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THE 2ND ANNUAL INTERNATIONAL SEMINAR ON TRANSFORMATIVE EDUCATION AND EDUCATIONAL LEADERSHIP

Educational Research to Endorse Productive and Innovative Generation in the 21st Century

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“Educational Research to Endorse Productive and Innovation Generation in The 21th Century”

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Preface

The 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL with web link is http://aisteel2017.unimed.ac.id/) was held on October 16 -17, 2017 in Medan City, Indonesia. This conference was organized by Postgraduate School, State University of Medan (Unimed) and is the routine agenda at Unimed now. The Second Annual International Seminar on Transformative Education and Educational Leadership’ is realized this year with various presenters, researchers, lecturers and students from universities both in and out of North Sumatera participate in the theme of which is “Educational Research to Endorse Productive and Innovative Generation in the 21st Century.”

2nd AISTEEL is the annual international seminar with main aim is to discuss of recent research special for Transformative Education and Education Leadership. Several topics like: Teachers Education Model, Research Global Issue in Education, Mathematics and Science Education, Social, Language Education, Vocational Education, Curriculum, Economic, History and Management Education have been discussed at the 2nd AISTEEL 2017. 2nd AISTEEL international seminar provided experts’ view on transformative education and educational leadership as well as curriculum article presentation. There were five keynote speakers have been came Professor Keiichiro Yoshinaga, Dr. Bambang Sumintono, Dr. Sitti Maesuri Patahuddin, and Dr. Yulia Rahmawaty. The organizer had been use online submission system to receive all abstract, full paper and also communication with authors. All of information include with comment of reviewer can be check real time by author.

Chairperson

Dr. Rahmad Husein, M.Ed
Welcoming Speech of Director of Postgraduate School State University of Medan

The Second Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL)

The honorable,
- Rector of State University of Medan, Prof. Dr. Syawal Gultom, M.Pd.
- Vice Rectors of UNIMED
- Professor Keiichiro Yoshinaga, PhD, Institute of Liberal Arts and Science, Kanazawa University – Japan
- Dr. Bambang Sumintono, M.Ed., University Malaya – Malaysia
- Dr. Sitti Maesuri Patahuddin, Faculty of Education, Science, Technology and Mathematics, University of Canberra – Australia
- Yuli Rahmawati, Chemistry Education Program, Universitas Negeri Jakarta
- Deans of Faculties of Education, Languages and Arts, Social Sciences, Natural Sciences and Mathematics, Engineering, Sports Sciences, and Economics
- Vice Directors of Postgraduate School of UNIMED
- All speakers, lecturers, researchers, students, and participants

Good Morning

Welcome the honorable guests speakers Professor Keiichiro Yoshinaga, Dr. Bambang Sumintono, Dr. Sitti Maesuri Patahuddin, Assoc. Prof. Emilia Zulmira de FAN, and other speakers, lecturers and students from outside and inside Unimed to this international seminar which is the routine agenda at Postgraduate program of Unimed now. I’m glad that ‘The Second Annual International Seminar on Transformative Education and Educational Leadership’ is realized this year with various presenters, lecturers and students from universities both in and out of North Sumatera and participate in the theme of which is “Educational Research to Endorse Productive and Innovative Generation in the 21st Century.”

Ladies and Gentlemen,

In this second seminar exels the first one related to the administration by online and the publication index by either Thomson Reuters or Google Scholar. By the new policy on student’s publication, postgraduate program really matches the system, particularly for the students who will sit in the oral defence examination. Through the seminar, the postgraduate students improve their article journal writing and it is proved by many articles are submitted by the students.

The plenary speakers coming from 15 provinces in Indonesia will present topics covering multi disciplines. They will contribute a lot of inspiring inputs and new knowledge on current trending educational research topics all over the world. The expectation is that all potential lecturers will share their research findings to educational scientists and researchers as well for improving their teaching process and quality. Thus, this will contribute to the next young generation researchers to produce innovative research findings in education and educational leadership contexts.

This second seminar continues the promotion of the first sequel ‘Developing Future Teachers’ Education Model. Therefore, the propose of this second seminar on the transformative education and educational leadership research will trigger the young professional lecturers and educators to compete in the invention of innovative educational teaching and learning strategies, techniques and leadership.

I hope that the scientific attitude and skills through research will promote Unimed to be a well-known university which persists to be developed and excelled in the future.

Thank you the Rector of Unimed who always supports us in organizing the seminar. Thank you all guest and plenary speakers. Special thanks to both steering and organizing committee who have well-coordinated and colaborated in actualizing the seminar.

Director of Postgraduate Unimed

Prof. Dr. Bornok Sinaga, M.Pd
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Daulat Saragi
The Effect of Reciprocal Teaching Approach to Student Achievement on Ecosystem Topic in Junior High School

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Abstract - Every teacher wants the learning process that fun and focused on students. Less passion, less active, less focused and always plays are some problems that faced by the school, so that student achievement is decreased and not as expected by the teacher. To achieve the better learning achievement, teachers were trying to apply the reciprocal teaching approach. With the reciprocal teaching approach, the lessons will be more interested and more successful, where as it associated with experiences when the pupils can see, touch, say, do, try, thinking and so on. The study aims to determine the Effect of Application of the Reciprocal Teaching Approach and how much its effect can improve student achievement on the Ecosystem Topic ar Junior High School. This research belongs to an experiment research with control group design. This research used the instrument test which is multiple choice of 20 questions, that the whole matter was valid and reliable. Based on data analysis, average gain score in the classroom that is equal to 80,09, while the control class at 69,90. Based on data it is means that H0 refused and H1 accepted so there is the effect of reciprocal teaching approach to students achievement.

Keywords: reciprocal teaching approach, students’ learning achievement

I. INTRODUCTION

Every teacher wants the learning process that is fun and focused on students. Students feel enthusiastic when raised their hand to answer questions or give opinions, cheer celebrate their success, exchange information and encourage each other. According to [9] says that the lessons will be more interested and more successful, where as it associated with experiences when the pupils can see, touch, say, do, try, thinking and so on. The lesson is not only focus on the intellectual domain, but also the emotional domain. The learning excitement can enhance learning outcomes.

The one of technique that has been studied is the using of reciprocal teaching approach. According to [6] says that the reciprocal teaching can teach the students about the essential cognitive skills by create a learning experience, through specific behaviour modelling and helping students develop those skills for their own effort with encouragement, support and a scaffolding system.

The steps of instructional technique is to create a pre-defined teaching summary material, clarify material that is considered difficult, make questions related to the material, make predictions of the material or presentation. The technique is used with a consideration, is:

1. After initial research, of 38 students rarely read (the impact of smartphone and other advances Science and Technology).
2. Students rarely ask questions and tend to have difficulty in asking questions.
3. Students have difficulty in speaking in front of other or class.
4. Almost the average students do not have a small note about the subject matter or lazy notes and how many other % has no books.

Based on the result of previous studies, such learning technique can improve student competence in the competence of mastering the teaching materials, ask or express opinions and competencies to make presentations in front of the class. Now, the result of research with reciprocal teaching learning technique is being re-tested at the 7th grade of 4th state junior high school of Bendahara to obtain scientifically reliable research results.

II. METHOD

This research was carried out on May 14th until 18th, 2012. This study is located at 4th State Junior High School of Bendahara, Aceh Tamiang years of learning 2011-2012.

The sample of this study is only 2 classes, so that the sample of this study as many as 63 students from the population total of 123 students. As for the random sampling technique, 2 classes of 4 classes that are exist. The selected classes are the VII2 and VII3 grade. VII2 grade is determined as
an experiment class, that is class given reciprocal teaching and VII grade is determined as a control class, it is class given conventional teaching. This study used pre-test-post-test group control design.

III. RESULT AND DISCUSSION

This study uses an instrument of pre-test and post-test given to VII grade students that use reciprocal teaching and VII grade that use conventional teaching. The value is test by using T-test statistic.

List the frequency distribution of VII grade pre-test values (experiments) that use reciprocal teaching

<table>
<thead>
<tr>
<th>Value</th>
<th>F1</th>
<th>Xi</th>
<th>Xi²</th>
<th>fi.xi</th>
<th>fi.xi²</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-15</td>
<td>2</td>
<td>12.5</td>
<td>156.25</td>
<td>25</td>
<td>312.5</td>
</tr>
<tr>
<td>16-21</td>
<td>3</td>
<td>18.5</td>
<td>342.25</td>
<td>55.5</td>
<td>1026.75</td>
</tr>
<tr>
<td>22-27</td>
<td>6</td>
<td>24.5</td>
<td>600.25</td>
<td>147</td>
<td>3601.5</td>
</tr>
<tr>
<td>28-33</td>
<td>6</td>
<td>30.5</td>
<td>930.25</td>
<td>183</td>
<td>5581.5</td>
</tr>
<tr>
<td>34-39</td>
<td>10</td>
<td>36.5</td>
<td>1332.25</td>
<td>365</td>
<td>13322.5</td>
</tr>
<tr>
<td>40-45</td>
<td>5</td>
<td>42.5</td>
<td>1806.25</td>
<td>212.5</td>
<td>9013.25</td>
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<tr>
<td>Total</td>
<td>32</td>
<td></td>
<td></td>
<td>988</td>
<td>32876</td>
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</table>

List the frequency distribution of VII grade pre-test values (control) that use conventional teaching

<table>
<thead>
<tr>
<th>Value</th>
<th>F1</th>
<th>Xi</th>
<th>Xi²</th>
<th>fi.xi</th>
<th>fi.xi²</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-20</td>
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<td>17.5</td>
<td>306.25</td>
<td>52.5</td>
<td>918.75</td>
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<tr>
<td>21-26</td>
<td>4</td>
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<td>552.25</td>
<td>94</td>
<td>2209</td>
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<tr>
<td>27-32</td>
<td>4</td>
<td>29.5</td>
<td>870.25</td>
<td>118</td>
<td>3481</td>
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<td>33-38</td>
<td>6</td>
<td>35.5</td>
<td>1260.25</td>
<td>213</td>
<td>7561.5</td>
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<td>9025</td>
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<tr>
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<td></td>
<td></td>
<td>1082.5</td>
<td>40417.75</td>
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</table>

- List the frequency distribution of VII grade post-test values (experiments) that use reciprocal teaching

<table>
<thead>
<tr>
<th>Value</th>
<th>F1</th>
<th>Xi</th>
<th>Xi²</th>
<th>fi.xi</th>
<th>fi.xi²</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>62-68</td>
<td>3</td>
<td>65</td>
<td>4225</td>
<td>195</td>
<td>12675</td>
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<tr>
<td>69-75</td>
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<td>79</td>
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<td>553</td>
<td>34387</td>
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<td>83-89</td>
<td>11</td>
<td>86</td>
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<td>81356</td>
</tr>
<tr>
<td>90-96</td>
<td>5</td>
<td>93</td>
<td>8496</td>
<td>465</td>
<td>32425</td>
</tr>
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<td></td>
<td>2563</td>
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</tbody>
</table>

List the frequency distribution of VII grade post-test values (control) that use conventional teaching

<table>
<thead>
<tr>
<th>Value</th>
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<th>Xi²</th>
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<th>fi.xi²</th>
</tr>
</thead>
<tbody>
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<td>2304</td>
<td>96</td>
<td>4608</td>
</tr>
<tr>
<td>52-58</td>
<td>3</td>
<td>55</td>
<td>3025</td>
<td>165</td>
<td>9075</td>
</tr>
<tr>
<td>59-65</td>
<td>6</td>
<td>62</td>
<td>3844</td>
<td>372</td>
<td>23064</td>
</tr>
<tr>
<td>66-72</td>
<td>4</td>
<td>69</td>
<td>4761</td>
<td>276</td>
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<td>73-79</td>
<td>10</td>
<td>76</td>
<td>5776</td>
<td>760</td>
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<td>80-86</td>
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<tr>
<td>Total</td>
<td>31</td>
<td></td>
<td>2167</td>
<td>154885</td>
<td></td>
</tr>
</tbody>
</table>

As for difference of score average of students pre-test and post-test result is as follows:

- In the experiment class students (VII) that use reciprocal teaching has a pre-test average score is 30.87 whereas the post-test average score is 80.09.
- In the control class students (VII) that use conventional teaching has a pre-test average score is 34.91 whereas the post-test average score is 69.90.

Therefore students are very helpful in learning as to get a good achievement after learning.

IV. CONCLUSION

1. There is influence of reciprocal teaching approach application to student achievement on ecosystem concept at the 7th grade of 4th state junior high school of Bendahara, Aceh Tamiang years of learning 2011/2012.

2. The magnitude of the effect of reciprocal teaching approach application to student achievement on the concept of ecosystem Concept at the 7th grade of 4th state junior high school of Bendahara, Aceh Tamiang years of learning 2011/2012.

REFERENCE