

Awareness of Needs and Its Effects on ESP Learning¹

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1. Introduction

There has been much research claiming that ESP (English for Specific Purposes) education is effective because it is clearly related to the learners' future occupation and it meets their needs. However, no empirical study has investigated how learners' awareness of their own needs for English in their future occupation can contribute to the effectiveness of ESP education. When we discuss the effectiveness of English teaching, we can not avoid dealing with motivation since there is no denying that motivation plays an important role in promoting effectiveness. The purposes of this paper are to discuss how needs analysis in ESP can affect learner motivation, and to conduct an empirical study analyzing the relationships between learners' awareness of needs for English usage in their future occupations and its effects on ESP learning. Finally this paper suggests how awareness of needs can promote effectiveness in ESP learning.

2. Needs analysis and motivation

2.1 Classification of motivation

Motivation theory has a focus on how motivation to learn is induced, and a broad distinction is made between intrinsic motivation and extrinsic motivation² (Hatano & Inagaki, 1971; Ichikawa, 2001; Ishizaki, 1995). Intrinsic motivation, which means that learners find satisfaction with learning itself, is more vital in teaching (Arai, 1995; Ichikawa, 2001; Sakurai, 2004; Tatsuno, 1989). It is said that self-determination can promote intrinsic motivation (Deci, 1980; Swann & Pittman, 1977; Zuckerman, et al., 1978), and Ishizaki (1995) claims that it is possible that people are intrinsically motivated by procedures which promote self-determination. As for the role of teachers, Hatano & Inagaki (1971) claim that teachers are responsible for directing learners to be intrinsically motivated. Because there are many factors involved in learning motivation, Sakurai (2004) insists that it is not possible to classify learning motivation just by whether it is intrinsic or extrinsic. Some studies claim that extrinsic motivation can be converted into intrinsic motivation (Arai, 1995; Ichikawa, 2001; Tatsuno, 1989), and another study states that extrinsic motivation is connected with intrinsic motivation (Hayami, 1993).

2.2 Social factors in learning motivation

As discussed above, there is no simple distinction between intrinsic motivation and extrinsic motivation. Now let us consider how learners are motivated from social perspectives which have a strong connection with ESP education.

Ichikawa (2001) stresses that “aspiration for practical use” plays an important role in promoting learning motivation. “Aspiration for practical use” means that learners study with the intention of utilizing what they have learned in their future. Ichikawa claims that teachers should convince learners that what they are studying now is vital for their future. Similarly, Arai (1995) mentions that, in order to promote learner motivation, learners should be shown how they can make use of what they have learned in real society. Wlodkowski (1985) also claims that learners can be motivated very highly, if they feel they need to learn what they are studying, and that teachers should be sensitive to learners’ “wants.” As for the learning motivation of Japanese children, Sakurai (2004) says that there is no clear distinction between intrinsic motivation and extrinsic motivation, and that the classification from the perspective of whether or not it is voluntary learning is important. Sakurai explains voluntary learning with the example of students who study very hard to pass the entrance examination of a school they want to enter. Sakurai named such motivation “socialized intrinsic learning desire.” Learners have “socialized intrinsic learning desire” when the aim of their study has a great importance in their socialization, and thus promotes voluntary learning. It is therefore reasonable to suppose that teachers, in order to promote learner motivation, should make learners aware of the significance of their learning to their future.

2.3 Function of learning motivation in needs analysis in ESP

This section reconsiders needs analysis in ESP from the perspective of motivation theory, revealing how needs analysis works to promote learner motivation.

2.3.1 Perspectives of “discourse communities”

ESP courses should be designed to meet the specific needs of learners and the learners’ present or future “discourse communities”³ (Swales, 1990), which are considered social groups of people with common goals. Therefore, ESP’s special focus on social activities can provide English education which is connected with society, and can contribute to promoting “socialized intrinsic learning desire” discussed earlier. Moreover, if learners are aware that they can utilize in the future what they are learning now, the education bears utility, leaving learners motivated with “aspiration for practical use.”

2.3.2 Contribution of awareness of needs to intrinsic motivation

In ESP education, teachers analyze the needs of learners’ future occupations. Therefore, learners who are not aware of these needs can get the information from the teacher. In the beginning of an ESP course, learners may not voluntarily study the

English related with their future occupation, but rather study just because their teacher tell them to: their learning behavior is induced by the extrinsic factor as the approach of the teacher. As the English course proceeds, the learners gradually know more about their future discourse community and are more aware of its needs. Then, they will go to the next stage where they can be motivated based on “socialized intrinsic learning desire,” and “aspiration for practical use.” If they can proceed far enough to analyze the needs by themselves, they can be intrinsically motivated through special intellectual curiosity⁴.

2.3.3 Application of learners’ needs to the contents of a course

For effective ESP education, teachers should analyze learners’ needs as well as the needs of discourse communities, and then apply the results of the needs analysis to the education. Usually learners’ needs mainly consist of their present situation (present English skills), and their “wants” concerning contents of the course, learning style, and teaching methodologies. If teachers can apply some of the needs of learners to their education, the contents will interest the learners. They can also give the learners a sense of self-determination which leads to intrinsic motivation. Since learners decide the contents of the lesson themselves, they naturally feel responsible for studying in the lesson, and this can lead to learner autonomy.

As we have discussed above, needs analysis in ESP can contribute to learning motivation, but it is important that learners are aware of the needs themselves. Among many studies on awareness of needs, Dickinson (1987) points out that learners are not aware of the needs, and Allwright (1982) suggests that teachers should make learners aware of their needs. Similarly, Iwai (2005) discusses the importance of making learners aware of their needs from the perspective of marketing theory, which makes people aware of needs by the systematic approach of marketing strategy.

Thus much research claims the perspective of society can develop motivation, which improves the quality of learning, but no empirical study has investigated how the learners’ awareness of needs can contribute to the effectiveness of ESP education. This paper will analyze and discuss how the degrees of awareness of needs for English usage in the future can affect the effectiveness of ESP education.

3. Effects of awareness of needs on ESP learning

ESP education for 209 sophomore students in the food science and nutrition department was provided at a certain university by the author. The students studied with the intent of becoming nationally registered dietitians after their graduation.

3.1 Needs analysis

ESP teachers should be interested in the subject the learners are studying, and should have a basic knowledge of the field (Miyama, 2000; Terauchi, 1998). This knowledge can be regarded as information which consists of the needs of ESP

education, because this information can be used in English teaching. Therefore, the author observed some of the classes in the students' department and interviewed some of the subject teachers.

3.1.1 Syllabi of the department

The syllabus analysis can provide the holistic picture of the education of the department the students belong to. After such subjects as basic science, social welfare, and food coordination in the first year, the sophomore students study more specialized subjects such as food education, applied nutritional science, and food science, which are strongly connected to their future job. As for the English education in the department, there was no compulsory English course designed for the students in the first year. The syllabus analysis revealed that there were not very specific subjects for the sophomore students, but they learned some basic knowledge of their major subjects since their first year. The analysis suggested that the ESP education should not be very specific, but more generalized: general-specific ESP. It also suggested that some basic English skills should be taught in the English course to fill the one-year absence of English education in the university.

3.1.2 Observation of students' major subjects

In order to know what the students were actually studying, the author participated in some of their subject classes. Among the classes which the author was allowed to observe, the following three were chosen: "Health Care" (for sophomores), "Basic Biochemistry" (for freshmen), and "Public Dietetics" (for sophomores). The author participated in each class for 90 minutes. It was a limited time for observation, but definitely a valuable opportunity to know the students and get basic knowledge of their subject matter. In the observation, all students looked eager to study their subjects. Basically, they appeared to have a strong desire for becoming dietitians, which was why they had chosen to enter this particular university. It seemed quite probable that an English course based on their subject could further motivate students. Also, the subject knowledge learned through this class observation was utilized in the ESP course design. Moreover, acquaintance with some of the subject teachers through the class observation enabled the author to consult with them when there was a need for the information about the subject in teaching the ESP course.

3.1.3 Interview with subject teachers

Some of the subject teachers in the students' department were interviewed to investigate the needs of the discourse community. The questions were "What are the needs for English in the students' future job as dietitians?" and "What English skills are needed for the job?"

1) Teacher A

Dietitians will need English more than ever. They need to search for

information on the Internet, but if they do so only on Japanese web sites, the amount of information they can get is limited. Therefore, they need to make use of sites written in English. I saw many dietitians at work use software to translate English web sites, and if they found the translation strange, they consulted a dictionary and made a better translation. I think it also important to acquire skills to use such software. Students who have an allergy to English will have difficulty even in learning to use such software.

This opinion was based on the teacher's experience working with dietitians. He stressed the importance of web sites written in English as an information source, and the necessity for skills in utilizing translation software. In order to avoid students' English allergy, the students needed to find that learning English can be enjoyable, and to gain confidence in using English. In addition, it seemed necessary to teach the students how to study English by themselves in order to make it easier for them to tackle English problems.

2) Teacher B

The students definitely need English. Especially in the graduate school.

This teacher insisted the importance of English ability for graduate students. However, his words "especially in the graduate school" imply that undergraduate students also need English skills to some extent.

3) Teacher C

The students need English because they must get information through the Internet. They can gradually read English for their specialty, because the vocabulary is limited. However, getting more general information could be more difficult. For example, it took the students a lot of time when they tried to read and understand web pages of WHO (World Health Organization) and FAO (Food and Agriculture Organization of the United Nations) in my class. They lacked the basic English vocabulary necessary to understand the web sites. Besides, they'll need English anyway whatever they'll do.

This teacher pointed out that English for the students' specialty is not very difficult if they have many chances to use the specific vocabulary items and that it is more difficult for them to get information from more general English texts on the Internet. It is worth noting that he claimed that before reaching the specific information of the students' major field, they are required to use general English skills.

3.1.4 Student questionnaire prior to the task

Questionnaires were distributed to the students prior to the task. There were questions regarding their perceived needs for English and for using computers, and

their current abilities in English and computer usage.

3.1.4.1 English usage

1) Liking for English (n = 204)

This question was regarding whether and how much they like English. The choices and the percentage of the students who chose each choice are as follows; "Like English very much" (13.2%), "Like English" (37.7%), "Don't know" (22.5%), "Don't like English very much" (20.1%), "Hate English" (6.4%). Although many students answered they "Like English" (37.7%), the second most frequent answer was "Don't know" (22.5%), and the third was "Don't like English very much" (20.1%). The results showed that there were some students who did not like English, and they should be paid special attention to in teaching.

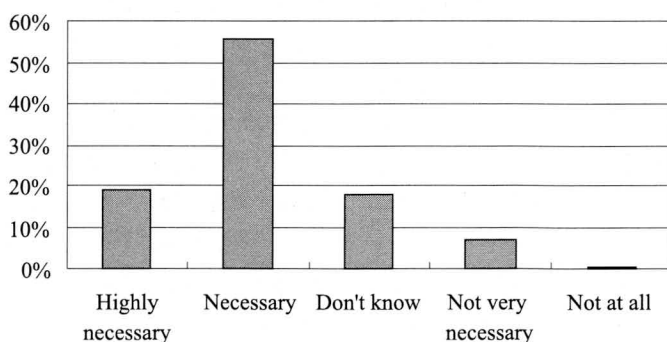
2) Perceived ability in English (n = 204)

This question investigated whether and how much the students felt they were able to use English. Again, there were five choices from "Excellent" to "Poor," and the most frequent answer was "Not very good" (38.2%), the second was "Fair" (35.3%), and the third was "Poor" (19.1%). There were not so many students who answered "Excellent" (1.0%) or "Good" (6.4%).

3) Perceived needs for English in the future (n = 204, Fig. 1)

This question was intended to find out the students' awareness of needs for English in their future job. The most frequent answer was "Necessary" (55.4%), and the second was "Highly necessary" (19.1%). There were much fewer students who answered "Don't know" (18.1%), "Not very necessary" (6.9%), or "Not at all" (0.5%). (See Fig. 1) Therefore, it is reasonably assumed that most of the students were aware of the needs for English in their future job, although they varied in the degrees of their awareness.

Fig. 1 : Perceived needs for English (n = 204)



3.1.4.2 Computer usage

1) English study by using computer (n = 197)

The students answered as to the degree they wanted to use materials such as text

books, audio materials, video materials, and computer materials. There were five choices such as "Want to use very much," "Want to use," "Don't know," "Don't want to use very much," and "Never want to use." For each item the numbers of answers for "Want to use very much" and "Want to use" were totaled. The material for which the most students answered "Want to use very much" or "Want to use" was audio materials (75.2%). The second most popular material was video materials (73.6%). Only 46.2% of the students favored computers as materials for English study, just a little bit more than text books (42.8%). The reason for these results could be that students did not have much experience learning English with help of a computer, while they were familiar with the usefulness of audio and video materials in learning English in junior and high schools. Therefore, they evaluated audio and video materials more highly than computer materials.

2) Frequency of computer usage (n = 204)

The students were asked how often they refer to web sites in order to investigate how familiar they are with web sites. The most frequent answer was "When needed" (70.6%). The other results were "Often" (22.5%), "Not so often" (4.4%), and "Never" (2.5%) out of 204 respondents. Therefore, most students were familiar with web pages and had at least basic knowledge and ability with computers.

3) Computer abilities (n = 204)

This item had the students perform a self-evaluation of their computer abilities. There were five choices: "Excellent," "Good," "Fair," "Not very good," and "Poor." More than half of the students (54.9%) answered "Fair," and the second most frequent answer was "Not very good" (21.1%). Other answers were "Excellent" (2.5%), "Good" (17.2%), and "Poor" (4.4%). These results show that many students need to be instructed on how to use a computer, when they are required to do a task with it.

4) Liking for computer usage (n = 204)

This question tried to find out the level of motivation to learn English by using computers. There were five choices for the question: "Like computers very much," "Like computers," "Don't know," "Don't like computers very much," and "Hate computers." The most frequent answer was "Like computers" (47.5%), and the third most frequent answer by the small difference from the second was "Like computers very much" (21.1%), while the second most frequent answer was "Don't know" (22.1%). Moreover, there were only few students who answered "Don't like computers very much" (8.3%), or "Hate computers" (1.0%), and it was quite likely that a task requiring the use of a computer would be welcomed by most students.

5) Needs for computer skills as a dietitian (n = 204)

This question was asked to investigate if they felt that they would need computer skills as a dietitian in the future. There were five choices: "Highly necessary,"

“Necessary,” “Don’t know,” “Not very necessary,” and “Not at all.” The most frequent answer was “Highly necessary” (68.1%), and the second most frequent answer was “Necessary” (29.9%), while there were no students who chose the answer “Not very necessary,” or “Not at all.” This results showed that majority of the students strongly perceived the needs for computer skills as a dietitian in the future.

3.2 Content of the task

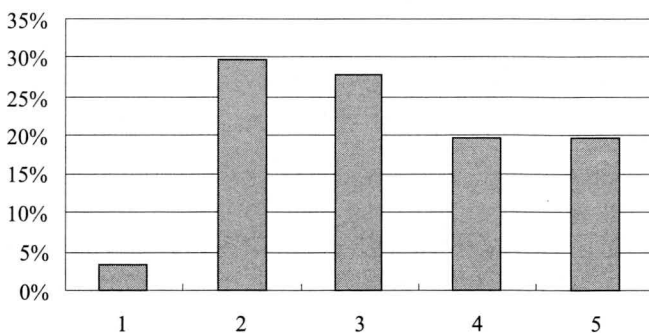
The results of the needs analysis above revealed that the subject teachers and the students had the same perception that both English ability and computer skills were needed in their present study and future jobs as dietitians. Although some of the students claimed that they were not skillful at computers, they liked using computers. Therefore, the author decided to set up a task in which students work with computers. As ESP education often utilizes authentic materials, Noguchi (2004) conducted ESP education where she let her students make a presentation after utilizing web resources and analyzing genre. Following some of her teaching methodology, the author had the students search web sites for information to complete their project in which they made a presentation on their specialty. Before the students tackled the task, the author instructed them how to search web sites for the information they wanted, and how to make an effective presentation. The students were advised to make their presentation in the same style as a research paper. It made a good practice for those who were going to write a graduation thesis in a few years.

3.3 Relationship between evaluation of the task and awareness of needs

3.3.1 Evaluation of the task by the teacher (n = 209, Fig. 2)

The evaluation of the presentation task by the teacher (the author) was from “1” to “5,” with “1” representing basic ability, and “5” representing near mastery. Presentations were evaluated based on oral communication skills (in English or Japanese), organization of the contents, and the quality of presentation slides. The results fell along the following distribution: “1” (3.3%), “2” (29.7%), “3” (27.8%), “4” (19.6%), and “5” (19.6%). (See Fig.2)

Fig. 2 : Teacher’s evaluation (n = 209)



3.3.2 Correlation between teacher's evaluation and students' awareness of their needs for English

As shown in Table 1, there is a significant correlation ($p < 0.05$, $r = 0.162$) between the evaluation of the task by the teacher and the students' awareness of their needs for English in the future. The result showed that the more the students were aware of the needs for English in the future, the better their evaluation of the task were. However, there are no significant correlations between the task evaluation and their perceived English ability or liking for English.

The results show that if students feel strong needs for English, they can be motivated to study English, and educational effectiveness is also promoted. This seems to have nothing to do with the present perceived ability of English or their liking for English. Therefore, it follows that the awareness of needs can help students to conquer their negative attitude toward English learning. These results also encourage ESP teachers to guide their students to become aware of their needs for English in their future occupation.

Table 1: Correlation Matrix

		(1)	(2)	(3)	(4)
(1) Teacher's evaluation	Pearson Correlation	1.00	0.162*	0.134	0.110
	Sig. (2-tailed)		0.021	0.055	0.116
	N	209	204	204	204
(2) Awareness of needs for English	Pearson Correlation		1.00	-0.005	0.080
	Sig. (2-tailed)			0.942	0.253
	N		204	204	204
(3) Perceived abilities of English	Pearson Correlation			1.00	0.593**
	Sig. (2-tailed)				0.000
	N			204	204
(4) Liking for English	Pearson Correlation				1.00
	Sig. (2-tailed)				
	N				204

* Correlation is significant at the level of 0.05% (2-tailed).

** Correlation is significant at the level of 0.01% (2-tailed).

4. Conclusion

This paper argued theoretically the kind of role needs analysis in ESP can play on learner motivation, and went further to analyze how awareness of needs for English can impact educational effectiveness. There was a significant correlation between the evaluation of the task by the teacher and the students' awareness of the needs for English in the future, while there were no significant correlations between the task evaluation and perceived English ability or liking for English.

However, this study has two limitations. One is regarding the decision of students' awareness of needs: it was measured by a single question about their perceived needs

for English in general for their future job. The questionnaire research did not deal with awareness of specific needs the students may encounter in their target discourse community. Further research is needed to explore students' awareness of specific needs based on thorough needs analysis of English usage in the students' future job. Student questionnaire should also be well designed to investigate students' needs and their awareness of needs. The other limitation is the way of judging the educational effectiveness. It was based on only the teachers' evaluation of the task, but in order to probe educational effectiveness precisely, the results of English tests before and after ESP lessons must be compared.

The results of the study, however, suggested a possibility that awareness of needs can help students to conquer their negative attitude toward English learning. In many cases, students who do not like English, or who think their English skills are poor, are difficult to motivate to study English hard. However, the results of the study show that such problems in English teaching can be solved by making students aware of their own needs. It is very important that students know that they need English in their future. Thus, the case study of this paper proves the theoretical discussion that social factors can lead to intrinsic learning motivation.

As discussed above, one of the main issues of this paper has been learning motivation, and the motivated learning observed in this case study can contribute to learner autonomy. Wlodkowski (1985) claims that learners who complete a learning experience and leave the situation feeling motivated about what they have learned seem more likely to maintain interest in what they have learned and are thus more likely to use it. Learners need to keep studying English to pursue their job appropriately as long as they do the job. Therefore, learners must study English by themselves to meet their own needs for English and must be responsible for their own English learning by filling in the gap between their English ability and the requirements of their target situation. Thus, a motivated learning experience induced by awareness of needs can help students to develop learner autonomy towards their future study.

The study of this paper also addresses an issue of the teachers' role in making their students aware of the needs in order to promote educational effectiveness. This is a case study of ESP education provided for the students of the food science and nutrition department, and the students basically had a strong sense of a specific future job as a dietitian. Therefore, they can easily be aware of their needs for English. In the case of a general business English class, it would be more difficult for students to know what kind of things they are going to do in their future job, because they have not decided upon a specific job. Most English teachers, however, do not have experience working in jobs other than teaching (Garcia, 2002), and it may be difficult for such teachers to provide information about business. Recently, universities, which try to provide practical education, have more and more teachers with working experience in the business world, and if ESP teachers can team-teach with them, or get some assistance from them, it will help them to make the students aware of their needs for English in business.

While there is much research on methodologies in needs analysis and the analysis of needs, the research on how teachers can make learners aware of their own needs is needed. This is one of the vital issues in order to promote effectiveness of ESP education.

Notes:

1. This paper is a modified version of a paper presented at the JACET Annual Convention held at Kansai Gaidai University on Sep. 9, 2006.
2. Extrinsic motivation refers to motivation which drives people to do something by external factors such as rewards and pressures (Tatsuno, 1989).
3. Swales (1990) defines a discourse community as having six characteristics: an agreed set of common public goals, mechanisms of intercommunication among its members, participatory mechanisms, one or more genres in the communicative furtherance of its aims, specific lexis, and a threshold level of members. He stresses that the communicative needs of the goal decide the characteristics of a discourse community (pp. 24-27).
4. Hatano & Inagaki (1971, 1973) divided intellectual curiosity, which humans have by nature, into two categories: special intellectual curiosity and spreading intellectual curiosity. Special intellectual curiosity is brought about when people notice that they do not have enough knowledge and they seek it until they can fill the lack. Spreading intellectual curiosity does not have a specific direction but helps people to have balanced knowledge.

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