind when developing teaching approaches used in the classroom. Teachers are required to acknowledge student personality types by running a simple personality test at the beginning of the semester. For the desired outcomes to occur, the transfer of knowledge should be compatible with a student's learning preference. Based on the recommendations in Table 4, teaching and learning strategies that would appeal to the four dimensions of characteristics is shown. Students should be offered multiple learning opportunities that promote motivation and allow for an expression of preference. Since the combination of personality types only indicates the learning preferences for the majority group of students, a variety of teaching methods should be designed to cater to the learning preferences of the minority group of students. It is impossible to design only one set of teaching method to address all learner preferences. Therefore, diversify teaching methods while keeping directions and expectations clear will likely meet with success.

To test on the effectiveness of designing teaching approaches in accordance with students' learning preferences, students' academic performance can be obtained from those teachers who attempt to design their teaching approaches based on a student's learning preferences.

## **CONCLUSION**

There is no uniformity for educators in communicating with students, but understanding students with different personality types is undoubtedly important in enhancing educator-student communication. Teaching students with different learning preferences enhances the latter's learning curve. Knowing the preferences of the personality is useful in developing strategies for more effective study, better time management, smoother communication and sounder relationships between students and teachers. Once a conducive study environment is established, students can maximize not only their academic potential but also cultivate a lifelong learning habit.

While this article has focused on ways to provide students the optimal learning experience based upon preferred learning and teaching styles, the knowledge and skill to perform better in their academic result is just one piece of the puzzle. Education is not just about the transmission of information, but should also include the transformation of the learner so that they have the confidence to apply their knowledge and skill in their future workplace.

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