LANGUAGE NEEDS ANALYSIS OF STUDENTS AT PHYSICS EDUCATION DEPARTMENT FACULTY OF TEACHER TRAINING AND EDUCATION, MATARAM UNIVERSITY

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Abstract: The purposes of this study are to: (1) describe the students' level of English at Physics Education Department, the Mataram University; (2) describe the needs of English perceived by the students at Physics Education Department; and (3) describe the needs of English perceived by English lecturers at Physics Education Department. It employed a mixed method by combining both quantitative and qualitative research. The subject of this research was 55 students at the Physics Department and 3 English lecturers. The data were collected by using a triangulation technique such as test (placement test), questionnaire, and interview. The result of the test showed that (1) most of the students' level of English are in the elementary level; (2) students and English teachers perceived the language needs differently. These situations caused conflicts in designing language programs between the results of Present Situation Analysis (PSA), and Target Situation Analysis (TSA).

Keywords: needs analysis, physics department, teaching English.

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INTRODUCTION

English has a very important role for human beings to improve the quality of human resources. Every aspect of human life such as education, business, social, economic, politic, and culture, needs English as an international language. The acquisition of English, therefore, becomes a central and crucial issue for the preparation of human resources to face the digital and globalization era. Having adequate English will become a plus point of academic and job competitions. For higher education (HE) students, English is needed during and after their study. During their study, they need English to obtain information for their academic lives such as reading textbooks, journal articles, manuals, and other resources on their own fields. In academic lives, the students are required to read the academic references, most of which are written in English, to write academic papers, and sometimes to do presentations in English. After completing their study, they need English for job competition and professional development (Sujana, Fritriana, & Syahrial, 2016; Sujana, Hanafi, Sudirman, Fitriana, Syahrial, 2019).

However, some studies conducted at the University of Mataram involving some study programs within UNRAM show the failure of students' English proficiency (Sujana, 2001, Sujana, 2001; Sujana, 2016; Sujana, et al, 2016; Juliansyah, 2017; Sujana, et al, 2019). The failure was due to several reasons: the conflict of target needs and present situations; the teaching and learning situations (time allocation, class size, materials); lack of TL management and control (Sujana, et al., 2016). Considering the results of study, Sujana, et al (2016) suggested the redesign of teaching English at the University of Mataram by

conducting more comprehensive needs analyses to find a skeleton of teaching English for all study programs at the same time to find specific characteristics and needs of each study program. As Hutchinson & Waters (1987) argued, the language in one context may differ from other context, contents and methods of second language teaching could be different in order to find the students' needs in specific situations. For instance, the needs of English between students of tourism and students of Physics will be totally different because they have different subjects and areas. So, in order to create a suitable material for some specific purposes, the curriculum used by the teacher should be based on the learner's needs. This is known as teaching English using an ESP approach, that is, an approach of designing courses based on learners' reasons (needs) for learning English (Hutchinson & Waters, 1987; Dudley-Evans & St. John, 1998; Gatehouse, 2001; Basturkmen, 2010; Brown, 2016). However, the meaning of needs is multi-interpreted. Needs can be interpreted as necessities, lacks, and wants (Hutchinson & Waters, 1987), as subjective and objective needs (Brindley, 1989), as present situations, target situations, learning situations (Dudley-Evans & St. John, 1998), and many others. The process of finding needs is known as Needs Analysis (Needs Assessment).

Richards (2001:51) defines NA as "a procedure used to collect information about learners' needs", while Nunan (cited in Sujana, et al., 2016) defines it as a set of procedures for specifying the parameter of a course. The parameter includes the criteria and rationale for grouping learners and the selection and sequencing course material/content, methodology, course length, intensity and duration. In addition, Iwai, et al. (1999) state that Needs Analysis refers to the activities involved in gathering information that will serve as the basis for developing a curriculum that will meet the learning needs of a particular group of students. Some experts (such as Graves, 2000; Basturkmen, 2010; Brown, 2016) claim that NA is an integral part of teaching English using an ESP approach; Brown (2016) extremely claims that there no ESP, if there is no Needs Analysis.

Of various elements of needs mentioned above, the main purpose of conducting NA is to find the needs in three main areas, that is, to find target needs (known as TSA), present situation needs (PSA). Both kinds of information are then used to design Learning Needs known as Target Situation Analysis (TSA) (Dudley-Evans & St. John, 1998).

From those studies and opinions, the present research is directed to conduct needs analysis to students of the Physics Education Department, Faculty of Education, the University of Mataram Lombok. Through English needs analysis, this research is expected to provide information of current practices and the needs in specific contexts for redesigning the teaching of English for students of the Physics Education Department, the University of Mataram. The present research is intended to(a) describe the students' level of English at Physics Education Department, the University of Mataram; (b) describe the needs of English perceived by the students at the Department; and (c) describe the needs of English perceived by English lecturers at Physics Education Department.

RESEARCH METHOD

This research employs a mixed method which combines both quantitative and qualitative research. According to Johnson and Onwuegbuzie (2007) mixed methods research is the class of research where the researcher mixes or combines quantitative and qualitative research technique, methods approach, concept or language into a single study or set of

related studies. It was conducted at the Physics Education Program, FKIP Mataram University, involving 55 students and 3 English teachers. The data were collected using triangulation techniques such as test, questionnaire, and interview. The collected data were then analysed qualitatively and quantitatively. Quantitative analysis is used to analyse the results of the test to find out the English level of students is known through the proficiency test English Communication Skill for Civil Service (ECSCS test). The result of the test was analysed by descriptive statistics in the form of means and standard deviation. Qualitative data would be obtained from questionnaires and interviews. The data was analysed through qualitative procedure. While to find the needs of students and lecturer, questionnaire and interview were analysed with descriptive statistics. So that, the result of the questionnaires and interview answered the problem of study.

FINDINGS AND DISCUSSION

The English Level of Students at Physics Department

The level of English of students at the Physics Department is measured by using ECSCS Placement test. The total number of respondents who participated in this study test are 55 students, most of them have English skill at the level of elementary (25 students or 45, 45%) the test results are shown in Table 1 below.

Table 1. The result of the placement test of the students at Physics Department.

ECSCS Level	Score	Number	Percentage (%)	Level
8	140-150			Advanced
7	124-139			Pre-advanced
6	111-124			Post-intermediate
5	96-110	1	2%	Upper-intermediate
4	80-95	4	7%	Intermediate
3	61-79	6	11%	Pre-intermediate
2	36-60	25	45%	Elementary
1	0-35	19	35%	Basic

Based on Table 1, 1 student (2%) had the English skill in Upper-intermediate level, 4 students (7%) in Intermediate level, 6 students (11%) in Pre-intermediate level, 25 students (45%) in Elementary level,19 students (34%) in basic level, and no one of the students is above Upper-intermediate level. So that 50 students (91%) were at a low level (Basic-Pre intermediate). Then 5 students (9%) were in high levels (Intermediate- Upper intermediate). Thus, we can assume that the students at the Physics Department are mostly at low level.

This result supports the previous studies conducted at the University of Mataram (among others Sujana, et al, 2016; Juliansyah, 2017; Sujana, et al, 2019), which found that the level of English of students registered at the UNRAM was relatively low. It means that it needs extra efforts to improve their English level to the targeted proficiency. As Dudley-Evans & St. John (1998) claim that ESP ideally starts from an intermediate level.

The Needs of Students at Physics Department in Learning English

The questionnaire is used to determine the students' needs (wants and lack). The data which is needed to find out the students' needs were students' personal information, students' need and want toward ESP course, and learning and class activity prepared by the students.

Students' personal information

The result of the questionnaires showed that 41 students have not taken an informal English course, and 14 students have taken the English class outside the classroom. Most of the students said that they never use English outside classroom with 32 students, 14 students using English for several times in 1 month, 7 students in several times in a week, and only 2 students who almost every day using English. So they assume that they are at the basic level of English.

Students' Needs and Wants toward ESP Course

The result of the objective of learning English was obtained by using a questionnaire involving 55 students from the Physics Department of FKIP. The objectives are divided into three categories: (1) to prepare students to read textbook in the field of each (English for Academic purposes/EAP), (2) to prepare students to find a job after college (English for Occupational purpose/EOP), (3) a combination between first and second. The result showed that most of the students choose combination between first and second as their target of learning English, followed by improving speaking skill and reading skill in the part of language skill to be improved. Then, in the part of abilities to be developed, most of them choose vocabulary mastery as their priority followed by pronunciation.

Learning and Class Activities Preferred by Students

The table below is the student's perception related to the syllabus, learning objective, and material that introduced by the lecturer at the beginning of learning.

Table 2. Explanation about syllabus at the beginning of learning.

Is there any explanation about the syllabus, learning objective, and the material at the beginning of the learning by the lecturer?	
Yes (%)	**No (%)**
53 (96%)	2 (4%)

Based on Table 2, it shows that 53 students (96%) state that the syllabus and objective of learning are introduced at the beginning of the learning. Meanwhile 2 students (4%) are not. By the number of 53 students, they mostly agree with the syllabus that IS introduced by the lecturer even though the students are against their own choice.

Table 3. Learning activities in the classroom preferred by students.

How do you grade the following activities during learning English?
(1= important, 2= rather, 3= unimportant)

Rank	Grammar practice	Pronunciation practice	New vocabulary practice	Textbook reading practice	Writing practice	Speaking practice	Listening practice	Presentation and discussion practice	Making report practice
1	40 (73%)	41 (75%)	48 (87%)	32 (58%)	37 (67%)	50 (91%)	39 (71%)	34 (62%)	18 (33%)
2	15 (27%)	13 (24%)	7 (13%)	19 (35%)	18 (33%)	5 (9%)	16 (29%)	20 (36%)	29 (53%)
3		1 (2%)		4 (7%)				1 (2%)	8 (15%)

Table 3 shows the variation of learning activities preferred by the students. It is seen that the students have their learning preference. The result show that the learning English activities that are necessary by the students are grammar practice with 40 students (73%%), pronunciation practice with 41 students (75%), new vocabulary practice with 48 students (87%), textbook reading practice with 32 students (58%), writing practice with 37 students (67%), speaking activities with 50 students (90%), listening practice with 39 students (71%), and presentation practice with 34 students (62%). While learning English considered pretty fair needed is making report practice with 29 students (53%). In addition to the aspect of language learning English above, the learning activities in the classroom also preferred by the students that can be seen in the table below.

Table 4. Learning activities in the classroom preferred by students.

Rank	Individual	Pair work	Small group discussion	Large group discussion	Total
	How do you grade the following activities in the classroom? (1=very like, 2=pretty fair, 3=dislike)				
1	10 (18%)	37(67%)	34 (62%)	15(27%)	
2	31 (56%)	18(33%)	21 (38%)	37 (67%)	
3	14 (25%)			3 (5)	
	55	55	55	55	

Table 4 shows the learning activities preferred by students, it shows the variation of learning style in the classroom, but most of the students preferred pair work and small group discussion. 37 students (67%) choose learning in pairs is very like, followed by 34 students (62%) who prefer small group discussion in the classroom. While fairly activities that are selected by the students are individual with 31 students (56%), and large group discussion with 37 students (67%). The first position which pairs work and small group discussion, it indicates that most of the students are comfortable in doing the task when they have a

companion in learning. Besides that, the students felt better learning English through some activities in following table:

Table 5. Students' perception about the best way of learning English.

Items of learning English (you can choose more than one)	Percentage of Students (%)
1. Read some written information (%)	6 (11%)
2. Listening (in general) (%)	40 (73%)
3. Repeat what you have learned (%)	23 (42%)
4. The activities that needs and action activity (%)	15 (27%)
5. The explanation from the lecturer (%)	20 (36%)
6. Listening western song (%)	37 (67%)
7. Reading novel or other stories (%)	10 (18%)
8. Learning autodidact (%)	9 (16%)

Based on Table 5, it shows that the best way of learning English chosen by students is listening. The first position was 40 students (73%) feel better in learning English when they listen. Second position, which is 37 students (67%), chose 'listening to western songs' as one of the best ways in learning English. The third position is 'repeat what they have learned' with 23 students (42%), followed by 'the explanation from the lecturer' as the fourth position with 20 students (36%). In addition, 'the activity that needs an action' is the fifth position with 15 students (27%). Sixth position belong to 'reading novel or other stories' with 10 students (18%), followed by 'learning autodidact' as the seventh position with 9 students (16%), and 'read some written information' as the eight position as one of the best way in learning English chosen by students with 6 students (11%). From this data, it can be concluded that the students prefer to learn English through listening.

Table 6. Justification of the English lecturers.

Justify the English lecturer in faculty 1= less/uninteresting/not much, not many 2= enough 3= much, many, very interesting/too much, so many			
Situation/condition	1	2	3
Number of students in the classroom (%)		52 (95%)	3 (5%)
1. Time allotment (credits) (%)	46 (84%)	9 (16%)	
2. The material that are taught (%)	5 (9%)	38 (69%)	12 (22%)
3. The material explanation (%)	10 (18%)	35 (64%)	10 (18%)
4. The learning facility available (%)	20 (36%)	35 (64%)	
5. Practice of using English (%)	34 (62%)	18 (33%)	3 (5%)

Based on Table 6, it shows that there are some aspects that should be considered in the teaching and learning process. Those are the number of students in one class, time allotment (credit), the materials that are taught, the way of the material presented, the learning facility available, and practice of using English. Firstly, the table above indicates that 52 students (95%) judged that the number of students is enough, while 3 students too much, and none of them choose less. It means that almost all of the students agree that the number of students is enough, which is around 20 students in one class.

Second, in the aspect of credit given in the English learning process, there are 46 students (73%) choosing less, 9 students (16%) choosing enough, and none of them choosing too much. It means that most of the students feel that the time allotment that is given is less proven by 46 students (84%). Third, in the part of materials that are taught, 38 students (69%) choose enough, 12 students (22%) choose very interesting, and 5 students (9%) choose uninteresting. It means that the material given by the lecturer is enough. Fourth, in the aspect of the way the lecturer present the material, there are 10 students (18%) that choose uninteresting, 35 students (64%) chooses enough, and 10 students (10%) choose very interesting. It means that the way the lecturer deliver the material is interesting. Fifth, the facility that is available, 35 students (64%) who choose enough, 20 students (36%) choose less. The last is about practice using English depending on their self-perception. The result shows that there are 34 students (62%) choose less, 18 students (33%) choose enough, and 3 students (5%) choose too much. It indicates that the students do less practice of using English when during the class.

Table 7. Topic for speaking and writing.

For speaking and writing activities, what topic that has been put on the syllabus?			
Speaking and writing related to the program. (%)	Speaking and writing unrelated to the program (general material) (%)	Speaking and writing related to the humorous. (%)	Speaking and writing related to the trending information. (%)
32(58%)	18(33%)	5(9%)	0(%)

Based on Table 7, it indicates that 32 students (58%) chose the topic for speaking and writing that related to their program as the activity required to be put on the syllabus. Then, 16 students (29%) chose speaking and writing to the program of general material, followed by 5 students (9%) who chose the topic of speaking and writing activities related to the humorous, and none of them chose topic for speaking and writing related to the trending information. It means that most of the students acquire the English for speaking and writing that are related to their program and general material as the topic on syllabus.

Needs Finding from English Lecturers and Subject Specialist

Based on the results of interviews of English lecturers and subject specialists at the Physics Department, it was found that the average skills of students at Physics programs are at elementary level. The lecturer explains that the main problems faced by the students are lack of vocabulary, less frequent use of English, limited time allotment, and so on. Besides that, the English lecturer expected to improve students' vocabulary mastery related to their field. Thus, they can read and understand their textbook, journal, or article related to their filed that is written in English. This expectation is similar to the learning objective from the institution which is one of the goals is that students can read and understand the textbook in their field (EAP) and prepare them to enter the job (EOP).

Furthermore, identification of students' characteristics also influences the achievement of learning objectives. Characteristics here refer to the students' background,

current level of English, their learning goal, social background and so on. Those characteristics become a consideration in many things, such as how to design the material, how to explain the material, and choosing teaching method. Thus, the characteristics of students should be considered in order to the success of teaching and learning process.

CONCLUSION AND SUGGESTION

From the result of analysis and discussion, it can be concluded that the students' level of English at Physics Program Faculty of Teacher Training and Education Mataram University is below the intermediate level and most of them are in the elementary level. It shows that the input English of students is very low.

In addition, to the needs of English perceived by students are to improve their communication skills and skill development that students choose. Thus, the improvement of communication skills includes vocabulary mastery, pronunciation, and grammar needs to be prioritized in teaching of English at Physics program.

The needs perceived by institution, English lecturer, and subject specialist are divided into short term goal and long-term goal. Short term goal of English is to prepare students as students who need English for reading textbook of their field that written in English. Long term goal refers to prepare students as job seekers who need English for looking for job after finishing their study, applying job at international school, and help them to continue their study at higher level. Short term goal directly guides the students to the activity for reinforcement their vocabulary mastery in order to help them understanding the material on their textbook. The activity could be done by integrated learning that combining the whole skills in one lesson, such as summarizing, note-taking, retelling, and paraphrasing. Those activities refer to the academic reading. In the other hand, short term goal also helps them for preparing them themselves for their future for seeking job or to compete in globalization era with the ability and knowledge that they get from study.

Besides that, the needs for learning English for students at Physics Education Department that is providing more opportunities for the students to practice using English, preparing them to read and understands their textbook, preparing them for job seeker, and additional credit of English is recommended to maximize the teaching and learning process because 2 credits are not enough to achieve the learning objective.

The suggestions in this study are: If the Physics study program emphasizes on the quality of graduates, especially in English, it is necessary to increase the students' ability in English in order to prepare the students entering the world of ESP. Therefore, the institution should change their policy such as adding credit of English (times allotment), providing facilities that support the learning process, and combining the English lecturer and subject specialist in one semester, so that the knowledge that acquired by the students would be completed. The lack of students in mastering vocabulary caused the problem and difficulties in their English learning. So, introducing more vocabulary that relates to their field is crucial in order to help them understand the material given. So, the reinforcement of vocabulary is really needed to support the learning process.

The consideration of the time allocation that is very limited with only 2 credits, it is impossible to teach one skill in one meeting. Thus, the integrating learning that combines whole skills is importantly suggested.

REFERENCES

Basturkmen, H. (2010). *Developing courses in English for specific purposes*. Springer.

Brindley, G. (1989). The Role of Needs Analysis in Adult ESL Programme Design. In R. Johnson (Ed.), *The second language curriculum* (pp. 43-78). Cambridge University Press.

Brown, J. D. (2016). *Introducing needs analysis and english for specific purposes*. Routledge.

Dudley-Evans, T., & St John, M. J. (1998). *Developments in English for specific purposes: A multi-disciplinary approach*. Cambridge University Press.

Gatehouse, K. (2001). Key Issues in English for Specific Purposes (ESP) Curriculum Development *The Internet TESL Journal*, Vol. VII, No. 10.
URL: http://iteslj.org/Articles/Gatehouse-ESP.html.

Graves, K., & Xu, S. (2000). *Designing language courses: A guide for teachers*. Heinle & Heinle.

Hutchinson, T. & Waters, A. (1987). *English for specific purposes: A learner centered approach.* Cambridge University Press.

Iwai, T., Kondo, K., Limm, S. J. D., Ray, E.G., Shimizu, H., & Brown, J.D. (1999). *Japanese language needs analysis*.
URL: https://scholarspace.manoa.hawaii.edu/handle/10125/8950

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, *1*(2), 112-133. SAGE Publication.
URL: https://journals.sagepub.com/doi/abs/10.1177/1558689806298224

Juliansyah. (2017). *Needs analysis and recommendation for teaching English at Non-English Depatment (TENED) at Sociology Education Program Faculty of Teacher Training and Education, Mataram University* [Bachelor thesis, Mataram University.

Masoumpanah, Z., & Tahririan, M. H. (2013). Target Situation Needs Analysis of Hotel Receptionists. *English for Specific Purposes World.* Issue 40, vol. 14, p. 1-19.
URL: www.esp-world.info/articles_40/masoumpanah.pdf

Richards, J. C. (2001) *Curriculum Development in Language Teaching.* Cambridge University Press.

Salehi, M. (2010). Investigating the English Language Needs of Engineering Students. *English for Specific Purposes World*, *10*(31), 1-16.
URL: www.esp-world.com/Articles_31/Needs_analysis_Salehi.pdf

Sujana, I. M. (2001). *Laporan Pelaksanaan MKDK Bahasa Inggris untuk Mahasiswa Fakultas Pertanian di Pusat Bahasa UNRAM*. UPT Pusat Bahasa Universitas Mataram.

Sujana, I. M. (2001b). *Rancangan Pembelajaran Bahasa Inggris untuk Mahasiswa Teknik Sipil.* Universitas Mataram. URL: http://eprints.unram.ac.id

Sujana, I. M. (2003). *Establishing English competency for students of Tourism Department University of Mataram (A proposal (1).* URL: http://eprints.unram.ac.id.

Sujana, I. M., Hanafi, N., Wilian, S., Syahrial, E., & Fitriana, E. (2019). Negotiating conflicts of needs in designing teaching English for midwifery students. *International Journal of Language Education*, *3*(2), 20-26. URL:
https://ojs.unm.ac.id/ijole/article/view/10657/pdf