PROCEEDINGS

AISTEEL 2017

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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October 16-17, 2017

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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, Languange 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 cheked 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 excels 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 collaborated in actualizing the seminar.

Director of Postgraduate Unimed

Prof. Dr. Bornok Sinaga, M.Pd
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Daulat Saragi
The Impact of Cooperative Learning Strategy and Learning Interest Toward The Learning Result of Second Year of Senior High School Students in 2016/2017

Riswan Sianturi¹, Abdul Muin Sibuea², Edward Purba³
Educational Technology
Postgraduate of State University of Medan
Corresponding email : riswansianturi4@gmail.com

Abstract- Cooperative learning is a study method where students study in small groups that have a different skill level. Every members of these small groups are required to be cooperated. Study method that were used in this study are quasi experimental research. Data were collected through a test instrument in the form of an observational assessment. The hypothesis testing is done by using test. This study was conducted on a sample consisting of two classes which each was amounted of 34 peoples, such as second year of science one as experimental class that was taught by using jigsaw type of cooperative learning strategy and second year of science three as control class that was taught by using discovery type of cooperative learning strategy. From the result of experiment, researcher concludes the Information, Communication and Technology (ICT)'s learning result by using jigsaw type of cooperative learning strategy was significantly better than using discovery type of cooperative learning strategy.

Keywords: cooperative learning, jigsaw, discovery, information, communication and technology lesson

I. INTRODUCTION

Education is one of the efforts to improve human intelligences and skills so the quality of human resources depends on the quality of education achieved. The importance of education is reflected in the Constitution 1945 and GBHN which states that education is the right of every citizen who aims to educate the life of the nation, thus the educational program has a very big role to the socio-economic progress and welfare of a nation. The process of education in Indonesia is always changing in the form of improvements that ultimately produce quality output. Various efforts are made to obtain the quality of education by improving learning achievement through learning result. “The learning result are skills, attitudes, and skills that acquire after students receive guidance by teachers so they can construct knowledge in their daily life. Learning strategies is an action plan (series of activities) which includes the use of strategies, methods and application of various resources/strengths in learning. This means that in the preparation of a new strategy until the process of preparing the work plan has not reached the action. Strategies are structured to achieve a particular goal, which means that the direction of all strategy-making decisions is the achievement of objectives, so that the preparation of learning steps, the use of facilities and learning resources are all directed towards achieving goals. But before that, we need to formulate a clear goal that can be measured its success. To achieve a good achievement, we do not only need an intelligence but also interest, because without any interest, all activities that we do will be less effective and efficient. In everyday conversations the notion of attention is confused with interest. In practical of attention, as if we accentuate the functioning of the mind, whereas in interest it seems to accentuate the function of taste, but the fact that what interests ours also will concern us, and what causes our attention to interest will be interest us”. The Information and Communication Technology (ICT) skills will further increase the ease of obtaining information that will improve students’ learning result. The purpose of this study are to know the students ICT learning result which were taught by using jigsaw type of cooperative learning strategy and the students ICT learning result which were taught by using discovery type of cooperative learning strategy, to know the ICT learning result of students who have high learning interest and know the ICT learning result of students who have low learning interest, and to know the interaction of cooperative learning strategy and learning interest against the students ICT learning result.

II. JIGSAW AND DISCOVERY

Strategy provides guidance for teachers in conveying learning and helps students to achieve learning objectives so that learning can be done effectively and efficiently. Learning strategy is an action plan which will be implemented, including the use of method and the application of various resources for learning. The jigsaw model was developed and tested by Eliot Aronson and his friends at the University of Texas United States and later adapted by Slavin and his friends at the University "John Hopkins" (Sugianto, 2010: 45). In learning, teachers have to understand the lesson materials and various learning strategies which stimulate students skills
to learn with teachers’ teaching plan. Jigsaw type of cooperative learning strategy is one of learning strategies which support contextual learning, and this type of jigsaw cooperative teaching system can be defined as a structured learning system. Slavin (1995: 30) expressed that jigsaw type of cooperative learning strategy is a cooperative learning strategy that focuses on small group work consisting of 5 or 6 heterogeneous students, and students cooperate positively and responsible interdependence.

According to Majid (2015: 182) in the application of jigsaw type, students are divided into groups of 4 or 6 members of heterogeneous learning groups, lesson materials is given to students in text form, all members are responsible for studying a particular part of the given material. Other group members who get the same topic of assignment will gather and discuss about the topic. This group is called the expert group. Jigsaw is designed to enhance student sense of responsibility to their own learning and others. Students do not only study the given materials but also be ready to teach that materials to every members of group. Thus, "students are interdependent with one another and must cooperate cooperatively to study the assigned material". According to Slavin (1995: 4), discovery type of cooperative learning strategy is that in deep of learning, students are encouraged to mostly learn through their own active engagement with concepts and principles, and teachers will encourage students to have experience and experiment which enabling them to find principles for them selves. The under lying theory of discovery learning is John Dewey, he stated that learning is an activity where knowledge and ideas appear as a result of one student’s interaction with other students and they are able to build their own knowledge through their experience. Dewey believes that students are naturally motivated to actively study and school is limited to provide learning services. He believes that mental development can occur through social interaction.

III. RESULTS

The main data obtained in this study is the students ICT learning result. From the results of data analysis, researcher obtained the following data, such as : Normality test is done to determine whether the data is normally distributed or not. This study used chi-square table. Based on the calculation result, researcher obtained $\chi^2_{\text{count}}$ for jigsaw type of cooperative learning strategy is 0.00181 while for discovery type of cooperative learning strategy is 0.0423. For $\chi^2_{\text{table}}$ is 0.886. Based on that result, researcher conclude that $\chi^2_{\text{count}} < \chi^2_{\text{table}}$ and data is normally distributed. Homogeneity test was conducted to obtain the assumption that the study sample were from the same condition. Homogeneity test was also conducted to find out whether both data had the same sample variance. Based on the calculation result, researcher obtained $F_{\text{count}}$ is 1.42 while $F_{\text{table}}$ is 1.82. Based on that result, researcher conclude that $F_{\text{count}} < F_{\text{table}}$ and data is homogenous. The hypothesis formulated in this study is the students ICT learning result by using jigsaw and discovery type of cooperative learning strategy. To know whether the students ICT learning result by using jigsaw type of cooperative learning strategy is better than the students ICT learning result by using discovery type of cooperative learning strategy, researcher conducted calculation by using T test and the criteria are : $F_{\text{count}} < F_{\text{table}}$, then $H_0$ accepted and $H_1$ rejected. $F_{\text{count}} > F_{\text{table}}$, then $H_0$ rejected and $H_1$ accepted. Based on the calculation that used T test, researcher obtained $F_{\text{count}}$ is 4.34 while $F_{\text{table}}$ is 3.99. Researcher conclude the ICT skills of students who are taught by using jigsaw type of cooperative learning strategy is better than the ICT skills of students who are taught by using discovery type of cooperative learning strategy.

IV. CONCLUSION

The purpose of this study are: to know the students ICT learning result which were taught by using jigsaw type of cooperative learning strategy and the students ICT learning result which were taught by using discovery type of cooperative learning strategy , to know the ICT learning result of students who have high learning interest and know the ICT learning result of students who have low learning interest , and to know the interaction of cooperative learning strategy and learning interest against the students ICT learning result. Based on the results of research, processing and data analysis and hypothesis testing, researcher concludes that there is a significant difference between the ability of ICT students who taught by using jigsaw and discovery type of cooperative learning strategy in this study.

REFERENCES