# LEARNERS' PROBLEMS IN QUESTIONING: A PORTRAYAL OF IMPLEMENTATION OF SCIENTIFIC APPROACH

# IN 2013 CURRICULUM

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**Abstract**

Since two years ago, 2013 curriculum has begun to be implemented in Indonesia which adopts scientific approach. Some stages are involved in scientific approach that are observing, questioning, experimenting, associating and communicating activities in the teaching learning process. However, some problems in the classroom might be faced by the students in questioning. This research aimed at investigating learners' problems in questioning in the implementation of scientific approach of 2013 curriculum. Therefore, this case study was conducted by employing observation, interview and questionnaire as the data collections. The observation was conducted two times. A class of X grade students in a Vocational High School in Cimahi and its English teacher are involved as the respondents. The collected data were analyzed by using coding and categorization. Results of the data analysis showed that there are three kinds of learners' problems in questioning. First, learners are still reluctant to ask question. Second, they are not able to ask good question. Third, they rarely use the question words-- *'which, who* and *what if'*. Based on these findings, it is expected to give a portrayal of scientific approach of 2013 curriculum in Indonesia EFL class. It is also suggested for the teacher to be aware of these learners' problems.

**Keywords**: student questioning, learner difficulties, asking question

## 1. Introduction

2013 Curriculum demands a teaching learning process to be interactive, inspiring, fun, challenging which can motivate students to participate actively in teaching learning process [1]. Principally, the implementation of 2013 curriculum demands scientific method to be fundamental approach for classroom lesson. This scientific approach deals with synthesizing of exploration, elaboration, confirmation and observing, questioning, experimenting, associating, networking [2]. In particular, the teaching and learning process is changed from spoon-feeding learning to discovery learning [3]. In the use of scientific approach in the 2013 curriculum, students are expected to be inquiry learners who use critical thinking in discovering certain concepts [2]. Ref. [4] suggests that questioning can create students to be active and scientific inquiry in meaningful learning. Therefore, teacher needs to create the lesson and teaching learning process which reflects the expectation of the current curriculum.

### Students Questioning

The act of questioning is central of thinking, to accumulate and communicate knowledge, even to several important types of social interaction [5]. In particular, questioning needs a person being asked the question to act in response in which it is to get deeper understanding or appreciation of what is being said [6]. Thus, students' questioning is the act of accumulating and communicating knowledge addressed by the students.

Basically, the functions of questioning is constructed to probe, to discover something that is not already there, to discover relationships and possibilities that are not given [5]. Ref. [4] assumes that students' questioning gives important benefit for thinking tools: they encourage meaningful learning and provide useful

feedback for the teacher about students' understanding. Students questioning is also appreciated to know information about students' current knowledge, thought processes, and feelings Huenecke as discussed in ref. [7], an indicator of desire for further information or explanation Cooper & Cooper as discussed in ref. [7], and a 'learning technique' per se Carpenter as discussed in ref. [7]. Ref. [8] adds that questioning is an integral part of meaningful learning and scientific inquiry. Students' questioning can serve different functions such as confirmation of an expectation, resolution of an unexpected puzzle, and filling a recognized knowledge gap Biddulph, et al. as discussed in [8]. Maskill, et al. as discussed in ref. [4] found that students' questions are able to be source of information for the teacher about each specific moment of the lesson to organize future teaching according to students' needs.

Questioning also gives some benefits for students, ref. [9] founds that when students know how to ask their own questions, students take greater ownership of their learning, deepen comprehension and make new connections and discoveries on their own. It is also able to build a critical lifelong skill. Ref. [10] proposes that questioning creates an inquiry-based environment in which promotes curiosity, fascination, and mindfulness for students. It is also suggested by ref. [4] that stimulating students to generate explanations for things which puzzle them and to propose solutions to problems are able to be facilitated by using questioning.

For getting sense of questioning, it is demanded to construct a good question. These are the criterion of good question proposed by ref. [11, pp. 61-63] that has listed procedure and considerations for effective classroom questioning. The criterions of a question that become a good question are: purposeful as the question that is asked to achieve a specific purpose; clear as the listener or receiver understands what question means; brief as the question should be stated in few words as possible; natural as the question should be uttered simply, in conversational; thought-provoking as the question should be in thought and response; limited in scope as the question is only one or two points in chain of reasoning called for; adapted to the level of the class: It should be tailored to the kinds of students in the class. Ref. [11] also suggests that questioning will be the most effective when questions are: planned, logical and sequential, addressed to the entire class, posed so students have time to think, balanced between fact and thought, distributed widely, not repeated, asked in a conversational tone, and designed to elicit sustained responses. In addition, ref. [2] proposes the criterion of good question, the questions should be brief and clear, inspiring the answer, focusing to the topic, probing, reinforcing, giving students to think twice, stimulating cognitive competence, and stimulating interaction.

Some types of questions are proposed by some experts. First, ref. [10] mentions types of question beginning from less powerful questions to more powerful questions that are *yes/no, which, who, when, where, what, how, why, what if*. It is explicitly shown that *yes/no* question is the lowest powerful question and *what if* question is the most powerful question.

Moreover, ref. [12] also suggests some types of question that are possibly encountered by students in accordance with Bloom's Taxonomy. These are types of questions from the lowest to the highest level of question explained orderly; knowledge question, comprehension question, application question, analysis question, synthesis question, and evaluation question.

In addition, ref. [13, pp. 24-25] explains that there are some types of questions in line with syntactic form. The question category includes interrogatives which share characteristic verb-subject inversion, that is polar (or yes/no) interrogative, disjunctive (or alternative) interrogatives, tagged declaratives, and wh-

interrogatives. *Polar interrogatives* realize *yes* and *no* questions where all elements are taken to be specified, and the addressee is expected to supply a truth value, by either answering 'yes' or 'no'. Besides, *disjunctive interrogatives* are said to realize alternative questions of two types. One type resembles a polar interrogative, and other functions like a wh-question. *Tagged declarative* are made up of an elliptical interrogative structure attached to a declarative form. Since their primary function is not to elicit information from the address but, rather, agreement or confirmation Biber et al. as discussed in [13]. *Wh-interrogatives* realize wh-questions.

## Questioning in Scientific Approach of 2013 Curriculum

Scientific approach is an approach used in 2013 curriculum. Basically, the process of scientific learning is closely related to the concept of conducting the research Creswell as discussed in [14]. Creswell also explains that research is a process of steps used to collect and analyze information to increases our understanding of the topic or issue. In particular, research is a process in which you engage in a small set of logical steps (1) pose a question, (2) collect data to answer the question, and (3) present an answer to the question [14, p. 126]. In particular, doing research is principally answering the questions by gaining the information to solve a problem William as discussed in [14].

Ref. [15] explains that five principal learning activities of scientific learning model in the implementation of 2013 Curriculum involve observing, questioning, experimenting, associating, and communicating. In questioning activities, the implementation of 2013 curriculum demands the questions coming from students rather than teacher. Questioning activity is conducted by asking the question about the information that students do not understand or the question to gain more information about object observation. These questions are coming from factual questions and hypothetic questions. To stimulate students in asking question, teacher has to provide the opportunities for them to ask questions. Ref. [2]mentions the advantages of questioning in scientific approach as follows: (a) stimulate the critical thinking, interest and attention of students toward the topic in teaching learning process; (b) encourage students to be active learning by constructing the questions; (c) diagnose the students' problems and find out the solution; (d) structure the worksheet and give opportunities for students to express the attitude, skills, and understanding about the material given; (e) increase the students' skill in speaking, questioning, and answering logically, systematically, and using appropriate language; (f) encourage students' participation in the discussion, argument, developing critical thinking and concluding the result; (g) build the transparent attitude to give and receive the idea and opinion, enrich vocabularies, increasing social tolerant in the society; (h) habitual students to think spontaneously and quickly, then response spryly to the thing appearing suddenly; (i) train the respective attitude in speaking and being empathy to other.

According to ref. [2], the learning activity in 2013 curriculum is an educational process that gives students opportunity in developing their potential becomes proficiency of attitude, skills and knowledge gradually improved. It is suggested that the teaching learning process is purposed to cover potential of students in order to achieve the expected competence. Further, the learning strategy is arranged to facilitate the competence achievement depending on the planned curriculum document in order to make every students become an autonomous learner. The principal learning concepts in this curriculum are: student-centered learning; developing the students' creativities; providing fun and challenging activities; evolving value, attitude, aesthetics, logic, and kinesthetic; and providing learning experiences through various learning

strategies and method which are fun, contextual, effective, efficient, and meaningful. This curriculum believes that teaching is not only to transfer the knowledge to the leaners but they are as subjects who have competences to actively observe, analyze, construct and use the knowledge [2].

Previous research related to students questioning were conducted by some researchers. First, ref. [7] found some teacher's strategies in promoting the student questioning. The results show that (a) giving opportunities for students, (b) giving explicitly instructions for students, and (c) supporting students to ask productive questions are able to stimulate students in questioning. In addition, ref. [16] found that students appear to be able to engage in argumentative practices of science which is to make their ideas public and open to debate. By engaging in implementing argumentative practices the 92 students were able to generate questions, argue and elaborate in ways that increased their comprehension of the subject under study. However, sometimes all teachers' plans are not always achieved in the classroom. For example, White and Gunstone as discussed in [8, p. 60] revealed students' problem in questioning that is question production in accordance with particularly of 'thinking' or more probing questions, is not a usual student role. They also said that in classroom situation, students are more often expected to answer rather than to ask. Even if they ask, few students spontaneously ask high quality thinking questions. Moreover, McLuhan as discussed in [5] affirms that students seem to be reluctant to ask questions and to be unusual to construct the question during the lesson.

Since the previous research investigated student questioning in science class, the present study is an attempt to fill the gap to investigate student questioning in EFL class. According to this issue, this research aimed at investigating the learners' problems in questioning in accordance with the implementation of scientific approach in 2013 curriculum. Thus, this study addressed a research question, 'What are the learners' problems in questioning?' The learners' problems would cover the characteristics and types of the questions that were addressed by the students.

Further, this study is important because it would give a portrayal on what the learners' problems in questioning in the implementation of scientific approach in 2013 curriculum so that the teacher would know what the problems and would give a thought to how to resolve it. The scope of this study was that findings will only be true to the respondents involved in it. There was not an attempt of generalization; therefore, there might be other interpretation to the issues raise in this study. This study only highlights to the theories in accordance with the students' ways in addressing good question that should be implemented in scientific approach of 2013 curriculum. Those are suggested by ref. [11] and [2]. Second, types of questions purposed by ref. [10], [12], and [13] are also to be concerned in this study to investigate how critical the students are in asking questions. Thus, both of criterions of good question and types of question are synthesized to be guideline for answering the research question.

2. **Methodology**

This study was conducted by applying a case study. To achieve the purpose, three data collection techniques were used; questionnaire, observation and interview. The questionnaire and observation were carried out to reveal the main data of this research which were to investigate learners' perception regarding to their problems in questioning. While the interview was to support the main data in order to clarify the questionnaire and the observation result. This research was conducted in one of favorite Vocational High School in Cimahi involving 31 students of X grade as respondents of questionnaire and an English teacher as a respondent of interview. All the

respondents were selected by using purposive sampling.

There are 20 questions that were addressed to the respondents in the form of closed questionnaire about the criterion of good question and types of question. Then, the researcher conducted direct observation of English teaching learning process in two times by using video camera recorder and observation sheet. The semi structure interview was guided by using interview guidance and recorded using audio recorder.

After the data of observation and interview were collected, the data were transcribed. Then, they were analyzed by using coding as the analytic process through which data are featured, conceptualized, and integrated to from theory Corbin as discussed in [17]. Then, the collected data of questionnaire were analyzed by determining the score of the respondents, and the percentage of the students' problems in questioning by using the formula:

$$P = \frac{\sum n}{\sum N} \times 100\%$$

Where,
P     = the percentage score
n     = the obtained score
N     = the total scores of the items

The data has been displayed in the form of description and chart of the students' questioning in the classroom. To draw the conclusion, it is according to the results of data analysis.

## 3. Findings and Discussion

The findings show that there are some problems in questioning in accordance with the characteristic of questions and the types of questions that were addressed by the students.

### The characteristic of questions

First, the questionnaire revealed the learners' perception about their questioning problems that have ever addressed in the classroom. There were 20 questions that were related to how good questions are and

what types of questions used. Based on the questionnaire results, the problems that were commonly encountered in questioning were the frequency of asking questions in the classroom, repeating the question, and low conversational tune. The following was tabulation of the questionnaire about learners'                    questioning.
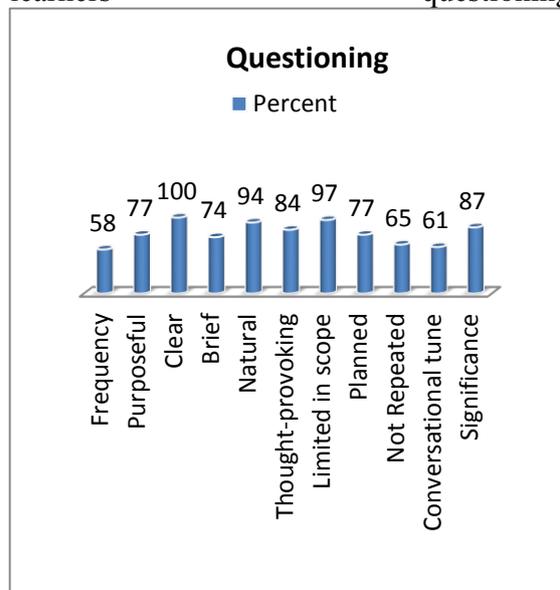


Figure 1. Chart of Questionnaire's Result about Characteristic of Questions

Displayed by the chart, the frequency of learners' questioning in the classroom is relatively low. There are only 18 respondents (58%) who often ask questions in the classroom. The respondents also assumed that some of them often repeat the question when they are addressing it and some of them also often do not listen what their friends' ask because of low conversational tune. The data shows that 20 respondents (65%) do not often repeat the questions when they are asking. Then, 19 respondents (61%) are able to listen their friends' question and the others are not. Those are the most problems commonly faced by the learner in asking questions. However, they claimed that they asked the questions clearly, briefly, and naturally, in particular the questions are thought provoking, limited in scope, planned, and significance.

Second, the observation results affirmed the questionnaire data, revealed that there are some problems of learners in

questioning during the teaching learning process. In the first observation, the learners looked unclearly in asking question. In particular, they often use incorrectly syntactic form. These are some questions that are not correct in accordance with syntactic form.

> S2: What is your **hope the leader** of Indonesia?
> S3: When is **Indonesia independent**?
> S9: Why is Cimahi **is** very hot?
> S2: Why do you **like teach other**?
> S5: Why **do** you arrogant?

Some of students also asked the questions unnaturally. Specifically, they address the questions by reading the notes and sometimes they looked stammer in questioning. It seems to be unnatural and not conversational in English. Also, when they were addressing the question, they often repeated. These are several kinds of questions that were addressed by the students.

> S4 : **What do you think about Indonesian food? What do you think about Indonesian food?**
> S8 : **What is**...**what is** your hope for Cimahi?
> S10: **Where is Cimahi? Where is** Cimahi in Jawa Barat?
> S13: How do you think about condition of **my school**..**eh..in your school?**

In the second observation, it found some learners' problems in questioning. The problem is some questions were not thought-provoking. These are such not thought-provoking questions.

> S1  : Can you see the question here?
> S1  : Can you answer this question?
> S1  : Do you know one direction?
> S1  : Do you know this color?
> S1  : Do you know chef?
> S2  : Is that your sister?
> S14 : Do you know Bandung?

Then, it also found that some students repeated the question while they were asking. Sometimes, they repeated by using *bahasa* in questioning and repeated words or whole sentences. Indeed, some questions were addressing in low conversational tune.

The following are some questions that were repeated by the students.

> S4 : How long you make it? **Berapa lama bikinnya?**
> S1 : What is your best experience with your family? **Apa pengalaman terindah?**

In addition, the interview results clarify the previous data of questionnaire and observation. The teacher affirmed that only some students who often ask question in teaching learning process. The students who frequently ask questions are usually the same in every meeting. She said that it seemed to be dominated by high level students. She stated

> 'Em..ya..**some students are still unwilling to ask questions in the class.** If I don't provide the opportunities to ask question, they may very **few students who are questioning in the class**. Of course, **it is dominated by high-level students.**'

The teacher also clarified that the most of learners' problem that is commonly faced in questioning is that they cannot arrange the words properly. She said

> 'There are some problems in students' questioning. **I think almost students tend to make a question in improperly words.** They seemed **difficult in arranging the world properly**. Sometimes, **the questions are not clear because of the pattern of the questions that were addressed**.'

In short, the findings show that the learners' problem in questioning are that students do not often ask question in the classroom and they are still not able to ask good question. It found that only 58% of students often ask question in the classroom. Moreover, they often repeat the question even they repeat by using *bahasa* and address questions in low conversational tune. They also look unclearly, unnaturally in asking question and the questions are not thought-provoking.

It can be discussed that the questioning activities that were addressed by the learners in the classroom do not fulfill the

theories proposed by ref. [11] and [2] about criterions of good questions. According to the findings from the data collections, the learners' questions that are not clear, not natural, not thought-provoking or probing, not in conversational tune, and repeated are not in line with the criterion of good questions. The data also shows that there are not many students who often ask questions in the teaching learning process. It is related to the McLuhan as discussed in ref. [5] who states that the students do not have the questions in the classroom.

*Types of questions*

The findings of questionnaire show that some types of question are rarely used by the respondents. The following chart displays which questions that are addressed by the learners in the classroom.
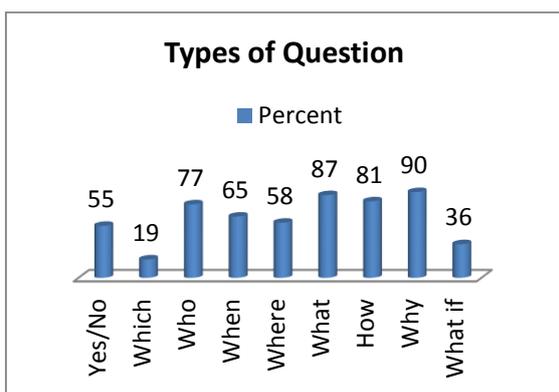


Figure 2.Chart of Questionnaire's Result about Types of Question

Type of question that is the most infrequently used by the respondents is question using *"which"*. There are only 6 respondents (19%) who have ever used the questions using *"which"*. It is also shown that they rarely use *"What if"* and *"yes/no"* question in their questioning. The other types of question such as using *"who, when, where, what, how, why"* are frequently used by the respondents in the classroom.

In addition, observation results added some findings. First, types of questions that were not used by the learners during the first observation are question using *'which, who,* and *what if'*. There were 14 questions that were addressed by the students in the first observation. Second, types of questions that were not used during the teaching learning process in the second observation are questions that used *"which, who, when, where,* and *what if"*. The students asked 21 questions during the second observation in the class.

Moreover, the teacher also clarified in the interview section regarding to the learners problems in questioning. She said that the students are rarely to ask questions by using *"what if* and *which"*. She addressed,

> "If I am not mistaken, they have rarely used **'what if'** and **'which'** in asking questions. Yah, they only often use 'yes/no', what, where, when, why and how'. Just it. "

In brief, the problems of the students is they are not frequently to use question word 'which*, who,* and *what if'*.

This case is in line with White and Gunstone as discussed in ref. [8] that few students are spontaneously to ask high quality thinking questions. Thus, those are the data analysis answering the research question that revealed three learners' problem in questioning.

## 4. Conclusions and Recommendations

According to the data analysis mentioned in the previous section, the findings answer the research question what the learners' problems are in questioning. Thus, it can be concluded that the learners have some problems in questioning. The problems are (1) they are rarely to ask questions in the class, (2) the learners have not been able to addressed good questions. In particular, they often ask questions unclearly, unnaturally, not thoughtfully provoking or probing, not conversationally tune, and repeatedly. (3) they also rarely use the questions' words 'which*, who,* and *what if"* when they are questioning.

After knowing this research, it is very expected that the teacher should know what the problems of their own students in questioning in accordance with the new designed of curriculum that demand to use scientific approach in which there is questioning stage in the teaching learning

process. In particular, by using this research, the further research about learner questioning is expected to be conducted to find some ways in encountering these problems.

**Acknowledgment**

## REFERENCES

[1] Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 32 Tahun 2013 Tentang Perubahan Standar Nasional Pendidikan.

[2] Kemendikbud, Materi Pelatihan Guru Implementasi Kurikulum 2013 Tahun 2014: Mata Pelajaran Bahasa Inggris SMA/SMK/MA, Badan Pengembangan Sumber Daya Manusia Pendidikan dan Kebudayaan dan Penjaminan Mutu Pendidikan, 2014.

[3] Peraturan Mentri Pendidikan dan Kebudayaan Republik Indonesia Nomor 65 Tahun 2013 Tentang Standar Proses Pendidikan dan Menengah.

[4] C. Chin, "Students' question: fostering a culture of inquisitiveness in science classroom," *School Science Review,* vol. 86, no. 314, pp. 107-112, 2004.

[5] M. H. Bowker, "Teaching Students to Ask Questions Instead of Answering Them," *The Nea Higher Education Journal,* pp. 127-134, 2010.

[6] M. N. Browne and S. Keeley, Asking the Right questions: A Guide to Critical Thingking, New Jersey: Pearson Prentince hall, 2007.

[7] C. Cornbleth, Student Questioning as a Learning Strategy, Pennsylvania: University of Pittsburgh, 1975.

[8] C. Chin, "Learning deeply in science: an analysis and reintegration of deep approaches in two case studies of grade 8 students," *Teaching and Learning Journal,* vol. 24, no. 5, pp. 59-67, 2002.

[9] D. Rothstein and L. Santana, "Teaching students to ask their own questions," *Harvard Education Letter,* vol. 27, no. 5, 2011.

[10] S. Jackson, "Helping students develop the ability to ask good questions," January 2013. [Online]. Available: http://www.scholatic.ca/education/teaching_tip/january2013.html.. [Accessed 28 October 2014].

[11] P. Groiser, The Practice of English Language Teaching, Teacher Practical Press. Inc., 1964.

[12] K. Lewis, "Developing questioning skills: Section 5. Improving specific teaching teaching techniques," in *Teacher and Student Sourcebook*, Austin, The University of texas, n.d.

[13] D. Archer, Questions and Answers in the English Courtroom: A sociopragmatoc analysis, Amsterdam: John Benjamins Publishing Company, 2005.

[14] Y. Abidin, Desain Sistem Pembelajaran Dalam Konteks Kurikulum 2013, Bandung: PT. Refika Aditama, 2014.

[15] Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 81 A Tentang Implementasi Kurikulum.

[16] J. J. F. Diaz, Examining student-generated questions in an Elementary science classrooms (Theses and Dissertations), University of Lowa, 2011.

[17] J. R. Fraenkel, N. E. Wallen and H. H. Hyun, How to Design and Evaluate Research in Education, New York: McGraw Hill, 2012.