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Medan, North Sumatra - Indonesia



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Rundown of The 4th Annual Internatioanal Seminar on Transformative Education and Educational Leadership (AISTEEL) 2019
Garuda Plaza Hotel, Medan, 23 – 24 September 2019

1st day (Monday, September 23, 2019)

Time	Activities	PIC
15.00 – 20.00	Registration in Garuda Plaza Hotel	committee

2nd day (Tuesday, September 24, 2019)

Time	Activities	PIC/Moderator
07.00 – 08.30	Poster Sessions 1	Section Poster 1
08.30 - 09.00	Opening Ceremony 1. MC Speech 2. Traditional Welcome Dance 3. Indonesian National Anthem 4. Pray 5. Chairperson Report 6. MoU signing between Unimed and PSU - Thailand 7. Welcoming speech of Director of Postgraduate School 8. Welcoming speech and official opening of Rector of State University of Medan	MC
09.00 – 09.40	Plenary Lecture 1: Prof. Dr. Syawal Gultom, M.Pd (State University of Medan– Indonesia)	Moderator Section
09.40 – 10.25	Plenari Lecture 2 Prof. W. L. Quint Oga-Baldwin (Department of Education, Faculty of education and Integrated Art and Sciences, Waseda University - Japan)	Prof. Amrin Saragih, PhD (Panel)
10.30 – 11.15	Plenari Lecture 3 Prof. Dr. Wu-Yuin Hwang (Graduate Institute of Network Learning Technology National Central University, NCU - Taiwan)	
11.15 – 12.00	Plenari Lecture 4 Prof. Dr. Ekkarin Sungtong (Dean of Faculty of Education Prince of Songkla University - Thailand)	Mangara Simanjorang, PhD (Panel)
12.00 – 12.45	Plenari Lecture 5 Asst. Prof. Patcharin Panjaburee, Ph.D. (Mahidol University – Thailand)	
12.45 – 13.30	Lunch Break/ Poster Sessions 2	Section Poster 2
13.30 – 15.30	Parallel Session 1	
15.30 – 16.00	Break/ Poster Sessions 3	Section Poster 3

15.50 – 18.00	Parallel Session 2	Moderator/Operator
18.00 – 19.00	Break/ Prayer	
19.00 – End	Banquet (Gala Dinner) - Announce of Best Presenter - Announce of Best Poster	Consumption Section

Proceedings of the 4th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2019)

Preface

The 4th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2019) was held in Garuda Plaza Hotel, Medan City-Indonesia on 23-24 September 2019. This seminar is organized by Postgraduate School, Universitas Negeri Medan and become a routine agenda at Postgraduate program of Unimed now.

The AISTEEL is realized this year with various presenters, lecturers, researchers and students from universities both in and out of Indonesia participating in, the seminar with theme “Education, Learning and Leadership Innovation.”

The plenary speakers coming from various provinces in Indonesia have been present topics covering multi disciplines. They have contributed many inspiring inputs on current trending educational research topics all over the world. The expectation is that all potential lecturers and students have shared their research findings for improving their teaching process and quality, and leadership.

The fourth AISTEEL presents a keynote speaker and 4 distinguished invited speakers from Indonesia, Japan, Taiwan, and Thailand. In addition, presenters come from various Government and Private Universities, Institutions, Academy, and Schools. Some of them are those who have sat and will sit in the oral defence examination.

There are 310 articles submitted to committee, some of which are presented orally in parallel sessions, and others are presented through posters. The articles have been reviewed by double blind reviewer and 172 of them were accepted for published by Atlantis Press indexed by International Indexation and 96 papers are published by digital library indexed by google scholar.

The Committees of AISTEEL invest great efforts in reviewing the papers submitted to the conference and organizing the sessions to enable the participants to gain maximum benefit.

Grateful thanks to all of members of The 4th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2019) for their outstanding contributions. Thanks also given to publisher for producing this volume.

The Editors

Bornok Sinaga
Rahmad Husein
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Uswatun Hasanah

The Influence of Learning Approaches and Interest in Learning Against the Results of Learning English in Class VIII Medan SPK Middle School T.A 2018/2019

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Abstract—This study aims to find out: 1) the learning outcomes of science students learned by using the CLIL learning approach and the learning outcomes of science students who are taught by the Direct learning approach; 2) science learning outcomes between students with a high level of interest in learning and learning outcomes of students with low learning interest; 3) the interaction between learning approaches (CLIL and Direct) and learning interest in influencing science learning outcomes. The research method used was a quasi-experimental 2x2 factorial design. The results of the study concluded that: (1) the average science learning outcomes of students taught with the CLIL learning approach were higher than the Direct learning approach; (2) average science learning outcomes of students who have higher learning interest higher learning interest is low; (3) there is an interaction between learning approaches and interest in learning towards science learning outcomes.

Keywords— *CLIL; Direct; Interest In Learning and Learning Outcomes of Science*

I. INTRODUCTION (HEADING 1)

The learning approach that had been applied at the Medan SPK Middle School was found that teachers in teaching science subjects, most of the learning approaches used were Direct Instruction. This is because the teacher thinks most science lesson material is more precisely delivered by the lecture method. This is because science learning by placing students individually will be more conducive. Another method besides lectures is discussion by studying the material itself either through books or the internet. Even though the teacher has implemented a group-based learning approach, the learning has not been fully directed and well-conditioned. Therefore, in the study group students do not fully participate and not a few students tend to be passive.

Based on the data obtained, it can be seen that the average UAS score is still low. This is thought to be caused by various factors including: students consider science lessons

identical to elusive calculations and memorization that are difficult to remember because many terms of the term IPA are difficult to understand. Teachers tend to teach using conventional methods even though science lessons are held at the beginning of the school hours. Students are still not proud in class and tend to be quiet when the teacher asks questions or asks students for opinions about the material that has been taught even there are some students tell their other friends when the teacher explains science lesson material so the class becomes noisy. If given group work training not all students participate in doing the assignments given by the teacher. Even if held in the classroom only a few students are active because many students assume that they are unable to communicate creatively in expressing their opinions and are unsure of their ability so students tend to withdraw in discussions and become more passive in learning.

The CLIL learning approach is one of the learning approaches that combines language and content approaches, where a second language or a foreign language is not only used as a language in learning instruction but also as a very important tool for building knowledge. The main function of this learning approach is centered on the material (content) as well as the introductory language used in learning. CLIL aims to introduce students to new concepts through learning with non-native language, improve the production of language of students from the subjects studied, improve the performance of students in the subjects studied and target the language and increase students' confidence in the target of English . While the Direct learning approach is a learning approach that is more teacher-centered and prioritizes effective learning strategies to expand information on teaching material. Taking into account both types of learning approaches, efforts to determine the effectiveness of each of these learning approaches need to be researched so that an appropriate learning approach can be obtained and can be used as a guide

in improving learning outcomes in science subjects at junior high schools in Medan.

In addition to learning approaches that can improve student learning outcomes, the interest in learning possessed by a student greatly influences the learning outcomes of science in the classroom. If students have an interest in learning in learning activities, then he will be motivated to do the task and do difficult activities but quite realistic in doing it, he will be persistent and never give up in every learning activity. He can find this if the atmosphere of the learning activities is very supportive and has a high interest in learning. Then the learning approach used by a teacher in the classroom is very closely related to the learning component related to interest in learning.

According to research from Welgruf (2013) that the effects of CLIL learning with traditional teaching on prospective teacher self-learning skills. In addition, it was also determined to determine the level of attitudes towards CLIL learning and self-confidence. His research was conducted on 49 teacher candidates from the Department of Secondary Education and Mathematics, Faculty of Education, Hacettepe University. The purpose of this study was to determine the effect of the learning approach on student self-confidence as seen from students' reasoning abilities. Then this research is reinforced by Rahmawati (2011) research which concluded in his research that the CLIL learning approach had a significant influence on biology learning outcomes, critical thinking skills, activities and scientific attitudes of students at Almuslim Bireun University. This is in line with Gamze's research, et al. (2010) which concluded in his research that the influence of the CLIL learning approach and teacher service, attitudes and skills greatly contributed to education at the high school level of African countries. This shows that the CLIL is guided and supported by influencing students' critical thinking skills compared to the lecture method.

In this study various theories are linked that can describe the influence of cooperative learning approaches and interest in learning on students' natural science learning outcomes. Furthermore, the results of the research and discussion will be presented which are related to the theory of theory that has underpinned this research. The reason for choosing the CLIL learning approach and direct learning approach is because the learning resources are not only teachers, but also students. Such conditions are expected to help students who have learning difficulties and can encourage students to complete each subject of the subject matter delivered by the teacher.

Regarding the above, the objectives of this study are (1) to find out the science learning outcomes of students taught with the CLIL learning approach higher than students taught with the Direct learning approach (2) to find out the science learning outcomes of students who have interest higher learning is higher than students who have low learning interest (3) to find

out the interaction between learning approaches and interest in learning towards science learning outcomes.

II. METHOD AND RESULTS METHOD

This research was conducted in Medan SPK Middle School. The population in this study were all eighth grade students at the Kingston School Middle School and Junior High School Singapore School totaling 292 students. The sampling technique in this study was cluster random sampling.

This study used an experimental method with a 2x2 factorial quasi-experimental design. Through this design compared the influence of the CLIL learning approach and the Direct learning approach to the learning outcomes of science in terms of student learning interests. These variables are then included in the research design as shown in Table 1.

TABLE 1. RESEARCH DESIGN

	A	CLIL (A ₁)	Direct (A ₂)
B			
High (B ₁)		A ₁ B ₁	A ₂ B ₁
Low (B ₂)		A ₁ B ₂	A ₂ B ₂

Information :

A1B1: Science learning outcomes of groups of students treated with CLIL learning approaches that have a high interest in learning

A2B1: Science learning outcomes of groups of students treated with CLIL learning approaches that have a high interest in learning

A1B2: Science learning outcomes of groups of students treated with CLIL learning approaches that have low learning interest

A2B2: Science learning outcomes are groups of students who are treated with Direct learning approaches that have low learning interest.

Teknik analisis data yang digunakan adalah teknik statistik deskriptif dan inferensial. Teknik statistik deskriptif digunakan untuk mendeskripsikan data antara lain: nilai rata-rata, median, modus, varians dan simpangan baku. Teknik inferensial yang akan digunakan adalah teknik analisis data varians (ANOVA) 2 x 2. Pengujian hipotesis dilakukan pada taraf signifikansi 5%. Sebelum ANOVA dua jalur dilakukan, terlebih dahulu dilakukan uji persyaratan analisis yakni uji normalitas menggunakan uji Liliefors dan uji homogenitas menggunakan uji Fisher dan uji Bartlett.

Furthermore, for the purposes of hypothesis testing, the statistical hypothesis is formulated as follows:

Hypothesis I $H_0 : \mu A_1 \leq \mu A_2$
 $H_a : \mu A_1 > \mu A_2$
 Hypothesis II $H_0 : \mu B_1 \leq \mu B_2$
 $H_a : \mu B_1 > \mu B_2$

TABLE II. TESTING HYPOTHESIS BY USING 2 WAY ANAVA

Varians	Dk	JK	RJK	F _{Hitung}	F _{Tabel}
A	1	129,54	129,54	12,42	3,94
B	1	120,57	120,57	11,56	3,94
AB	1	205,15	148,96	19,67	3,94
Galat	63	657,09	10,43	-	-
Total	66	1112,36	465,69	-	-

Where,

- A : Learning Approaches
- B : interest to learn
- Dk : Degree of freedom
- JK : The sum of squares
- RJK : The average of the sum of squares

The interaction can be seen in fig. 1

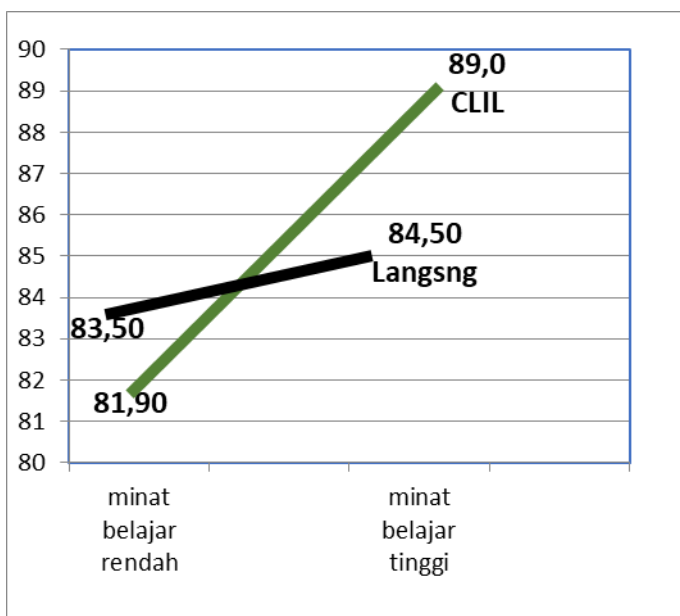


Fig. 1 Interaction of learning approaches and interest in learning

III. RESULTS AND DISCUSSION

Based on the results of testing the first hypothesis then from the results of the calculation of the hypothesis obtained F count = 12.42. For the distribution value F table = 3.94 then this result shows that F count > F table so that gives a decision that Ho is rejected and Ha is accepted. Thus, the research hypothesis proposed is the science learning outcomes of class students CLIL learning approach is higher than the science learning outcomes of class students direct learning approach.

This is in line with the results of research by Mike (2004) which states that there is an increase in student learning outcomes using the CLIL learning approach. According to Research Mike the CLIL learning approach provides opportunities and opportunities for students to think more and reason about what students are learning. This approach also

encourages students to carry out skills such as proficiency in using English in learning and everyday life. Where students here are required to actively carry out these skills personally. The CLIL approach can also develop students' attitudes, skills and knowledge. The application of the CLIL approach in learning does not only focus on how to develop students' competencies in conducting observations or experiments, but how to develop thinking and thinking skills so that they can support creative activities in innovating or working. Through a series of learning that uses the CLIL approach, student learning outcomes include cognitive, affective domains, and psychomotor domains can be trained.

While the Direct Approach is an approach that prioritizes teaching goals that emphasize the function of the teacher as a learning center. The focus of the Direct approach lies in how students learn by observing selectively, remembering and imitating what the teacher models. Though the learning outcomes in schools are not only about the use of language / students' skills in mastering the language but also students' understanding of the structure of grammar.

From the description above, it appears that student learning outcomes concerning cognitive aspects are highly developed in the CLIL approach. Thus, it is clear that using the CLIL Approach will have a better influence on the learning outcomes of science compared to learning using the Direct learning approach.

From the results of the calculation of the second hypothesis obtained F count = 11.56. For the distribution value of F table = 3.9 then this result shows that F count > F table so that gives a decision that Ho is rejected and Ha is accepted. Thus, the research hypothesis proposed is that there are differences in science learning outcomes of students with high learning interest with science learning outcomes of students with low learning interest. The results showed that the average value of science learning outcomes of students who have high learning interest is higher than students who have low interest in learning. This indicates that students who have a high interest in learning are better able to understand science lessons than students who have low interest in learning. The results of observations of researchers during the learning process, it appears that students who are classified as having a high interest in learning tend to be more sociable, mingle with new environments, active in groups and personal, more motivated and enthusiastic about learning, more confident in asking questions, answering questions, expressing opinion. Students who have a high interest in learning also do not feel afraid of being wrong or disagree with other students and have more mutual respect.

Based on the description above, it is clear that students who have a high interest in learning obtain higher science learning outcomes compared to students who have low interest in learning. It can be concluded if there are differences in science learning outcomes of students who have high learning interest with low interest in learning.

From the results of the calculation of the third hypothesis obtained $F_{count} = 19.67$. For the distribution value of $F_{table} = 3.9$ then this result shows that $F_{count} > F_{table}$ so that gives a decision that H_0 is rejected and H_a is accepted. Thus, the research hypothesis proposed is that there is an interaction between learning approaches and interest in learning towards learning outcomes of science. When viewed from the average science learning outcomes in the group of students who have a high interest in learning and are taught with the CLIL learning approach is higher than the average learning outcomes of other groups of students. This is because students can learn well, where students are able to solve the problems posed, the learning approach that can foster the enthusiasm of students in learning. Meanwhile, in teaching and learning activities, either in the CLIL learning approach or the Direct learning approach can take place interactively because of the pleasant learning atmosphere.

Learning uses the CLIL learning approach. The teacher is no longer a learning center but is student-centered. That is, the CLIL learning approach is intended to provide understanding to students in knowing, understanding various materials using language and content approaches, that information can come from anywhere, anytime, does not depend on the direction of the teacher's information. The essence of this approach expects students to carry out the process of observation, questioning, reasoning, trying, communicating (networking) to everything related to the learning process itself. Through this approach students are expected to think scientifically and be able to learn and work in groups to solve problems given by the teacher so that they can achieve optimal learning achievement. One of the things that need to be considered also in the factors that influence learning outcomes is the interest in learning. The interest in learning students who are less well known by the teacher as a whole will be difficult to direct students to be active in learning activities. This situation causes the value of student learning outcomes is still much below the average.

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