NEED ANALYSIS OF ENGLISH FOR SPECIFIC PURPOSES (ESP) TO INFORMATIC STUDENTS

Rita Karmila Sari [1], Adhityo Kuncoro [2] & Fajar Erlangga [3]
Universitas Indraprasta PGRI
karmilasari_rita@yahoo.com, adhityokuncoro@yahoo.com,
erlangga.dawn@gmail.com

Abstract

The aim of the research is to find out 1) the aims of students to learn English; 2) the aspects of English students want to learn, 3) the purpose of learning four English language skills namely reading, writing, speaking, and listening, and 4) the difficulties students face when learning English. This research employs a descriptive analysis method with a qualitative approach. The respondents consist of students taken from six regular classes in an informatics study program. The data are obtained by distributing questionnaires. The result of the research indicates that 1) the main aim of students to learn English is for the needs for finding a job; 2) the students want to learn all aspects of language, especially reading; 3) the students' main difficulties when learning English are limited vocabulary and insufficient understanding of grammar.

Keywords: need analysis, ESP, informatics

Abstrak

Penelitian ini bertujuan untuk mengetahui 1) tujuan mahasiswa/i mempelajari bahasa Inggris; 2) aspek bahasa Inggris yang mahasiswa/i ingin pelajari; 3) tujuan mempelajari empat keahlian dalam bahasa Inggris, yaitu membaca, menulis, berbicara dan menyimak; dan 4) kesulitan yang mahasiswa/i hadapi saat belajar bahasa Inggris. Penelitian ini menggunakan metode analisis deskriptif dengan pendekatan kualitatif. Responden terdiri dari mahasiswa/i yang diambil dari enam kelas reguler di program studi informatika. Data diperoleh melalui penyebaran kuesioner. Hasil penelitian menunjukkan 1) tujuan utama mahasiswa/i mempelajari bahasa Inggris adalah untuk keperluan mencari pekerjaan; 2) mahasiswa/i ingin mempelajari semua aspek bahasa, khususnya membaca; 3) kesulitan utama yang dihadapi oleh mahasiswa/i ketika mempelajari bahasa Inggris adalah keterbatasan kosakata dan pemahaman tata bahasa.

Kata kunci: Analisis kebutuhan, ESP, informatika

Introduction

Mastering English is very important, considering its status as an international language used in various fields, especially education. This fact inspires education in Indonesia to make the language a compulsory subject. It has long been taught in various levels of education, be it formal and informal ones. This language is formally learned by applying curriculums at various levels of education consisting of elementary schools, junior high schools, senior high schools and universities. In an informal way, it is learned by attending English tutoring sessions / courses provided by language institutions.

English learned in formal education varies based on the education levels. English learned at elementary, junior and senior high school levels is commonly called General English, while English learned at the university level is called English for Specific Purposes (ESP) because it is taught in accordance with the field of science. ESP itself aims to provide students with English that is important in their majors. The English learning is expected to provide students with competence in English language.

The ability to use English, especially ESP, is very helpful for students to explore the fields of science they study. With the excellent English skill, students can understand the contents of reference books, information from the internet, scientific journals and other sources of information that use English. In addition, students need to prepare their English skill for their career in the future because the ability to use English can be a very useful thing in the competition they will face when finding a good job.

In view of the importance of English for students, it is necessary to design English subject materials / curriculums that suit for their needs. The teachers must pay their full attention to the accuracy and appropriateness in the formulation of materials. Materials in the English language module will not be effective in achieving their objectives if they are not formulated in accordance with the needs of students. English subject for students with non-English majors are one of the subjects that are considered difficult because most of students do not have a good basics of English. Teaching this subject in non-English majors is a challenge for English teachers. In addition to a right method, the teaching also needs to be supported by a module that has good quality and is in accordance with the needs of students.

Based on the facts above, the researchers are interested in performing the needs analysis of English subject in Informatics study program in the Faculty of Engineering and Computer Science. The problems analyzed include:

1. What are the informatics students' aims of learning English?
2. What are the aspects of English needed by informatics students?

3. What are the needs of informatics students in learning 4 basic skills in English?
4. What are the difficulties facing by informatics students in learning English?

Literature Review

Needs Analysis

Needs analysis is a method that cannot be separated from the development of language learning materials and curriculums, especially ESP. This is restated by Basturkmen (2010: 17) saying that needs analysis is the identification of a language and skills used in determining and selecting ESP-based learning materials. The analysis can also be used to assess learners and the learning process at the end of the learning period.

Richard (as cited in Puspitasari, 2013: 23) states the procedure used to gather information on the needs of learners is known as needs analysis. Meanwhile, according to Nunan (as cited in Sukarni, 2016: 13) needs analysis is the process of gathering information concerning learners' needs. Before carrying out the analysis, the difference between target needs and learning needs must be first identified. Furthermore, Hutchinson and Waters (as cited in Nuryanto, 2018: 27) classify the needs into target needs (what learners need to be able to communicate in the target situation) and learning needs (what learners need to learn). The target needs are further divided into:

1) *Necessities*: what language aspects are needed by the learners to reach the target effectively.
2) *Lacks*: what learners have not mastered.
3) *Wants*: what learners want to learn.

In more detail, Hutchinson and Waters (as cited in Mahripah, 2016: 8-9) also state that analysis related to target situation that include necessities, lacks, and wants and analysis of learning can be seen in the following table,

Table 1. Needs Analysis

Type of needs analysis	Based on target situation	Type of needs analysis	Based on leaning needs
Why is the language needed	For study; for work, for training, for combination of these; for some other purposes, e.g. status, exam, promotion ets	Why are the learners taking the course?	▪ Compulsory or optional; ▪ Apparent need or not; ▪ Are status, money promotion involved?; ▪ What do learners think they will achieve?; ▪ What is their attitude towards the ESP

			course?; ▪ Do they want to improve their English or do they resent the time they have to spend on it?
How will the languge be used?	Medium: speaking, writing, reading etc. Channel: e.g. telephone, face to face; Types of text or discourse: e.g. academic texts, lecturers, informal conversations, etc.	How do the learners learn?	▪ What is their learning background? ▪ What is their concept of teaching and learning? ▪ What methodology will appeal to them? ▪ What sort of techniques are likely/alienate to them?
What will the content areas be?	Subjects: e.g. medicine, biology, architecture, etc. Level: e.g. technician, craftsman, postgraduate, etc.	What resources are available?	▪ Number and professional competence of teachers; ▪ Attitude of teachers to ESP ▪ Teachers' knowledge of and attitude to the subject content; ▪ Materials; ▪ Aids and opportunities out of class activities
Who will the learner use the language with?	Native speakers or nonnative; Level of knowledge receive: e.g. expert, layman, student; Relationship: e.g. colleague, teacher, customer superior, subordinate.	Who are the learners?	▪ Age, sex, nationality ▪ What do they know already about English? ▪ What subject knowledge do they have? ▪ What are their interests? ▪ What is their socio-cultural background? ▪ What teaching styles are they use to? ▪ What is their attitude to English or to cultures of the English speaking world?
Where will the language be used?	Physical setting; e.g. office, lecture theatre, hotel etc Human context: e.g. alone, meetings,	Where will the ESP course take place?	Are the surroundings pleasant, dull, noisy, cold etc?

	telephone etc Linguistic context: e.g. in own country, abroad		

ESP (*English for Specific Purposes*)

Learning English for adult learners is generally divided into two different categories, namely English for General Purposes (EGP) and English for Specific Purposes (ESP), depending on how specific the goal to be achieved in the learning is. (Liu, Chan, Yan, and Sun, 2011; Basturkmen, 2010: 17).

Hutchinson and Waters (as cited in Mahripah, 2016: 6) emphasize that the difference between ESP and EGP is not in the learners 'needs but in the awareness of learners' needs. All parties involved in the language learning process, be they learners, teachers, stakeholders, and prospective users realize the importance of needs analysis and its process. The awareness of how this needs analysis is conducted and how to react to it in the entire learning process, including internalizing the results of the needs analysis in developing teaching materials is an important key that distinguishes ESP or EGP-based learning practices.

Robinson (as cited in Ginanjar, 2015) states that there are three main characteristics of ESP that distinguishe it from General English or English as a Foreign Language (EFL) or English as a Mother Tongue (EMT). The three characteristics are 1) ESP is goal-oriented learning. In this context, learners learn English not because they want to know a language as a language and culture it contains, but they learn ESP because it has specific goals in the academic and professional fields. 2) The substance of ESP is designed and developed based on the concept of needs analysis. The concept of needs analysis aims to specialize, link and bring together what learners need in both the academic and professional fields. 3) ESP is more specifically aimed at adult learners than children or adolescents. This is logical because ESP is generally taught for learners in middle and high academic levels, for professionals or for workers in workplaces.

Research Methods

The method applied in this research is a descriptive analysis with a qualitative approach. This research uses the data from questionnaires distributed to respondents. The respondents consist of six regular classes in the informatics study program. Research data are obtained from the the questionnaire filled out by respondents. The research team has compiled a questionnaire to obtain data on the needs of learning English for informatics students. The questionnaire consists of, 1) questions regarding the identity of the respondent and 2) 38 questions about the need for English for Specific Purposes (ESP).

The data analysis in this study is conducted based on the following stages:

1. Collecting the data obtained from questionnaires completed by respondents (informatics students).
2. Classifying or grouping questionnaire data.
3. Identifying the needs for learning English for Informatics students.
4. Describing the data to find out the needs for English language learning for informatics students

Results and Discussion

Results

This research analyzes data from 221 respondents from informatics students. The distribution of respondents in the research is as follows;

1. Respondents are generally under 20 years old with a presentation of 76.9%, while the remaining of 23.1% are between 21-29 years old
2. Most respondents are male (78.3%).
3. Respondents coming from Vocational High Schools are 78.7%, while the rest come from Senior High Schools.
4. In general, the level of English proficiency of respondents is at the basic level (74.7%) and the rest are at intermediate level.

The basic ability means the respondents are in the stage of being able to use simple vocabularies and expressions such as introducing and greeting, understanding a little English grammar, and making many mistakes in pronunciation. The intermediate ability means the respondents are able to fluently speak English about several things they know, but they still have difficulties such as limited vocabulary, lack of grammar skill and incorrect pronunciation.

The respondents of the research respond to 38 statements that are classified into four categories, namely: 1) The purpose of learning English; 2) The aspects of English that students want to learn, 3) The aim of learning 4 English language skills consisting of reading, writing, speaking, listening; 4) Difficulties in learning English.

1. The purpose of Learning English

English learners will learn all English language skills more easily if they have a learning purpose. The following table shows the purpose of informatics students to learn English,

Table 2. The purpose of Learning English

No.	The purpose of learning English	Yes (%)	No (%)
1	To increase academic score	94.6	5.4
2	To find a good job after graduating from university	95.9	4.1
3	To continue studying abroad	36.2	63.8
4	To be able to speak English	96.4	3.6
5	I like to study English	74.2	25.8

From the five statements, most respondents show their main purpose to learn English is to be able to speak English, to find a good job after graduating from university and to increase their academic score. They also choose their liking for studying English. Then, very few respondents choose to continue studying abroad as their learning purpose.

In addition, the rest of respondents add that their purpose of learning English are as follows:

1. To understand computer languages so that they can make programs, websites and coding more easily.
2. To be able to communicate with foreigners when playing online games.
3. To help them when they work in the future, especially if they work in a foreign company.

From the data above, it can be seen that informatics students aim to learn English for their academic needs and to help them later in their work, especially computer-related ones. Besides, respondents also add that they really want to be able to communicate in English to support their hobby of playing online games.

2. The aspects of English that students want to learn

The table below presents the aspects of English that informatics students want to learn,

Table 3. The aspects of English that students want to learn

No.	The aspects of English that students want to learn	Yes (%)	No (%)
1	Grammar	93.7	6.3
2	English vocabulary related to technique.	87.3	12.7
3	Reading comprehension	94.1	5.9
4	Listening	89.1	10.9
5	Speaking	93.7	6.3
6	Writing	86.9	13.1

The table indicates the respondents agree that learning all aspects of English is very important. The aspects students want to learn the most are reading comprehension, speaking and grammar, followed by English vocabulary related to technique dan writing.

3. The aim of learning 4 English language skills

Besides discussing the aspects of English that informatics students want to learn, the research also analyzes the need for English learning categorized into 4 language skills, namely, reading, writing, speaking, and listening.

1) The aim of learning reading

The following table shows the students' aims of learning reading,

Table 4. The aim of learning reading

No	The aim of learning reading	Yes (%)	No (%)
1	Searching for information needed in English texts.	94.6	5.4
2	Understanding English texts from the internet.	93.7	6.3
3	Understanding texts in English books / modules / scientific articles.	82.4	17.6
4	Understanding texts in English newspapers or magazines.	76.9	23.1
5	Guessing the meaning of words in English texts.	86.9	13.1

The table indicates that most of respondents state searching for information needed in English texts and understanding English texts from the internet are their main aim of learning reading. Then, some of them also choose the ability to guess the meaning of words in English texts and understanding texts in English books/ modules/ scientific articles as their aim. The rest learn reading to understand texts in English newspapers or magazines

2) The aim of learning writing

Table 5. The aim of learning writing

No.	The aim of learning writing	Yes (%)	No (%)
1	Writing correct sentences in English	86.4	13.6
2	Writing a correct paragraph in English	70.6	29.4
3	Writing a correct spelling in English	72.4	27.6
4	Writing a report or simple article in English	65.6	34.4
5	Evaluating and revising an English text	62.9	37.1

The table above shows that the writing skills that the informatics students need most is writing correct sentences in English because they will often write English sentences when creating computer programs. The respondents also add that their another aim of learning writing, which is to communicate in social media, such as writing or commenting on others' status.

Writing a report or simpel article in English dan evaluating and revising an English text are the aims last chosen by students when learning writing because these skills are not urgent needs for them in learning English.

3) The aim of learning speaking

The next table presents the students' aim of learning speaking,

Table 6. The aim of learning speaking

No.	The aim of learning speaking	Yes (%)	No (%)
1	Speaking English words properly	80.5	19.5
2	Asking and answering questions in English	79.2	20.8
3	Participating in a group discussion using English	59.7	40.3
4	Making presentation using English	61.5	38.5
5	Taking part in an English conversation.	65.6	43.4

The main aim of informatics students to learn speaking is to speak English properly and to ask and answer questions in English, while the other points are quite chosen by the students.

4) The aim of learning listening

Listening is English skill also needed by informatics students. It can be seen from the following table showing the even need for learning listening,

Table 7. The aim of learning listening

No.	The aim of learning listening	Yes (%)	No (%)
1	Understanding English presentations from lecturers	77.8	22.2
2	Understanding everyday conversations in English.	74.2	25.8
3	Listening to English conversations to get certain information.	80.1	19.9
4	Understanding instructions in English	81.9	18.1
5	Understanding English-language media (such as news, movies, songs,	84.6	15.4

	announcements, etc).		

4. Difficulties in learning English

Besides analyzing the needs of learning English, the research also explores what kinds of difficulties facing by informatics students when learning English. It can be seen in the following table,

Table 8. Difficulties in learning English

No.	Difficulties in learning English	Yes (%)	No (%)
1	Having limited English vocabulary	84.6	15.4
2	Don't understand grammar	73.8	26.2
3	Can't pronounce English vocabulary	57	43
4	Having difficulty in understanding texts in English	51.1	48.9
5	Having difficulty in writing English sentences	51.6	48.4
6	Can't speak English well	64.7	35.3
7	Can't listen to and understand sentences or English conversations.	51.6	48.4

The informatics students state their greatest difficulty when learning English are they have limited vocabulary and they don't understand grammar. They also state they really need to study vocabularies related to computer programming and study tenses to be able to master all four language skills, namely reading, writing, speaking, and listening.

Discussion

The purpose of this research is to find out the need for English for Specific Purposes in the informatics study program. The results of the research show that the students' main aim to learn English is to help them when looking for a job. This is in accordance with Sukarni's findings (2016) entitled Needs Analysis of English Language Needs for University Students in West Nusa Tenggara. Sukarni concludes that the needs of non-English students when learning English is for the purpose of preparing students for working or for other professional lives. The similar results of research are also stated by Hui (2017) conducting a research at Qingdao University in the Science and Technology study program. Hui said that the main aim of students in learning English is to work and get more professional knowledge in school for their future needs. Further, the results of data analysis show that the main needs of informatics students are learning reading. This finding is almost similar to the findings of Balaei and Ahour (2018) who research the ESP needs of engineering students in Information Technology (IT) at University of Islam Azad, Tabriz Branch, Iran.

Informatics students state that they want to learn all aspects of English such as grammar, vocabulary, reading comprehension, listening, and writing. But they mention that their main difficulties in learning English are limited vocabulary and insufficient understanding of grammar. The need for learning reading that students choose is to understand the information contained in texts both in the book or in the Internet. For writing skills, the main need of students is to write sentences for computer programming and communication on social media. The need for learning speaking selected by the students are speaking English properly and asking and answering questions in English, followed by understanding English media (such as news, movies, songs, announcements, etc.) as learning listening needs.

Conclusion

The research on needs analysis for English for Specific Purposes (ESP) to Informatic Students is performed to find out 1) the aims of students to learn English, 2) the aspects of English students want to learn, 3) the purpose of learning four English language skills namely reading, writing, speaking, and listening, and 4) the difficulties students face when learning English. This research collects the data from questionnaires distributed to a total of 221 regular students from the informatics study program. The general characteristics of respondents are under 20 years old, most of them are male, with the latest education in Vocational High Schools and have basic skills in using English.

The result of the research indicates that the main aim of students in learning English is for the needs for finding a job. Then, the research concludes that students want to learn all aspects of language with the main skill they want to learn is reading. The study also finds that their main difficulties when learning English are limited vocabulary and insufficient understanding of grammar.

References

Balaei, Parisa & Touran Ahour. (2018). Information Technology Students' Language Needs for Their ESP Course. *International Journal of Applied Linguistics & English Literature.* Vol 7, Issue 2, March 2018, 197 – 203.

Basturkmen, H. (2010). *Developing Courses in English for Specific Purposes.* Hampshire: Palgrave Macmillan.

Ginanjar, Ega. (2015). *English for Specific Purpose (Materi Kuliah ESP).* https://egaginanjar79.wordpress.com/2015/05/23/english-for-specific-purpose-materi-kuliah-esp/#_ftn4. Diakses 12 November 2018.

Hui, Guo. (2017). The Learning Needs Analysis of English for Specific Purpose (ESP) in College. *US-China Foreign Language.* Vol 15, No.1, January 2017, 1-6.

Liu, J.Y., Chang, Y.J., Yang, F.Y., and Sun Y.C. (2011). Is what I need what I want? Recopceptualizing college students' need in English course for general and specific/academic purposes. *Journal of English for Academic Purposes.* Vol. 10, 271-280.

Mahripah, Siti. dkk. (2016). *Analisis Persepsi Mahasiswa dalam Mengembangkan* English for Specific Purposes (ESP) Learning Materials *(Materi Ajar Pengajaran Bahasa Inggrisuntuk Tujuan Khusus)* [Proposal Penelitian Pengembangan]. Yogyakarta: Lembaga Penelitian dan Pengabdian Kepada Masyarakat Universitas Negeri Yogyakarta.

Nuryanto. (2018). Peningkatan Mutu Madrasah Ibtidaiyah: School-Based Management dan Kompetensi Guru Madrasah. *Jurnal Elementary*. Vol 4 , 21-32.

Puspitasari, Indah. (2013). *English For Computer Science*: Sebuah Analisis Kebutuhan Bahasa Inggris pada Mahasiswa Teknik Informatika. *Jurnal Pro Bisnis.* 6 (1)*,* 21-37.

Sukarni, Sri. (2016). Analisis Kebutuhan Bahasa Inggris Mahasiswa Universitas Nusa Tenggara Barat. *Jurnal Media Bina Ilmiah*. 10 (1), 12-16.