

*The Efficacy and Implementation of the ESP Approach:
Assessment of ESP Textbook for Physical Therapy*

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Abstract

In response to university reform movement in 1991, in which deregulation of the University Establishment Standards is executed, a popular practice in many Japanese universities has been to design and implement English for Specific Purposes (ESP) programs. One of the difficulties encountered in doing this is finding appropriate ESP textbooks. The purposes of this study include introducing our university original ESP textbook for Physical Therapy (PT) and revealing students' perceptions of the relationship between English learning and the textbook. Data include descriptions of the textbooks and the results of a questionnaire survey in which 108 PT majors participated. Survey data were stored in SPSS software and analyzed through descriptive and inferential approaches. The data seem to justify the efficacy of the ESP textbook for current English language instruction. However, although the textbook writers carefully chose topics that they believed would be interesting for students and match the needs of the field as well as the course goals, the study found that the writers' beliefs do not always match with students' interests. For example, some students labeled certain topics as very boring. The study suggests that topics need to be carefully examined and selected for the next textbook revision. The contents in the textbook are modified and revised every year so that it becomes practical and updated. In order to motivate students, their needs and interests should be taken into account. Moreover, collaboration between faculty in the related field and language teachers is a key for improving the ESP textbook.

Keywords: ESP approach, ESP textbooks, physical therapy, students' perceptions

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Introduction

English for Specific Purpose (ESP) is an approach used for teaching English oriented for specific purposes in specific fields. ESP is designed to help learners master relevant vocabularies, expressions, and other communication requirements needed in specific fields so that they can gain relevant communication skills and function well in those fields. It has gained interest due to globalization. In Japan, the Ministry of Education, Culture, Sports, Science & Technology of Japan (MEXT), has been working on enhancing English education throughout its educational system to improve Japan's competitiveness in the global business market as well as prepare for the upcoming 2020 Tokyo Olympics. At the tertiary level, MEXT has been focused on liberalization, deregulation, and increased institutional autonomy since the reform in 1991, in which MEXT executed deregulation of the University Establishment Standards. The shrinking number of applicants has led to many universities lowering entry standards. These universities have to deal with a variety of students in terms of their English proficiency, motivation, and future goals and occupational fields. In such situations, new methods and materials for teaching English have been sought, and ESP is believed to be beneficial and useful for students and their futures. It is also considered as a good strategy to prove institutional productivity and efficacy. Currently, a growing number of universities are implementing ESP in their curriculum to prepare students to function well in their future occupational fields as well as in the global society.

Problem Statement

Having appropriate materials is crucial to leading a successful ESP program. One of difficulties in designing and implementing an ESP program is to find appropriate ESP textbooks. ESP textbooks should be matched with students' language proficiency levels and their knowledge in the specialized field along with authentic and updated materials. In many cases, the ESP instructors responsible for the decision making on the materials actually have limited content knowledge or experience in the specific fields. In such cases, commercially available textbooks are helpful; in a few cases, universities create their own original ESP textbooks on which language experts and experts in the fields collaborate.

Significance of the study

Although the ESP approach is beneficial and useful, few appropriate ESP textbooks are available in rehabilitation fields. In such a situation, our university created English textbooks with a collaboration of English teachers, subject teachers, office workers, and students in 2008. There are four types of textbooks: English I textbooks target the first year students majoring in physical therapy, occupational therapy, and welfare, and psychology. The English II textbooks target the second year students, and they are major-specific textbooks with three versions for Physical Therapy (PT), Occupational Therapy (OT), and Welfare and Psychology (WP) majors.

The current study evaluates the ESP approach by studying its implementation in a PT course through the introduction of our original ESP textbook. It also intends to reveal students' perceptions on the textbook and instructions. The textbook is revised every year, responding to the needs of students and for updating materials. However, the

systematic review of the textbook has been performed only once, the year after the first textbook was published. According to the results of the placement tests, the English proficiency level of students has been steadily decreasing, mainly due to the decrease in applicants. In order to respond to such a situation, a need-analysis regarding the textbook and instruction is necessary. Analysis of students' learning and perceptions could provide useful guidelines for examining whether the textbook and instruction match with students' needs as well as measuring attainment the textbook's aims. Since a few university produced original ESP textbook for physical therapy major are available for review, this research will hopefully provide a stepping-stone for those planning to create or review ESP textbooks in similar fields.

The purposes of this study

The target university has provided content-based instruction using original ESP textbooks for the past ten years. During this time, the university has observed the issues related to students' decreasing levels of English proficiency. Thus, it is urgent to review the current English curriculum, including instruction and the textbook. This study examines whether the aims and the contents of the textbook and instruction would meet the aims of an English curriculum as well as students' needs and interests in this context. Ultimately, this study would provide a reassuring guide to improving not only our program but also other programs in similar fields.

To achieve the above stated purpose, the following two objectives were formulated. The study set out to

1. Obtain information on students' perception and attitudes toward English learning and ESP; and
2. Obtain information on students' perceptions of the textbook and current English instruction

Research design

To achieve two objectives, the questionnaire consisted of four multiple-choice questions and 11 Likert-scale questions. Open-ended questions were included at the end of the questionnaire to obtain individual opinions and suggestions for the textbook and English classes (A copy of the questionnaire is available on request). The questionnaire was completed in class. The purpose of the study, students' confidentiality, and the right to accept or refuse participation were explained. Participants were also advised that responses would be anonymous and would not influence their grades. The data were stored in SPSS software for descriptive approaches, including rank/order, numerical interpretation, distribution, and frequency. At the same time, correlational analysis was employed to assess the relationship among variables.

Participants

The participants were 108 second-year students majoring in PT, including 79 males and 29 females.

English curriculum

English instruction at our university has followed the principles of Content Based Instruction (CBI) and English for Specific Purpose (ESP), using the original ESP textbook in an effort to improve students' practical English skills as well as their motivation. Almost all contents are written in English although the index page at the end contains Japanese translations.

English II-1 and II-2 are required courses for second-year students in the Health Science Department. There are 5 classes for English II, including two PT major classes, two OT major classes, and one WP major class. Classes consist of mixed proficiency level students. Each PT class has approximately 55 students. These classes use ERP specific major textbooks for PT, OT, and WP.

The aims of English II textbooks are to help students build basic communication skills; to improve other language skills needed in the field; and to broaden their knowledge of the terms, phrases, and expressions in the specific fields. Materials have been developed through the coordinated efforts of professionals in the areas of OT, PT, social welfare, psychology, and basic medicine. In this process, English instructors discuss with the instructors or professionals in the field to refine the content. Some materials are chosen from news and scientific journals, government organizations including World Health Organization (WHO), United Nations (UN), and broadcasters such as CNN, BBC. Dialogues are suggested by professors from the major fields.

Three ERP Part 2 textbooks include the same first three units as a common section for all majors, covering current topics in basic medicine and rehabilitation. The common units deal with major specific topics.

Contents of the textbook:

Units for Current Topics in Rehabilitation

Unit 1 Regenerative medicine & Rehabilitation

Unit 2 Brain & Its function

Unit 3 International Classification of Functioning (ICF), Disability & Health

Units for Physical Therapy

Unit 1 Stroke

Unit 2 Osteoarthritis

Unit 3 Parkinson's disease

Unit 4 Spinal Cord Injury

Unit 5 Diabetes

Unit 6 Lower Back Pain

Appendix

1. Medical terminology (Muscles)

2. Glossary

3. Physical therapy

The CD used for the listening portion of each lesson was recorded by native speakers.

Format of each lesson: Every textbook lesson is described in the unified format (1 and 2) and similar format (3 to 7) as follows.

1. Study Goals: Each lesson indicates study goals in terms of content, grammar,

terms/expressions, and skills and activities.

2. Key terms: Vocabulary lists which are the form of the quiz in which students required to match English and Japanese.

3. Pre-reading activity, Reading, and reading comprehension

4. Listening and listening comprehension

5. Grammar

6. Terminology (prefix, root, suffix for medical terms)

7. Expressions related to physical therapy

e.g., Body position, action, and instructions

Giving advice

Joint movement words

Range of motions

Anatomical terms and directions

Praise and encouragement words

Use of assistive devices

Adverbs of frequency

Muscles, bones, organs

Pains

Dialogues with patients

Additional contents: The followed contents are added and handouts are prepared.

Case studies (Sports injury and Physical Therapy)

Paragraph writing (Instruction for body movement)

Quizzes and final examinations

After each unit, students take a quiz. A study guide is prepared for the final examinations, which are administered at the end of each semester.

Grading system

Students are graded by the scores of the final examination (40%), quizzes (50%)and writing assignment (10%).

Conclusions

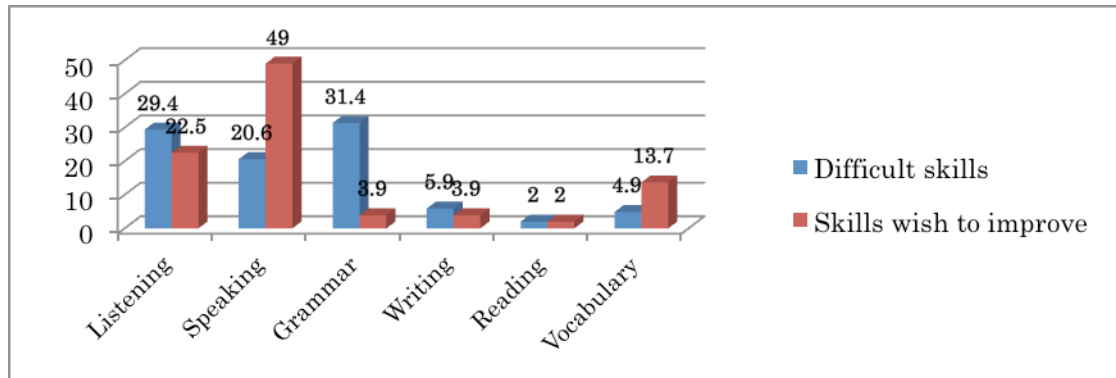
Findings

The results of the study address the two objectives of determining (1) students' perspectives of English skills and (2) students' perceptions of the textbook.

1. Students' perceptions of and attitudes toward English learning and ESP

Perception of English skills

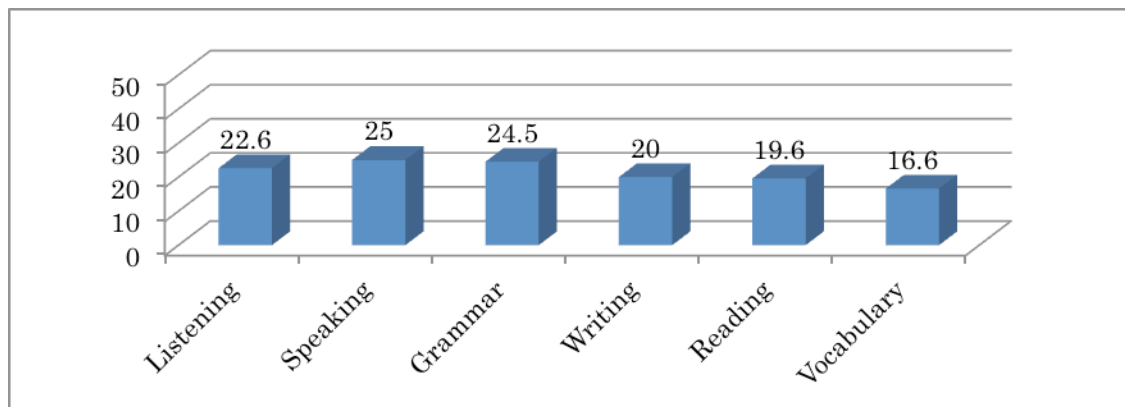
The following graph shows students' perception on the most difficult skills and skills students most want to improve. The number on the top of each bar shows percentages of the whole.



Graph 1 Difficult Skills and Skills to Improve

As indicated in the above graph (Graph 1), about one-third (31.4%) of students feel grammar is the most difficult skill, followed by listening (29.4%). Only 2% students claim reading skills as the most difficult one. Regarding skills that students want to improve, 49% of students want to improve their speaking skills the most, followed by listening (22.5%). The lowest responses were for reading skills (2%).

The following graph shows students' perceptions of improved skills, in response to a question asking which English skills improved through the year. Multiple answers were allowed for this question.



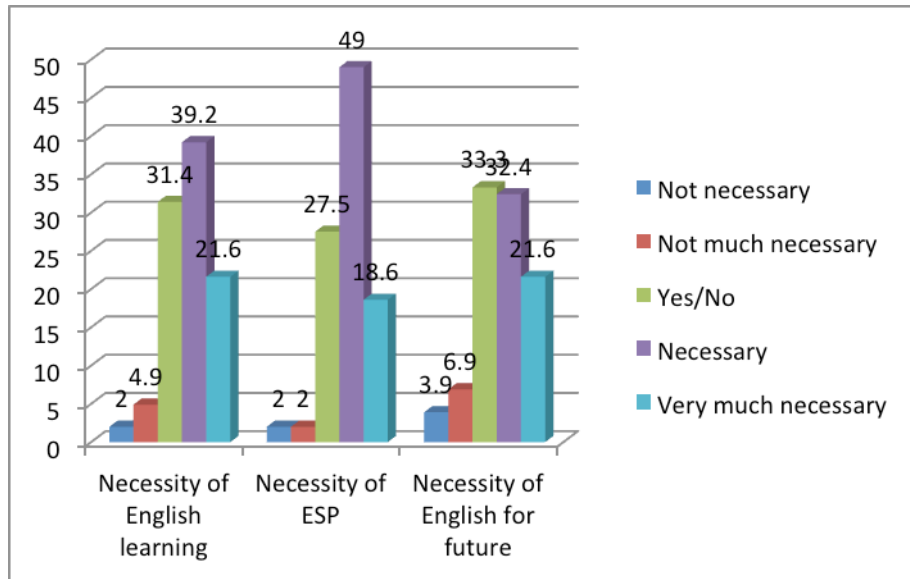
Graph 2 Improved Skills

All students responded that their English skills had improved after completing English

As indicated in Graph 2, about a quarter of the students believed their speaking skills and grammar knowledge had improved over the year, followed by listening skills (22.6%). On the other hand, fewer students (16.6%) reported that their vocabulary had improved.

Attitudes and perception toward English and English learning

Graph 3 reveals students' thoughts regarding the necessity of English learning, ESP, and English for future.



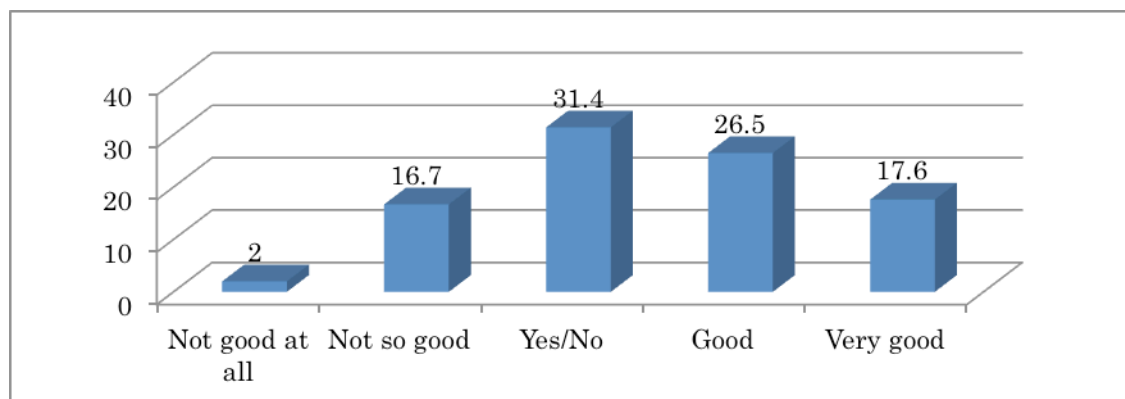
Graph 3 Students' Perceptions of English Learning

As indicated in Graph 3, more than half of the students believe that studying English is necessary (39.2% necessary; 21.6% very much necessary), that ESP is necessary (49% necessary; 18.6% very much necessary), and that English is necessary for their futures (32.4% necessary; 21.6% very much necessary).

2. Students' perceptions of the textbook and instruction

Textbook

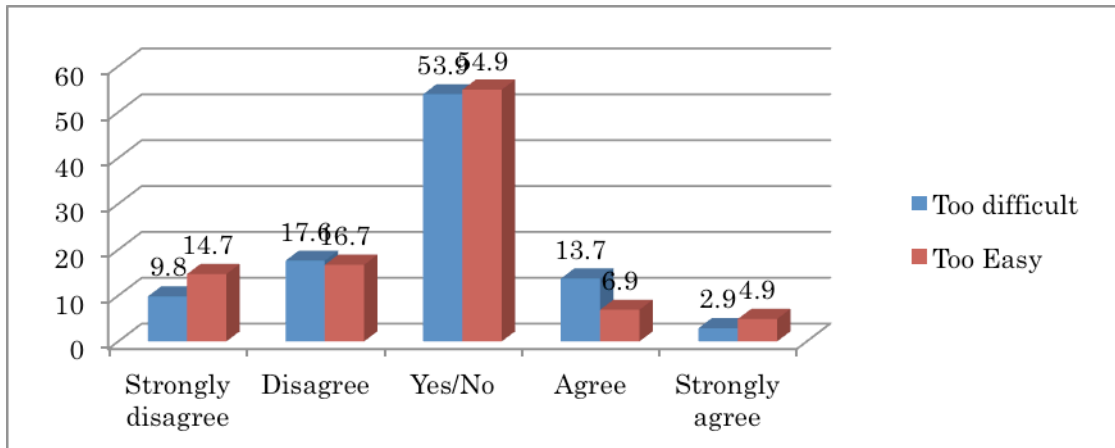
The ERP Part II is primarily written in English. Students were asked to judge the primarily English-language textbook. The graph below shows the result.



Graph 4 Students' Opinions of English-Language Textbook

As indicated in Graph 4, 18.7% students are not in favor of the textbook written in English.

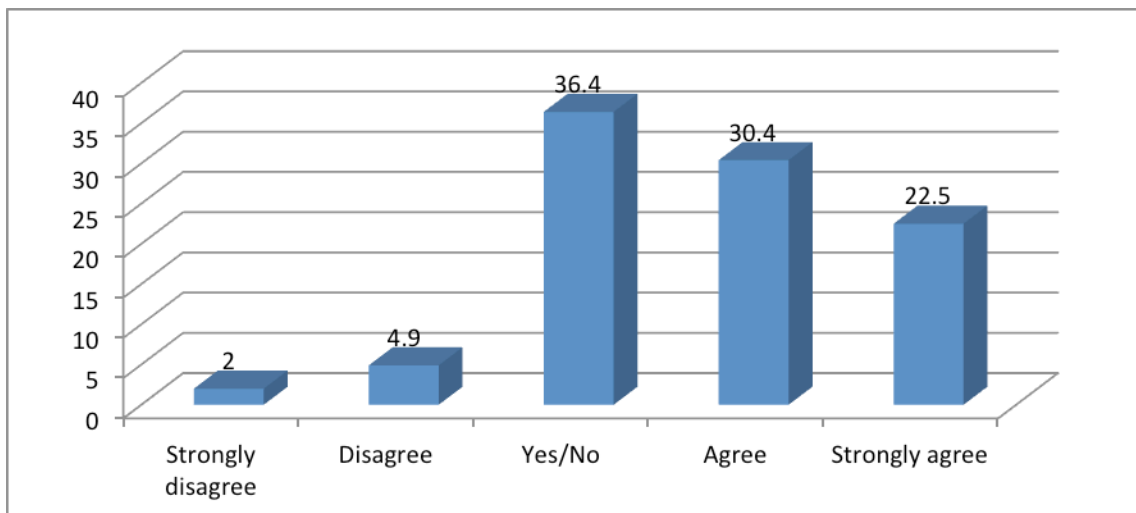
The graph below shows students' perceptions of the content of the textbook in terms of difficulty.



Graph 5 Students' Perceptions of Textbook difficulty Levels

As the above graph indicates (Graph 5), 16.6% (13.7% agree; 2.9% strongly agree), students feel the textbook is too difficult, and 11.8% (6.9% agree; 4.9% strongly agree) believe it is too easy.

The following graph shows how students' feel regarding the usefulness of the textbook.

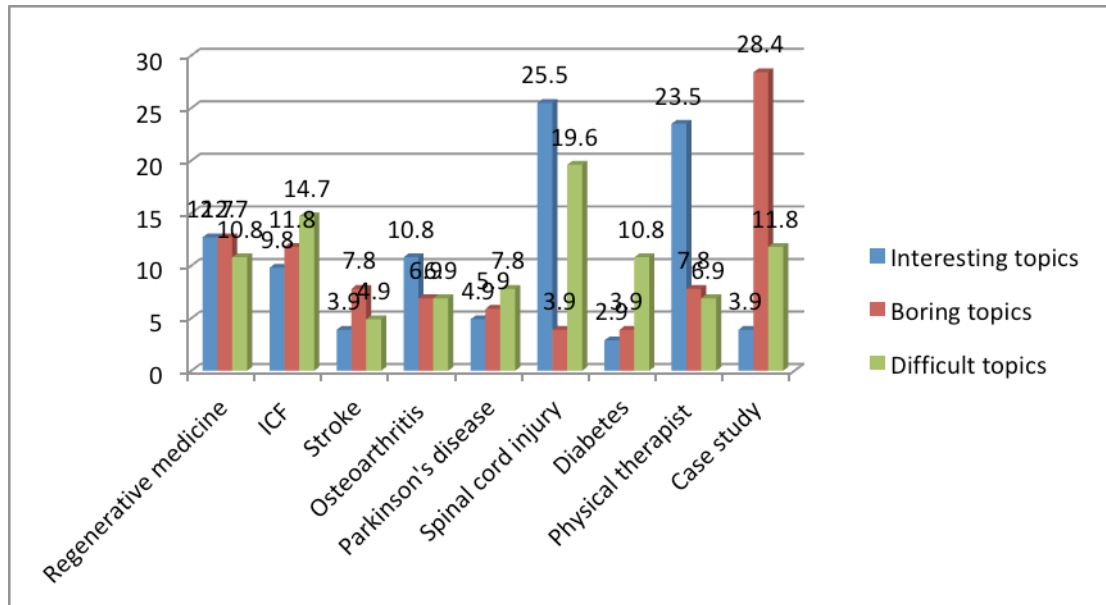


Graph 6 Student's Perceptions of Textbook Usefulness

As indicated in Graph 6, 52.9% (30.4% agree; 22.5% strongly agree) of the students reported that the textbook content is useful for their future.

The topics covered include Regenerative Medicine; International Classification of Functioning, Health, and Disability (ICF); Stroke; Osteoarthritis; Parkinson's disease; Spinal cord injury; Diabetes; Physical therapist; and Case studies.

The following graph shows students' responses on interesting, boring, and difficult topics.



Graph 7 Students' Perspectives on Textbook Topics

As Graph 7 shows, 25.5.1% of the students are interested in the topic of spinal cord injury, followed by physical therapist (23.5%). The topics judged as “boring” include Case study (28.4%) and Regenerative Medicine (10.8%). The students reported that the most difficult topic was Spinal cord injury (19.6%), followed by ICF (14.7%).

The following table shows the correlational analysis among variables (interesting, boring, and difficult topics).

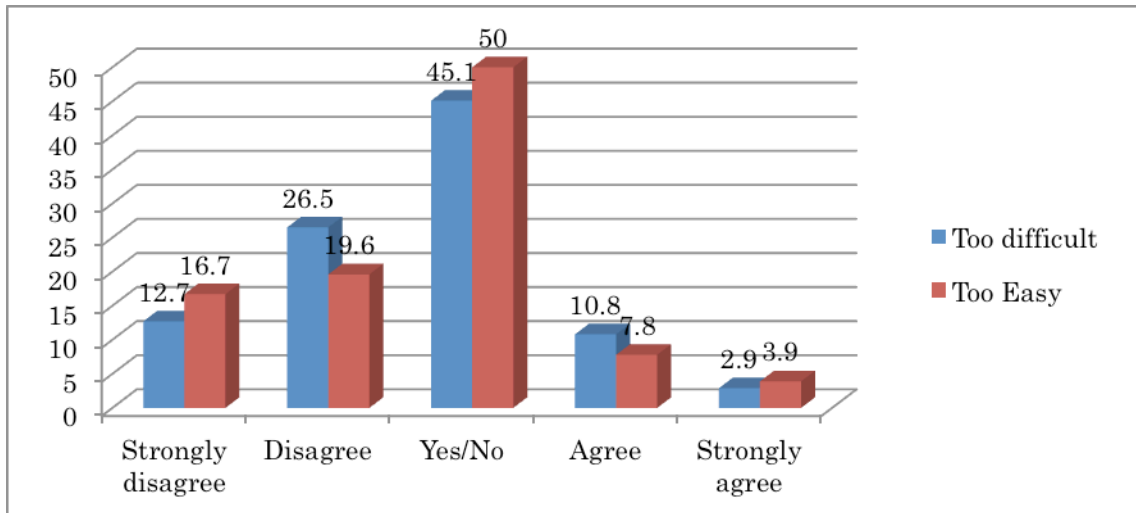
Table 1 Correlational Analysis of Topics

		Interesting	Boring	Difficult
Interesting	Pearson's correlation	1	-.135	.047
	Sig. (2-tailed)		.203	.647
Boring	Pearson's correlation	-.135	1	.096
	Sig. (2-tailed)	.203		.365

Pearson's correlation analysis confirmed there are no significant correlations among the three variables as indicated in Table 3.

Instruction

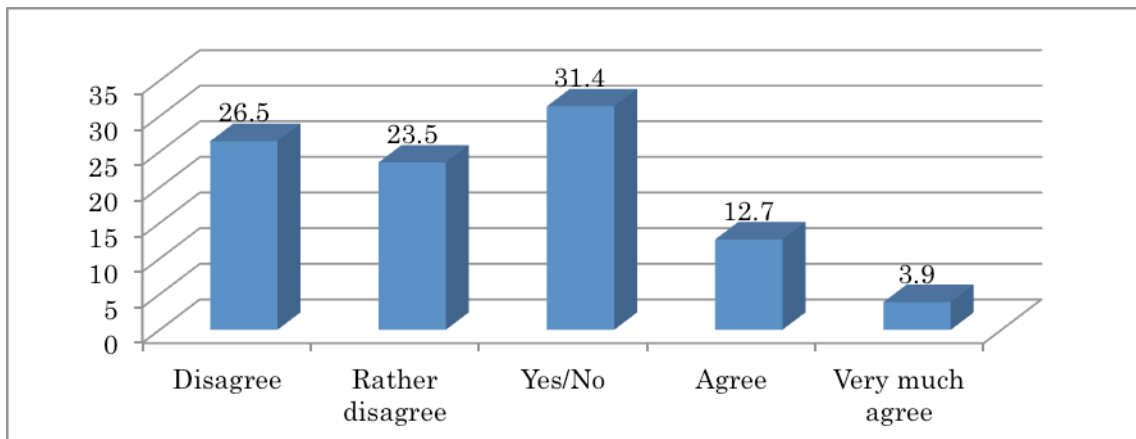
The following graph shows how students feel about the level difficulty of instruction.



Graph 8 Students' Opinions on Instruction Difficulty

As is shown in Graph 8, 11.7% of students (7.8% agree; 3.9% strongly agree) believe instruction is too easy, and 13.7% (10.8% agree; 2.9% strongly agree) perceive that the instruction is too difficult.

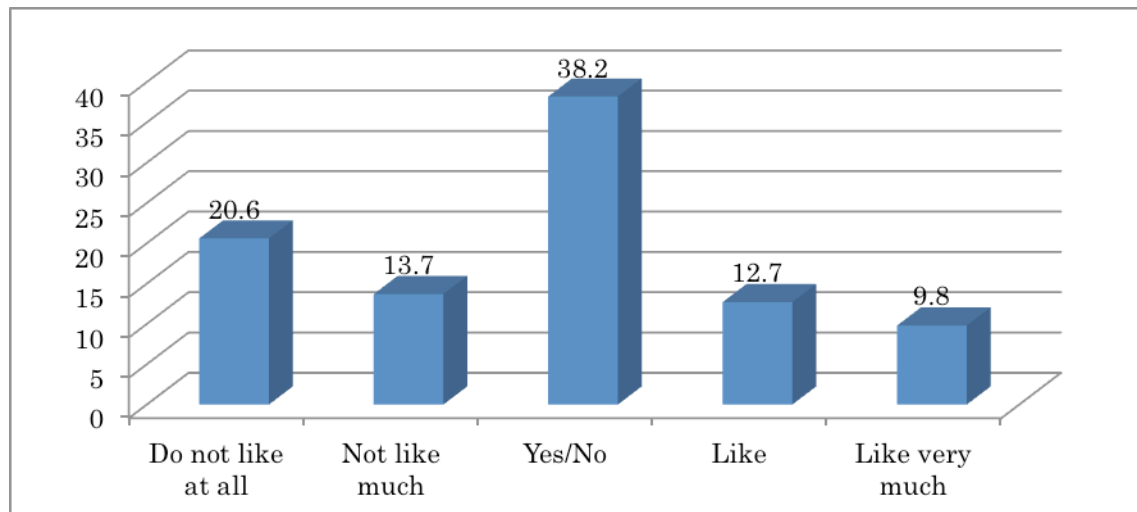
The next graph indicates how students view English as a Medium of Instruction (EMI).



Graph 9 Students' Perceptions of EMI

In terms of EMI, about half of the students (26.5% strongly disagree, 23.5% disagree) disagree with using this method.

English class involves a variety of activities for students to work in pairs or groups. Students were asked how they feel about such group or pair work.



Graph 10 Students' Perceptions of Group/ Pair Work

The results in Graph 10 indicate that approximately one third of students do not like group work.

Discussion and Implications

The study reveals that very few students believe the textbook or instruction is too difficult or too easy, which appears to confirm that the difficulty level is appropriate for the participants. When students were asked what skills they find difficult, the most frequent answer was grammar. However, only a few students want to improve this grammar skill. Instead, they want to improve listening and speaking skills, which are considered to be comprehension and self-expression abilities in communication. The research found that all students who responded reported that their English skills have improved since taking English II. During class, active learning strategies, which include grouped or paired student activities, are implemented. Students work together for comprehending reading materials, for listening tasks, or when engaging in practice conversation. Such engagement in various activities may lead to improved skills. However, compared to other skills, fewer responses pointed to vocabulary knowledge as an improved skill. Vocabulary knowledge is essential for the ESP approach. It is believed that with knowledge of vocabulary, comprehension, and expression abilities can be possible. Therefore, consideration of activities for vocabulary and grammar improvement in the textbook and instructional activities seems necessary.

As discussed above, almost all contents of the textbook are written in English, and the study found the majority of students favor this. Occasionally instructors use only English, and students do not like such approaches. As with ESP, EMI also is popular in higher education in Japan. However, if the students' level of English proficiency or knowledge of the specified field is insufficient, the effectiveness of EMI remains a question. The results of our study show students have reluctant attitudes toward EMI despite their positive attitudes toward the textbook written in English. This reluctance together with their relatively lower English proficiency may influence their motivation for learning. Therefore, at least at this time, it seems that the safer choice is not to introduce EMI in our university.

Regarding activities for students working in pairs or small groups, some students

report reluctance to cooperate and depend on other students. According to our data for the placement tests and final examinations, there is a huge gap between the highest and the lowest scores, and students with lower scores tend to show low motivation in such group activities. In such mixed-ability classes, there are students with different proficiency levels, learning styles, and motivational levels. In order to respond such differences, active learning practices, in which students participate in various types of activities, have been facilitated. However, it is not easy to have all students actively participate in all of the activities. Designing other activities, such as engaging in research, discussion, or peer feedback, can improve the outcomes for greater numbers of students. Even low-stake activities may be added so that students have more opportunities to find suitable ways to participate in activities. Moreover, introducing a learning log, in which students record their learning and reflections, might help students to become responsible for their learning and hopefully becoming independent, active learners.

In terms of the topics of the university's original textbook, spinal cord injury is perceived as the most difficult topic, but students are interested in this topic the most. Students are also interested in the topic of physical therapists that teaches about PT jobs, procedures of support, and uses of orthosis. Meanwhile, the students claimed that the most boring topic was the case study, which describes the cases of athletes and their injuries in relation to PT. Such results seem to provide a warning for textbook writers. Our language instructors and specialists in the field carefully chose topics that are interesting and that match with needs of the fields as well as with the course goals. However, the study found mismatches of writers' intentions and students' interests despite the fact that many students wish to learn ESP. Selecting topics only from the view of practitioners may be biased or may not meet the needs and interests of the students. For the next revision of the textbook, taking into consideration the topics that match with students' needs and interests is necessary. Feedback from the students and discussion with the specialists may help solving this issue. At the same time, keeping an eye on current news and conducting genre analysis related to the discipline can help with finding up-to-date materials that take into consideration students' levels of language proficiency, knowledge in the field, and interests.

Limitation and implication of further study

The sample size of this study was 108 PT students, which may be considered as small. At the same time, the deviation value of the university is the lower rank and, thus, students' English proficiency levels are relatively low. Such conditions make generalization of the study results difficult. However, it has been reported that cases related to ESP for physical therapy are rarely reported. Therefore, it is hoped that the data stemming from this study will be able to add data for research on the ESP approach and textbooks for physical therapy.

Another limitation of this study is an evaluation method. The study evaluated the textbook and instruction through the students' perception. The methodological triangulation, employing surveys on instructors, conducting interviews, and using evaluation models or criteria can be suggested for the further study. Such an approach is believed to view curriculum from different angles and therefore to enhance the validity of the study.

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