THE EFFECT OF JIGSAW II TOWARD LEARNING MOTIVATION AND READING COMPREHENSION AT THE SECOND GRADE OF ENGLISH STUDENTS IN STKIP DHARMA BAKTI

Eka Melati
AMIK Mitra Gama
Jl. Kayangan no. 99 Duri – Bengkalis, Riau
Email: eccamelati@yahoo.com

Abstract

In teaching Reading, learning motivation and reading comprehension are essential. Ideally, after students learn Reading skills, both of their learning motivation and reading comprehension are better than before. In fact, the students still face some problems in comprehending the text. The problems are: they get low score of reading comprehension, they are lack of motivation, they are lack of vocabulary mastery, their reading comprehension is still low, and the lecturer always uses small group discussion method without any variation. The purpose of this research was to find out the effect of Jigsaw II on learning motivation and reading comprehension. This study was an experimental research. Population of this research was the second grade students of English Department of STKIP Dharma Bakti Lubuk Alung academic year 2010/2011 who was totally 133 students. The sample was selected by cluster random technique. The instruments were questionnaire of learning motivation and test to of reading comprehension. The data were analyzed manually by t-test formula. The result of this study were learning motivation of students who were taught by Jigsaw II was better than those who were taught by small group discussion and reading comprehension of students who were taught by Jigsaw II was better than those who were taught by small group discussion. It concluded that Jigsaw II produced better result on learning motivation and reading comprehension. It was implied that Jigsaw II could be used as method of teaching Reading for English students.

Keywords: *Effect, Jigsaw II, Learning Motivation, Reading Comprehension*

Abstrak

Motivasi belajar dan kemampuan membaca pemahaman sangat diperlukan dalam pengajaran Reading di perguruan tinggi. Kenyataannya, pengajaran Reading di kalangan mahasiswa masih menemui kendala, diantaranya nilai yang diperoleh dalam tes membaca pemahaman rendah, rendahnya motivasi belajar, rendahnya penguasaan kosakata serta kurangya variasi metode yang digunakan dosen dalam mengajar. Penelitian ini bertujuan untuk menguji apakah metode Jigsaw II memiliki pengaruh terhadap motivasi belajar dan kemampuan membaca pemahaman. Penelitian ini merupakan penelitian eksperimen. Populasi penelitian ini adalah mahasiswa STKIP Dharma Bakti Lubuk Alung jurusan Bahasa Inggris tingkat dua tahun pelajaran 2010/2011 yang berjumlah 133 orang. Sampel diambil dengan menggunakan teknik klaster acak. Instrumen yang digunakan dalam penelitian ini adalah angket untuk mengukur motivasi belajar dan tes untuk mengukur kemampuan membaca pemahaman. Data dalam penelitian ini dianalisis secara manual dengan rumus uji t. Hasil dari penelitian ini menunjukkan bahwa motivasi belajar mahasiswa yang diajar menggunakan Jigsaw II lebih baik daripada motivasi belajar mahasiswa yang diajar menggunakan metode diskusi kelompok kecil dan membaca pemahaman mahasiswa yang diajar menggunakan Jigsaw II lebih baik daripada membaca pemahaman mahasiswa yang diajar menggunakan metode diskusi kelompok kecil. Jadi dapat disimpulkan bahwa metode Jigsaw II dapat
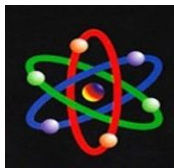
memberikan efek yang lebih baik terhadap motivasi belajar dan membaca pemahaman. Penelitian ini mengimplikasikan bahwa Jigsaw II dapat digunakan sebagai salah satu metode dalam pengajaran Reading untuk mahasiswa jurusan Bahasa Inggris.
Kata kunci: *Pengaruh, Jigsaw II, Motivasi Belajar, Membaca Pemahaman*

INTRODUCTION

Reading becomes an essential skill that college students should have. It is an activity which enlarges students' knowledge. Many books and other references of knowledge have been written in English and it is regarded as the main sources. In order to get the knowledge, the students should have reading skills to comprehend the texts. These skills influence students' successfulness in learning process at college since reading is not only for *Reading* subject but also for all subjects. This skill can be useful for them in reading the materials of other subjects. Buker (1990) states that "The more you read, the better you will write".

An important part of reading process is reading comprehension because it involves the process of extracting and constructing the meaning of the texts and the readers involve actively in this process and use their background knowledge, vocabulary, grammatical knowledge and the strategies to understand the texts [2]. It implies that the students who involve actively in reading should comprehend the text well. They should understand the ideas, recognize the relationship and structure among ideas, master the information from the text easily, apply the appropriate strategies of reading, activate their background knowledge and have sufficient vocabulary. When they do not able to comprehend the text well, they fail to catch the information.

Since reading comprehension is an important process of reading skills, it is necessary for the college students to learn reading skills. The reading skills at university teach at certain subjects as well as other skills such as listening, speaking, and writing and it is called teaching reading. Ideally, after the students finish studying *Reading* subject, they are able to comprehend the text well and apply their reading skills.

Furthermore, learning motivation involves in the process of teaching and learning the reading skills. It engages the learning goal and effort to achieve the goal. As Weiner and Woolfolk, 1996; Brown, 2000; and Dornyei, 2001 states learning motivation is one of the students' psychological states which arouses, sustains, directs, and integrates behavior to achieve the learning goal and the effort to achieve it.

In learning motivation of reading skills, the learning goal is important. For example, the students learn to achieve their goal – to comprehend the text. Comprehending the text is the students' cognitive needs and it has to be fulfilled during the lecture. To fulfill this need, the students can do some efforts such as read the material given by the lecturer, answer lecturer's questions directly, get the meaning of difficult word by their own, etc.

Besides, the teaching method is one of the lecturer efforts to achieve the students' goal. In this case, the lecturer should vary their teaching method that involves the students actively. Moore (2005: 396) states "motivation is largely influenced by internal factors, the lecturer's action, and the physical environment."

In fact, based on the researcher's observation and interview at STKIP Dharma Bakti Lubuk Alung on January, 13th 2011, the students of the second grade who
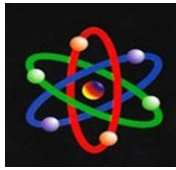
attended the *Reading II* got low reading achievement. It could be seen from the grades – the grade A for 81-100, B for 66-80, C for 56-65, D for 45-55 and E for less than 45 – achieved by the students. Based on table 1, it concluded that the students were not able to comprehend the text well.

Table 1. Percentage of Students' Grade for Mid-Term Test of *Reading II*

Classes	% of Students' Grade Mid-Term Test of Reading II				
	A (100-81)	**B** (80-66)	**C** (65-56)	**D** (55-45)	**E** (< 45)
ING 09 A	14.3	25.7	11.4	8.6	40
ING 09 B	-	12.5	53.2	25	9.3
ING 09 C	7.1	14.3	17.9	7.1	53.6
ING 09 D	16	16	12	20	36

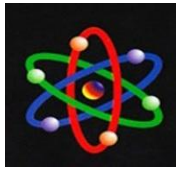*Source: Reading II Lecturer of STKIP Dharma Bakti Lubuk Alung (2011)*

The researcher assumes that there are several problems which caused the students' difficulties in comprehending the texts. The problems are lack of motivation in learning, lack of vocabulary, unable to apply the appropriate reading strategies and small group discussion as common used method by the lecturer.

In relation to the problems above, the researcher conducts the study on Cooperative Learning. There are several kinds of cooperative learning methods such as Students Teams-Achievement Divisions (STAD), Teams-Games-Tournaments (TGT), Jigsaw II, Team Accelerated Instruction (TAI) and Cooperative Integrated Reading and Composition (CIRC). The researcher limits her study on examining the effect of Jigsaw II on learning motivation and reading comprehension because of time, funds, and energy limitation.

Brief Review of Related Theories

1.1 Jigsaw II

Cooperative Learning is group learning activity and dependent on exchange the information between students in groups socially, a set of instructional method in which the students are encouraged or required to work together on academic tasks organized (Richards, 2000; Slavin, Oslen and Kagan, 1992). It is emphasized on students' cooperation and discussion during the learning process and engages other students' aid to master and comprehend the materials because the students can be more understood their friends' explanation in simple words. Each group members should be responsible of team successful on academic tasks. According to Slavin (2009: 26 – 29) cooperative learning can be divided into five typology based on six principal categories. First typology is group goals typology. It means each group can be certified if the members succeed to meet a present objective. Student Teams Achievement Division (STAD), Teams-

Games-Tournaments (TGT), Jigsaw II, Team Accelerated Instruction (TAI), and Cooperative Integrated Reading and Composition (CIRC) include in this typology. Second typology is individual accountability typology. It can be achieved by group scores which are being sum by individual quiz score and tasks specialization – part of group task is given each student as responsibility. Third typology is equal opportunities for success typology. This typology includes the scoring methods used to contribute the students' group such as improvement points (STAD and Jigsaw II), competition with equals (TGT), adaptation of tasks to individual performance level (TAI and CIRC). Fourth typology is team competition which refers to the use of competition as students' motivation. Next typology is task specialization which focuses on the assignment of a subtask to each group member (Jigsaw II and Group Investigation). The last typology is adaption to individual needs which has purpose to adapt instruction to students' individual needs. The results generally suggest that cooperative learning develops higher-order thinking skills, enhances motivation, improves interpersonal relations and peer relations, and exploits the diversified abilities of students to enhance their cognitive and social performance (Kam-Wing: 2004).

In this research, the researcher focuses on Jigsaw II. Jigsaw II was developed by Slavin in 1986. It is an adaptation of Original Jigsaw which was developed by Elliot Arronson and his colleagues in 1978 (Slavin, 1995: 122). Jigsaw II is one kind of cooperative learning methods which divides the students into small (4 –5 students) heterogeneous (mixed in ability and gender)

group. Then, each student take on specific roles in attaining an overall group tasks and they have to be able to teach the tasks to other students on their group.

Based on the typology above, Jigsaw II is categorized on group goals, individual accountability, opportunity to success and tasks specialization typology (Slavin, 1995). Group goals typology means each group (home group) in Jigsaw II can be certified if the members succeed to meet a present objective. Then, individual tasks typology of Jigsaw II can be achieved by group scores which are being sum by individual quiz score. The equal opportunity to success typology in Jigsaw II defines the scoring methods used to contribute the group is improvement points. The next, tasks specialization typology in Jigsaw means the assignment of a subtask to each group member. Avoiding the problem of tasks specialization methods such as the students will learn only about the subtopic for which they were responsible personally, at the end of teaching learning process the students are quizzed on all topics and the quiz scores are averaged to form group score. Furthermore, the material of Jigsaw II such as written narrative is appropriate for subjects such as social studies, literature, some parts of science, etc. It is focused on concept rather than skill. The example of material is a chapter of book, story biography or narrative or descriptive material (Slavin, 1995: 122).

In addition, there are five steps of implementation Jigsaw II (Kam-wing, 2004: 93). The steps are (1) Reading. Students receive expert topics and read assigned material to locate information; (2) Expert group – a group which consists of different members of home group and each members of the group is assigned to learn and comprehend certain topic and finish it then
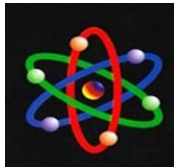
explain it to home group – discussion. The students with the same expert topics meet to discuss them in expert groups; (3) Home group – the main group which consists of heterogeneous students (ability, racial, sex) and it is combination of some experts – reporting. Experts return to their teams to teach their topics to their teammates and place team members' names on team summary sheet (Appendix 1); (4) Testing. The students take individual quizzes covering all topics; and (5) Group recognition. Team scores are computed as in STAD – the students earn points for their teams based on percentage correct pass their base scores and the lecturer copy a quiz score sheet (Appendix 1). The illustration of Jigsaw II group activities is shown below:

HOME GROUP

(Consisting of 4 – 5 students)
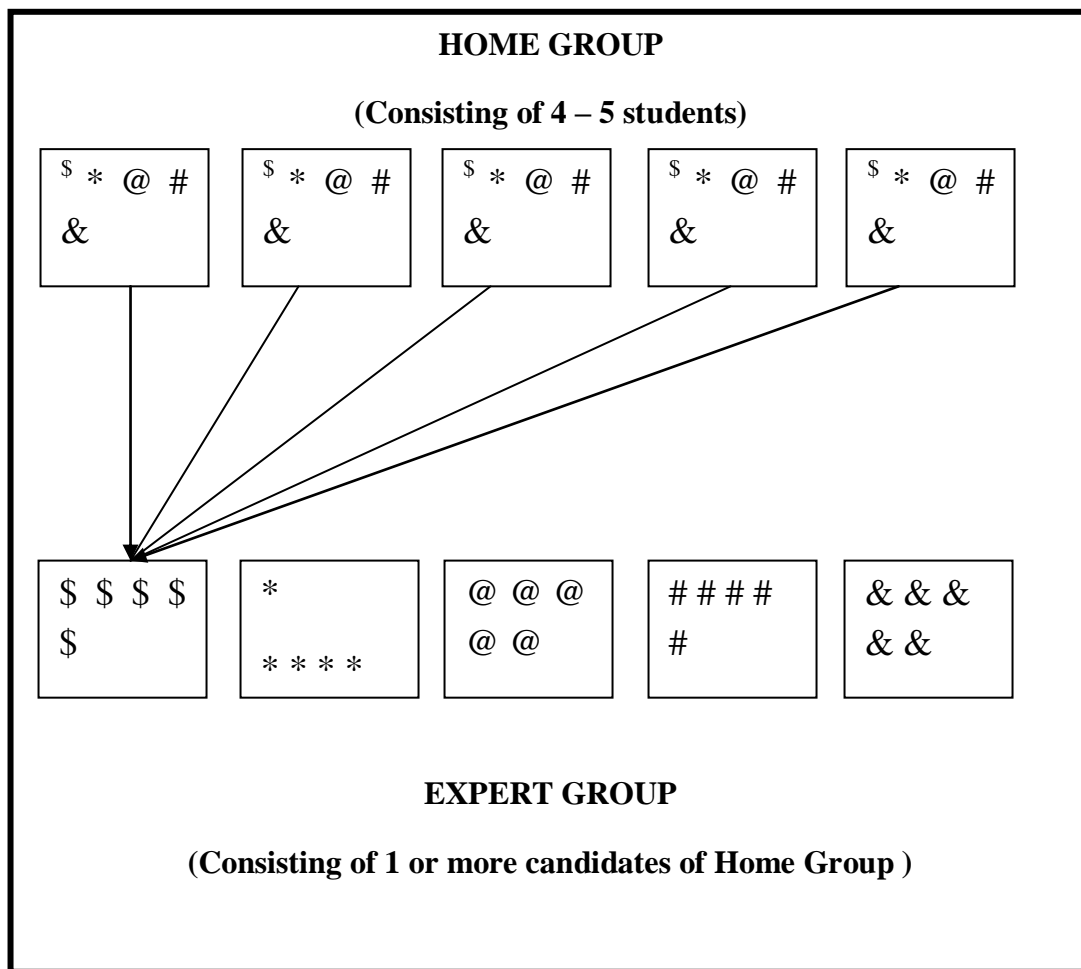
Figure 1. Illustration of Jigsaw Group Activities

Then, at the end of the teaching learning process, the evaluation should be done. According to Slavin (1995: 80), there are three steps of evaluation system of Jigsaw II. The steps are (1) computing the base score is the score of each students based on their score quiz before; (2) computing present quiz score based on the topic discussed; and (3) computing improvement score includes computing the students score based on their
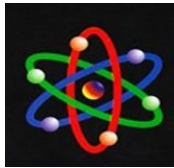
improvement from the base score by using certain scale above. Then he explains the way to compute individual improvement score. It can be seen on table 2 above:

Table 2. Improvement Point Criteria of Jigsaw II

Quiz Score	Improvement Points
More than 10 points below base score	5
10 points to 1 point below base score	10
Base score to 10 points above base score	20
More than 10 points above base score	30
Perfect paper (regardless of base score)	30

The next, he also gives the level of awards given which is based on average team score. See Table 3 for details.
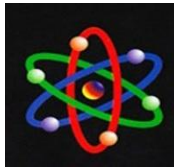
Table 3. Team Accomplishments

Criterion (Team Average)	Award
15 points	GOOD TEAM
20 points	GREAT TEAM
30 points	SUPER TEAM

Besides, in the design of Jigsaw II, Kam-Wing (2004) states there are four elements of Jigsaw II constructed in by Slavin which gives contribution to its successful in implementation: (1) mixed-ability grouping. The students are assigned carefully to heterogeneous group in terms of ability and gender so that each group is a cross-sectional representation of the whole class. The performance of low ability students improves in heterogeneous grouping because these students receive more elaborated explanations from their high ability peers about learning materials; (2) individual accountability. It means that the success of a group depends on the individual learning of all group members. It exists when the performance of each individual member is assessed, the results are given back to the individual and the member is held responsible by groupmates for contributing the group success; (3) group reward. It has relationship with individual accountability. The individual accountability can be fostered by the effective use of group reward based on individual performance; and (4) equal opportunity to success. Jigsaw II uses improvement scores instead of test scores for computing the group score. With improvement scores, members of different ability are given an equal opportunity to earn points towards the group scores as long as they make improvement over their past performance.

Moreover, there are some academically and socially benefits of applying Jigsaw II in teaching process (Morgan et al, 2008; Doymus, 2009). The benefits of Jigsaw II are (a) increasing students' academic achievement; (b) increasing students' motivation to read; (c) improving attitudes and academic achievement of under achieving students (d) increasing students' reading comprehension skill and deeper comprehension of reading material; (e) increasing students' self-esteem, individual and group responsibility, mutual assistance relationship and verbal communication; and (e) increasing motivation in learning.

In contrast, Jigsaw II has some disadvantages (M. Nur, 2005: 96 – 97). The disadvantages, the effect and how to reduce it are presented on Table 4 below:

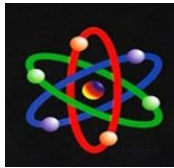**Table 4. The Disadvantages of Jigsaw II and Its Solution**

No	Disadvantages	Effect	Lecturers' Efforts
1.	The expert group discussion tends to be unwell structured	Discussion spends a lot of time.	The lecturer limits discussion time and helps them.
2.	It can be a serious problem if one member of group does not attend the meeting.	One of home group member does not represent on their expert so there is one topic does not discuss.	The lecturer forms the group with 4 members and asks them to finish the task in pair. Then he/she prepares a half of the topic to anticipate the missing student.
3.	Lecturer is disturbed by several preparations such as materials, lesson plan, and quiz.	The lecturer is hard to apply Jigsaw II in the classroom because they think that there is so many preparations.	The lecturer collaborate with others, he/she limits the topic.

Based on the explanation above, it can be concluded that Jigsaw II is one kind of cooperative methods which was developed by Slavin in 1986. It has five steps in classroom implementation: reading, expert group discussion, home group reporting, testing and group recognition. This method includes academically and socially benefits.

1.2 Learning Motivation

Motivation is one of the internal condition that human has. The internal condition plays the important role for doing the daily activities. The word motivation derives from the Latin verb *movere* which means to move. As Ushioda (in Griffiths, 2008: 19) states "motivation concerns what moves a person to make certain choices, to engage in action, and to persist in action." It means without motivation, success will be hard to come by.

Motivation is important to success. Without such motivation we will almost fail to make necessary effort. In line with the idea above, motivation is defined as an internal state that arouses us to action, pushes us in particular direction and keeps us engaged in certain activities (Weiner in Elliot et al, 1996: 330). Indeed motivation coming from within of individual is important because it promotes us doing something spontaneously. Woolfolk (in Marsh 1996: 27) states that motivation is an internal state that arouses, directs, and maintains behavior. One of the causes why person initiate a particular action is motivation. When you are motivated, you usually can discover the source of motivation. According to Brown (2000: 34), motivation defines as "the extent to which you make choices about a (goals) to pursue and (b) the effort you will devote to that pursuit." The motivation relates to

someone's purpose to get something and the effort to get it. For example, if a student wants to master English to continue her study abroad, he/she can do some efforts such as learn by herselves through television, internet, or native speaker, enroll English course and study hard. It means that the strength of motivation depends on the individual outcome and their wish to achieve the goals. Even though an adult has defined goals and children's goal is less easy to describe, both of them can still be very powerful achieving the goals. Then, Dőrnyei and Ottó in Dőrnyei (2001: 9) defines the motivation as switching cumulative stimulation in individual that leads up, guides, organizes, expands, arranges, and evaluates the cognitive and psychomotor processes by selected, prioritized, operationalised and acted out wishes and desires. Motivation stimulates an individual to achieve their goals by doing some efforts. From the definitions above, it can be concluded that motivation is the personal's internal state that arouses, sustains, directs, and integrates behavior to get something and the effort to get it.

Furthermore, Elliot, N Stephen et al (1996: 333) divided the kinds of motivation into two categories based on educational psychologists. The motivations are intrinsic motivation and extrinsic motivation. Intrinsic motivation means the students' desire to learn in order to achieve specific objectives, for example wanting to do something such as read for enjoyment or value of it. By contrast, extrinsic motivation means external factors which comes from students' outside, for example rewards such as praise, grades, and candy. It is useful for the teacher to know about the differences of these characteristics of motivation in mind to decide on motivational strategies. Then,

Brown (in Ur, 2000) also divided the motivation into global, situational, and task motivation. Global motivation refers to the students' orientation towards the learning of the foreign language. It is actually determined by previous education and multitude of social factors, and teachers' own attitudes conveyed the explicit information and persuasion unconsciously. Next, situational motivation relates to the context of learning such as classroom and total environment. Task motivation is the way the learner approaches the specific tasks in hand. This is one of teachers' effort which is invested in practice. The teacher should make the tasks in hand as attractive as possible to encourage the students to engage in it.

Learning means a process of behavior adaptation progressively based on one experience. The experience is gained through the process such as exercises and adaptation between one and her environment in the form of knowledge, skill and emotion. In learning, motivation is needed. It can encourage the students to achieve their goals in learning process. In the process of learning, motivational intrinsic factors involve enjoyment, sense of challenging and skill development. But extrinsic factors in learning include personal goals and aspiration. Both of them can be internalized and regulated by others such as teachers, peers, curricula, educational and expectations. External motivation becomes the internal one if the students motivated highly to become a successful learner. It can be regulated by the teacher and the role of teacher becomes a motivator. In fact, there are motivated and unmotivated students. It means that motivated students are the students who are able to change their external become internal motivation to reach
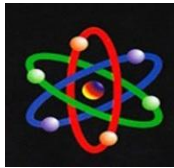
their learning objectives. As Zainil (2010: 156) says to be a successful learner someone should develop her intrinsic motivation and change the external one motivation becomes the internal one because only intrinsic motivation help learner to be successful. According to Uno (2010: 31) motivation in learning is both intrinsic and extrinsic factors on students to change their behavior toward learning. It is based on the indicators: (1) desire becomes successful learner; (2) the need to study; (3) the possibility of future; (4) the hope of reward on learning; (5) interesting learning activities; and (6) comfortable learning environment. All of these indicators may support a student to study well.

Previously, Reigeluth (1983: 395) presents four motivational categories. The motivational categories are: (1) Interest refers to the learner's arousing and sustaining curiosity and attention; (2) Relevance refers to the connection of instruction to important needs and motives; (3) Expectancy refers to the developing confidence in success; and (4) Satisfaction refers to the combination of extrinsic rewards and intrinsic motivation, whether these are compatible with the learner's anticipations. According to Atkinson and Raynor in Woolfork et al (1984), there are some characteristics of the students who are highly motivated in learning. The characteristics are better responding of the more challenging assignments, stricter grading of achievement, corrective feedback of new and unusual problems, pure chance to try again, avoiding failure to respond better the less challenging assignments, ample reinforcement for success, having small steps in learning and avoidance of the wrong opinion. Moreover, Mc. Cleland (in Steer, 1987: 69) also mentions some

characteristics of highly motivation students. The characteristics are (1) strong desire to assume personal responsibility for finding solutions for the problems; (2) a tendency to set moderately the difficult achievement goals and take calculated risks; (3) a strong desire for concrete feedback on task performance; and (4) a single minded preoccupation with task and task accomplishment. Then, Weiner (in Elliot et al, 1996) proposes four characteristics of high achievement motivated individual: (a) initiate achievement activities; (b) have more persistence in case of failure; (c) work with greater intensity; and (d) choose more task of intermediate difficulty than individuals of low achievement motivation. Naiman et al (in Ur, 2000: 275), furthermore, states "the most successful students necessarily are not those to whom a language comes easily; they are those who display certain typical characteristics as follows: (a) Positive task orientation. The student is willing to tackle and challenges and has confidence in his or her success; (b) Ego-involvement. The student finds it important to succeed in learning in order to maintain and promote his or her own (positive) self-image; (c) Need for achievement. The student has a need to achieve, to overcome difficulties and succeed in what he or she sets out to do; (d) High aspirations. The student is ambitious, goes for demanding challenges, high proficiency, top grades; (e) Goal orientation. The student is very aware of the goals of learning, or of specific learning activities, and directs his or her efforts towards achieving them; (f) Perseverance. The student consistently invests a high level of effort in learning, and is not discouraged by setbacks or apparent lack of progress; and (g) Tolerance of ambiguity. The student is
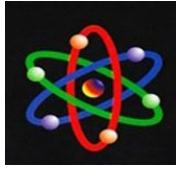
not disturbed or frustrated by situations involving a temporary lack of understanding or confusion; he or she can live with these patiently, in the confidence that understanding will come later."

In conclusion, learning motivation refers to the students' internal state that arouses, sustains, directs, and integrates behavior to get the successfulness in learning and the efforts to get it. It is indicated by several indicators such as positive task orientation, ego-involvement, need for achievement, high aspiration, goal orientation, perseverance, tolerance of ambiguity (Naiman et al in Ur, 2000: 275).
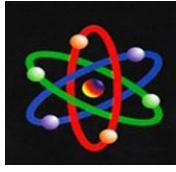
1.3 Reading Comprehension

Reading becomes a part of our daily life or an activity for the people. In real life, people do not normally read because reading is done only when it is needed. But for a student, he/she have to read. Usually reading has some purposes: there is something that people want to find, to check some information, and to confirm the opinion. So the readers do not usually begin reading with empty mind. They already have some ideas about the topics that are going to be read.

Reading is a process of transferring information from the writer to the reader by using text. It is an active mental process which uses the background knowledge about the world and the language to get meaning from written word. It purposes are to know much information about event that occurs in the text, for maintaining the reader's focus, and to achieve comprehension. (Kustaryo: 1988, Rumelhart in Aebersold: 1999, and Aebersold and Field: 1999).

In reading, comprehension becomes an important process. Reading comprehension is the process of constructing meaning from the text. It

involves the reader and the writer. Also the process of reading comprehension involves decoding the writer's words and using background knowledge to construct an approximate understanding of the writers' message as the process of comprehending. It is not only understanding the words in sentence but also understanding the whole writings are going through the writer's mind when he writes the words.

According to Grellet (1990: 3) comprehension means understanding a written text which takes the information out from it as efficiently as possible. Different reading strategies can be applied by a good reader to different particular texts. For example, when he reads an article in a scientific journal he can try to understand the new information contained in that article and apply his more detailed comprehension. Irwin (2000: 9) says "Comprehension can be seen as the process of using one's own prior experiences (reader context) and the writer's cues (text context) to infer the author's intended meaning". It means that not only reader's background knowledge influences reading comprehension but also reader's characteristics (reader context), the specific text being read (text context), and the total situation (situational context). The reader's characteristics (reader context) involve his or her individual attitudes, interests, expectations, skills and prior knowledge and situational context relates to factors such as the situation organizer, the task and the total setting. Moreover, Irwin (2000: 9) explains about reading comprehension's processes. The processes are deriving meaning from individual idea in each sentence and deciding which of the ideas to remember (microprocessing); recalling what reader's read if the individual ideas are connected into a coherent of the text (integrative
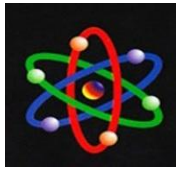
processing); the process of synthesizing and organizing individual idea units into a summary or organized series of related general ideas (macroprocessing); the process of making inferences not necessarily intended by the author (elaborative processing); and the process of adjusting one's strategies to control comprehension and long-term recall (metacognitive processing). A good reader can be able to apply these processes in reading comprehension. A good reader, in addition, can relate whatever new information they encounter in the texts to what they have already known to their cognitive structure. The readers' background knowledge integrates with the text to create meaning. As Nunan (2003: 68) states reading comprehension is a smooth process of readers combining information from a text and their background knowledge to build meaning and has comprehension as the goal.

Accurate and effective comprehension involves the appropriate techniques used by the reader. In second language teaching, one of the most common aspects of reading is focused on developing comprehension skills. McWhorther (1980: 57-134) suggests four comprehension skills. The comprehension skills are (1) understanding sentences by recognizing complete sentences, identifying core parts, identifying core parts in complicated sentences and using punctuation to comprehend sentences; (2) understanding paragraphs by knowing how to identify the topic of a paragraph, how to find mind idea, where to find stated main idea, recognizing details and unstated main ideas; (3) understanding passages by understanding of elements of a passage, identifying the subject, finding the central thought, recognizing the supporting ideas and

recognizing directional words; and (4) improving concentration and recall ability. In reading comprehension, developing appropriate and efficient comprehension strategies is needed. Brown (2004: 188-189) states some principal strategies for reading comprehension. The strategies are (1) identifying the purpose of reading a text; (2) applying spelling rules and conventions for bottom-up decoding; (3) using lexical analysis such as prefixes, roots suffixes, etc to determine meaning; (4) guessing at meaning of words, idioms, etc when the meaning is not certain; (5) skimming the text for the gist and main ideas; (6) scanning the text for specific information for example names, dates, and key words; (7) using silent reading techniques for rapid processing; (8) using marginal notes, outlines, charts, or semantic maps for understanding and retaining information; (9) distinguishing between literal and implied meaning; and (10) capitalizing on discourse markers to process relationship.

Based on the theories stated by the experts above, it can be concluded that in reading any kinds of text the reader have to involve comprehension to the texts being read. The comprehension is followed by certain purposes in the readers' mind in order to get ideas from the text reader's read. The process in reading comprehension is complex and it involves all aspects in the text. There are some indicators of good reading comprehension, the indicators are: (1) identifying word meaning from context; (2) identifying topic; (3) identifying main idea; (4) identifying details; (5) identifying paragraph patterns; and (6) making inferences. It is needed to develop these comprehension skills in second language teaching.

RESEARCH METHOD

This research was an experimental research. In this research, the researcher manipulated the independent variable (Jigsaw II) then controlled other variable (small group discussion) and observed the effect of dependent variables (learning motivation and reading comprehension). As Gay, Mills, and Airisian (2009: 240) states "experimental research is the only type of the research that can test hypotheses to establish cause and effect relationship."

The design of this research was the posttest-only control group design. There was no pretest. The participants were randomly assigned, then different treatments for both of experimental and control group given, and post-test assigned.

The population of this research was the second grade students of *Sekolah Tinggi Keguruan dan Ilmu Pendidikan* (STKIP) Dharma Bakti Lubuk Alung for academic year of 2010/2011. Based on the table 2, there were 133 students which classified into four classes. Before the sample was randomly selected, the researcher analyzed the homogeneity and normality of population. Based on these testing, the sample was homogenous and normally distributed. Then, cluster random sampling used to select the sample. In this research, test of reading comprehension and questionnaire of learning motivation were the instruments. It assigned in post-test which was assigned after the treatment did. After the data collected, it analyzed by normality testing, homogeneity testing, and hypotheses testing.

RESULT AND ANALYSIS
Normality Testing

Normality testing was analyzed toward four of the data group: reading comprehension data of experimental class, learning motivation data of experimental class, reading comprehension data of control class, and learning motivation data of control class. The testing was analyzed by using Lilliefors test at the level of significance .05. More detail, see the Table 15 below:

Table 15. Summary of Normality Testing

| Variable	$L_{observed}$	L_{table}	Note
Learning Motivation of Experimental Class	0. 0757	0. 1433	Lt < Lo Normal
Learning Motivation of Control Class	0. 1328	0. 1433	Lt < Lo Normal
Reading Comprehension of Experimental Class	0. 1035	0. 1433	Lt < Lo Normal
Reading Comprehension of Control Class	0. 0889	0. 1433	Lt < Lo Normal

Based on the table above, both of experimental and control class data was normally distributed because Lobserved is lower than Ltable. The procedure of normality testing could be observed in Appendix 20 and 21. The result of normality testing illustrated by normal curve below:
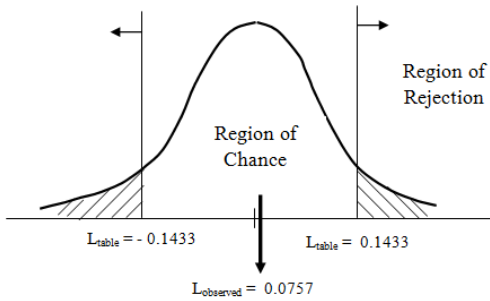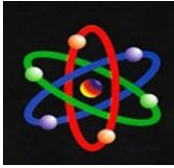
Figure 3: Normal Curve of Learning Motivation of Students Teaching by Jigsaw II

From the illustration of curve above, it could be observed that the value of $L_{observed}$ = 0.0757 was situated on L_{table} = ± 0.1433. It indicated that students' learning motivation of experimental class data was normally distributed at significance level of .05.
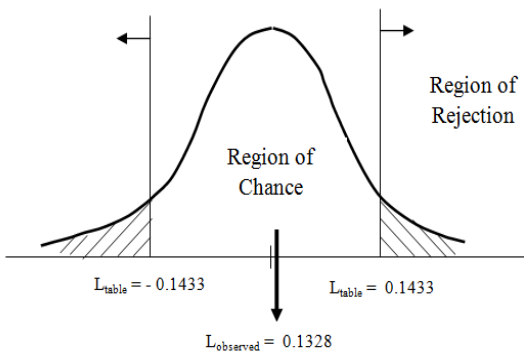

Figure 4: Normal Curve of Learning Motivation of Students Teaching by Small Group Discussion

Then, based on normal curve of control class students' learning motivation illustration above, $L_{observed}$ = 0.1328 was situated on L_{table} = ± 0.1433. It meant that the data of control class students' learning motivation was normally distributed in the level of significance .05.
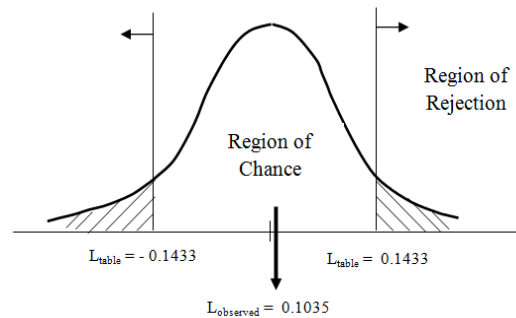

Figure 5: Normal Curve of Reading Comprehension of Students Teaching by Jigsaw II

After that, the data of students' reading comprehension at experimental class was normally distributed. It was illustrated on the Figure 5. Based on the normal curve above, the value of Lobserved = 0.1035 was fixed into the ratio of Ltable = ± 0.1433 at .05 significance level.
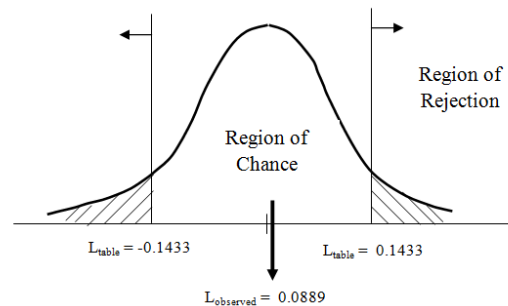
Figure 6: Normal Curve of Reading Comprehension of Students Teaching by Small Group Discussion

When the $L_{observed}$ was located between the area of ± L_{table}, it meant that the data was normally distributed. Based on illustrated above, the value of $L_{observed}$ = 0.0889 was situated on the value of L_{table} = ± 0.1433 at significance level .05. It indicated the data was normally distributed.
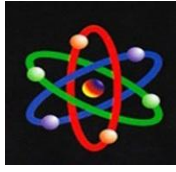
Homogeneity Testing

In this study, the homogeneity was tested to know whether each group had the same variance or not. It was tested by using Variance Test (F Test). The summary of homogeneity testing result could be seen from Table 16.

Table 16. The summary of Homogeneity Testing

No	Variable	$F_{observed}$	F_{table}	Conclusion
1	Learning Motivation	1.11	1.80	Homogeny
2	Reading Comprehension	1.48	1.80	Homogeny

Based on the table of homogeneity testing summary above, it concluded that F observed for students' learning motivation and reading comprehension was lower than the ratio of F table. It meant that both of the variances were homogenous. The procedures of homogeneity testing analysis could be seen in Appendix 22.

Hypothesis Testing

Hypothesis testing of this research was done by T test for both of first hypothesis and second hypothesis.

Hypothesis 1

"Learning motivation of students who are taught by Jigsaw II is as the same as those who taught by small group discussion."

The result of T test of learning motivation for both of experimental class and control class could be seen at Table 17 below.

Table 17. Summary of T Test Result of Experimental and Control Class Learning Motivation

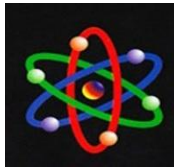| Variable	Class	N	$\bar{X}$	$T_{observed}$	T_{table}	Note
Learning Motivation	Experimental	36	112.42	6.16	1.671	Significant
	Control	36	103.69			

Based on analysis of hypothesis by using T Test, it was computed that mean of learning motivation score of experimental class students was 112.42, but mean of learning motivation score of control class was 103.69. The t observed was 6.16. Corresponding *t* for df = 71 required for significance at the .05 level was 1.671. Since $t_{observed} = 6.16$ was higher than $t_{table} = 1.671$, it could be concluded that *t* situated on rejected area of H_0. It meant alternative hypothesis (H_a) – learning motivation of students who are taught by Jigsaw II is better than those who taught by small group discussion – accepted.

Hypothesis 2

"Reading comprehension of students who are taught by Jigsaw II is as the same as those who taught by small group discussion."

The result of T test of reading comprehension for both of experimental class and control class could be seen at Table 18 below.

Table 18. Summary of T Test of Experimental and Control Class Learning Motivation

Variable	Class	N	$\overline{X}$	$T_{observed}$	T_{table}	Note
Learning Motivation	Experimental	36	20.03	1.87	1.671	Significant
	Control	36	15.69			

From the table above, it was computed that mean of reading comprehension score of experimental class students was 20.03, but mean of reading comprehension score of control class was 15.69. The t observed was 6.16. Corresponding t for df = 71 required for significance at the .05 level was 1.671. Since $t_{observed}$ = 1.87 was higher than t_{table} = 1.671, it could be concluded that t situated on rejected area of H_0. It meant alternative hypothesis (H_a) – reading comprehension of students who are taught by Jigsaw II is better than those who taught by small group discussion – accepted.
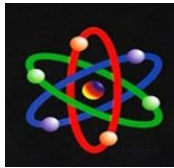
Based on statistical analysis of the hypothesis testing, it was known that the Jigsaw II gave significant effect on students' learning motivation and reading comprehension. Mean score of learning motivation and reading comprehension of experimental class or control class was significantly different. The mean score of learning motivation and reading comprehension of experimental class respectively were 112.39 and 20.03. In contrast, the mean score of learning motivation and reading comprehension of control class were respectively 103.69 and 15.69.

The first finding, the researcher argued that the result of hypothesis testing above was caused by small group discussion by lecturer which always started with presentation, question-answer session and doing the tasks in group, without any variation. The students were uninterested. There was no variation method used by the lecturer in teaching *Reading*. The students didn't enjoy their learning process because of the boredom of the lecturer method. If the students felt bored, their motivation would fall down. They were lazy in doing their tasks. Moore (2005: 384) supported this opinion. He stated "variety of teaching methods and arouse students involvement in the subject and their motivation." This statement also supported by the study conducted by Morgan et al (2008) in which the students who were given the opportunity to work in Jigsaw II group increased their awareness and they felt comfortable using Jigsaw II in college classroom.

Furthermore, motivation in learning was important. It should be paid attention by the lecturer. Increasing learning motivation stimulated the students to learn better. Dornyei and Otto in Dornyei (2001: 9) defined that motivation is the switching cumulative stimulation in individual that leads up, guides, organizes, expands, arranges, and evaluates the cognitive and psychomotor processes by selected, prioritized, operationalised and acted out wishes and desires.

In addition, doing some tasks during teaching learning process was one of the students' effort to achieve their goal in learning. A motivated student had positive task orientation. The lecturer had better to make the task as attractive as possible to

encourage the students to engage in it. Brown (in Ur, 2000) states task motivation is one way of the learner approaches the specific tasks in hand and the task becomes the lecturer's effort which is invested in practice. Then, the evidence above supported by the result of learning motivation questionnaire of the positive task orientation indicator. The percentage of this indicator at experimental class was 77.33% but at control class was 73.89%. It meant that the students who were taught by Jigsaw II have better positive task orientation.

The second findings showed that the students' mean score of reading comprehension at experimental class was better than students' mean score of reading comprehension at control class. It supported by Morgan et al (2008) Doymus (2009) who had stated the benefit of using Jigsaw II. One of the benefit is the Jigsaw II increased reading comprehension.

Moreover, there are four elements of Jigsaw II which contribute to its success in implementation (Kam-Wing, 2004). The elements were (1) mixed- ability grouping. The students assigned carefully to heterogeneous group in terms of ability and gender so that each group was a cross-sectional representation of the whole class. The performance of low ability students improved in heterogeneous grouping because these students received more elaborated explanations from their high ability peers about learning materials; (2) individual accountability. It meant the success of a group depended on the individual learning of all group members. It existed when the performance of each individual member was assessed, the results were given back to the individual and the member is held responsible by groupmates for contributing the group success; (3) group

reward. It had relationship with individual accountability. The individual accountability fostered by the effective use of group reward based on individual performance; and (4) equal opportunity to success. Jigsaw II used improvement scores instead of test scores for computing the group score. With improvement scores, members of different ability were given an equal opportunity to earn points towards the group scores.

The last finding was Jigsaw II could be used on teaching skill. The researcher have conducted the research while she taught *Reading III* subject which focused on reading skill for second grade of English Department students at STKIP Dharma Bakti Lubuk Alung. The researcher used material in the form of book chapters which included concept of the reading skill and supported by the tasks (in expert sheet) which assigned the students to apply the concept of reading skill. This evidence contrasted with Slavin (1995) statement " Jigsaw II method more focused on concept rather than skill."

From the discussion above, it concluded that Jigsaw II gave better result on learning motivation and reading comprehension.

CONCLUSION

Based on the research conducted for second grade students of English Department of STKIP Dharma Bakti Lubuk Alung, it can be concluded that:

Jigsaw II produced better result on learning motivation and reading comprehension.

The use of Jigsaw II can be chosen as an alternative method of teaching reading skills especially if the material focuses on concept.
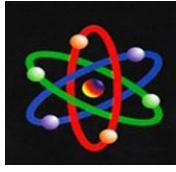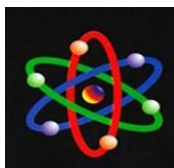
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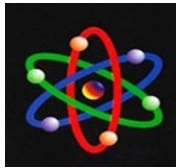
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