

# The Effect of Cooperative Learning Model and Kolb Learning Styles on Learning Result of The Basics of Politics

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## Abstract

The aims of this research were to determine the effect of cooperative learning model and learning styles on learning result. This quasi-experimental study employed a 2X2 treatment by level, involved independent variables, i.e. cooperative learning model and learning styles, and learning result as the dependent variable. Findings signify that: (1) Students learning result who were taught by cooperative learning model type of GI brings higher learning result compared to those that based on type STAD. (2) There is an effect of interaction between cooperative learning model and learning styles on the students learning result. (3) The learning result of type of accommodator students who were taught by learning model type of GI showed higher result than those who were taught by type of STAD. (4) The assimilators learning result who were taught by type of GI obtained lesser result than those of STAD's.

**Keywords:** cooperative learning model type of GI, type of STAD, accommodator learning style, assimilator learning style, learning result

## 1. Introduction

Selection and using of the appropriate learning model is expected be able to increase learners motivation of and create an atmosphere conducive to study, and consequently it will affect the improvement or increase of learning outcomes. One of the many learning model that much studied and developed by experts is the model of cooperative learning. The implementation of cooperative learning model will usually bring the students to develop their social skills such as interpersonal relationship skills to achieve and master the concepts and materials designed by the teacher. Cooperative learning environment prepares students to master about collaboration and various valuable social skills they will use during their lives.

Other than learning models, learning style of the students is an important and unique characteristic to consider. Educator's knowledge concerning students learning styles helps them to create suitable and multi-sensory learning environment, which serves the best possible learning climate for learners. Optimal learning results will be obtained if the variety of students such as habits, interests, and learning styles being accommodated by educators through the appropriate choice of learning models and teaching materials with regard to the learning styles of learners. The quality process of learning, could be improved, when educators understand the characteristics of learners including their learning styles. Educators should considerate the information about learners in selecting methods, teaching techniques, and appropriate teaching materials. Conditions of learning like typical of students and the characteristics of course, strategy, effectiveness, efficiency and attractiveness of learning have been the influential factors on learning outcome.

While, learning model, covers instructional organizing, the process of delivery, management and evaluation of learning could also increase the learning result. While, learning model, covers instructional organizing, the process of delivery, management and evaluation of learning could also increase the learning result. Learning outcomes in this study means the course's learning result of Basics of Political Science. Analysis of learning outcomes in this study is limited to cognitive domain assessment. The success of learning is more determined by competency in cognitive realm, such as the ability to understand the problems of a political event as well as to analyze, synthesis and evaluate the political significance in the life of a state.

Furthermore, focus of this study is the two influential elements consists of the learning models and styles of learning. The learning model is limited to the cooperative learning model type of Group Investigation (GI) and will be compared with the type of Students Team Achievement Group (STAD). Learning style as a moderator variable studied from two aspects, namely assimilator, and Accommodator. The styles of learning in this study is used as moderator variable given because of the relatively permanent the habitual of behaving in receiving and managing information in a person.

Cooperative model requires cooperation and interdependence of learners in the superstructure of the task, the goal superstructure and its reward superstructure (Arends, 2008:5). The learning model is among the factors that can affect learning outcomes (Slameto, 2010:54). According to Joyce, the actual teaching models are also models of learning (Joyce and Weil, 2000:7). When a faculty member helps students acquire information, ideas, skills, values and ways of thinking, to express its meaning, the lecturer (professor) also teaches about how to learn. The essence of learning is basically to prepare students to be able to show the behavior of learning outcomes in a real condition, or to solve problems encountered in life. Hence, the development of learning programs use the techniques of learning needs analysis to obtain information about the capabilities or competencies required by learners (Abdullah, 2007: 523).

Course of Basics of Political Science is one of the distinctive subjects of Faculty of Social Sciences in State University of Medan, North Sumatera, Indonesia. This lesson discuss and explore the basic concepts of political science including the definition, the type and shape, development and significance. Budiardjo (2000: 8), said the correct politics persistently concerning the business of the whole society (public goals) and not for personal use (private goals). Study the fundamentals of political science increasingly important (fundamental) in state practices as they relate to various issues, comprise areas (places), leadership, image, and democracy, including the ruling principle of law-abiding and morality compliant. Machiavelli (2003: 34-35) said that comply with the law and morality is an imperative and most commendable for the sovereign. Rulers should not deviate from the good traits.

The scope of this course is the study of the basic concepts of political science, theories ranging from understanding, meaning, the essence of politics and political science, and key concepts, as well as systems approach and political relations with other sciences, democracy, the Constitution, and citizenship. Furthermore, the discussion is on the subject of good governance and decentralization, human rights, socialization, communication and political culture, political parties, political participation and elections as well. At the end, discuss the division of state power, decisions and policies, Muladi and Tamara, (2004: 11); Budiardjo, et al., (2005: 4.1-6.50); Pambudi, et al., (2003: 54-56).

Lie, (2004: 12) and Sanjaya, (2008: 241), concluded that the cooperative learning, students work together as a team to solve problems, accomplish tasks and achieve goals. In cooperative learning means that a person must have a spouse or friends so that friends can be asked to solve a problem. Work cooperatively means to group students in small number of groups in the classroom in order to cooperate with the maximum capability owned and mutually learn from each other in the group (Isjoni, 2010: 17).

Cooperative model, in an effort to increase learning outcomes, excel in helping students understand difficult concepts, provide opportunities of mutual cooperation, and mutual respect. Characteristics of cooperative learning instilled willingness and skills to cooperate, setting (arrangements) tasks and responsibilities of each respectively. Lie (2004: 31), citing Roger and Johnson, said the five elements of cooperative learning in order to achieve maximum results, namely: 1) positive interdependence; (2) the responsibility of the individual, 3) face to face; (4) communication among members; and (5) evaluation of the group process. Loui (2006: 3), the most important advantages of group work is that students learn how to work in a team with people who may be derived from diverse social backgrounds and include its cultural values. The modern world needs people who are able to work in teams concurrently based on good individual capability.

Group Investigation (GI) which developed by Sharan and Sharan, has philosophical roots, ethical and psychological in accordance with Dewey's views regarding mutual work (cooperation) in the classroom as a prerequisite to be able to cope with the various problems of life. The role of teachers in GI is as a resource and facilitator who directs process that occurs in clusters (in the small group) (Joyce and Weil, 2000: 321). Teachers/lecturers around to monitor the activities carried out and help the group in distress. Learners in type of GI embroiled since the beginning in the planning of classroom learning, both on the topics learned and ways how the investigation started.

Cooperative learning model type of STAD (Student Teams Achievement Divisions) developed by Slavin that emphasizes the ease of use activity and interaction among participants is a protégé to mutually motivate and help each other in mastering the subject matter in order to achieve maximum (Isjoni, 2010: 51). Educators who use type of STAD, after serving the material and then divide students into small batches. Group using worksheets master a variety of academic material and helping each other to learn the material (Arends, 2008: 51). Characteristics of learning styles is one of essential factors that need to be identified by teachers to use as a guidance in developing learning programs (Uno, 2008: 143). Students learning styles is one of the characteristics of participants that much studied by experts and are grouped based on different viewpoint.

Cullingford expressed it is important for a teacher to understand the learners learning style (Cullingford, 1995: 110). Nasution (2008: 94), defined learning style as the consistent conduct (ways) that is a learner employ in capturing stimuli or information, how to remember, how to think and solve problems.

Kolb considered learning as a process where knowledge is created through the transformation of experience (Kolb and Kolb, 2005: 2). Its type of learning styles among other things are assimilator and accommodator. Type of assimilator is a combination of thinking and observing (watching). Students with assimilator type have advantages in understanding the various of information and summarize in a logical format, concise (to the point), and clear, like the ideas and abstract concepts, and also tend to be more theoretical. Accommodator types is a combination of feelings and actions (doing). Student with type of accommodator has a good ability to learn from the their own real experience and active doing the experimentation.

Muijs and Reynolds (2008: 306), stated the type of assimilator student is fond of lecture-style instructions or trainings which have been prepared, accomplish data analysis and independent research. While that has the type of accommodator enjoy cooperative learning and work together collaboratively. Furthermore Fitriana, shows that learning result in mathematics of students dealt with GI cooperative learning model is better than that of handled by the model of STAD on students who have moderate or low independent learning style (Fitriana, 2011: 29).

The research problems are specified as follow:

1. Are there differences in the learning results of the basics of political science students who learned with GI cooperative learning model than that of educated through STAD cooperative learning model?
2. Is there an interaction effect between models of learning and learning styles on students learning outcomes of Basics of Political Science?
3. Are there differences in the learning results of basics of political science students who have type of accommodator learning style that learned by means of GI type cooperative model than that of cultured by using type of STAD?
4. Are there differences in the results of learning of basics of political science students who have type of assimilator learning styles that learned by way of GI type cooperative model than that of cultured through type of STAD?

This research is looked forward to be useful for: 1) Being one of the inputs to improve the quality of learning process, namely the use of cooperative learning model type of GI or type of STAD according to the characteristics of the students learning style; 2) Provide an input for consideration for the design of learning, especially in the setting of learning model for students who have learning styles of accommodator or assimilator; and 3) Provide input as one of the empirical foundation for who will review learning models and styles of learning in relation to learning results.

The hypothesis of this research are set out in:

- 1). Learning results of Basics of Political Science students who learned with GI cooperative learning model is higher than that of educated through STAD cooperative learning model
- 2). There is an interaction effect between cooperative learning models and learning styles on students learning outcomes of Basics of Political Science.
- 3). Learning results of basics of political science of the students who have type of accommodator learning style that learned by means of GI type cooperative model is higher than that of learned by means of type of STAD
- 4). Learning results of basics of political science of the students who have type of assimilator learning styles that learned with cooperative learning model of GI type is lower than that of learned by means of type of STAD.

## **2. Research Methodology**

### *2.1 Purpose*

The purpose of this study was to reveal the difference of effect both independent variable of learning models and learning style on learning results as the dependent variable.

In addition, to determine whether there is an interaction between the independent variables affect the learning outcomes. This research was carried out at the Department of Geographical Education (DGE) Faculty of Social Sciences, State University of Medan (FIS UNIMED), performed at the first semester students academic year

(FY) 2013/2014, the period of August to November 2013.

### 2.2 Methods and Design

The study used a quasi-experiment method (quasi-experimental), with a draft design treatment by level 2 x 2 (Graduate Program Team: 22-27). The independent variables are the learning model (type of GI and STAD), and student learning styles (accommodator and assimilator). Table 1 shows the design used.

Table 1. Matrix of Research Design

Learning Style (B)	Learning Model (A)	
	Type of GI (A <sub>1</sub> )	Type of STAD (A <sub>2</sub> )
Accommodator (B <sub>1</sub> )	A <sub>1</sub> B <sub>1</sub>	A <sub>2</sub> B <sub>1</sub>
Assimilator (B <sub>2</sub> )	A <sub>1</sub> B <sub>2</sub>	A <sub>2</sub> B <sub>2</sub>

### 2.3. Population and Sample

Population is a first semester students of Geographical Education Department, spread on five class numbered 174 people and sample amounted to 78 people.

Sample acquisition techniques performed by lottery to the selected sample class, elected class A and C. Class A (37 students) is a class treated by cooperative learning model type of GI, and class C (41 students) is handled by cooperative learning model type of STAD. Research sample was determined based on the questionnaire results of student learning styles of both sample class. Sampling of class A (type of GI) comprise accommodator students (A<sub>1</sub>B<sub>2</sub>) amounted to 19 people, and the assimilator (A<sub>1</sub>B<sub>2</sub>) amounted to 18 people. While sampling of the other class (type of STAD), consist of 20 accommodator students (A<sub>2</sub>B<sub>1</sub>), and 21 assimilator (A<sub>2</sub>B<sub>1</sub>). More detail can be seen in Table 2, as follow.

Table 2. Matrix of Respondents Distribution Based on Learning Model and Learning Style

Learning Style (B)	Learning Model (A)		Total
	Type of GI (A <sub>1</sub> )	Type of STAD (A <sub>2</sub> )	
Accommodator (B <sub>1</sub> )	19	20	39
Assimilator (B <sub>2</sub> )	18	21	39
Total	37	41	78

### 3. Research Result

Based on data of the students test score of learning results of the basics of political science, the next step is to calculate the total score and the average score for each treatment group according to chart further ANOVA, which can then be used as the basis for the decision statistic for testing the hypothesis, as rates in Table 3, as follow.

Table 3. Summary of Descriptive Statistics of Calculation Data

Variable		Learning Model		Total
		GI	STAD	
Learning Style	ACCOMODATOR	n : 19	n : 20	N : 39
		$\bar{x}$ : 33.97	$\bar{x}$ : 26.80	$\bar{x}$ : 30.31
		$\sum X$ : 645	$\sum X$ : 537	$\sum X$ : 1182
		$\sum X^2$ : 22065	$\sum X^2$ : 14579	$\sum X^2$ : 36644
		s : 3.04	s : 2.92	S : 2.91
	ASSIMILATOR	n : 18	n : 21	N : 39
		$\bar{x}$ : 29.17	$\bar{x}$ : 31.64	$\bar{x}$ : 30.58
		$\sum X$ : 526	$\sum X$ : 666	$\sum X$ : 1192
		$\sum X^2$ : 15492	$\sum X^2$ : 21208	$\sum X^2$ : 36700
		s : 2.77	s : 2.15	S : 2.75
Total		n : 37	n : 41	N : 78
		$\bar{x}$ : 31.61	$\bar{x}$ : 29.28	$\bar{x}$ : 30.444
		$\sum X$ : 1171	$\sum X$ : 1203	$\sum X$ : 2374
		$\sum X^2$ : 37557	$\sum X^2$ : 35787	$\sum X^2$ : 73344
		s : 3.80	s : 3.52	s : 3.658

### 3.1 Hypothesis Testing

Based on the results of the first hypothesis testing, the value acquired of  $F_{\text{calculate}} = 14.27 > F_{\text{table}} = 3.98$  with  $\alpha = 0.05$ , so that  $H_0$  is rejected and  $H_1$  is accepted. Thus there is a difference in the students learning results of the basics of political science between that who treated by cooperative learning model type of GI than that with the given conduct by type of STAD.

Overall ANOVA results for hypothesis testing can be seen in Table 4 below.

Table 4. Summary of Result of Anova

Variation Source	dk	JK	RJK	$F_{\text{count}}$	$F_{\text{table}}$ ( $\alpha = 0.05$ )
Learning Model (A)	1	103,53	103,53	14,27	3,98
Learning Style (B)	1	1,28	1,28	0,17	
Interaction (A >< B)	1	447,47	447,47	61,7	
Error	74	536,89	7,25		
Total	77				

Looking at the average of the learning results of the basics of political science students treated by GI type ( $\bar{x} = 31.61$ ) was higher than the average learning outcomes treated by type of STAD ( $\bar{x} = 29.28$ ), it can be concluded that learning outcomes of students who learned with GI cooperative learning model is higher than that learned through type of STAD.

Based on the results of the second hypothesis testing, the value acquired of  $F_{\text{calculate}} = 61.67 > F_{\text{table}} = 3.98$  with  $\alpha = 0.05$ , so that  $H_0$  is rejected and  $H_1$  is accepted. Therefore it is proven that there is an interaction effect between learning models and styles of learning on students learning outcomes of the basics of political science, as rates in Figure 1.

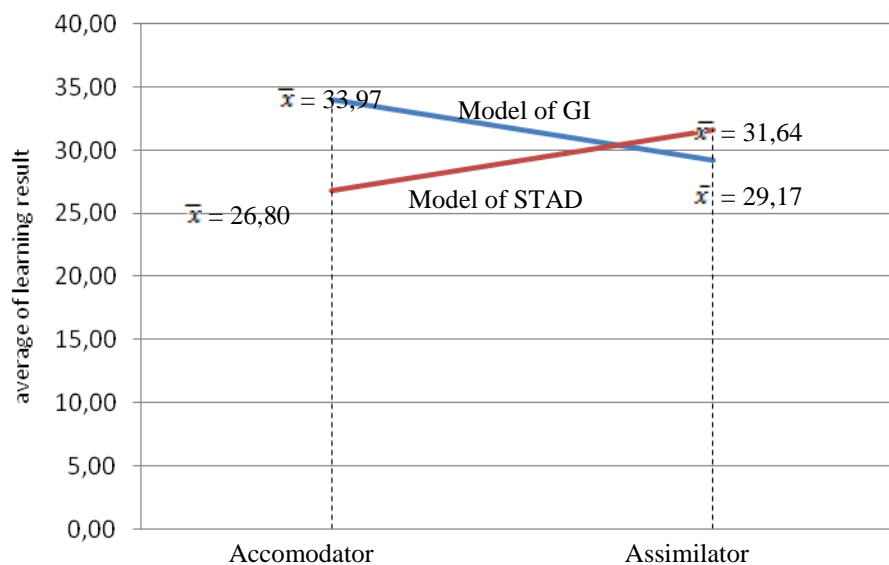


Figure 1. Interaction Model Between Learning Model and Learning Style on to Learning Results the Basics of Political Science.

Advanced test (post hoc test) was performed because there is an interaction between the models of learning and learning styles in influencing learning outcomes, using Scheffe test. The test explicitly to determine which samples of the average results of learning is different. Summary of the results is presented in Table 5.

Based on the results of the third hypothesis testing, the value acquired of  $F_{\text{calculate}} = 8,31_{\text{tables}} > F = 2,74$  with  $\alpha = 0.05$ , so that  $H_0$  is rejected, and  $H_1$  is accepted. Thus, it is verified that the learning results of the basics of political science accommodator students learning styles who learned with type of GI is higher compared with those who treated with type of STAD.

Table 5. Summary of Calculation Results of Scheffe Test

No	Interaction	$F_{\text{Calculate}}$	$F_{\text{Table}}$	Commentary
1.	$\mu A_1 B_1$ with $\mu A_2 B_1$	8,31	2,74	Significant
2.	$\mu A_1 B_2$ with $\mu A_2 B_2$	2,86	2,74	Significant

Based on the results of fourth hypothesis testing, the value of  $F = 2.86 > F_{\text{table}} = 2.74$  with  $\alpha = 0.05$ , so that  $H_0$  is rejected and  $H_1$  is accepted. Thus it can be proved that the learning result of the basics of political science students group of assimilator learning styles that treated with type of GI is lower than that of learned through type of STAD.

#### 4. Discussion

##### 4.1. Learning Results of Basics of Political Science Students who learned with Cooperative Learning Model type of GI is Higher Compared with that of learned through Type of STAD

Under the first hypothesis testing, proved that the learning result of the basics of political science students who were treated by type of GI cooperative learning model is higher than that of treated by type of STAD. This can be explained by the comparison of the two models. Both emphasis on learning as a team, but each has a center of gravity and orientation in different stages of implementation.

Type of GI cooperative learning model, like other cooperative learning model, emphasizes learning for problem solving learning, but student involvement in learning is very dominant. GI type requires students beginning in the planning of classroom learning, both on the topic and ways to start their investigation. This approach helps students build the skills of communication and group process skills.

While in cooperative learning model type of STAD, students do not engaged in the planning of learning, but only in the process. This cooperative type emphasizes the activity and interaction among learners to motivate each other and help each other in mastering the subject matter in order to achieve optimal performance expected to cope with the tests, especially the final test. Lecturers who use type of STAD presenting new academic material



to students, dividing students into small groups. Students help each other and learning materials studied in team work, use the worksheets in order to better master the various academic material.

Activity of cooperative learning model type of GI oriented discussion and investigation, so that the student strive to construct their own knowledge. By constructing their own knowledge, the knowledge obtained is expected to be more meaningful, more lasting and not easily forgotten as well as useful for later life. Students solve problems of their own choosing and to dig deeply, not merely just to be able to answer the test when the examination.

While on cooperative learning model in type of STAD, students' discussions limited to the material determined by the lecturer. Exploration of the debate material as well as the depth of discussion quite limited because of the demands from the beginning is discussed by the students to answer the questions or issues that have been designed by the lecturer. Since the material is limited and pre-determined, students are not sufficiently challenged to discuss more deeply and just trying to find answers to the questions. Therefore, it can be argued that the knowledge gained by the students treated by the type of STAD, tend to summon up only, while the knowledge acquired by the students dealt with type GI cooperative learning model is more meaningful.

Furthermore, in the GI type, students beginning in the planning of learning in the classroom. Lecturer provide general purpose of learning, then students were given the independence to determine their own learning objective in accordance with the purpose of learning that the teacher displayed. In addition to having a personal learning goals, students are also given the autonomy to choose sub topics that they think are interesting (according to their interest). Lecturer convey general topics that will be discussed, and students are appreciated to have a topic to be investigated in a group.

The role of lecturer learning in type of STAD, still likely to be dominant. Lecturers set goals of learning and students just follow the instructions of lecturers. Material and topics to be covered in the discussion is also set by the faculty member, including guiding how to do the work report, and how to present it so that students just follow the direction of professors and discuss the material in the team.

In type of STAD, tasks assigned looks more simple and not too complex. Lecturers have a limit design work instructions will be given to students, what should be done, including guiding the discussion group classes. The still dominant role of the lecturer is make students orientation tend to only do the tasks or the work given considering the material for preparation for exam, thus seem less motivated to explore further discussion. Member in a cluster, in the completion of the task group, some students become hearers only, write only presentations and partly seek answers and replies or discuss a topic.

Some differences in the application of the two types of cooperative learning in the above explained that the GI type learning model is able to create an atmosphere more conducive to learning, motivate to study harder (to learn more actively), maintaining focus during learning activities take place because the students are actively engaged in each stage of learning. Learning becomes more meaningful not only to get the value (point) or group award for students construct their own knowledge, so that the achievement of learning goals more effectively and would be more influential to improve the learning result.

#### *4.2 There is an interaction effect between cooperative learning models and learning styles on students learning outcomes of Basics of Political Science.*

Based on the second hypothesis testing, proved that there is an interaction effect between both learning models and learning styles on the student learning outcomes. Learning models are external factors for the students originated and developed by lecturers that affect their learning outcomes. While, there is internal factors come from students originally that influence their learning results. Internal factors such as motivation, personality, self-concept, style of thinking and learning styles are contributing factors influencing how people learn, receive information, solve problems, meet the challenges, socialize and collaborate with classmates. In designing a model of learning in the classroom, lecturer should consider things that can affect the results of learning, such as the material characteristics and student characteristics. Taking into account the characteristics of students, lecturers could easier optimize student learning outcomes acquired.

Applied learning models turned out to give a different effect on the students. Differences in student characteristics affect how they receive information, process the message, and interact in class. Specific learning model may be suitable for certain student characteristics but it could be not compatible to students with different characteristics as well. Compatibility or incompatibility is defined as optimal or absence of specific learning model to motivate students to learn better and achieve the purpose of learning more effectively and efficiently.

In this study, the observed students characteristics is the style of learning. Learning style is a picture (overview) of student characteristics associated with a consistent way used by the student in the process of absorbing,

processing and accommodate new information. In this study, the discussion is limited to the learning style of accommodator and assimilator.

Students with learning style of type of accommodator learned well from the real experience of his own accomplishments. Love making plans and engage in new experiences. Tend to act on intuition rather than logical analysis. Consider the human factor rather than technical analysis, including tend to be dominated by the situation and practical things in learning process. Not too concerned with the theory and is not oriented to the source of books only, however, experience is the best teacher. Counting on information from others and very actively looking for a new challenge. Tend to be very active along well with others, but the disadvantage is impatient and quick to give up, and rarely finish the job. Learn in an environment that offers constant challenges, and in a heterogeneous cluster.

Students with assimilator type is excels in comprehending the presented information and recount it logically, concise and clear. While, this assimilator students less attention to others but more consideration to abstract ideas or concepts and theoretical inclined. These type person tend to be theoretical and reluctant to do, a books and examples oriented. They are able to form theories based on their analysis of the problems. Smart in finding alternative solutions, including utilizing the experience of everyday life, it is very logical and happy on accuracy, smart in organizing and planning something. The drawback is very theoretical and did not see the realities, and very difficult to accept anything that is not in accordance with the theory. This assimilator students will learn more effectively if given a clear structure, observing something logically, to equip themselves with the data, learn calmly with care and need a more quiet place to think, enjoy lecture-style and prepared training, data analysis and independent research.

Both types of students reply different response to the application of cooperative learning type of GI and type of STAD. This difference is due to certain type of students feel more convenient in a classroom situation with specific learning model because according to the orientation and their best learning habits. While the other type, may have to be in the discomfort zone when faced a particular learning situation that does not match the orientation and the best learning conditions. GI type learning model needs more students activities while in type of STAD is not. Conversely, the role of the lecturer in the type of STAD is still dominant.

Students active role in the type of STAD is tend to be limited to discussion classroom to complete the task together, although the portion of students working independently is still accommodated. For students with the type of passive learning style, learning by observing and listening to the other person would make them feel comfortable. Its type of learning process do not force them to perform and too much interaction with other people. They have more time to explore their need of thinking autonomously and non-cluster.

#### *4.3 Learning results of basics of political science of the students who have type of accommodator learning style that learned by means of GI type cooperative model is higher than that of learned by means of type of STAD*

Based on the result of further test, students learning outcome of type of accommodator that learned with GI learning model is higher than the learning outcomes of students that learned through in type of STAD. Accommodator type of students, learn by trying to figure theories available and love to experiment. They use concept of learning by doing to learn something new. They learn better when able to use something as object to be observed, touched, explored and used. The accommodator type are tend to be extrovert and likely dare to take risks. They prefer to learn together compared to learn on their own. The more opportunities to interact and discuss with many people generate these type learning more vibrant and performed.

Students with type of accommodator are non-thinker type and not be too conscious about theories. This type tends to come up with ideas spontaneously. In GI learning, the accommodators are helped with many learning activities and opportunities to choose program and not be dictated as in the type of STAD. Opportunities to interact in a more complex communication relationships between student with each other, between students and lecturer make this type would be active and dominant in the group, though less contributes to the ideas, and the analysis of problems, this type can motivate other members of the group by way of their strong interpersonal capacity.

Conversely, if learned with type of STAD, the accommodators tend to be get bored hastily, because this type is not a thinker and less enthusiastic about the theories, particularly if only accept what was already conceptualized by the lecturer. Limited interaction within the group and the lack of challenging learning activities make the individual of this type would feel get bored easily if learned with type of STAD.

If learned with the cooperative model type of GI, accommodator types students will tend to be individuals who



play an active role although not the most widely convey ideas. This type would be very easy to absorb information from friends in the group and quick in taking decisions. Ability to analyze something although not as sharp as the type assimilator, help the accommodator able to get acquainted to learning that requires deep thinking and active participation of students in each learning activity.

Compared to the less challenging learning model type of STAD, the accommodator is more suitable if learned by type of GI, for the reason that more varied and provide a good challenge of intellectual needs and the needs of learning activities. It can be concluded that the learning result of students who have accommodator type would be better if learned with cooperative models GI compared with type of STAD.

#### *4.4 Learning results of basics of political science of the students who have type of assimilator learning styles that learned with cooperative learning model of GI type is lower than that of learned by means of type of STAD*

Based on the calculation of further test showed that the learning result of assimilator students who learned by learning model type of STAD is higher than that of learned by the type of GI. The assimilator students more comfortable and suitable if learned through type of STAD. This is because the assimilator type is the self-directed (independence) learners and tend to become passive and closed when interacting with others.

This assimilator type learns by combining observation and thought. Students of this type observe and reflect their experience from various point of view. This type tends to be cautious in making decisions, understand ideas and situations from different viewpoints. This type is capable of making their own concepts through observation they do and integrate it with logical theories. This type make use of analytical and rationale approach to solve the problem.

The assimilator type is a kind of deep thinker. They excel at explaining things logically and clearly, explore more data and sources. While, they are very interested in making a plan, analyze problems in-depth and make decisions. This type is not too fond of interacting with others and do not really care about the environment. They learn better with direct authority, impersonal learning situations that emphasize on theory and systematic analysis. This type could be frustrated in unstructured learning conditions. They are in high spirits if their learning is planned systematically to develop theories and ideas in solving the problem. In addition, they also enjoy the task of summary, lectures, examining (reviewing) documents.

Type of assimilator learning styles tend to be more effective if they learn independently. Although student active role is required, assimilator types tend to be less active in cooperative learning. This type tends to be brilliant in actively thinking about something compared to involved doing something to understand a new information. This type is more productive when studying autonomously compared to learning in cluster. The larger portion of independently learning and at least challenge in learning in the type of STAD tend to be more suitable to this type.

In style of STAD, lecturers have more active portion, presentation of learning material by lecturers helped type of assimilator learns more. This type is superior in explaining things logically and clearly. Intelligent and logical, as well as superior in planning something. Nevertheless, this type tend to be individual and not too interested in social issues. They prefer the data to the needs of their logical thinking.

Learning style of STAD accommodates the needs of the assimilator in exploring and developing their thinking and observing things in problem-solving activities both individuals and groups. Clusters activities that are not too dominant and still dominated by the instructor or lecturer in style of STAD granting more space to assimilator in exploring thoughts independently. In the style of STAD, assimilator student type feels fit and enjoy with a situation of learning in a structured and orderly, because of early learning that the classroom has guided and planned by lecturer. Type of assimilator tend not to match with the learning situation that is not structured and programmed by the instructor.

Instead, in the learning style of GI, assimilator students have a tendency to become passive. The assimilator who tend to individualist would feels uncomfortable with the demands of the lively activity in the classroom and dominance in working in group. In the learning type of GI, requires lively endeavour students, have the courage to come forward, come up with ideas, interact with friends, and solve problems in a dynamic learning group so that the assimilator students must be get rid of their comfort zone to be able to adapt to GI type learning atmosphere.

Type of assimilator troublesome to make best use of their ability to think logically and deeply when every idea and thought should be shared and delivered other than influenced by the opinions of others who are not necessarily in line with his thinking. Assimilator students will be frustrated with the learning environment of GI

type because it is not structured and programmed from the beginning. In the type of GI, students are involved from the beginning to explore and develop ideas to determine their best learning system, starting from determining the goals, topics, search for solutions, and so on. This situation makes the assimilator students unable to maximize the ability to think analytically and logically, they tend to find objectionable on spontaneous and unplanned things. It can be concluded that the learning result of the assimilator students who learned with type of STAD is higher than that of learned through the type of GI.

#### *4.5. Implication*

As an implication, cooperative learning model type of GI can be considered as an alternative learning models that can be used by lecturers to increase the student learning outcomes for the course, especially the Basics of Political Science, based on that students who learned with GI cooperative learning model to obtain higher learning outcomes. Type of GI in cooperative learning model not only accommodate the development of students knowledge but also attitudes through group investigation activities in the learning process. Including in share the information, ideas so that students discover and construct their own knowledge and make knowledge meaningful.

In addition, to implement the type of GI satisfactorily is required knowledge and skills of lecturers sufficiently so that it can be applied appropriately and effectively. Therefore, the results of this study suggest the need for seminars and training to enhance the knowledge and skills of the lecturers in implementing cooperative learning model of GI type in efforts to make better the learning outcomes of students in the classroom.

The accommodator students obtained higher learning outcomes if learned with GI type compared to that of learned with type of STAD. On the other hand, the assimilator students achieved higher learning outcomes if learned with type of STAD than that of learned through the type of GI. These different learning styles can be considered to employ by the faculty in designing appropriate learning model so that all students although have different characteristics have a propensity to be accommodated appropriately, effectively and efficiently. The other parallel classroom lecturers who teach subjects Basics of Political Science also need briefing sessions, for example through seminars or socialization introduction how the characteristics of individual student learning styles, especially how to provide appropriate learning models.

#### *4.6 Limitations*

The research was done as detailed as possible. However, this study can not be escaped from the weaknesses or shortcomings due to the limitations of some things that can not be controlled or avoided that can affect student learning outcomes. One is due to human subjects research is that conditions quasi-experimental research conducted so many factors that allow the bias.

Some of the perceived limitations for doing this study take account of the following. Firstly, the sample of both classroom treatment consists of different individuals in races, learning styles, religion, intelligence, family background, readiness of physical and psychological condition of the student before entering the classroom, etc, was possible to allowed the occurrence of bias. However, the possible bias situations that may occur of both groups could be minimize by acclimatize a few consideration. Namely both samples study in the same semester, the environmental situation and the condition of the students during the time learning is also considered to be the same, as they have about the same age and experiencing the same treatment. In addition, before starting the class the lecturer first creating conducive conditions to learning class, by take the time to restore the concentrations of students and conduct a refresher purposes to restore a comfortable classroom atmosphere to start learning. So, they have characteristics that are not much different eventually.

Secondly, the condition of the students when taking the test. For example, understanding of test items tested, test implementation time, and sincerity (or strength of mind) in charging test. For instance, the use of the words that match the characteristics of the sample so it is easy to understand; planning for the time of tests carried out, not performed during the hours of courses so that most students do not in stress conditions.

Thirdly, other factors that could affect learning outcomes that difficult to be controlled, for example, students discussions activities outside class hours, information obtained from various sources such as television, newspapers, magazines, learning at home, and internet, etc. So that the learning outcomes achieved are not solely influenced by the learning model. From a variety of limitations, the results of this study need to be an interpreted with vigilance. This should be a concern of researchers before taking the data and strengthen its validity.

## 5. Conclusion And Suggestions

### 5.1. Conclusion

Based on the research discussion can be summarized as follows. First, the students learning results of the Basics of Political Science who learned with cooperative learning model of GI type is higher than that of learned using type of STAD. Second, there is an interaction effect between cooperative learning models and learning styles on learning outcomes of Basics of Political Science. Learning result of Basics of Political Science of the accommodator students that learned by means of type of GI is higher than that of learned by means of type of STAD. Learning result of the Basics of Political Science of the students who have type of assimilator learning styles that learned with cooperative learning model of GI type is lower than that of learned by means of type of STAD.

### 5.2. Suggestions

Suggestions put forward in this research are set as follow. First, for lecturers particularly who teach the subject of Basics of Political Science to be able to give more consideration in selecting appropriate learning models. Lecturers may consider the use of cooperative learning model type of GI as an attempt to enhance student motivation to learn and create more meaningful learning process, therefore to improve the student learning outcomes.

Second, the student's learning style is a characteristic that should be considered in designing appropriate learning models. The appropriateness of learning styles deal with the chosen learning models will maximize the learning process in the classroom. It is recommended for faculty to accommodate the types of learning styles in the learning process design in order to maximize the aptitude and augment student learning result.

Third, the students with accommodator characteristics are recommended to be learned with cooperative learning model type of GI (Group of Investigation), whereas assimilator learning style students are advised to be learned by means of cooperative learning model type STAD (Student Team Achievement Division).

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