JIGSAW TECHNIQUE
IN READING CLASS OF YOUNG LEARNERS:
REVEALING STUDENTS' INTERACTION

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Abstract

(**Purpose**) The purpose of this study was to reveal classroom interaction patterns in jigsaw classroom of young learners. To be more specific, this study was aimed at depicting the ways young learners initiate discussion, respond to initiations, and evaluate responses and initiations. (**Methodology**) Five graders of 2 elementary schools in Surabaya, Indonesia were involved in the study. They were in their reading class discussing a text. In the last (third) treatment carried out in the first school one team consisting of 4 students was chosen when they were working in their expert teams of the jigsaw class. Similarly, another 4-member-expert team from the second school was also chosen. The exact subjects were then 8 graders who were chosen purposively to get the data to achieve the research purpose. A hidden tape recorder was set to record the discussion the students had while they were trying to be the experts of the paragraph assigned to them. The recorded data were first of all transcribed. The transcript was then analyzed to find out the strategies used by the subjects to initiate the discussion, to respond to initiations, and to evaluate responses and initiations. (**Results**) It was found out that the students initiated the discussion by asking others to commence, volunteering themselves to start, or reminding others to start the discussion. The students responded one another by doing what was expected - reading, answering, translating - or refusing what was expected. The students evaluated responses or initiations by giving correction, giving confirmation, giving other answers, or terminating the discussion neutrally. (**Conclusions**) Results indicate that young learners could do things quite independently in their group like adults could. Young learners can be encouraged to maximize their capability to build their knowledge constructing meaning. (**Recommendations**) Further studies can be conducted to see the interaction happening in the home team. Quantitative

studies can also be carried out to examine the short-term effect of jigsaw technique on young students' academic achievement in English. **(Additional data)** (has 9 references)

INTRODUCTION

The new curriculum - *Kurikulum Berbasis Kompetensi* - is applied nation wide starting from the academic year of 2004/2005. *Kurikulum Berbasis Kompetensi* is implemented to, as stated in "Kurikulum Berbasis Kompetensi Mata Pelajaran Bahasa Inggris" (2001:6), produce outputs who have competitive and comparative qualities based on national and international standard.

One of the theories underlying the emergence of *Kurikulum Berbasis Kompetensi* is constructivism. Kaplan (2002) puts forward that constructivism proposes that learning environment should support multiple interpretations of reality, knowledge construction as well as context-rich and experience-based activities. Guided by constructivist principles, teachers believe that learners are engaged in doing something as learning is an active process of which meaning is constructed out, and that learners learn by interaction with their fellow students, teachers and families.

Engaging students in *Kurikulum Berbasis Kompetensi* class can be realized by employing cooperative structures one of which is jigsaw. Teachers in favor of Jigsaw believe that each student owns the capability to be the contributor of knowledge. Students are encouraged to learn from their fellow students in their expert team and when they go back to their home team they are encouraged to teach one another the material they have worked on in the expert team. This jigsaw design facilitates students' interaction in the class enabling them to value each other as contributors (Aronson, 2005).

Traditional reading class is carried out by the teacher's reading the text being discussed then by some students' reading in turns. The teacher poses a question; the students wanting to respond raise their hands; the teacher calls on one particular student and the chosen student tries to state the correct answer. This particular classroom structure can be changed to make the class more interactive by jigsaw technique.

In jigsaw technique students form groups of 4-5 students. They initially gather in their 'home group'. Each student is assigned to read a different part of a reading text. Students with the same part then make a group called an 'expert group' to discuss and master their own part. Then they go back to their own 'home group' to exchange the information. All members of the home group should at last understand the whole text. Every member should be responsible for his or her own part and responsible for the success of all teammates in comprehending the text.

The issue is then related primarily to how the teacher can improve on the means to involve students in their reading class. The class teacher is challenged to implement the types of assistance their students need to accomplish a particular task as their competence grows. Simply the teacher is encouraged to bring opportunities for the students to learn maximally on their own in this case by taking part in jigsaw activities to achieve reading skill.

Studies related to the implementation of jigsaw technique in Indonesia language classes have in fact been carried out in high school settings. More studies then need to be conducted to ascertain the implementation of jigsaw technique in other settings, in this case in elementary schools. It is this particular concern that arouses the writer to conduct a study on the implementation of jigsaw technique in young learners' reading class.

RESEARCH QUESTION

Based on the rationale mentioned above, the writer poses the following research question: "What classroom interaction patterns exist in the expert team of jigsaw class?" of which the sub-questions are: "How do young learners initiate the discussion?", "How do young learners respond to initiations?", and "How do young learners evaluate responses and initiations?"

REVIEW OF RELATED LITERATURE
Co-operative Learning

Referring to Slavin (1990), Jacobs, Lee and Ball (1996:26) point out that cooperative learning requires students to work together to learn and to be responsible for their fellow students' learning as well as their own. Similarly, Nurhadi (2004:112)

defines cooperative learning as a learning approach focusing on the use of small groups of students who work together so that learning condition is maximized to attain learning objectives. Meanwhile, Felder (2005:2) viewing cooperative learning from the perspective of teaching puts forward a similar definition of cooperative learning as follows:

> Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it.

Felder (2005:2) argues that certain conditions must be met to result in productive cooperation instead of competitive one. The conditions are: (1) positive interdependence (the sense of 'sink or swim together'), (2) face-to-face interaction (the effort to promote each other's success), (3) individual and group accountability (the share of each student to the group achieving the goal as there is 'no hitchhiking!'), (4) interpersonal and small-group skills (the existence of leadership, decision-making, trust, communication and conflict resolution), and (5) group processing (the reflection or the feedback on how well the group functions and what to continue or change).

Some techniques or cooperative structures widely suggested and employed are: (see Felder, 2005; Jacobs, Lee and Ball, 1996; Kagan in Orr, 1999; and Nurhadi, 2004)

1. Think-Pair-Share. Students individually think about a question posed by the teacher. They pair up to discuss it and eventually they share it with other pairs, and/or with other groups.

2. Numbered-Heads. Groups of 4 – 5 students are formed and each is given numbers. The teacher poses a question and the students think of the answer making sure each member gets it. The teacher calls out a number (e.g. 2) and each student numbered 2 is asked to give the answer.

3. Jigsaw. Groups of 4 – 5 students (home teams) are formed and each group is assigned a part of the material to learn and then to teach to the other members in the group. More discussion on jigsaw can be found in the next sub-topic for it is important to have a separate discussion on this particular cooperative structure as the primary theory underlying this paper.

Jigsaw Technique

Initially introduced by Aronson et al. (1978), this jigsaw structure is meant to provide students with the chance to learn a material from their peers. A material is divided into sections and one section is for each student to take care of. The students who are responsible for the same section get together and form a new group of which the goal is for the students to master the section of the material and to enable them to teach the other members in their original learning group later.

Strategy to Conduct Jigsaw

First of all, children are assigned into groups of 4 or 5, and they can be encouraged to give their group a name that indicates their identity. These groups are their home teams or 'home groups' (Aronson, 2006). The groups should be diverse in gender, ethnicity, race and ability. All the members of each home group are assigned the role: as leader, illustrator, speaker and encourager. The leader is usually the most mature. The speaker is the one who becomes the representative of the group in explaining to the class; the illustrator is the one who makes the illustration to help them explain the text. The encourager should motivate all the members of the group to state their opinion or to speak.

Children temporarily form their expert teams or 'expert groups' (Aronson, 2006). One child from each 'home group' joins with other children who are assigned to the same segment. In the 'expert group', each member plays different role that can be done like in the home groups. Students in the expert groups have some time to discuss the main points of their segment and to rehearse the presentations they will make to their 'home groups'.

After finishing the discussion, students return to their 'home groups'. Each student presents her or his segment to the group in turns. The other members of the group who do not present their segment may ask questions for clarification. The teacher floats from group to group, observing the process. The teacher may make an appropriate intervention if any group has problems in discussion. At the end of the session, the teacher gives a quiz on the material so that students quickly come to realize that the sessions are not just for fun.

Classroom Interaction

When language teaching is supposed to be communicative, classroom interaction becomes the essential issue. This is in line with what Brown (2001:165) states as follows: "In the era of communicative language teaching, interaction is, in fact, the heart of communication; it is what communication is all about." If interaction does not exist, communication does not either.

In classroom interaction, students use language to negotiate meaning. They get the chance to make use of all they have of the language. This implicitly means that it is crucial for the teacher to provide more chance for the students to interact for the sake of real-life exchanges.

METHOD

This study was descriptive in nature. It presented information concerning classroom interaction in jigsaw class. Based on the research problem formulated, the writer collected the data by using an audio recording. The obtained data from the instrument were transcribed, analyzed and interpreted. The findings were then used to answer the research question.

The subjects of this study were taken from the fifth grade students of 'T' Elementary School in Surabaya and the fifth grade students of 'Y' Elementary School in Surabaya belonging to the academic year of 2006/2007. At 'T' Elementary School, there were 39 students involved in this study. At 'Y' Elementary School, there were 46 students. They were those students present on the third (the last) treatment when they learnt using jigsaw technique. More particularly, they were those working in their expert teams formed in the last treatment of the jigsaw class.

In each class, one expert team consisting of 4 students was chosen from the expert teams formed. Altogether there were two expert teams - one from 'T' Elementary School and one from 'Y' Elementary School. Consequently, the exact subjects were 8 students who were chosen purposively to get the data to answer the research question.

To obtain the data, the writer used, as previously mentioned, a tape recorder. The instrument was 'hidden' inside a small bag which was put in the center of the chosen

expert team. It was set to record the discussion the students had while they were trying to be the experts of the paragraph assigned to them.

First of all the writer made sure the 'hidden' tape recorder worked well. On September 21, 2006 she recorded the discussion of an expert team in the first treatment of jigsaw class at 'T' Elementary School. On September 22, 2006 she also recorded another one at 'Y' Elementary School. It was found out that the expected subjects' voice was too much disturbed by the other noise – from the whole big class who were also working or discussing their task in their groups.

The writer then tried hard to find a solution to this problem. She eventually made up her mind to do the recording outside the classroom. When the expert teams were formed, the chosen expert team was asked to go outside the classroom to do the assigned task. They did it outside not too far away from the classroom door.

On October 6, 2006 the discussion of the chosen expert team in the last treatment of jigsaw class at 'Y' Elementary School was recorded. On October 12, 2006 other data were also taken at 'T' Elementary School. Another chosen expert team in the last treatment of jigsaw was recorded while they were having their expert team discussion.

The recorded data were first of all transcribed. The transcript was then analyzed to find out the strategies used by the subjects to initiate the discussion, to respond to initiations, and to evaluate responses and initiations.

RESULTS AND DISCUSSION

The research question of this study is related to the classroom interaction patterns existing in jigsaw classroom in the expert team. It is more particularly intended, as previously mentioned, to reveal the ways students initiate the discussion, respond to initiations and evaluate responses and initiations.

Ways to Initiate

From the transcribed data, it is indicated that the students initiated the discussion in the expert team by making a request. One student said 'Ayo kamu dulu' [Translation: Come on, you start first]. Analyzing down the lines in the transcript, the writer found that to initiate the discussion a student repeated his friend's answer by adding 'but' – a

conjunction showing something contradictory. Adding 'but', he wanted to show his understanding in answering the question and he wanted to indirectly tell his friends about the contradiction issue. Please refer to the following script:

Jn:	[reading the question and answering it] What does Didi do in the break time? Didi plays football with his 5 friends. He does not go to the canteen.
Dd:	He plays football with his 5 friends **but** he .. **but** he doesn't go to the canteen.

Another way found in the transcript is that the student asked and offered others to read. She said: 'Yes, finished. Who wants to read the text?' Another similar way is by asking whether the others understood. Similarly, the student used the question 'Diartino ta?' [Translation: Shall we translate it?] to invite the discussion.

Reminding is another way to initiate. Please refer to the following script:

Wd:	Kurang satu .. ayo sama-sama. /Still one more sentence. Let's translate it together/

It is also shown in the following statement: 'Ayo, the question. [Translation: Come on, let's go on with the question]

It is shown in the second script that **Ko** started the discussion by volunteering himself to read the paragraph. He said 'Aku yang baca ya' [Translation: Let me read, OK?]

Realizing that there was a mistake in the translation, **Ko** tried to initiate the discussion by highlighting the main point. He read the incomplete sentence twice to emphasize the negative sentence. Please read the following script:

Ss:	[translating 'He does not go to the canteen'] Dia berlari ke kantin.
Ko:	[trying to correct] He does not. He does not….

Ways to Respond

It is indicated in the transcript that one of the students directly responded to the initiation by carrying out the expected action. This way of responding can be seen in the following script:

Kn:	Diartino ta? /Shall we translate it?/
Dd:	Pada waktu … /when…/

After **Kn** initiated by saying 'Diartino ta?' [Translation: Shall we translate it?], **Dd** directly translated the sentence showing the response of the initiation.

The following script also indicates the initiation which was responded by the student's performing the action expected.

Wd	Kurang satu .. ayo sama-sama. /Still one more sentence. Let's translate it together/
Ss:	[reading the sentence and translating it] He studies again at 9.30. Dia belajar lagi … jam setengah sepuluh.

In the following script

Dd:	[repeating] He plays football with his 5 friends **but** he .. **but** he doesn't go to the canteen.
Kn :	[repeating] He plays football.
Wd:	[reading the question and answering it] Does Didi buy some food at school? No, he doesn't.

it is found out that the initiation made by **Dd** was not responded as expected. The other students, **Kn** and **Wd** seemed to know nothing about the intention of **Dd** to emphasize 'but', or they might just ignore it as it was not an essential thing to discuss.

In the script below

Ko:	Aku yang baca ya. /Let me read, OK?/
Se:	Sek ta ngene ae lho, lapo dibaca? /Wait! Why should we read or translate it?/

it is obviously revealed that the initiation was rejected. **Ko** wanted to start discussing the paragraph but **Se** refused the idea suggesting to start directly with the questions to answer.

It is also indicated in the transcribed data that one of the students directly responded to the initiation by correcting the wrong translation. In the following script:

Ss:	[translating 'He does not go to the canteen'] Dia berlari ke kantin.
Ko:	[trying to correct] He does not. He does not….
Ke + Ko:	[realizing the mistake then correcting] Dia tidak berlari ke kantin

Ke and **Ko** responded by translating 'He does not go to the canteen' into 'Dia tidak berlari ke kantin' to correct the wrong one 'Dia berlari ke kantin'.

Ways to Evaluate Responses and Initiations

Saying 'Ayo, kamu dulu', the student named **Dd** initiated the discussion. His team mate **Jn** directly answered the question in the material. This particular response was then

evaluated by another student **Wd**. He realized the answer was not 'Didi's going to school' but 'Didi's playing at school'. He evaluated by providing direct correction. Please take a look at the script below:

Dd:	Ayo kamu dulu. /Come on, you start first/
Jn :	[reading the question and answering it] What does paragraph 4 tell us? Didi's going to school. [Silence]
Wd:	[correcting the answer] Didi's playing at school. Didi's playing at school

As shown in the following script

Jn:	Yes, finished. Who wants to read the text?
Kn:	Mau dibaca ta? /Shall we read it?/
Wd:	Ha? /Pardon?/
Dd:	Perlu ta? /Do we have to read it?/
Wd:	Supaya bisa njelasin nanti. Ayo baca ta? /So that we can explain later. Shall we read it?/

after **Jn** initiated by asking 'Who wants to read the text?', **Kn** responded by confirming what was said by **Jn**. Meanwhile **Dd** wondered why they needed to read the text. He questioned 'Do we have to read it?' This particular response was then acknowledged by **Wd** who provided the reason saying 'So that we can explain later.'

Giving another possible answer is also a way employed by the student to evaluate responses and initiation. After **Wd** initiated, all the students in the team responded by doing what was 'instructed' – translating the sentence. Since there was another way to translate the sentence, **Dd** continued giving another translation. Please examine the following script:

Wd:	Kurang satu .. ayo sama-sama. /Still one more sentence. Let's translate it together/
Ss:	He studies again at 9.30. Dia belajar lagi … jam setengah sepuluh. /half past nine/
Dd:	Atau … atau.. jam 9 lebih 30 menit. /Or 30 minutes after 9/

Having analysed the script below

Ko:	Aku yang baca ya. /Let me read, OK?/
Se:	Sek ta ngene ae lho, lapo dibaca? /Wait! Why should we read or translate it?/

Ke:	Yo wis. Eh istirahat jam piro?
	/OK. What time is the break?/

the writer found out that evaluating responses and initiations was performed by agreeing to the responses. After the idea of **Ko** to read the paragraph was rejected by **Se**, **Ke** showed his agreement to the idea of **Se**. **Ke** acknowledged the response by discussing the answer of the question instead of discussing the paragraph.

       In the script below

Ko:	Emm 'support your answer' itu mengapa lho, itu kan?
	/Emm, 'support your answer' means that we are asked about 'why', right?/
Ke:	[translating 'support your answer'] Menyemangati. Semangati, semangati jawabanmu
Ko:	Because.......
Yu:	Eh, maksud'e 'support' itu 'semangati jawabanmu'? /Hi, does it mean 'encouraging your answer'?
Ko:	Apa gini lho, buktikan buktikan jawabanmu. Jadi buktikan apa?
	/Maybe it means 'prove your answer'. So prove!/
	Because he likes..... He likes to save his money. Money money

it is found that **Ko** himself at last acknowledged the responses and initiations by providing the answer to the question. The word "support' in the question became the center of the discussion. 'Support your answer' was thought to be 'encouraging your answer'. **Ko** at last used another way to make the word understood. He then used the word 'prove'. Eventually he himself answered the question.

       Observing the script below

Yu + Se:	Nomer tiga. /Number 3/ No, because Didi likes saving.....
Ke:	No, no, he doesn't. No, he doesn't.
Ko:	No, he does not.
Ke:	Stop. **doesn't** ngono lho. /Stop. **doesn't**. Keep this answer/
Ko:	**Does not**.
Ke:	**Doesn't** ae lho. /Let's use **doesn't**/
Ko:	Gampang gampang. /Take it easy/
Yu:	Ga onok bedane, ga onok bedane. /There is no difference/

the writer found out that evaluating or acknowledging responses and initiations was performed by neutralizing the disagreement. The focus of the discussion was 'does not' and 'doesn't'. **Ke** insisted on the use of 'doesn't', but **Ko** insisted on the one of 'does not'. **Ko** and **Yu** at last tried to evaluate the responses and initiations stating that they had to stop the 'quarrel' as both 'does not' and 'doesn't' were correct.

       The classroom interaction patterns existing in the expert team were revealed in the students' discussing the paragraph and its questions. After the data were analyzed, it was found out that the students initiated by asking others or volunteering themselves to start

the discussion. Another way to initiate was reminding others to start. The students responded each other by doing what was expected: reading, answering, translating. Another way was refusing what was expected. The students evaluated or acknowledged responses or initiations by giving correction, giving confirmation, giving other answers, and stopping the discussion. The one evaluating was not always the initiator him/herself.

The discussion in the expert team in young learners' class seemed to work in the use of the students' mother tongue. The students were working differently when the observer was nearby. This was proved by the difference between the two transcripts (one belonged to 'T' Elementary School and the other one 'Y' Elementary School). Unlike the students at 'Y' Elementary School, the ones at 'T' Elementary School did not talk about other things. This was due to the fact that the students at 'Y' Elementary School was left 'unattended' by the observer. Though they diverted, they were guided back by one of them using the initiation way: reminding.

CONCLUSION

This study found out that the students initiated the discussion by asking others or volunteering themselves to start the discussion or reminding others to start. The students responded one another by doing what was expected: reading, answering, translating, or refusing what was expected. The students evaluated or acknowledged responses or initiations by giving correction, giving confirmation, giving other answers, or terminating the discussion neutrally. Young learners should not be underestimated. They could do things quite independently in their group like adults could. They could be encouraged to rely on their capability to construct meaning.

This study is limited to the student interaction in expert team. Further studies can be conducted to see the interaction happening in the home team or home group. Quantitative studies can also be carried out to examine the short-term effect of jigsaw technique on young students' academic achievement in English.

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