

PERSONALITY TYPE, MOTIVATION, LEARNING STYLE, ACADEMIC POTENTIAL AND ACADEMIC ACHIEVEMENT OF STUDENTS IN COLLEGE

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Abstract: The list of The Best University Rankings in Indonesia latest version of WEBOMETRICS shows that the University of Sumatera Utara is still less prestigious than any other university in Indonesia. The quality of graduates is one of the factors that determine the university rank. One of the references to measure the quality of graduates is academic achievement. To achieve the expected academic achievement, it is necessary to consider several factors that influence it. There are various factors that affect academic achievement, both internal and external. Internal factors consist of potential/intelligence, motivation, interests, attitudes and learning habits, personality type, learning style, emotional style and physical factors. Based on the description, this research is done to know and analyze student personality type and influence of personality type to learning style, to know student learning style, and influence of learning style to academic achievement, to know motivation and influence of motivation toward academic achievement, to know the influence of academic potential toward achievement academic. This type of research according to its approach is Expost facto research. It was conducted in University of Sumatera Utara, with a total sample of 640 students with proportional composition randomized by the Faculty. Data collecting techniques was through questionnaires and documentation studies. Data analysis used SEM technique – SmartPLS application. The results showed that the type of personality affect the learning style. Learning styles have an effect on academic achievement. Academic potential affects academic achievement and motivation has an effect on academic achievement.

Keywords: personality type, motivation, learning style, academic potential, academic achievement

INTRODUCTION

Referring to one of the University of Sumatera Utara's mission is to produce qualified graduates who are able to develop science, technology, humanities, and arts, based on religious morals, and able to compete in national and international level, without exception all faculties, departments and study programs must be able to run the function and purpose. It is intended that these universities can produce qualified students and have the competence in their respective fields so that it can scent good name and image of the university, as well as taken into account both by prospective students, users and recruiters.

However, in the rank of Indonesian Higher Education Webometrics Edition July 2016 version (is a website based global ranking system), the University of Sumatera Utara each still ranked 38th, and 3524th in the world. The rank list is outlined in Table 1.

The ranking list shows that the University of Sumatera Utara is still less prestigious compared to other universities in Indonesia. Whereas, the vision of University of Sumatera Utara is "Being a college that has academic excellence as a barometer of scientific progress that can compete in the global world". The quality of graduates is one the factors that determine the university rank. The benchmark for measuring the quality of

Table 1
Webometrics Indonesia Ranking July 2016 Edition

<i>Ranking</i>	<i>World Rank</i>	<i>University</i>	<i>Presence Rank*</i>	<i>Impact Rank*</i>	<i>Openness Rank*</i>	<i>Excellence Rank*</i>
1	761	Univ Gadjah Mada	95	284	1131	1988
2	849	Universitas Indonesia	120	394	1818	1875
3	939	ITB	334	541	1406	1912
4	1366	IPB	106	1072	2240	2509
5	1373	Universitas Riau	1337	304	3260	3110
6	1379	Brawijaya University	207	536	2081	3198
7	1538	Universitas Padjadjaran	955	760	2259	3026
8	1563	Universitas Diponegoro	244	579	1820	3683
9	1601	Univ Sebelas Maret	475	114	3179	4698
10	1953	Universitas Airlangga	398	1121	2800	3740
11	2005	Universitas Udayana	1204	1727	2919	3198
12	2022	Universitas Syiah Kuala	622	3321	2981	2509
13	2156	Universitas Hasanuddin	498	2925	3172	2978
14	2215	Institut Teknologi Sepuluh Nopember	525	1675	2236	4053
15	2249	Universitas Lampung	864	1659	3498	3683
16	2525	Gunadarma University	290	457	3354	5820
17	2557	Petra Christian University	795	2411	3630	3880
18	2601	UnivJenderal Soedirman	1309	3456	3379	3523
19	2773	Universitas Ahmad Dahlan Yogyakarta	2086	1760	3267	4698
20	2791	BINUS University	312	3594	3281	4165
21	2791	Univ Pendidikan Indonesia	547	1145	1702	5820
22	2858	UnivIslam Indonesia	721	936	2877	5820
23	3013	Universitas Terbuka	2454	1088	3919	5263
24	3081	Univ Negeri Semarang	603	1211	3533	5820
25	3089	Telkom University	634	1364	3231	5820
26	3089	Univ Muhammadiyah Yogyakarta	1580	1266	2999	5820
27	3139	Univ Negeri Yogyakarta	623	1814	2430	5820
28	3177	Universitas Sriwijaya	353	1819	3053	5820
29	3208	UnivNegeri Malang	448	1859	2996	5820
30	3211	Universitas Surabaya	1296	5161	3075	4267
31	3262	UniversitasAndalas	557	1832	3277	5820
32	3280	UnivKatolikParahyangan	5409	3259	3596	4506
33	3405	Universitas Dian Nuswantoro	1762	4980	3981	4165
34	3407	UniversitasTrisakti	2402	1872	3317	5820
35	3488	UnivMuhammadiyah Malang	197	2540	3694	5820
36	3492	UnivIslam Negeri Syarif Hidayatullah Jakarta	786	3485	1839	5820
37	3524	UnivMuhammadiyah Surakarta	423	2682	3573	5820
38	3524	Univ Sumatera Utara	228	2805	3613	5820
39	3587	UniversitasJember	570	3415	2834	5820
40	3631	UniversitasTanjungpura	1296	4335	3416	5263
41	3648	UniversitasNarotama	2033	1602	4074	5820
42	3664	Universitas Kristen Satya Wacana	1932	7211	3156	4506
43	3714	Univ Sam Ratulangi	2119	6640	3668	4506
44	3726	Universitas Bengkulu	4571	2445	3543	5820
45	3773	UnivMercuBuana	757	1153	4121	5820

Source : www.webometrics.info2016 (diolah)

graduates is academic achievement, which is usually seen from the GPA (Grade Point Average). GPA is indeed one of the considerations for the user or recruiter to determine whether or not a graduate is accepted (Swa, 2014 in Tatiana and Soetjipto).

Academic achievement is a term to show an achievement level of success about a goal because a learning effort that has been done by someone optimally (Setiawan, 2016). Academic achievement is inseparable from learning activities because learning is a process, while achievement is the result of the learning process. To achieve the expected academic achievement, it is necessary to consider several factors that influence it. According to Winkel (1983), Crow (1984), and Susilawati (2002), there are various factors that affect Academic Achievement, both internal and external. Internal factors consist of potential/intelligence, motivation, interests, attitudes and learning habits, learning styles, emotional states, and physical factors. While external factors consist of socio-economic and social culture, factors related to the learning process, social factors in the campus environment and other situation factors. According to Howe (1996) of the previous factors, the factors of learning style and motivation make the greatest contribution in determining the good or bad of the students' academic achievement, when compared with other factors.

At the University of Sumatera Utara and other universities in Indonesia, the intelligence/potential factor has become one of the criteria in recruiting prospective students. In this case, intelligence is assessed on the value of the Academic Potential Test (TPA) although USU does not specify a particular TPA value standard for student selection. If the factor of intelligence/potential has been used as one of the criteria in selection, it is not the case with learning style and motivation factor. Meanwhile, if referred back to the opinion of Howe (1996), in addition to the factors of intelligence, learning style and motivation factor are the most influential factors on student achievement. Therefore, it is necessary to further study the influence of learning style with personality type on academic achievement.

Furthermore, Heckhausen in Hawadi (2001) stated that learning motivation is very important in achievement. According to Suciati and Irawan (2001), motivation is a

factor that has a lot of influence on process and achievement. Motivation contributes 36% to academic achievement. Sadli (1986) stated that the potential of a person will remain less developed if it is not enough accompanied by motivation. Individual who have the ability to highly motivate, will have a higher fighting power in achieving goals and not easily discouraged in solving the problem. Based on the exposure, the problem to be answered in this research is (a) How is student's personality type and how is the influence of personality type to learning style? (b) What are student's learning styles, and how do learning styles affect academic achievement? (c) What is student's motivation and how does motivation affect academic achievement? (d) What is the effect of academic potential on academic achievement?

LITERATURE REVIEW

Learning Theory and Academic Achievement

There are many experts who propose the definition of learning, some of which are: According to Winkel (1983), learning is all mental or psychological activity that takes place in an active interaction within the environment, resulting in changes in knowledge, experience, understanding, skills, and value that are sedentary. According to Morgan, King and Robinson (1986), learning is a relatively permanent change in behaviour that occurs as a result of experience or practice. While the notion of learning according to Gagne in his book *The Conditions of Learning* (1977), learning is a kind of change that is shown in the change of behaviour, which is different from before the individual is in a learning situation and after doing such a similar action. Changes occur due to an experience or practice. The conclusion that can be drawn from some of these notions is that in principle, learning is a relatively permanent change in behaviour, change in knowledge, experience, understanding, skills that occur within the individual as a result of interactions with the surrounding environment. It means that someone is said to have learned if there has been a change in the person self, from knowing nothing to knowing something, from not able to be able. To know the level of success of students in the learning

process, it is necessary to measure how far the learning experience has been embedded in students. In other word, it must be evaluated the learning process. Evaluation can be done both quantitatively and manifested in the form of academic achievement. Many benefits can be gained by measuring academic achievement. Through academic achievement, it can be seen whether the learning process has been effective or not (Crow & Crow, 1984). Apart from that academic achievement can also be used as input for curriculum improvement and so on. Academic achievement is a term to show an achievement level of success about a goal because a learning effort that has been done by someone optimally (Setiawan, 2006). Many ways can be done to measure academic achievement. But the most common is through a written test (Winkel, 1983). The result of academic achievement is then expressed in the form of achievement index (IP) per semester and cumulative achievement index (GPA). The high level of student's achievement is influenced by various factors. According to Winkel (1983), these factors can be grouped into two major groups, namely external factors and internal factors of the students concerned. The internal factors consist of: intelligence/academic potential, motivation achievement, interest, learning habit, learning style, emotional state, and physical factor. While external factors consist of four major groups, namely: socio-economic and social cultural factor, factor related to the learning process, social factor on campus and other situation factor. Of the various factors mentioned, the learning style factor and academic potential contributed greatly to the good or bad of student's academic achievement (Howe, 1986). Therefore, in this study will be seen the influence of learning styles and academic potential on academic achievement.

Theory about Academic Potential

Potential is one of the human ability to perform an activity. Turner and Helms (1990) indicated that a person's potential comes from genetic factors inherited by parent, while in its development there is an influence of environmental factors. Potential concerns the problem of intelligence, which is the mental structure to realize the ability to understand something (Sardiman, 2005). Intelligence (academic potential) is one of the important

aspects that determine the success or failure of one's study. If students have a normal level of intelligence or above normal then the potential of children can achieve high achievement. There are several theories about academic intelligence/potential:

- Uni-factor Theory (General Capacity Theory)

According to this theory, intelligence is a person's capacity or ability. Reactions or actions of a person in adjusting to the environment or in solving problem are general. This theory was introduced by Wilhelm Stem in 1911.

- Two Factors Theory

This theory was introduced by Charles Spearman, a mathematician, in 1904. He developed an intelligence theory based on general mental factors coded "g" (general) and specific factors that are coded "s" (specific). The "g" factor represents the common mental strength that is functioning in each individual's mental behaviour, while the "s" factor determines the mental actions to overcome the problem. This "s" factor is more dependent on the neurological organization associated with specific abilities.

- Multi Factors Theory

This theory was introduced by E.L. Thorndike. This theory states that intelligence consists of a special neural relationship form between the stimulus and the response. This particular neural relationship directs the behaviour of the individual.

- Primary–Mental–Abilities Theory

According to this theory, intelligence is the embodiment of seven personal abilities, namely numerical ability/mathematics. Verbal/language ability, abstraction ability in the form of visualization or thinking, decision making ability, either inductive or deductive, ability to recognize or observe, and ability to remember.

- Sampling Theory

According to this theory, intelligence is a variety of sample capabilities. The world contains various fields of experience and not all of them can be mastered by the human mind. This theory was introduced by Godfret H in 1916, and was refined in 1935 and 1948.

Theory about Learning Style

Each student has different learning styles. The lecturers should know the learning styles of their students so that they can choose the teaching method so that the results obtained are more optimal. A student must also know their own learning style and be able to choose a method or way of learning that suits their character. To help students achieve objective learning, institutions or lecturers can combine various teaching methods that can stimulate students to be actively involved in learning. Learning styles are a tendency to apply certain strategies (Entwistle, 1981). Meanwhile, according to Gibbs, Morgan & Taylor (1980), the learning style is the formation of flexibility in applying appropriate learning approaches for specific learning tasks. Based on the definition, it can be concluded that the learning style is a tendency of students to adapt certain strategies in the learning process, until they finally get a learning approach in accordance with the demands of learning. Everyone has different learning styles and if a certain delivery method in learning style to them is acceptable, they can learn better. Many experts found different learning styles, which are learning style according to Kolb, which consists of divergent, convergent, assimilator, and accommodator. Learning style by Honey and Mumford are activist, reflector, theorist, and pragmatist. Learning style according to Jan D. Vermunt are undirected learning style, reproduction learning style, meaningful learning style and application learning style. Learning style by Neil Fleming includes visual (V), auditoric (A), read/write (R), and kinesthetic (K) abbreviated VARK. VARK learning style is at most and easy to use. The type of visual learning style is the type of learning style of a person who best receives and understands information by viewing. The type of auditoric learning style is one's best learning style when listening. The type of learning style of reading/writing will love learning by reading, writing, graphing, or schematics. Kinesthetic learning style type is someone who is best in learning while doing something he learns. In the learning process there is no way of learning that is considered right or wrong because everyone has different learning style and gives advantages and disadvantages on their own. When students are able to understand their learning styles, the learning process of students will be

more effective and efficient. therefore, this research is designed to know the influence of learning style on student achievement in University of Sumatera Utara.

The Theory of Personality Types by Carl Jung

Carl Jung is a doctor of psychology from Switzerland. He distinguishes human personality into three, namely introvert, ambivert, and extrovert. However, among the three personalities, only two are popular: introvert and extrovert. Here is also no personality of the best or worst. Here is a kind of human personality according to Carl Jung:

- *Introvert*, *Introvert* is a personality that tends to focus on the world in the human mind. Introvert people just have fun with their own world and closed with others. More like to think critically, but never voice his thoughts. The nature of introverted personality is loner, shy, like thinking, prefer to work/do something alone, like to imagine, hard to get along, and rarely tell stories.
- *Ambivert*, *Ambivert* is the personality that is between the introvert and the extrovert. The point is, the person can be an extrovert and can also turn into an introvert. He is also able to communicate with both introverts and extroverts. There is also often said that ambivert people are people who have multiple personalities.
- *Ekstrovert*, *Ekstrovert* is a personality that focuses on the outside world. This personality is certainly opposite to introverts that tend to be closed. Extrovert personality is very easy to communicate with others and easy to get along. His actions were more than thought. He also prefers crowds rather than lonely places.

Personality Type according to Hippocrates

Hippocrates was an Ancient Greek philosopher. He distinguishes personality into four namely sanguin, koleris, melancholy, and plegmatis. No personality is best or worst.

- *Sanguin*, is a human personality with a passionate nature, is very sociable, loves to follow trends, likes to exaggerate things, sometimes excessive sounds, easy to follow a group, often late, forgetful, a little childish, selfish, and difficult concentration.

- Koleris, is a human personality which likes to lead, can make decisions, dynamic, hard-wielding, stubborn, impatient, easy to get emotional, likes conflict, hard work, freedom, difficult to budge, likes to rule, productive, and have a good vision for the future.
 - Melancholy, is a human personality with an analytical, sensitive, self-sacrificing, vindictive nature, always seeing problems from the negative side, being sociable, disinterested, frugal, perfectionist, artistic, serious, caring, able to express opinions, and focus more on how to compare goals.
 - Plegmatis, is a human personality with an easy to mingle, patient, always trying to find a shortcut, sympathetic, very fond of order, have a high sense of humor but sarcastic (mocking / offensive), less enthusiastic about novelty, likes to delay, do not like forced, willing to watch rather than get involved, and stubborn.
- the individualist. He is a person who is often drowned in his own feelings. He was so affectionate and understanding the things he experienced in life very deeply.
- 5) Observer type (*The Investigator*), is a person who has a high curiosity. He also wants to understand the world around him. If he does not find a logical explanation of what is going on around him, then he will take various ways to be able to answer and understand his world.
 - 6) Worrier type (*The Sceptic*), this type is a person who always wants a sense of security in his life. He often feels anxious because he always feels he cannot control everything that may happen. This worrier type is difficult to surrender his life to the universe or to others. He tends not to believe. Yet he is a loyal, very considerate and warm person.
 - 7) Adventurous type (*The Enthusiast*), is the type of person who cannot be quiet and have energies and so passionate. Motivation and goal is to achieve a happy life and everyday can do fun activities. This is what makes him bored quickly. He can not bear to be constantly in the same place with the same activities.
 - 8) Fighter type (*The Challenger*), is a human type that does not easily give up. It has a steel spirit and has exceptional self-control. He does not want anyone to see his weakness. He is also very independent and does not want to depend on others. This type of fighter is someone who is very confident with his abilities. He believes that he can do everything, because he believes it has that ability, and a wonderful positive attitude. However, he tends to be authoritarian and wants to dominate others.
 - 9) The Mediator (*The Mediator*), is a type of human being who does not like conflicts. He greatly cared for himself and the people around him. If you have to choose between two parties in conflict, he will try to take the middle path, so no one will be offended. Some have a smooth and soft feeling.

Type of Enneagram Personality

- 1) Perfectionist type, this personality type is the type of person who is difficult to accept himself when he made a mistake, even if the mistake was not intentional. This type of perfectionist has a high standard against something. The standard can be a variety of things, from the details to the general. People with perfectionist personalities are motivated by the need to live life properly, according to the standards that they have.
- 2) Helper type (*The Helper*), is a very generous human type and happy to provide help to others. But not necessarily what he did was really sincere want to help. People with this type of helper are motivated by the need to be loved, appreciated, and also to express their positive feelings to others.
- 3) Achievement Hunter type (*The Achiever*), the type of achievement hunter is a personality type driven by the need to be productive. This type is the type of person whose ambition reaches great success. As much as possible he will avoid failure, especially when dealing with work.
- 4) Romantic type (*The Melancholy*), people with romantic or melancholy type is often referred to as

Achievement Motivation

Motivation comes from latin *movere* which means "move". According to Wlodkowski (1985) in Suciatty and

Irawan (2001) motivation in behaviorism is a condition that causes or causes certain behavior, and gives direction and resilience to a behavior. According to Ames (1984) in Suciaty and Irawan (2001) Motivation according to cognitive views is a person's perspective on self and environment. Heckhausen in Hawadi (2001) states that learning motivation is essential in learning success. According to Suciaty and Irawan (2001), motivation is a factor that affects the learning process and outcome. Motivation contributes 36% to academic achievement. Sadli (1986) states that, a person's potential will be less developed if not sufficiently motivated. Individuals with high motivation ability, will have a higher chance of achieving goals and will not be easily discouraged in solving problems. Sukmadinata (2003) states, with the ability to self-motivate one will tend to have a positive outlook in assessing everything. According to Hawadi (2001), learning motivational variants have two forms. First, the learning motivation that comes from within (intrinsic). This motivation comes without the encouragement of outsiders, one learns because of consciousness or desire to learn and argue that learning is a necessity. Second, the learning motivation that comes from outside (extrinsic). This motivation arises because of outside factors of either the family or the faculty.

RESEARCH METHODS

Type of Research, Research Site, Subject, Population and Sample

This type of research according to its approach is Expost facto research. This research was conducted at University of Sumatera Utara, with population of all University of Sumatera Utara students registered and active in 2016 amounted to 6397 students. The number of research samples taken as much as 10% of the population of 640 students with proportional composition randomized by the Faculty. Data collection techniques used were questionnaires or questionnaires and documentation studies. The research data is processed using SEM - Partial Least Square (PLS) technique of SmartPLS application.

RESULTS AND DISCUSSION

Respondents

Respondents in this study amounted to 640 people, consisting of men (51.4%) and women (48.6%). Characteristics of Respondents Based on the Cumulative Performance Index is 63% in the range 2.01- 2.99, in the range of > 3.00 as much as 33.6%, and students who have Cumulative Performance Index below 2.00 is 3.4%.

Student Learning Style

Student learning styles obtained were 25.5% convergent, 26.3% divergent, 26.8% assimilation, and 21.4% accomodative. The relation of all learning styles with academic achievement was obtained 0.636, the correlation learning style of convergent with academic achievement was 0.640, and the relationship of learning style divergent with academic achievement was obtained 0.893, association of learning style assimilation with academic achievement obtained 0.889, and accomodative learning style relationship with academic achievement obtained 0.851.

Academic Potential

Intelligence (academic potential) is one of the important aspects that determine the success or failure of one's study. If students have a normal level of intelligence or above normal then the potential students can achieve high achievement. Based on the data obtained, the academic potential of students viewed from the intelligence indicator is 6% classified as very superior, 17% superior, 23% above average, 51% normal, 3% below average.

Motivation

Based on the distribution of respondents' answers to the variable level of discipline following the lectures, it can be stated that: In general, students are actively participating in lectures with pleasure, students try to never miss college, students try to attend college on time, always listening / paying attention when lecturers give lectures. Many students do not take part in helping smoothness of the learning process that takes place. There are still many students who are reluctant or do not ask even though they have not understood the material.

Based on the distribution of respondents' answers to the variable level of diligence to do the task can be stated that: In general, students do the job seriously, before the task is collected, students check the task first, students try to complete the task on time and try to finish the task until the end, full of his duties and the students do their best in their duties, albeit at the expense of other affairs.

Based on the distribution of respondents' answers to the variables in the learning frequency, it can be stated that: Students can make a schedule of learning to order regularly, leisure time outside the classroom is used for learning, students realize that learning though no duty is a liability, materials taught during lectures and students are always doing new things to increase knowledge.

Personality Type

Based on the Enneagram Tests performed, the personality type belonging to the type of perfectionist is 10.5%, The helper type is 12.6, The Achiever type is 9.2%, The romantic type (The Melancholy) 10, 4%. Observer type (The Investigator) 11.9%. Type of worrier (The Sceptic) 14% The adventurer type (The Enthusiast) 12.3, The Challenger type 9.1% and The Mediator type is 10%.

Structural Model Analysis

Evaluation Measurement (Outer) Model

(a) *Convergent Validity*. Expected value > 0.7. Outer Loadings results (measurement model) or convergent validity are used to test the unidimensionality of each construct. According to Chin (1998), the value of the loading factor indicator greater or equal to 0.5 can be said to be valid. The SmartPLS output for loading factor gives the following results:

Validity test for reflective indicator uses correlation between item score and construct score. Table 2 shows that the loading factor gives a value above the suggested value of 0.5. The smallest value is 0.582 for the Kindergarten 6 indicator, Skeptic Personality Type. This indicates that the indicators used in this study are valid or have fulfilled the convergent validity. The following is the loading factor diagram of each indicator in the research model:

Table 2
Outer Model (Weights or Loadings)

	GB	MOT	PA	POT	TK
GB 1	0.737				
GB 2	0.917				
GB 3	0.932				
GB 4	0.847				
MO 1		0.859			
MO 2		0.756			
MO 3		0.629			
MO 4		0.778			
MO 5		0.775			
MO 6		0.679			
PA 1			0.851		
PA 2			0.920		
PA 3			0.794		
PO 1				0.860	
PO 2				0.941	
PO 3				0.923	
TK 1					0.924
TK 2					0.914
TK 3					0.769
TK 4					0.960
TK 5					0.720
TK 6					0.582
TK 7					0.585
TK 8					0.647
TK 9					0.911

Source: Output SmartPLS 2017

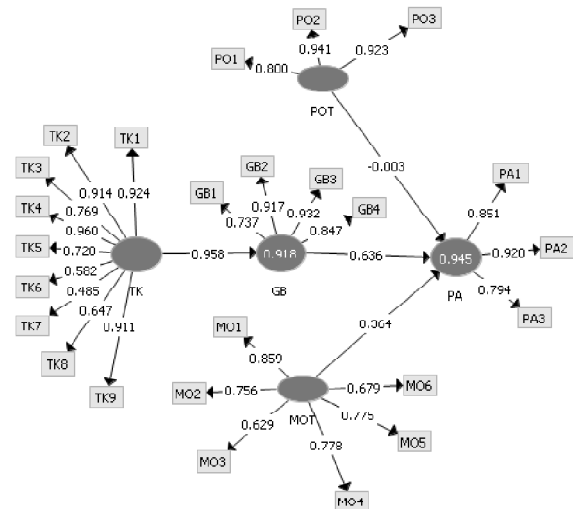


Figure 1: Loading factor diagram of personality type, motivation, learning style, academic potential and student academic achievement

Source: Output SmartPLS 2017

(b) *Discriminant Validity*. This value is a value of cross loading factor that is useful to determine whether the construct has an adequate discriminant that is by comparing the loading value on the intended construct must be greater than the loading value with other constructs.

Table 3
Cross Loadings

	<i>GB</i>	<i>MOT</i>	<i>PA</i>	<i>POT</i>	<i>TK</i>
GB 1	0.737	0.622	0.640	0.800	0.631
GB 2	0.917	0.834	0.893	0.638	0.934
GB 3	0.932	0.827	0.889	0.679	0.927
GB 4	0.847	0.770	0.851	0.947	0.769
MO 1	0.944	0.859	0.920	0.692	0.960
MO 2	0.637	0.756	0.920	0.398	0.720
MO 3	0.495	0.629	0.794	0.541	0.582
MO 4	0.567	0.778	0.515	0.542	0.616
MO 5	0.568	0.775	0.571	0.818	0.647
MO 6	0.667	0.679	0.566	0.847	0.614
PA 1	0.847	0.770	0.851	0.692	0.769
PA 2	0.944	0.859	0.920	.486	0.960
PA 3	0.637	0.756	0.794	0.800	0.720
PO 1	0.737	0.622	0.640	0.860	0.631
PO 2	0.795	0.749	0.802	0.941	0.740
PO 3	0.798	0.715	0.781	0.923	0.716
TK 1	0.879	0.826	0.857	0.670	0.924
TK 2	0.889	0.794	0.864	0.628	0.914
TK 3	0.847	0.770	0.851	0.947	0.769
TK 4	0.944	0.859	0.920	0.691	0.960
TK 5	0.637	0.756	0.794	0.486	0.720
TK 6	0.494	0.629	0.515	0.398	0.582
TK 7	0.378	0.472	0.401	0.348	0.585
TK 8	0.568	0.775	0.566	0.542	0.647
TK 9	0.877	0.812	0.835	0.671	0.911

Source: Output SmartPLS 2017

(c) *Composite Reliability*. Data that has composite reliability > 0.7 has high reliability.

Table 4
Composite Reliability

	<i>Composite Reliability</i>
TK	0.933
GB	0.920
POT	0.919
MOT	0.884
PA	0.892

Source: Output SmartPLS 2017

(d) *Average Variance Extracted (AVE)*. Expected AVE value > 0.5.

Table 5
Average Variance Extracted (AVE)

	<i>Average Variance Extracted AVE</i>
TK	0.616
GB	0.742
POT	0.792
MOT	0.562
PA	0.733

Source: Output SmartPLS 2017

(e) *Cronbach Alpha*. Reliability test reinforced with Cronbach Alpha. Value is expected > 0.6 for all constructs.

Table 6
Cronbachs Alpha

	<i>Cronbachs Alpha</i>
TK	0.916
GB	0.883
POT	0.867
MOT	0.843
PA	0.816

Source: Output SmartPLS 2017

Table 7
Latent Variable Correlations

	<i>GB</i>	<i>MOT</i>	<i>PA</i>	<i>POT</i>	<i>TK</i>
GB	1.000				
MOT	0.892	1.000			
PA	0.958	0.929	1.000		
POT	0.872	0.783	0.837	1.000	
TK	0.958	0.951	0.961	0.783	1.000

Source: Output SmartPLS 2017

Table 8
Total Effects

	<i>GB</i>	<i>MOT</i>	<i>PA</i>	<i>POT</i>	<i>TK</i>
GB			0.636		
MOT			0.364		
PA					
POT			0.403		
TK	0.958		0.609		

Source: Output SmartPLS 2017

Inner Model Analysis

Inner model analysis / structural model analysis is performed to ensure that structural models are constructed accurately. Inner model evaluation can be seen from indicator Coefficient of determination (R^2) Here is the value of R-Square on the construct:

Table 9
R Square

	<i>R Square</i>	<i>R Square Adjusted</i>
GB	0.918	0.914
PA	0.945	0.943

Source: Output SmartPLS 2017

The R Square table gives a value of 0.918 for the GB construct (Learning Style), which means that TP (Personality Type) is able to explain Learning Style variance of 91.8%.

Hypothesis Testing

Table 10
Path Coefficients

	<i>GB</i>	<i>MOT</i>	<i>PA</i>	<i>POT</i>	<i>TK</i>
GB			0.636		
MOT			0.364		
PA				0.403	
POT					
TK	0.958				

Source: Output SmartPLS

Table 10 shows that the direction of the relationship between TK (Personality Type) and GB (Learning Style) is significant. The direction of the relationship between Academic Potential (POT) and Academic Achievement (PA) is significant, the direction of the relationship between motivation (MOT) and academic achievement (PA) is significant, and the direction of the relationship between GB learning style) and academic achievement (PA) is significant. Thus the hypothesis in this study that states that the Personality Type affect the learning style of students, learning styles have an influence on academic achievement, student motivation influence on academic achievement and academic potential influence on academic achievement, accepted.

CONCLUSION

The results showed that: Motivation influence on student academic achievement, personality type have an effect on to student's learning style, student learning style have an effect on academic achievement and academic potency influence to academic achievement.

SUGGESTION

Based on the conclusion of the research, it is necessary to hold further research on the influence of learning styles on student achievement with a much larger sample. It is necessary to conduct research on other factors that can influence student's learning style.

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