

# **Students' Speaking Problems: A Case Study of Chemistry Students at UPI Bandung**

**Andrie Sukma Nugraha**  
School of Postgraduate Studies  
Indonesia University of Education

**Juang Rudianto Putra**  
English Education Study Program  
Ibn Khaldun University of Bogor

## **Abstract**

International schools require teachers of mathematics and science to teach in English. The problem is that not all teachers of the schools have the ability to speak in English. For that reason, institutions that accommodate future teachers should have concern on this issue especially the mathematics and science department. The chemistry department in UPI realizes the issue and has sent their students to teach in international schools around Bandung and Bogor for their teaching practice (PLP). The main purpose of the research is to identify speaking problems that international class students of the Chemistry Department in UPI have. Additionally, the result of this present research is also expected to provide valuable suggestion for the consideration of English course designers in designing future English course. Observation and the distribution of questionnaire help provide the data. The results of the research show that the main problems that the students face in speaking are diction issues, pronouncing words with English sounds that do not exist in Bahasa Indonesia, and speaking according to grammatical rules. Meanwhile, findings regarding suggestions of the respondents for future English courses show that the respondents prefer both native and non-native speakers in class, the instructor to act as a teacher and speaking partner, a situation where students talk more, materials in the form of visual aids, English for teaching and English for chemistry to dominate the content of the course, activities in the form of discussion and games, and an evaluation in the form of both oral and written test. As a suggestion, future English course designers should pay attention to the problems that students have in speaking and also to identify what and how students want to learn in an English Course before designing a course as knowing what students know and do not know will provide a more effective and useful training for the targets

*Keywords:* Speaking skill, Speaking problem, Needs analysis

## **INTRODUCTION**

Entering the era of globalization, schools in Indonesia, both public and private, have established themselves as international schools. In order to become an international school, schools need to fulfill the National Standards (SNP). According to the laws number 20 year 2003, the standards are: content standard, process standard, graduate's competence

standard, educators' standard, infrastructure standard, management standard, funding standard, and evaluation standard.

However, according to Haryana (2009), there are also indicators of an international school; one of which insists educators of science and mathematics to teach in English. This means that educators should have the ability to speak in English. Snyder and Anderson (as

cited in Encarta: 2006) stated that speaking is a learned system of communication requiring the coordinated use of voice, articulation, and language skills. International school teachers are required to have the ability to coordinate voice, articulation, and employ language skills in English when teaching in class.

Nevertheless, speaking in English is not necessarily a simple case. A research conducted by Khaemkaw (2008) entitled "Need and Problems in English Listening and Speaking Skills" shows that English as Foreign Language (EFL) speakers face problems when trying to speak in English. The results of the study show that they have trouble saying basic expressions, speaking in complete sentences, and pronouncing English vowel sounds. In overcoming students' problems in speaking, it would be necessary to hold English courses for international teachers or future International teachers. This is in accordance with Hutchinson and Waters (1987) who believe that clear relevance of an English course towards the students' needs would help develop learners' motivation and would result in better and faster learning.

Based on the results of the study conducted by Khaemkaw (2008), distinguishing students' problems in speaking is necessary before holding an English course. This is in line with Hutchinson and Waters (1987) who stated that in designing a course it is necessary to know what the students need, lack, and want.

In relation with the phenomenon elaborated above, this present research is carried out to find out the speaking problems that the students of Chemistry Department of UPI face. The findings of the research are expected to give feedback to future English course designers of the department. Future English course planners can consider the problems that students face based on the

research before designing an English course.

## **THEORETICAL FRAMEWORK**

### **Speaking Problems**

Many EFL speakers admit that they have more difficulties in speaking compared to written skills (reading and writing). According to Beare (2007), students try to translate from their native language into English and try to look for specific words rather than using simple words. Some people tend to hesitate or pause when delivering their speech. It seems that they are trying to translate from Bahasa Indonesia to English. This way of speaking is time consuming. Besides that, Beare (2007) also stated that non-native speakers have trouble speaking according to grammatical rules. Although they know the grammatical rules in speech, but when it comes to producing the language orally they tend to get it wrong.

Another problem that non-English speakers face is pronouncing English phonetics that does not exist in Bahasa Indonesia. According to Ur (1984), some typical sounds in English may confuse EFL students. This is because some sounds in English do not exist in their own language. For example, the sound (ə) in *think* does not exist in other languages. Some people would not recognize (ə) and assimilate it to the nearest sound in their language. Some Indonesians, for example, might assimilate it with the sound of (t). In addition, according to Brown (2000), stress, rhythm, and intonation are the most important characteristics in pronunciation. These must be performed well in order to send a clear message. Mispronunciation can lead to misunderstanding. For example, the production of "tick" instead of the intended "thick" can lead to confusion.

The other problem that non-native speakers of English face in their attempt

to speak in English is self-esteem. According to Brown (2000), in speaking English, learners have fear of saying things that are wrong, stupid, and incomprehensible. Learners need to overcome these feelings and have the courage to speak although they may make some mistakes in doing so. There is an old saying that people learn from their mistakes.

### **Needs Analysis**

In designing a course, course designers need to consider the needs of the targets. Hutchinson and Waters (1987, p.55) stated that “it is useful to look at the targets’ necessities, lacks, and wants”.

Necessities concern on what the targets need to know in order to function effectively in the workplace. For example, secretaries need learn how to write formal letters to affiliated companies in order to send a good and clear message. Meanwhile, identifying the students’ lacks is also important to identify what the students do not know. Teachers would need to emphasize on what the students do not know but need to know in significance with their lives and jobs. However, it is not only the instructors or teachers who have a view on what the students need to learn. Students also have their own view (wants) on what they need to learn in order to develop themselves. People develop images on what they need to know based on their own importance and environment (Ritcherich as cited in Hutchinson and Waters, 1987, p.56). Views of needs of each individual including teachers and students would certainly be different from one individual to another. Teachers need to be aware of the differences and must consider the differences when choosing a method and material in teaching (Hutchinson and Waters, 1987, p.58).

In sum, it is important for course designers to make a research on what the

targets need, lack, and want in order to develop the area they are willing to.

### ***Needs Analysis as a Part of English for Specific Purposes (ESP)***

English for Specific Purposes (ESP) is an approach to language teaching where the basis of the approach is the needs and demands of the learners themselves (Hutchinson and Waters, 1987). The aim of the approach is to accelerate the learners in learning the English that are needed by learners in a certain context (Basturkmen, 2006). In other words, learners of ESP are provided material which relates to their importance instead of materials which are not commonly found in their specific world.

How would ESP differ from General English (GE)? Jordan (2009) regards GE as TENOR which stands for Teaching of English for No Obvious Reason. Jordan takes into account the words of Abbott (1981 as cited in Jordan, 2009) who believes that most learners of English are children who are too young to actually use English for any real communication and results in an idea that these learners do not have identifiable needs in English. However, although General English is considered the learning of English with no specific purpose, Basturkmen (2006) believes that GE is a concept that needs to be grasped by learners before entering any specific courses of English. The idea is that GE contains a set of language which would be useful in any situation and context.

In late 2011, we were assigned to design and teach an ESP course for chemistry students at UPI Bandung. The students were selected to teach in international schools around Bandung and Bogor; therefore, the objective of the course was to help prepare students the teaching of chemistry with English as the medium of instruction. In terms of the implementation, the course found problems related to facility and schedule

for the course. There was no permanent classroom for the course and the schedule of the course clashed with other course the students had to attend. In terms of content, the course also failed to meet areas where students lacked. Apart from that, it also failed to find areas which students needed to master but lacked, for example, technical terms in mathematics. Based on the problems which emerged during the previous course, in general, ESP courses do require analysis before implementation to fulfill the needs of the learners which is the main objective of ESP courses. This is in line with Hutchinson and Waters (1987) who believe that clear relevance of an English course towards the students' needs would help develop learners' motivation and would result in better and faster learning.

Kittidhaworn (2001) realized the importance to conduct needs analysis for students in a public Thai University before implementing the ESP course. The researcher realized that needs analysis is an early step before designing course. The research was entitled "An Assessment of the English-Language Needs of Second-Year Thai Undergraduate Engineering Students in a Thai Public University in Thailand in Relation to the Second-Year EAP Program in Engineering". The objective was to investigate the needs of English language of 182 second year undergraduate engineering students. To gain data for the research, a questionnaire was employed. The results showed that the English functions and skills presented in the questionnaire were all considered as moderately important and very important by the participants of the research.

An analysis of the needs of the learners would help identify the set of skills in English that learners need in order to perform well in their future or current workplace (Richards, 2001). However, according to Hutchinson and Waters (1987), apart from identifying the needs

of the language that learners acquire, the lacks and wants of the learners should also be identified. Necessities concern on what the targets need to know in order to function effectively in the workplace.

For example, teachers need to know how to make a question when inviting answers from the students. Meanwhile, lacks are skills that the learners need to know. However, to know what the learners lack, contribution from people who have good description on the learners needs to be taken into account. Lastly, wants is described as what the learners' view of the skills that they need to improve and perform well in their future workplace. Learners also have their own view of what they need to learn in order to develop themselves. People develop images on what they need to know based on their own importance and environment (Ritcherich as cited in Hutchinson and Waters, 1987).

In conducting a needs analysis, it would be advisable to have a framework. The proposed study will follow the framework provided by Hutchinson and Waters (1987). There are two frameworks provided by Hutchinson and Waters namely the target situation analysis and learning needs analysis. The target situation analysis discusses about the background of the learners and the teachers, meanwhile the learning situation analysis discusses on "communicative needs" of the learners. The former focuses in discovering six points. The points covered are:

- 1) Why is the language needed?
- 2) How will the language be used
- 3) What will the content areas be?
- 4) Who will the learners use the language with?
- 5) Where will the language be used?
- 6) When will the language be used?

Meanwhile, the later focuses on other six points, namely:

- 1) Why are the learners taking the course?
- 2) How do the learners learn?
- 3) What resources are available?
- 4) Who are the learners?
- 5) Where will the course take place?
- 6) When will the course take place?

In gaining information on the target and learning situation, Richards (2001) proposed that various elements need to be taken into account in order to gain a more insightful analysis. For the proposed study, elements who would contribute to the study are established international class teachers of chemistry, the learners, and academic experts of chemistry or the learners' lecturers. These are the elements that will contribute and provide data for the proposed study.

However, in the attempt to design an ESP course, Hutchinson and Waters (1987, pp. 65-77) offers three approaches. The approaches are namely language-centered approach, skills-centered approach, and learning-centered approach.

#### *Language-centered approach*

The language-centered approach simply starts with the identification of the target situation of the potential learners. The analysis of the target situation goes along with the overview of theories of language. The analysis of the target situation and overview of language contributes in the identification of linguistic features of the target situation which will later contribute in the designing of the syllabus. After a syllabus has been made, materials and evaluation will follow and is in line with the syllabus which serves contents of the course.

#### *Skills-centered approach*

A skills-centered approach starts with the identifying of the target situation which leads to analyzing target skills and strategies needed by learners in order to perform well in target situations. In analyzing those skills needed by the

learners, theoretical views of language and learning are taken into account. Results of skills analysis would contribute determine the content of the course or syllabus design. From the syllabus, texts and materials for learning can be situated along with the evaluation for the program.

#### *Learning-centered approach*

In this approach to course design, the initial step is to identify the learners. This step covers question about who the learners are and why they are taking the course. The next step is to identify the target and learning situation. The target situation analysis is supported by theories of language, while the learning situation analysis is supported by theories about learning. Results from the analysis of the learning situation which covers questions about the circumstances and facilities for learning, a course designer can identify potential wants, needs, and potential problems that may occur. Meanwhile, results of target situation analysis would lead to identifying skills and knowledge needed by learners in order to perform well in the target situation. All the results would help design syllabus for the course. The content of the course will be evaluated when conducting similar courses for different targets of learners who have potential to have different needs, wants, and problems in English language.

## **RESEARCH METHODOLOGY**

### **Participants**

The participants of the research are 18 Chemistry students in UPI. The 18 students were chosen since they are members expected to be teachers of international schools in the future. The 18 students are in the seventh semester and are preparing themselves for teaching practice (PLP) in the eighth semester. Frankly, there are 25 students in the international class, but only 18 students came by the day the questionnaires were

distributed. The participants have been participating in an English Course provided by the chemistry department with the aim to help improve their English especially their communication skills. Access to this class is not difficult since the researcher himself is the participants' instructor in the English course.

### **Data Collection**

In order to gain information and data needed in conducting the research, an observation and questionnaire is employed. Details about the use of both instruments are described in the following sub-headings.

#### ***Observation***

The observation was employed in the present research to identify problems which emerged in class concerning on the students' speaking performance. In the observation, the researcher took notes on speaking problems during three meetings of the course. The observation was conducted when the respondents were presenting their work because in these situations students dominate the talk. Students present their work, comment on their friend's work, raise questions based on their friend's presentation, and answer their friend's question. This gave the researcher the opportunity to observe the students and also take notes. The presentation was not evaluated so the students did not have much burden in presenting their work, so the level of reactivity is not too high. According to Alwasilah (2009, p.174), "reactivity is when the researcher's presence promotes new atmosphere, new attitude, and new perspective of the respondents". Alwasilah also claimed that reactivity cannot be avoided.

#### ***Questionnaire***

A questionnaire is a technique to gain information from participants of a research. A questionnaire consists of the

same questions for every participant. Additionally, a questionnaire may employ either questions or statements (McMillan and Schumacher, 2005). The questionnaire of the present research consists of three categories namely: Personal information, Speaking problems, and Suggestions for Future English Course Designers.

The personal information category covers questions concerning the participants' age, educational background, and gender. Meanwhile, the speaking problems category is aimed to identify students' problems in speaking. Speaking problems identified by the researcher in the observation were guidelines in designing the speaking problems category of the questionnaire. The last category is suggestion for future English Course designers. Basically, questions in this category ask what students demand in an English Course in order to improve their Speaking skills. This in accordance with Hutchinson and Waters' (1987) point of view that learners' wants cannot be ignored.

In designing the questionnaire, categories of speaking problems based on the results of observation were used as guidelines. Books with knowledge on how to design questionnaire, speaking problems and course design were also taken into account in designing the questionnaire. Besides that, research related with the present research was also reviewed to give input in designing the questionnaire.

After studying books and reviewing research, the questionnaire was designed. Before distributing the questionnaire a pilot study was conducted towards one of the lecturers in the chemistry department who was told to fill out the questionnaire. The purpose was to identify which questions needs to be excluded and included in the questionnaire.

After the pilot study, the questionnaire was then distributed to 18 students of the

international class of the chemistry department in UPI.

1	Never (0%)	1.00-1.49
---	------------	-----------

### Data Analysis

Notes of students' speaking problems through observation are compiled. The notes are then analyzed and categorized. The categories are presented in the questionnaire to gain a description of students' speaking problem.

From the questionnaire, Respondents' personal information and suggestions for English courses are summed up. Afterwards, the sum is divided by the number of respondents which will give the percentage of each category question. The results of the calculation are then interpreted. Meanwhile, data concerning speaking problems are summed, divided by the number of respondents (to gather the mean) and categorized based on Likert's scale.

Table. 1  
*Likert's scale*

Scale	Problem	Mean range
5	Always (81-100%)	4.50-5.00
4	Usually (51-80%)	3.50-4.49
3	Often (21-50%)	2.50-3.49
2	Seldom (1-20%)	1.50-2.49

The problems that emerged based on observation are categorized as displayed in the table below:

No.	Speaking problems
1	Students' tendency to translate from Bahasa Indonesia to English.
2	Students' lack of self-esteem.
3	Students' problem in finding appropriate vocabulary when speaking (diction).
4	Students' problem dealing with English phonetics such as th-, sh-, etc.
5	Students' problem in speaking according to grammatical rules.

### Validity

To avoid misinterpretation, members check is employed to reassure the interpretation made based on observation. This is in line with Alwasilah (2009) who stated that members check is conducted to avoid misinterpretation that a researcher makes. Meanwhile, to ensure the validity of the questionnaire, the researcher asked for feedback, critics, comments, and suggestions. According to Alwasilah (2009, p.176), "feedback, critics, comments, and suggestions are required to identify threats towards validity". Feedback, critics, comments, and suggestions were given by the researcher's colleges and a lecturer of the chemistry department. All the inputs gave contribution in designing the final draft of the questionnaire.

## FINDINGS AND DISCUSSIONS

### Findings from Observation

From the findings of the observation, students basically had pronunciation problems, especially with English phonetics that do not exist in Bahasa Indonesia, grammatical problems in constructing sentences, diction problems, students took time when delivering their talk, and some students seemed reluctant to participate in the discussion.

Table. 2 Categories of speaking problems

The categories above gave guideline in designing the speaking problems section of the questionnaire. The category “students’ lack of self-esteem” is an interpretation made by the researcher based on the observation where there were several students who were not active in class. Since the researcher is unsure about his interpretation and needs justification, therefore, the researcher did member check. The researcher asked directly to one of the students who are not active in class whether the reason she does not participate much in discussion is caused by the fact that she lacks confidence. The student did approve the

*Gender*

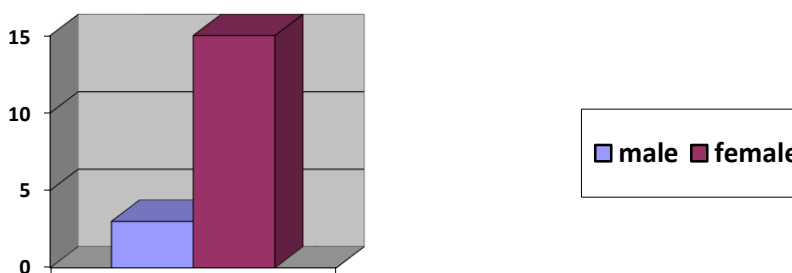


Figure 1

From figure 1, the members of the international class of the chemistry department are dominated by female. The ratio between male and female is 1:6 or 16.66% of the participants are male while the other 83.33% are female. The selection of the students entering the

*Age*

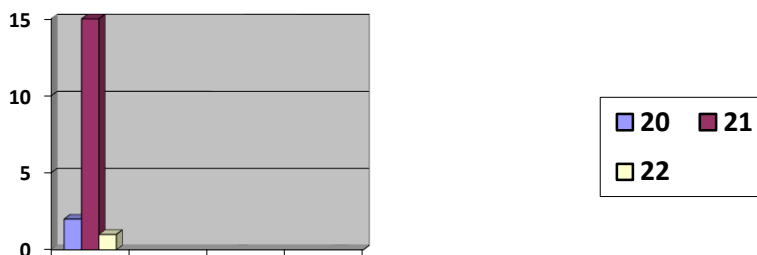


Figure 2

The range of age in the chemistry department is narrow. The ages are 20,

statement that she was quiet because she was not confident with her English.

**Findings from Questionnaire**

This part of the section presents findings from the questionnaire. It covers three parts: personal information, speaking problems, and suggestions.

*Personal Information*

The personal information gathered from the questionnaire covers gender age, and educational background. Results of each category is summed up and divided by the number of participants. The sum was then converted into percentage.

international class is based on GPA and TOEFL score. Therefore, the reason why there are more female compared to male is because female in the chemistry department has better GPA and TOEFL scores.

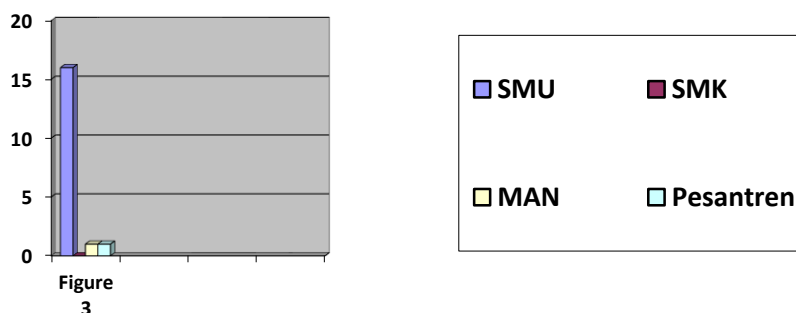
21, and 22. The main reason is because all students are high school graduates



who are all in the seventh semester. From figure 2, 83.3% of the students are at the

age of 21, 11.1% at the age of 20, and 8.88% at the age of 22.

*Educational background*



Educational background indicates the kind of school the respondents entered before entering university. From figure 3, 88.8% of the respondents entered SMU, 5.55% entered MAN, and 5.55% entered pesantren (Islamic boarding school).

students' speaking problems. The questions of the section are based on the categories resulted from the observation. Each category of speaking problems were summed and divided by the number of respondents. The result of the calculation was then categorized based on Likert's scale. The final result of the calculation is presented as follows:

**Speaking Problems**

This section provides findings from the questionnaire concerning on the

No.	Issues	Mean	Mean range
1	Students' tendency to translate from Bahasa Indonesia to English.	3.05	Often
2	Students' lack of self-esteem.	3.11	Often
3	Students' problem in finding appropriate vocabulary when speaking (diction).	3.77	Usually
4	Students' problem dealing with English phonetics such as th-, sh-, etc.	3.61	Usually
5	Students' problem in speaking according to grammatical rules.	3.61	Usually
6	Problems with limited knowledge on certain topics.	3.22	Often

Table. 3 Results of speaking problems calculation

From the table presented above, the main problems that the students face in speaking are diction issues (3.77) which is categorized *usually*, dealing with phonetics of English that does not exist in their mother language (3.61) which is categorized *usually*, and speaking

according to grammatical rules (3.61) which is also categorized *usually*.

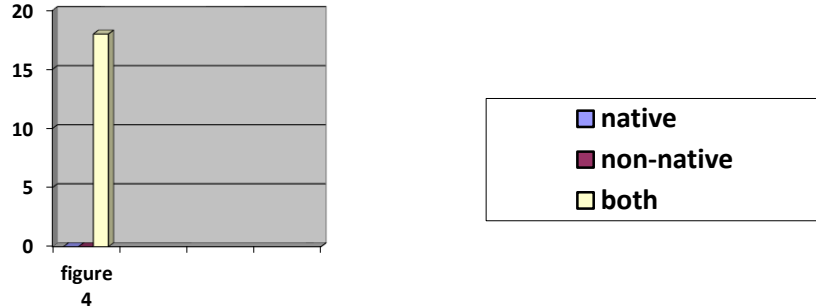
**Suggestions**

This part presents findings dealing with suggestions for English Course given by

the respondents through the questionnaire. Options of each category question is summed up and divided by the

number of respondents. The data were then converted into percentage.

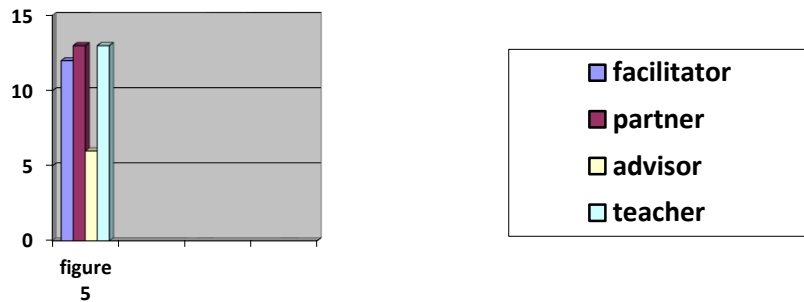
*Instructor*



From figure 4, students unanimously prefer both native and non-native speakers (100%) in the English training. Probably, students prefer variation in the course. Meeting the same teacher every week

seems to bore them. It might be possible to invite native speakers to the class once in a while.

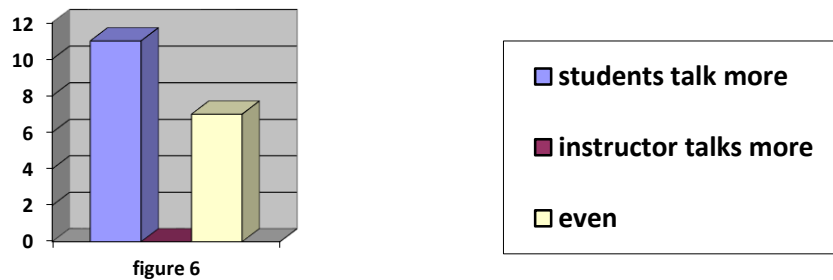
*Role of the teacher*



From figure 5, the data shows that 13 out of 18 respondents (72.2%) want the instructor to act as a speaking partner and teacher (72.2%). This probably means

that students want the trainer to teach concepts, give examples or models, but at the same time act as their partner in the discussion.

*Portion of talk*



From figure 6, the results show that 61.1% (11 of 18) of the respondents demand to dominate the talk in class. Maybe, the respondents prefer active

### Materials

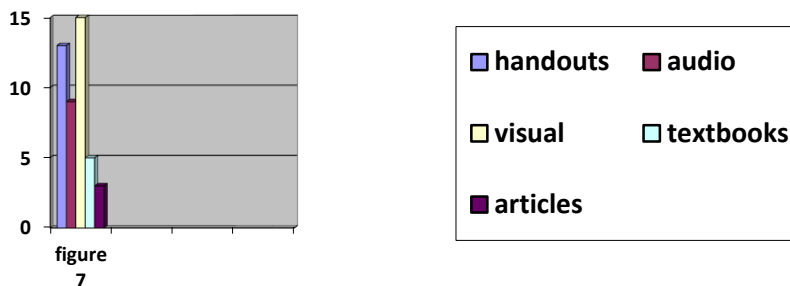
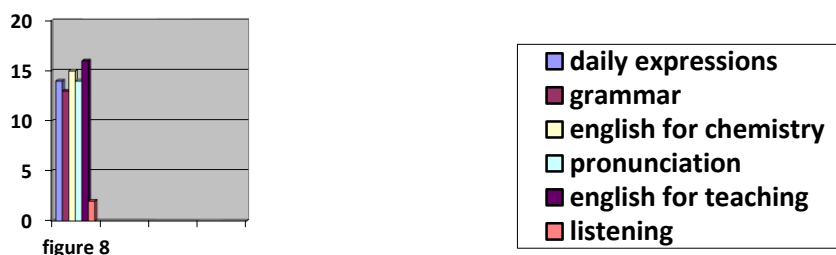


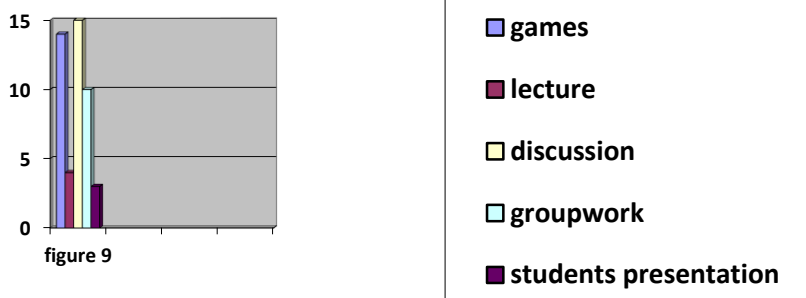
Figure 7 shows that 83.3% (15 of 18) of the students prefer materials in the form of visual aids, 72.2% (13 of 18) in the form of handouts, 50% (9 of 18) in the form of audio, 27.7% (5 of 18) in the

### Content of training



The majority of students prefer the training to emphasize on English for teaching (16 of 18 or 87.5% of the students) and English for chemistry (15 of 18 or 83.3% of the students). Bearing in mind that the respondents are students

### Activities



participation in class rather than listening to the instructor for most of the lesson.

form of textbooks, and 16.6% (3 of 18) in the form of articles. The majority of students prefer visual aids in the training. Maybe it is because most of the students learn better through visual.

of the chemistry department and their major is chemistry education, it is quite obvious that the students demand the course to emphasize more on English for chemistry and teaching.

The majority of students prefer discussion (83.3%) and games (77.7%) for activities in the lesson. This is because discussion helps students practice concepts that they

already have and games help students break the boredom they might feel in the course.

### *Evaluation*

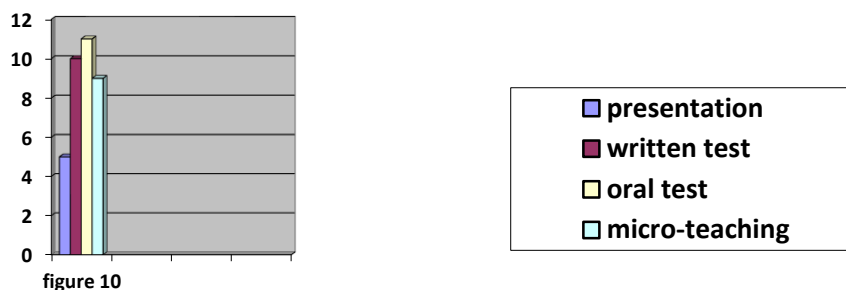


figure 10

The majority of students prefer oral test (11 of 18 or 61.1% of respondents) and written test (10 of 18 or 55.5% of respondents) for their evaluation. The respondents want to test their speaking skills in English and also want to know how far their writing proficiency is.

### **CONCLUSION**

After all, it can be taken into a conclusion that that the main problems that the students face in speaking are diction issues, pronouncing words with English sounds that do not exist in Bahasa Indonesia, and speaking according to grammatical rules. Further, it can be notified that in the English course, the respondents prefer both native and non-native speakers in class, the instructor to act as a teacher and speaking partner, a situation where students talk more, materials in the form of visual aids, English for teaching and English for chemistry to dominate the content of the course, activities in the form of discussion and games, and an evaluation in the form of both oral and written test.

### **IMPLICATION**

The findings of the present research provide future English instructors of the chemistry department ideas on what problems students face in speaking

English. Additionally, the findings of the research also presented what the students want in the English course. The findings of the research show that the main problems that the students face in speaking are diction issues, pronouncing words with English sounds that do not exist in Bahasa Indonesia, and speaking according to grammatical rules. Meanwhile, findings regarding suggestions of the respondents for future English courses show the respondents prefer both native and non-native speakers in class, the instructor to act as a teacher and speaking partner, a situation where students talk more, materials in the form of visual aids, English for teaching and English for chemistry to dominate the content of the course, activities in the form of discussion and games, and an evaluation in the form of both oral and written test.

The findings are expected to give guideline and ideas on what to emphasize on when conducting an English Course in order to overcome the students' difficulties in speaking in the Chemistry Department of UPI in the future. Besides that, it will give an idea on how the students want to learn in future English Courses.

## REFERENCES

- Alwasilah, A. C. (2009). *Pokoknya kualitatif* [Principles of qualitative research design]. Jakarta: Pustaka Jaya.
- Basturkmen, H. (2006). *Ideas and options in English for Specific Purposes*. New Jersey: Lawrence Erlbaum.
- Beare, K. (2007). *Speaking strategies for English learners*. Retrieved on March 20, 2015, from: [http://esl.about.com/od/speakingspeaking/a/speaking\\_hub.htm](http://esl.about.com/od/speakingspeaking/a/speaking_hub.htm)
- Brown, H. D. (2001). *Teaching by principles*. New York: Addison Wesley Longman, Inc.
- Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes: A learning-centered approach*. Cambridge: Cambridge University Press.
- Jordan, R.R. (2009). *English for Academic Purposes: A guide book for English teachers*. Cambridge: Cambridge University.
- Khamkaew, S. (2008). *A thesis: Needs and problems in English listening and speaking skills* (Unpublished master thesis), Srinakharinwirot University, Thailand.
- Kittidhaworn, P. (2001). *An assessment of the English-language needs of second-year Thai undergraduate engineering students in a Thai public university in Thailand in relation to the second-year EAP program in engineering* (Unpublished master thesis), West Virginia University, The US.
- Richards, J.C. (2001). *Curriculum development in language teaching*. Cambridge: Cambridge University Press.
- Ur, P. (1984). *Teaching listening comprehension*. Cambridge: Cambridge University Press.