**ABSTRACT**

Model and learning media is an important component that may affect the achievement of learning objectives. Model selection and appropriate learning media can improve student learning outcomes both in the cognitive and affective domains. This study was aimed to examine the effect of the learning model Think Pair Share (TPS), Student Team Achievement Division (STAD) and Conventional learning model and the interaction model and learning media attitude towards reproductive health and student learning outcomes in the material reproductive system. The study was conducted at XI MIA grade students in four Senior High Schools in North Jakarta the academic year 2014/2015. Data were collected through the test instrument scale reproductive health attitudes and learning outcomes instruments reproductive system. Data were analyzed by Two-Way ANOVA and Tukey Test. The results showed that the use of models and instructional media and the interaction between the model and learning media significantly influence the attitude of reproductive health and learning outcomes of the reproductive system of high school students with a significance value (p< α = 0.01).

**Keywords**: Animation, Figure, Conventional, Student, Team, Achievement, Think-Pair-Share.

**INTRODUCTION**

The components in the learning consists of students, teachers, learning objectives, lesson content, media, learning models and evaluation (Rashad, 2003). Lufri (2003) says that students generally suffer from boredom in learning science, largely due to the didactic factors, including the method of teacher-centered teaching. Teachers using conventional learning models in the form of a lecture, assignments, and frequently asking questions, so that teachers dominate in learning activities. Freire (1999) giving the term conventional learning models as a banking concept of education.

The role of students in conventional learning is receiving, storing, and perform activities such as listening, reading, and notes the information provided by the teacher (Arends, 2011). The use of cooperative learning model can be a solution to the learning process of the reproductive system. One is a cooperative learning model Think Pair Share (TPS), which was developed by Frank Lyman in 1981. Lyman (1981) describes the steps of learning model Think Pair Share, namely:

a. Teachers deliver teaching materials for students to observe and discuss.

b. Teachers submit questions to the whole class.

c. Teachers provide time to student to think (Think) on the questions given.

d. Divide the students into pairs (Pair) were randomized to discuss the best answer.

e. Ask students to share the ideas of the partner (Share).

f. Invite several students to communicate their ideas in response to the questions posed by the teacher in the classical style.
Other cooperative learning model is Student Teams Achievement Division (STAD), which is the simplest model of cooperative learning and suitable for use by the new teacher using cooperative learning. According to Slavin (1994), STAD type of cooperative learning model is designed to motivate students through group discussions, so that students can help each other in solving problems such as how to address the various issues on reproductive health. Step-by-step learning model Student Teams Achievement Division (STAD) is:

a. Teachers deliver learning materials appropriate basic competencies to be achieved.
b. Teachers form groups. Each group consisted of 4-5 students with different abilities (high, medium, and low).
c. Resource materials that have been prepared are to be discussed in the group to achieve basic competence.
d. The teacher facilitates the students in making a summary, directing, and giving emphasis on learning materials that have been studied.
e. Teachers give tests / quizzes for each student individually.

The learning experience of students as a whole is obtained through a process of cooperative learning, is expected to improve the quality of learning outcomes both in knowledge and attitude. According to Clark (1981), results for students at the school 70% influenced by the ability of students and 30% by the environment. Bloom divides the learning objectives as a reference of learning outcomes into three domains, namely cognitive, affective and psychomotor. Depth affective/attitude according to Krathwohl illustrated in the following diagram:

![Figure 1. Taxonomy of affective](image)

The UN agency WHO defines reproductive health as a state of well-being physically, mentally and socially associated with the system, functions and processes that occur in the reproductive system, for example, the process of embryonic development, the formation of sex cells etc. Study of cognitive abilities in the revised Bloom taxonomy has been illustrated in the following diagram:
The quality of learning outcomes can also be enhanced by the use of appropriate learning media. Ali (2009) wrote that the function of media in learning are: 1) Increase the stimulation of learners in the learning process; 2) Increase the motivation to learn; 3) Clarify the presentation of messages and information so as to reduce misunderstanding. Thomas and Israel (2013) says that the media animations in learning is a device that has audio and visual presentations to convey knowledge effectively, in which there is a program or instructions that will be delivered. Media involves visual and auditory learners so as to increase the ability of learners to remember and understand the concept. Nopitasari (2012) defines the concept of media is a picture of a simple visual media that can be used as a means to convey information in the learning process.

**Benefits of research**

The benefits of this research are:

1. For Teachers:
   a. Resources in the use of learning models fit for the reproductive system.
   b. Resources in the use of learning media appropriate for the material reproductive system.

2. For Students:
   a. Provides a complete knowledge about the material reproductive system so as to improve learning results.
   b. Instill a positive attitude towards reproductive health.
   c. Train the ability of learners to communicate knowledge gained through sharing with classmates.

3. For School as Institution:
   a. Provide input to the development potential of teachers in making the variation models and instructional media.
   b. Provide input to develop a curriculum program in improving the quality of student learning outcomes, both on the cognitive and affective.

4. For researchers:
   Become a revenue source and reference materials to conduct further research in education.
METHODOLOGY

The method used in this study is Quasi Experiment and the factorial design is 3 x 2 as shown in Table 1.

Table 1. Design of factorial design 3 x 2 influence model and the learning media the attitude of reproductive health and reproductive systems learning outcomes high school students

<table>
<thead>
<tr>
<th>Learning Medias</th>
<th>Learning Models</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Think Pair Share (TPS)</td>
<td>A1</td>
</tr>
<tr>
<td>Animation Media (B1)</td>
<td></td>
<td>A2</td>
</tr>
<tr>
<td>Figure Media (B2)</td>
<td></td>
<td>A3</td>
</tr>
<tr>
<td></td>
<td>Student Team Achievement Division (STAD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conventional</td>
<td></td>
</tr>
</tbody>
</table>

The treatments
1. The model of cooperative learning Think Pair Share and Media Animation (A1B1).
2. The model of cooperative learning Student Team Achievement Division and media Animation (A2B1).
4. The model of cooperative learning Think Pair Share and media Images (A1B2).
5. Cooperative Learning Model Student Team Achievement Division and media Images (A2B2).

Operational objectives of this study are as follows:
1. To examine the effect of the use of cooperative learning model Think Pair Share (TPS), Student Team Achievement Division (STAD) and Conventional learning model on the material of the reproductive system and reproductive health attitudes of high school students learning outcomes.
2. To test the effect of the use of learning model attitude towards reproductive health and learning outcomes of the reproductive system materials of high school students in the group of animation media and media images.
3. To examine the interaction between the use of models and learning media on the matter to the reproductive system and reproductive health attitudes of high school students learning outcomes.

Place and time research
Where research is SMA Negeri 18, 40, 45, 72, 80, and 83 in North Jakarta. The study was conducted from April to May 2015 in class XI MIA second semester in the academic year 2014/2015.

Population
The population in this study were all students of class XI MIA in the school year 2014/2015 in schools where research is SMA Negeri 83 (615 students), SMAN 18 (743 students), SMAN 40 (758 students), SMAN 72 (767 students), SMAN 80 (798 students) and SMA 45 (843 students).

Sampling technique
Purposive sampling technique was employed to select the school to conduct the research in North Jakarta. Cluster random sampling has been employed to determine the class by calculating the variance of the entire class XI MIA in schools where the research is based on the value of UN IPA SMP. Simple Random Sampling was used to determine the number of samples of homogeneous
classes using Yamane formula and calculation results obtained figures were minimal sample of 98. This study used 180 students.

**Hypothesis**

1. There is influence on the use of cooperative learning model Think Pair Share (TPS), Student Team Achievement Division (STAD) and Conventional learning model on the material of the reproductive system and reproductive health attitudes of high school students learning outcomes,
2. There is influence on the use of instructional media and Pictures Animations attitude towards reproductive health and learning outcomes of the reproductive system of high school students.
3. There is an interaction between the use of models and learning media on the matter to the reproductive system and reproductive health attitudes of high school students’ learning outcomes.

**Statistical Hypotheses**

1. The hypothesis of the influence of cooperative learning model Think Pair Share (TPS), Student Team Achievement Division (STAD) and Conventional learning model attitude towards reproductive health and student learning outcomes.

   
   \[ H_0 : \mu_{A1} = \mu_{A2} = \mu_{A3} \]
   
   \[ H_1 : \text{On average, these are not the same.} \]

2. Hypotheses about the influence of media and media Pictures Animations attitude towards reproductive health and student learning outcomes.

   \[ H_0 : \mu_{B1} = \mu_{B2} \]
   
   \[ H_1 : \mu_{B1} > \mu_{B2} \]

3. Hypotheses on the interaction between models with learning media attitude towards reproductive health, and student learning outcomes.

   \[ H_0 : \text{Interaction A x B = 0} \]
   
   \[ H_1 : \text{interaction A x B > 0} \]

**Information:**

- \( \mu_{A1} \): Cooperative learning model Think Pair Share
- \( \mu_{A2} \): Cooperative learning model Student Team Achievement Division
- \( \mu_{A3} \): Conventional learning model
- \( \mu_{B1} \): Animation media
- \( \mu_{B2} \): Image media

**RESULTS AND DISCUSSION**

Variance test results on the 19 class XI MIA at the school where the study, the obtained 6 classes who have the same variance as a research site. Determination of the experimental class and control class has been done by a draw, so the data obtained treatment classes as follows:

1. Experiment 1: cooperative learning model Think Pair Share / TPS and media animations in class XI MIA 3 Senior High School 80 (A1B1).
2. Experiment 2: cooperative learning model Student Team Achievement Division / STAD and media animations in class XI MIA 1 Senior High School 45 (A1B2).
3. Experiment 3: Conventional learning model and animation media in class XI Senior High School 83 MIA 2 (A3B1).
4. Experiment 4: cooperative learning model Think Pair Share / TPS and media Fig 3 MIA in class XI Senior High School 72 (A2B1).
5) Experiment 5: cooperative learning model Student Team Achievement Division / STAD and Media Images in class XI MIA 1 in Senior High School 72 (A2B2).
6) Control: Conventional learning model and media in class XI MIA Senior High School 45 (A3B2).

Description of data normality test results
Normality test data in this study carried out on six groups of data treatment classes. Tests using real level $\alpha = 0.01$. Summary of calculation results are shown in Tables 2 and 3 below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>A1B2</td>
<td>.084</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A2B1</td>
<td>.072</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A2B2</td>
<td>.091</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A3B1</td>
<td>.081</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A3B2</td>
<td>.076</td>
<td>30</td>
</tr>
</tbody>
</table>

a. Kolmogorov-Smirnov Significance Correction
*. This is a lower bound of the true significance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
<td>Sig.</td>
</tr>
<tr>
<td>LEARNING REPRODUCTIVE SYSTEM</td>
<td>A1B1</td>
<td>.129</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A1B2</td>
<td>.144</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A2B1</td>
<td>.129</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A2B2</td>
<td>.125</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A3B1</td>
<td>.125</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>A3B2</td>
<td>.153</td>
<td>30</td>
</tr>
</tbody>
</table>

a. Kolmogorov-Smirnov Significance Correction
*. This is a lower bound of the true significance.

Based on Table 2 and 3, all of the data group research on reproductive health attitudes learning outcomes reproductive system has a significance value $(p) < \alpha = 0.01$. The conclusion is all the data group derived from normal distributed population.

Data description of test results homogeneity
Homogeneity test results using Bartlett's test figures obtained 0.059 while $2\chi$ at significance level $\alpha = 0.01$. This figure shows that the value $2\chi = 0.950$ for reproductive health attitudes and $2\chi = 0.342$ for the learning outcomes is smaller than the value $2\chi = 11.1$, which means that the null hypothesis is accepted, the population variance is homogeneous. The calculation results can be seen in Table 4 below:
### Table 4. Summary of test results homogeneity

<table>
<thead>
<tr>
<th>Data</th>
<th>$S_{\text{gab}}^2$</th>
<th>B</th>
<th>$\chi^2_o$</th>
<th>$\chi^2_i$</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Reproductive Health</td>
<td>51,450</td>
<td>297,780</td>
<td>0,950</td>
<td>11,1</td>
<td>Homogen</td>
</tr>
<tr>
<td>Learning Outcomes Reproductive System</td>
<td>15,366</td>
<td>206,461</td>
<td>0,342</td>
<td>11,1</td>
<td>Homogen</td>
</tr>
</tbody>
</table>

**Research hypothesis testing research**

Hypothesis testing using two-way ANOVA, if there is no interaction then followed by Tukey test. The values required for Two-Way ANOVA calculation is as follows:

The influence of the interaction between the model and learning media attitude towards reproductive health of students can be seen in Figure 3, it shows that there are significant interaction model and the use of learning media attitude regards reproductive health of students. The influence of this interaction can be seen from the average value of reproductive health attitudes of different students in every interaction between models and different media.

![Interaction between model and learning media attitude with regards to reproductive health](image-url)
Table 5. Effect model and learning media attitude towards reproductive health reproduction

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean of Squares</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>6769.907*</td>
<td>5</td>
<td>1353.981</td>
<td>88.117</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>1025032.040</td>
<td>1</td>
<td>1025032.040</td>
<td>66708.873</td>
<td>.000</td>
</tr>
<tr>
<td>Model</td>
<td>2364.802</td>
<td>2</td>
<td>1182.401</td>
<td>76.950</td>
<td>.000</td>
</tr>
<tr>
<td>Media</td>
<td>3533.279</td>
<td>1</td>
<td>3533.279</td>
<td>229.945</td>
<td>.000</td>
</tr>
<tr>
<td>Model * Media</td>
<td>871.826</td>
<td>2</td>
<td>435.913</td>
<td>28.369</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>2673.641</td>
<td>174</td>
<td>15.366</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1034475.589</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>9443.548</td>
<td>179</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Effect model and media learning on learning outcomes reproductive system

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean of Squares</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>9522.317*</td>
<td>5</td>
<td>1904.463</td>
<td>37.016</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>4963068.450</td>
<td>1</td>
<td>4963068.450</td>
<td>96464.634</td>
<td>.000</td>
</tr>
<tr>
<td>Model</td>
<td>4022.533</td>
<td>2</td>
<td>2011.267</td>
<td>39.092</td>
<td>.000</td>
</tr>
<tr>
<td>Media</td>
<td>4080.272</td>
<td>1</td>
<td>4080.272</td>
<td>79.306</td>
<td>.000</td>
</tr>
<tr>
<td>Model * Media</td>
<td>1419.511</td>
<td>2</td>
<td>709.756</td>
<td>13.795</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>8952.233</td>
<td>174</td>
<td>51.450</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4981543.000</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 6 shows that both capital and learning media provided significant influence on student learning outcomes with significance value ($p < \alpha = 0.01$). Interaction usage models and learning media also showed a significant effect on learning outcomes with the value of significance ($p < \alpha = 0.01$). The influence of the interaction between the model and learning media to the learning outcomes of students of the reproductive system, can be seen in Figure 4. It shows that there are significant interaction and learning media usage models to student learning outcomes in the reproductive system materials. The influence of this interaction can be seen from the average value of student learning outcomes different at every interaction between models and different media.

Advanced test A further test is necessary if the hypothesis testing interaction obtained significant interaction effect. Results of Two-Way ANOVA calculation on the research data shows the influence of a significant interaction between the model and learning media attitude towards reproductive health and student learning outcomes. Further tests used in this study is the Tukey HSD test or test of Significant Difference (HSD) or Honestly Significance Difference (HSD). Tukey test was used to compare all couples treatment mean after the test analysis Variety done. This test is also performed for the analysis of a sample group of data comparison with the same number. Number of samples of each treatment group in this study was 30. The results of Tukey HSD test using SPSS Ver.18 Reproductive Health Attitudes on Media Animation and Media Figure, can be seen in Table 7, while the Tukey test for Student Results have been given in Table 8.
Tukey HSD test results by using SPSS Ver.18 Reproductive Health Attitudes Students on Media Animation and Media Figure, can be seen in Table 7 and 8 the following:

Table 7. Tukey test average value of reproductive health attitudes

<table>
<thead>
<tr>
<th>Group</th>
<th>Value</th>
<th>Subset for alpha = 0.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3B2</td>
<td>151.43</td>
<td>a</td>
</tr>
<tr>
<td>A2B2</td>
<td>164.60</td>
<td>b</td>
</tr>
<tr>
<td>A3B1</td>
<td>167.33</td>
<td>b</td>
</tr>
<tr>
<td>A1B2</td>
<td>167.83</td>
<td>b</td>
</tr>
<tr>
<td>A2B1</td>
<td>170.07</td>
<td>bc</td>
</tr>
<tr>
<td>A1B1</td>
<td>175.03</td>
<td>c</td>
</tr>
</tbody>
</table>
In Table 7 show that in general there is a difference in the effect of treatment group on reproductive health attitudes, but there is a significantly different because the value of significance (p) < $\alpha = 0.01$, some are not significantly different because the value of significance (p) > $\alpha = 0.01$. If any subset of the same column, then between the treatment groups were not significantly different, whereas if it is in a different subset of the columns between the treatment groups were significantly different.

A3B2 treatment group (conventional learning models and media Images) exist in a subset column. This shows that the A3B2 treatment group was significantly different from the treatment group A2B2, A3B1, A1B2, A2B1 and A1B1. The treatment group A2B2 (learning model Student Team Achievement Division and media Figure), A3B1 (learning model Conventional and media Animation), A1B2 (learning model Think Pair Share and media Images) and A2B1 (learning model Student Team Achievement Division and media Animation) No in a subset column b. This means that the treatment groups were not significantly different treatment. A2B1 treatment groups (study model Student Team Achievement Division and media Animation) and A1B1 (learning model Think Pair Share and media Animation) in the column subset c. This means that between the two treatment groups were not significantly different, but significantly different from the other treatment groups existing in the subset columns a and b.

A3B2 treatment group (conventional learning models and media Images) exist in a subset column. This shows that the A3B2 treatment group was significantly different from the treatment group A2B2, A3B1, A1B2, A2B1 and A1B1. The treatment group A2B2 (learning model Student Team Achievement Division and media Figure), A3B1 (learning model Conventional and media Animation), A1B2 (learning model Think Pair Share and media Images) and A2B1 (learning model Student Team Achievement Division and media Animation) No in a subset column b. This means that the treatment groups were not significantly different treatment. A2B1 treatment groups (study model Student Team Achievement Division and media Animation) and A1B1 (learning model Think Pair Share and media Animation) in the column subset c. This means that between the two treatment groups were not significantly different, but significantly different from the other treatment groups existing in the subset columns a and b.

<table>
<thead>
<tr>
<th>Group</th>
<th>Value</th>
<th>Subset for alpha = 0.01</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3B2</td>
<td>64.7627</td>
<td>a</td>
<td></td>
</tr>
<tr>
<td>A1B2</td>
<td>72.0647</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>A3B1</td>
<td>75.9520</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>A2B2</td>
<td>76.2693</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>A2B1</td>
<td>78.9667</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>A1B1</td>
<td>84.7610</td>
<td>d</td>
<td></td>
</tr>
</tbody>
</table>

The table shows results similar to Table 7, the effect of treatment group differences in learning outcomes of the reproductive system. There is a significant difference because the value of significance (p) < $\alpha = 0.01$, and there were no significance because the value of significance (p) > $\alpha = 0.01$. Differences in each group can be viewed from the harmonic mean values in Table 8.

The test results showed that the treatment group A3B2 (Conventional learning models and media Figure) are at a subset column. This shows that the A3B2 treatment group was significantly different from the other treatment groups. Likewise, the treatment group A1B2 (learning model Think Pair Share and media Images) situated in a subset column b, showed that the treatment group is significantly different from the other treatment groups. A1B1 treatment group (learning model Think Pair Share and media animations) are in the subset column d, it also showed that the treatment group is significantly different from the other treatment groups.

Different results shown by the treatment group A3B1 (conventional learning models and media Animation), A2B2 (learning model Student Team Achievement Division and media Images) and A2B1 (learning model Student Team Achievement Division and media Animation), three are in column subset of the same, namely a subset column c. This shows that the three treatment groups were not significantly different.

**DISCUSSION**

**First hypothesis**

The first hypothesis states that Ho accepted and H1 is rejected if there are differences in average on attitudes reproductive health and learning outcomes of students between classes using cooperative learning model Think Pair Share (TPS), Student Team Achievement Division (STAD) and learning model Conventional. Ho refused and H1 accepted if there are differences in the average on reproductive health attitudes and student learning outcomes between these classes.
In Tables 5 and 6, the effect of using learning model are significant to reproductive health attitudes and student learning outcomes. This shows that Ho is rejected and H1 is accepted. The results of the statistical data in Tables 7 and 8 both on reproductive health attitudes and student learning outcomes showed that of the six classes with different learning models, the best results on the use of cooperative learning model Think Pair Share (TPS).

The results of this study are consistent with results of previous relevant studies, such as research Surayya et al. (2014), Muraya and Kimamo (2011) as well as Boleng and Corebima (2014). The conclusion from the findings obtained indicates that cooperative learning model Think Pair Share (TPS) is better than the other learning models.

This research can prove that the average value of reproductive health attitudes and student learning outcomes in the reproductive system of the material in the class using cooperative learning model Think Pair Share (TPS) is higher than the grade that use other learning models. Another learning models referred in this study are a cooperative learning model Student Team Achievement Division (STAD) and Conventional learning model.

Implementation of learning using cooperative learning model Think Pair Share (TPS) can be successful if there is cooperation between student and teacher is always active as a facilitator that provides ease in learning. Teacher as a facilitator also must prepare learning strategy that are always centered on students (Student Centered) and in accordance with the needs of students.

All these supporting components can be met in this study so that the implementation of learning cooperative learning model Think Pair Share (TPS) can be managed in accordance learning objectives planned. The learning process using this model can facilitate learners to more easily find and understand the difficult concepts that they can discuss with other students. Students tend to be more active in questioning and vetting of teachers and other learning resources. Learning patterns like this tend to have learning achievement is higher, it can be demonstrated in this study that the use of learning model Think Pair Share (TPS) can improve student learning outcomes both in the cognitive and affective.

According to Arends (2011), the cooperative learning model Think Pair Share (TPS) is able to activate all students during the learning process and provide an opportunity to work together among students who have heterogeneous capabilities. In accordance with the stages i.e Thinking, Pairing and sharing learning model is effective for classroom discussion because the procedure can be used to give students more time to think, respond to, and help each other.

Learning patterns of this discussion will deepen the meaning of the answers that have been thinking through intersubjective partner. Intersubjective discussion results in each pair then communicated with a partner to the entire class, so in this activity happens frequently asked questions that drive the knowledge pengontruksian integrative manner. Learners can find the structure of the knowledge they have acquired (Suprijono, 2009). It can be seen from the average value of the attitude of reproductive health in the class using cooperative learning model Think Pair Share obtain the average value of 169.82 and learning outcomes of students scored an average 78.41. The average value is higher than the class that uses cooperative learning model STAD whose grades average 168.95 for reproductive health attitudes and 77.62 for student learning outcomes. Likewise, when compared with conventional learning model which scored an average 159.58 for reproductive health attitudes and 70.36 for student learning outcomes.

The advantages of cooperative learning model Think Pair Share (TPS) more is contained pairing stage, where at this stage students will pair up to discuss what they think. When students discuss in pairs and then there will be face-to-face interaction. According to Sanjaya (2009), face interaction in cooperative learning will provide an opportunity for each member of the group for sharing information and mutual membelajarkan. This will cause the students co-exist to exchange information. More Sanjaya (2009) suggested that the collaboration between students will provide
several advantages for students, among other things: 1) to learn independently; 2) to develop the ability to express an idea or ideas; 3) Helping students to respond to others; 4) Empower students to take more responsibility in learning; and 5) Improving academic achievement as well as social skills. According to Joyce et al. (2011), interaction and collaboration in the learning process will give a very positive effect in a short time, both in terms of academic learning or skill aspect.

Unlike the case with cooperative learning model Student Team Achievement Division (STAD), although the pattern of discussion but no demands students to communicate the results of the discussion in the classical style. This has an impact on the students became less motivated to master a subject matter, because of the knowledge acquired only for the strengthening of the material itself only and are not to be delivered to another person. The other drawback during the learning process, the class that uses cooperative learning model Student Team Achievement Division (STAD) when the learning took place students in heterogeneous groups, each group consisting of 4 students. When students learn in a heterogeneous group, there is an advantage that students can help each other who are having difficulty.

Its realization is when a cooperative learning model Student Team Achievement Division (STAD) is in progress, there are still some students who do not want to participate in the group. In this regard, Lie (2005) states that in a group of four or five a weakness is the lack of individual contributions and students easily escape from the engagement and do not pay attention. This was evidenced in the learning process, when students study and discuss in the group, of four members of the group, only 2 are active. It can result in, two other members who did not have the benefit of their learning in the group.

In the class using cooperative learning model Think Pair Share (TPS), when learning took place, all of the students either individually or in pairs work more optimally. At this stage of think (think individual), individual students to look for answers to questions of teachers, so that all students in the current class. Next on stage pair (pairs), students pair up with her to discuss the previous answers obtained individually. Through discussion in pairs, students can also get more leverage in participating in the group.

This is in accordance with the opinion of Lie (2005), which states that the cooperative learning model Think Pair Share (TPS) has its advantages, among others, can increase student participation, student interaction easier, and students the opportunity to contribute more. In the group of cooperative Think Pair Share (TPS), as long as the learning progresses, the activity of each student more leverage when compared with the group of cooperative Student Team Achievement Division (STAD). Students participate more leverage, carry out the task in earnest, and the learning process also takes place quietly, no students crowded themselves.

The same opinion was also delivered by Suprijono (2009) states through a phase think (think individual), can avoid chattering students as each student has their respective duties. In contrast to the cooperative learning model Student Team Achievement Division (STAD), where each group consisted of 4 students, when students learn in small groups, some students still participate less and crowded own. Even sometimes in one group only one or two people who are active, while the other members engrossed talking about things beyond the learning topic.

Significant differences occur in the classroom using conventional teaching model, where students have the opportunity to collaborate with other students. It is less improve social skills, passive students currently learning activities for students are not organized in study groups. Students can not discuss, exchange views, share ideas, ideas and knowledge so that students become less in understanding the subject matter. Such conditions, can affect student learning outcomes.

This is in accordance with the opinion of Joyce et al., (2011) which says that the absence of a task group would reduce the effectiveness of student learning. Students who learn in a cooperative model such discussions patterns can increase positive feelings toward themselves and others. Interaction
between students lead their social support and improve cognitive abilities. Students who learn individually if you have trouble, can not share with their friends, it allows students to individualistic and have an impact on the lack of understanding of the material taught and poor social skills of students.

The description indicates that the monotonous learning model can affect student interest in learning, so understanding the material and even less understanding of the problems and adversely affects the overall learning outcomes of both the cognitive and affective.

**Second hypothesis**
The second hypothesis states that Ho accepted and H1 is rejected if there are differences in average on reproductive health attitudes and learning outcomes of students between classes using animation media with media images. Ho has been rejected and H1 has been accepted if there are differences in the average on reproductive health attitudes and student learning outcomes between these classes, where the use of animation media showed better results than the media image.

Based on Tables 5 and 6 indicate that there is significant influence on the use of animation media and media images on reproductive health attitudes and student learning outcomes. This means that Ho refused and H1 accepted. Based on the results of statistical calculations on reproductive health attitudes and student learning outcomes showed that of the six classes with different learning media, the best result in the use of animation media. It can be seen from the average value of reproductive health attitudes in the class using animation media is 170.81 while the class that uses the media picture of the average value was 161.29 attitude reproductive health. Likewise, the value of student learning outcomes in the classroom using the media Animation obtain the average value of 79.89, while in the classroom using the media Figure obtaining the average value of 71.00. The results of this study are consistent with results of previous studies that Satyaparaksha and Sudhanshu (2014) and Perry (2013) generally conclude that the use of animation media in the learning process can improve student learning outcomes. Animation media usage in the experimental class can help teachers explain the material and help students in understanding the subject matter. Media presentation animations enables students to observe the stages of a process that is abstract, as if dealing with the actual object.

The use of media animations help students understand the materials on the human reproductive system such abstract gametogenesis process, the process of menstruation, the process of embryonic development and others for presenting the material using a moving image with colored text. The animations look nice touch so as to clarify the students' understanding and increase student interest in learning, so that the learning outcomes increases. Researchers argue that the use of animation media can increase retention (memory) and enhance students' understanding of the subject matter. Students can understand the concepts are learned and can apply real positive things learned in everyday life.

Increased memory after learning with animations media proved by obtaining the average value of better learning outcomes is 79.89 compared with students in the class are learning to use the media Figure 71.00. A good understanding of the concept of reproductive system can be proved also by the acquisition of the average attitude score higher on the students in the class using animation media is 170.81 compared to students in the class that uses the media image that is 161.29.

**Third hypothesis**
The third hypothesis states that Ho is accepted and H1 is rejected if there is no interaction effect between the use of models and learning media attitude towards reproductive health and student learning outcomes. Ho is rejected and H1 accepted if there is an interaction effect between the use of models and learning media attitude towards reproductive health and student learning outcomes.

Results of the two-way ANOVA test revealed that the interaction between the model and learning media significantly influence the attitude of reproductive health and student learning outcomes in the reproductive system materials. The interaction between the model and the media the details of this study can be seen from Tukey test results presented in Tables 7 and 8.
The test results showed A1B1 treatment group (learning model Think Pair Share and media animations) with A2B1 (learning model Student Team Achievement Division), did not differ significantly, but have significant differences with the other treatment groups. Both the learning model including cooperative learning model, both have their advantages, among others, can increase the activity of students in the learning process, which is expected to increase the motivation to learn and can ultimately improve learning outcomes both in the affective and cognitive.

This data prove that the cooperative learning model that diinteraksikan with animation media, can improve student learning outcomes both at the affective and cognitive. As already explained earlier that the cooperative learning model have had the ability to increase the interest and participation of students in the learning process, so that if diinteraksikan with animation media which is also a medium of learning interesting and increase the interest of students, it can enhance students' understanding and ultimately improve better student learning outcomes in the cognitive and affective, in this study proved to be able to increase the value of reproductive health attitudes and student learning outcomes in the reproductive system materials.

The results are consistent with the opinion of Jones and Jones (2008) in a research journal which said that the cooperation between students in the learning process is the most effective way to maximize the potential of students, increase understanding and desire to help others. This means that the implementation of cooperative learning model can be useful in two things: the academic benefits of social and emotional benefits of students, which is expected through the implementation of cooperative learning model is an increase in cognitive and affective abilities of students.

Cooperative learning model Think Pair Share as said Lyman (1981) gives the students time to think, respond, share and help each other, so the students can maximize their potential and can be trained to solve problems that given by the teacher. The learning model Student Team Achievement Division (Slavin, 1994) also apply the pattern of interactions between students via discussion. Learning patterns like this will further enhance students' motivation to explore the concept being studied, so as to increase also the mastery of the concept.

Based on these descriptions prove that cooperative learning model (TPS, and STAD) better and positive effect on the value of reproductive health attitudes compared to conventional learning models. More prominent a cooperative learning model compared to conventional learning models show that in the process of student-centered learning (Student Centered) allows students to be able to further explore the potential optimally.

A3B2 treatment group (conventional learning models and media Images) differ significantly from the other treatment groups. The difference shows that the average value of these treatment groups both in the attitude of reproductive health as well as on learning outcomes for the reproductive system have the lowest score. This happens because the learning models used do not give students the opportunity to explore the potential of the widest. Students sat quietly listening and heard the material presented by the teacher, without trying to see and find themselves solving problems faced. The learning model like this tends to make the students bored, boredom may affect the students' motivation to dig deeper into the concept being studied, allowing the occurrence of the failure in achieving the learning objectives. The use of media images as a tool for delivering the material to the students is also an option that is not right, because the material reproductive system, many things that come into direct contact with the life of a teenager, but because the presentation is less attractive, it can lead to saturation even antipathy with the material being taught teachers. This condition causes the student's ability both on the affective and cognitive not optimally tapped.

Interactions other treatment groups showed no significant difference. This shows that although the learning model can motivate students to interact actively in the learning process, so as to improve learning results, but if integrated with media that is not right then it will still be too good to student learning outcomes. Likewise with interesting learning media, if diinteraksikan learning model that can not motivate students to learn, in the end can not give a positive impact on student learning outcomes.
Based on these results it is clear that the media animation will have a significant impact both on the attitude of reproductive health and student learning outcomes if diinteraksikan with appropriate learning models that cooperative learning model.

**CONCLUSION**

Based on the analysis and discussion of the research, it can be concluded that the use of cooperative learning model Think Pair Share (TPS) and Student Teams Achievement Division (STAD), as well as conventional learning model showed a significant difference to the attitude of reproductive health and learning outcomes of the reproductive system of high school students. The use of instructional media Animation and Image shows a significant difference to the attitude of reproductive health and learning outcomes of the reproductive system of high school students. There is interaction model and the use of learning media attitude towards reproductive health and learning outcomes of the reproductive system of high school students. And to improve reproductive health attitudes and learning outcomes of the reproductive system, then use a learning model with regard to the use of instructional media can be considered.

**RECOMMENDATION**

A teacher should always seek to improve their competence in the learning process, both pedagogical and professional competence. This study only analyzed the effect of three types of learning models that Think Pair Share (TPS), the learning model Student Team Achievement Division (STAD) and Conventional learning model as well as two types of instructional media and the media ie Animation Picture attitude towards reproductive health and student learning outcomes, which is an assessment of the affective domain, as well as the learning outcomes of students, which is an assessment of the cognitive domain. For the next study, analysis on the use of models and the instructional media learning materials for biological sciences can be conducted.

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