

# EXPLORING THE LEARNING NEEDS OF ELECTRONIC STUDENTS AT HUE INDUSTRIAL COLLEGE: TOWARDS A SUGGESTED ESP SYLLABUS

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**Abstract:** Designing an ESP course-book for technical students to meet their demand for applying effectively in workplace is crucial and practical. This study explored the needs of electronic students at Hue Industrial College (HIC) towards a suggested syllabus. Also, the research aimed to gain some insights into material sources, language structures and functions needed in ESP course. Subjects for this study included 50 electronic students, 4 English teachers and 5 subject instructors at HIC and 30 former electronic students currently working in domestic and foreign companies in Vietnam. Data were collected through questionnaires and interviews, then analyzed by quantitative and qualitative methods. The findings of study pointed out students' needs in ESP course, such as purposes of learning, learning activity preference, language skills and language areas, topics and testing form as well as learning assessment preference.

**Key words:** Learning needs, syllabus development, English for specific purposes (ESP)

## 1. Introduction

In recent years with the globalization of trade and economy, our world has entered the era of international communication and advanced technology. The boom of foreign investment in Vietnam has created more and more opportunities for graduates, especially technical graduates in general and Electronic graduates in particular, to work in foreign companies. Like students of other different fields in Vietnam, electronic students, must be equipped with basic knowledge of English for Specific Purposes (ESP) as well as their subject knowledge. ESP will help graduate students communicate effectively at the work site. ESP and their major knowledge are two crucial factors that help them adapt and exist in the current socio-economic development. In response to the demand of society for improving students' ability of English communication at the work-site, the ESP course quality is of much concern.

However, there are not many ESP course-books appropriate for Electronic students available at Vietnamese universities in general, and at Hue Industrial College (HIC) in particular. ESP teaching materials for technical students in HIC have remained a big problem. Therefore, designing an ESP course-book for Electronic students in HIC to meet their demand for developing English language proficiency and for communicating in the workplace effectively is very crucial and practical work. The existing problems noted above made the idea of exploring the needs of Electronic Students at HIC to design a syllabus in order to meet the learners' needs. Therefore, the researcher decides to carry out a study entitled: "*Exploring the Learners' Needs of Electronic Students at Hue Industrial College: Towards a Suggested ESP Syllabus*". The study covered the Electronic students' needs in the ESP course including purposes of learning, language skills and language areas required, topics and testing form. In

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addition, the results from the study also revealed the sources of materials needed to be taught in the ESP course and language functions and language forms are included in the syllabus. The study ended with pedagogical implications for efficient and effective ESP course preparation at HIC- a vocational college.

## **2. Theoretical background**

### **2.1. What is ESP?**

Hutchinson and Waters (1986, p. 19) define that "*ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning*". Duane and Gu (2004, p. 121) also have the same definition, "*ESP is a pedagogy in which the syllabus, contents and methods are determined according to the needs of learners' specialized subjects*". Wright (2001, p. 57) considers that "*ESP is, basically, language learning which has its focus on all aspects of language pertaining to a particular field of human activity, while taking into account the time constraints imposed by learners*".

All of the three definitions clearly express the main ESP characteristics: it is relevant to the learners and being focused on the learners' needs. Thus the aim of ESP teaching is to help students use English effectively that they will meet in real situations in their future professions or need for their further education. Consequently, it provides learners' motivation and makes the learning better. Based on the definition of Hutchinson and Waters, the content and method of this syllabus are designed under the basis of learners' needs.

### **2.2. Definition of syllabus**

To get an exact conception about syllabus, the terms "curriculum" and "syllabus" should be clarified. Nunan (1988, p. 9) distinguishes clearly these two terms. According to him, "*Curriculum is related to planning, implementation, evaluation, management and administration of education programs meanwhile Syllabus focus more narrowly on the selection and grading of content*".

There are many different ways to define a syllabus. In the word of Widdowson (1984, p. 26), "*a syllabus is simply a framework within which activities can be carried out: a teaching device to facilitate learning*". Yalden (1996 p. 75 as cited in Pham, 2002) gives another definition of syllabus: "*The syllabus is now seen as an instrument by which the teacher, with the help of the syllabus designer, can achieve a degree of "fit" between the needs and aims of the learner (as social being and individual) and the activities which will take place in the classroom*". Hutchinson and Waters (1986, p. 80) define syllabus in a simple way: "*a syllabus is a document which says what will be learnt*".

### **2.3. Process of designing a syllabus**

Successful teaching requires an appropriate syllabus, therefore, syllabus design in language teaching is of taken fundamental importance and learners' needs analysis should be the point of departure in the designing process. In the light of this view, we can divide designing a syllabus into the following steps:

- Needs analysis
- Goals and objectives determining
- Content selecting and grading
- Teaching method suggesting
- Testing and evaluation forming

#### **2.4. Needs analysis**

The term “Needs analysis” is also called “Needs assessment” (Brown, 1995). According to Richards and Platt (1992, as cited in Izaiah, 2005), a needs analysis is the process of shaping the needs for which a learner or a group of learners requires a language and arranging the needs according to priorities. In a more formal term, Grave (2000, p. 98) defines: "Needs assessment is a systematic and ongoing process of gathering information about students' needs and preferences, interpreting the information, and then making course decisions based on the interpretation in order to meet the needs”.

The role of needs analysis is mentioned by Wright (2001, p. 63), "The content of any ESP course should only be determined by a comprehensive need analysis" as this first step is seen as being absolutely crucial if ESP practitioners wish to design a course that will bring maximal benefits to their learners. In addition, Mackay and Mountford (1978, as cited in Xenodohidis, 2002) state that if needs are clear, the learning aims can be expressed more easily and the language course can become motivating. On the contrary, if the learners' needs are not taken into account, the course will be based on unsuitable or irrelevant material, as a result, it will disappoint the students and lead to a low motivation. Therefore, it is of vital importance to conduct a needs analysis in designing an ESP syllabus.

#### **2.5. Testing and evaluation forming**

Evaluation, according to Robinson (1991, p. 65) ‘is the discovery of the value of something for some purpose’. In the form of various types of testing and teaching observation and records, it is the process of determining and finding out how far the goals and objectives of the syllabus are being achieved. Since the syllabus is essentially a plan for helping the learners to learn, ultimately all evaluation goes back to the criterion of effectiveness of learning. There is no doubt that evaluation serves an important role in syllabus design, teaching and learning. Evaluating, particularly testing, therefore, is likely to create a broad motivation for learning.

### **3. Methods**

#### **3.1. Method orientation**

This research employed both qualitative and quantitative approaches. The research instruments as questionnaires and interviews were used.

Data collected from the questionnaires for teachers and students are analyzed quantitatively through tables and charts according to statistical frequency and percentage. The additional ideas specified in the questionnaires for the teachers as well as for the students are basically used for qualitative analysis. In addition, data collected from interviews are also contributed to the qualitative analysis.

### 3.2. Subjects

This study has been carried out on a scale of HIC and electronic foreign and domestic electronic companies in Vietnam during one year with 89 participants divided into 3 groups:

- Group 1 consists of 50 first-year students of electronic engineering who are attending classes at HIC. Their age ranges from 18-25 and they are from different provinces in the Central Vietnam. The researchers chose first-year students to do the survey as the ESP course is often conducted in the second semester of the first-year curriculum. As a result, the students' responses gave the researchers an overview of students' needs towards their ESP course.

- Group 2 consists of 30 former electronic students (FESs) who are working in domestic and foreign companies. Their age ranges from 24-37 with over-3-year experience.

- Group 3 includes 4 general English teachers and 5 experienced instructors of electronics who are teaching at HIC.

### 3.3. Data analysis

The quantitative method was used to analyze the numerical data from the questionnaires and materials. The results of the data were grouped and analyzed by statistical frequency then transferred into percentages and presented in tables and figures.

The qualitative method was used to analyze information obtained from the interviews. The qualitative analysis is a systematic process of selecting, categorizing, comparing, synthesizing, and interpreting data.

All of the information above helps the researcher to interpret the precise goals and objectives of the course, language skills and language areas, topics, student grouping, testing form included in the syllabus.

### 3.4. Procedures

50 copies of questionnaire A were distributed to the ESs who are learning at HIC.

30 copies of questionnaire B were delivered to the FESs who are working at electronic domestic and foreign companies in Vietnam.

Questionnaire A aimed to investigate the ESs' backgrounds, interests, their needs in an ESP course, language skills and areas, testing form and the English themes they are concerned about and wish to deal with in an ESP course.

Questionnaire B has been designed to identify the FESs' backgrounds, the use of English in their job, the frequency of their use of English, language skills and areas, kinds of materials and the English themes needed in their jobs.

Interviews were conducted with 4 general English teachers at HIC. In addition to the interviews with general English teachers, there were interviews with 5 electronic instructors as well.

All the data from these sources were mainly quantitatively processed. In addition, for interview data, qualitative approach was also applied to help the researcher get more insights into the nature of the issues investigated and maintain the reliability of the data collected.

## 4. Findings

### 4.1. The importance of ESP for the electronic students' current study and for the former electronic students' jobs

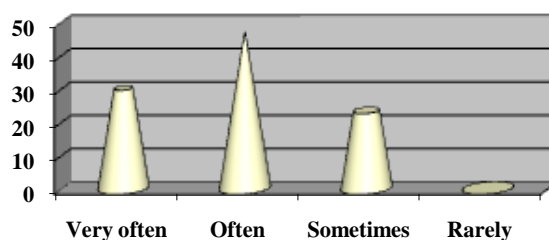
Question 5 in questionnaire A and question 7 in questionnaire B deal with the electronic students' and former electronic students' awareness towards the necessity of ESP in the English courses at HIC. The result of the data analysis reveals a high percentage on the necessity of learning ESP of electronic students at HIC. An overwhelming majority of the electronic students (45 out of 50 students) have emphasized the necessity of ESP course at HIC. Only 5 out of 50 students (10%) considered that ESP course at HIC is of little necessity.

In an in-depth interview, a male student named N.T.A. from 16CDDT11 class said that: *"I think ESP is very important for my study now as well as my job in the future. Most of electronic machines and equipment use English for their instructions, if I do not know about ESP, how can I understand what to do with the machines?"*

As for former electronic students, from the results of data analysis, the percentage of the importance of ESP is also very high (100% of the former electronic students considered that ESP is very necessary or necessary for their jobs; of which 18 former electronic students (60%) thought that ESP is very necessary and the rest (12 former electronic students, accounting for 40%) asserted that ESP is necessary.

A worker from Hue Electronic Company totally agreed that ESP is really necessary for his current job. He claimed that *"I work a lot with electronics machines, most of which use English as instructions and guidance. A wide knowledge of ESP will certainly help us a lot in our work. In addition, each year my company invites trainers from Australia to train the employees. This opportunity will be useless if I cannot understand English."*

The data in the Figure 1 below deals with Question 8 in Questionnaire B



**Figure 1.** The frequency of using ESP of former electronic students at work-site

The result in Figure 1 on the frequency of using ESP at the work-site of former electronic students also reaffirms the above mentioned findings that learning ESP at HIC is of necessity or even great necessity. Mostly former electronic students (23 out of 30 former electronic students) very often or often use ESP at the work-site. The rest (23.3%) sometimes use ESP, nobody rarely use ESP for their jobs.

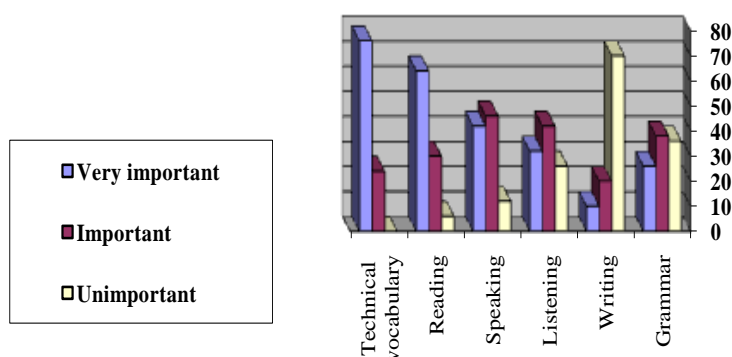
In general, most electronic students and former electronic students at HIC have fully recognized the necessity and significance of learning ESP. Nobody denied the importance of learning ESP at HIC.

## 4.2. English skills and areas for electronic students

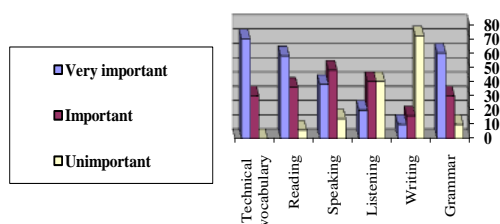
### 4.2.1. The electronic students and former electronic students' view on the importance of English skills and areas

Question 8 in Questionnaire A and Question 9 in Questionnaire B are designed for the electronic students and former electronic students' evaluation on the importance of skills and areas.

It is revealed from the answers to the questions that vocabulary, reading skill and speaking skills are much more concerned both by electronic students and the former ones.



**Figure 2.** Electronic students' view on the importance of English skills and area



**Figure 3.** Former electronic students' view on the importance of English skills and areas

The result of the data analysis in Figure 2 reveals a surprising high percentage on the very importance of vocabulary. An overwhelming majority of the students in question (35 out of 50) have emphasized on the very importance of learning vocabulary. Furthermore, 15 informants (accounting for 30%) stated that vocabulary is important and none considered that vocabulary is not important at all. Of the four skills, reading and speaking are the most used ones at work and listening skills and writing skills are the least used ones. 29 students (58%) thought that reading is very important, only 6% stated that it is not important. Communicating at work is one of the main purposes of the students in the ESP course; therefore, speaking skill is much more

concerned than reading skill (38% of very importance, 48% of importance and 14% of unimportance). A majority of students (72%) considered that writing skill is unimportant.

The result from interview revealed the same opinion. Student named T.V.H. expressed his idea that *“ESP vocabulary is important because it helps us understand a lot about our major. We can read the materials, search for information, exchange our ideas. Without vocabulary, I can’t express myself to be understood.”*

In term of English skills, N.V.B. agreed that *“I think speaking and reading skills are more important in our major. In fact, we often read the materials to improve our knowledge about electronics and speak with each other to communicate or to share our viewpoint”*.

A remarkable high percentage of former electronic students (80%) revealed that vocabulary is very important and no one stated that it is unimportant. Along with technical vocabulary, reading and speaking skills are much more emphasized. 70% (22 out of 30) of them stated in the questionnaire that reading is very important. (Figure 3).

In the interview, a worker named N.H.A. from Minh Tran Electronic Company also confirmed that *“In my work, reading skill is very important and vocabulary is of great necessity”*.

#### 4.2.2. Topic selection

The table below deals with Question 10 in Questionnaire A and Question 14 in Questionnaire B.

**Table 1.** The choice of subject topics of electronic students and former electronic students in the ESP Course

Topics	Electronic students (N=50)	%	Former electronic students (N=30)	%
Digital input and output	38	76%	12	40%
Television technology	36	72%	9	30%
Audio and video transmission and reception	34	68%	17	56.7%
Alarm system	29	58%	20	66.7%
Semiconductor diodes	25	50%	11	36.7%
Transmission	25	50%	13	43.3%
Amplifiers	21	42%	8	26.7%
Digital communication	18	36%	7	23.3%
Test and measurements	13	26%	8	26.7%
Wave and wave forms	10	20%	5	16.7%
Oscilloscopes	8	16%	3	10%
Safety at work	7	14%	1	3.3%
Others	0	0%	0	0%

The topics in Table 1 are given by the subject teachers in the interviews. According to them, these topics are popular and the electronic students have to read many materials in English related to them. Furthermore, they are all in the subject curriculum for electronic students.

Data from the above table gives us overall information about the topic selection of both electronic students and the former ones. Although the choice of these two groups of informants has a little bit difference in percentage in each topic such as *television technology* (72% of the

former and 30% of the latter), some topics were chosen with high percentage by both. They are *digital input and output* (76% versus 40%), *audio and video transmission and reception* (68% of current students and 56.7% of former students), *alarm system* (58% versus 66.7%), *semiconductor diodes* (50% versus 36.7%). Moreover, *oscilloscopes* was chosen only by 16% of current students and 10% of former students and *safety at work* (14% of students, 3.3% of former students).

When being asked about which criteria he used to choose the topics for ESP course, a student from 16CDDT12 claimed that *“I think these topics are important for my major because I have learnt these issues in Vietnamese, then I want to understand further in English. To me, what was taught in Vietnamese is important, so I just chose the relevant topics in English.”*

A general English teacher admitted that *“Choosing what topics to teach in ESP is really hard because I was not trained to be a teacher of electronics. As a result, I often consult with Vietnamese instructors of electronics to have a suitable syllabus for students.”*

#### **4.2.3. Testing preference**

Question 14 in Questionnaire A is designed for the electronic Students' choice of testing forms. The survey showed that a majority of the informants (76%) preferred objective tests. 7 out of 50, accounting for 14% stated that they like oral tests. Only 10% considered that they are fond of subjective tests. In the in-depth interview, students confessed that they still liked doing objective test, especially multiple-choice test because this kind of test was easy for them to do and manage. Students did not like subjective test because they found ESP rather difficult and although they tried their best to study, they still did not have enough confidence.

Ms. H.T.H.T. - a teacher of English said that objective test was still a good method of testing for students at HIC. Students at vocational college did not have quite good ability of general English or ESP. Taking objective test would keep students less nervous and they could prepare themselves better for an objective test with the guidance for revision from teachers.

#### **4.2.4. Learning activity reference**

Question 11 in the Questionnaire A is designed for electronic students' selection of learning activities preference in the classroom in the ESP course. It is shown from the answers to the question that most of the electronic students at HIC are quite fond of group work activities in the classrooms. Remarkably, a large proportion of the informants (29 out of 50, making up 58%) like group work activities. Along with group work, pair work has the second highest percentage. 26% of electronic students stated that pair work was their favorite learning activity. Whereas, a small number of electronic students mentioned individual work and whole class work. Only 10% of the choices (5 out of 50) is for individual work and 6% is for whole class work.

#### **4.2.5. Learning assessment preference**

Question 15 in the Questionnaire A is designed for electronic students' choice of the assessment during the ESP course. It is revealed from the answers to the question that most of the informants are fond of end-of-course assessment plus on-going assessment in the ESP



course at HIC. According to the survey, a large number of students (34 of 50) accounting for 68% prefer end-of-course assessment plus on-going assessment. Whereas, 22% of them like on-going assessment and the rest (5 out of 10, accounting 10%) prefer end-of-course assessment.

Student H.A.T. from 16CDDT11 said that *“I like on-going assessment plus end-of-course assessment because it will help me focus and concentrate on my learning during the course. If there’s only a test at the end of the course, I think I will be lazy and lack motivation to study.”*

When being asked why he liked end-of-course assessment, H.D.A.T. - a student from 16CDDT12 revealed that *“I just want to take a final exam, I don’t have time to study during the course as I have to do my part-time job. I just can manage to spend time at the end of the semester to review for the lessons.”*

## 5. Discussion and implications

In the following part, the research results will be discussed in detail.

Firstly, as far as language skills required are concerned, depending on the students’ needs, all the elements of the language should be taken into consideration but at a greater or lesser degree. In the ESP course for ESs at HIC, reading and speaking should be much more emphasized. Ramadhani (2017) confirmed that teaching speaking for ESP classes is important. He also suggested that teaching speaking based on content-oriented input gives the students ammunition to prepare their oral speech by giving pre-teach vocabulary in reading or listening test as a series of teaching and learning activity before the students practicing the speaking in front of the class. By this method, the students feel more confident to share their ideas in front of the class as they have prepared for their speech in advance.

In terms of language areas, in the ESP course at HIC for ESs, technical terms should be much more focused. However, the role of grammar cannot be denied completely. *“To understand a material in English effectively, some factors affected such as terms, content, structures, etc. and to create the language which expresses what he wants to say, the learner must be able to use the rules of grammar”* (Cunningsworth, 1986, p.18). Therefore, grammar should be taught but at a smaller proportion, compared with technical vocabulary.

With regard to the theme selection in the ESP course, twelve themes selected from the interviews with 5 subject instructors were put in the preference order suggested by ESs and FESs. The choice rate of each theme is not greatly different from one another.

Student grouping in the ESP course for ESs should be designed for groups or pairs rather than for individuals or the whole class. It can be perceived that the use of group work has a number of positive effects on some specific learners and difficult task to some extent that we cannot ignore (Ahmed, 2013). It was thought that group work and pair work activities could increase students’ motivation and develop their confidence as well as independence in learning.

As far as testing form is concerned, objective test should be designed to assess ESs’ achievement in the ESP course. In the interviews with five English teachers, they stated that they often use objective tests for on-going assessment as well as end of course assessment and the Electronic students are quite familiar with it, which is a vital factor that Graves mentions

about organizing test. “An important factor to keep in mind is that students need to learn how to use any assessment instrument, whether it is peer feedback or a multiple-choice test” (Graves, 2000, p. 212).

Last but not least, the sources of English materials for the ESP course are concerned, web page source is preferred by the subject instructors. Besides, there are some other sources that the ESs should consult such as manuals or ESP journals.

## 6. Conclusion

The results of this research specified the important consideration for ESP course to be designed at HIC. Both ESP and technical qualifications are both necessary for graduate students to have a good job and gain success in their career. After conducting survey by means of questionnaires, interviews and material analysis, the fundamental content of the ESP syllabus such as the purposes of learning ESP of ESs; the themes; language skills and language areas; student grouping and testing form for ESs at HIC has been formed and will be used as the basis for designing a real ESP syllabus.

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## KHẢO SÁT NHU CẦU NGƯỜI HỌC HƯỚNG ĐẾN THIẾT KẾ CHƯƠNG TRÌNH TIẾNG ANH CHUYÊN NGÀNH CHO SINH VIÊN NGÀNH ĐIỆN TỬ TRƯỜNG CAO ĐẲNG CÔNG NGHIỆP HUẾ

**Tóm tắt:** Thiết kế giáo trình tiếng Anh chuyên ngành (TACN) cho sinh viên nhằm đáp ứng nhu cầu làm việc là vấn đề rất cần thiết. Nghiên cứu tập trung vào nhu cầu học của sinh viên Điện tử (SVĐT) trường Cao đẳng Công nghiệp Huế (HIC) nhằm thiết kế chương trình học TACN. Đối tượng nghiên cứu gồm 50 SVĐT, 4 giảng viên tiếng Anh, 5 giảng viên Điện tử tại HIC và 30 cựu sinh viên đang làm việc tại các công ty, nhà máy trong và ngoài nước. Dữ liệu được thu thập chủ yếu qua phỏng vấn và phiếu điều tra. Kết quả cho thấy nhu cầu của sinh viên về tiếng Anh chuyên ngành như mục tiêu, kỹ năng, chức năng ngôn ngữ, chủ đề, hình thức kiểm tra.

**Từ khóa:** Nhu cầu học, phát triển chương trình học, tiếng Anh chuyên ngành