

*A Comparison of English Textbooks from the Perspectives of Reading:
IB Diploma Programs and Japanese Senior High Schools*

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Abstract

The Ministry of Education (MEXT) is promoting International Baccalaureate (IB) programs, aiming to increase the number of IB schools in Japan to 200 by 2018 (MEXT, 2012). Although IB programs are recognized as awarding an international qualification, not many educators in Japan are familiar with the programs and there have been few studies conducted to elucidate the IB curricula. In this paper, I compare and contrast the English textbooks used in IB Diploma programs and the senior high school textbooks approved by MEXT, especially from the perspectives of reading in the second language. Two IB textbooks of English B and two textbooks of Communication English II were analyzed in this study. First, the themes and styles of reading passages were categorized. As a result of content analysis, the IB textbooks were found to cover topics related to communication, global issues, and social relationships, while the Japanese textbooks, though they included such topics as environmental problems and communication, focused more on biography, science, and technology. As for the styles of passages, reports in the newspaper and on the Internet accounted for more than half of IB textbooks; the Japanese textbooks included mostly exploratory essays. Second, tasks and reading comprehension questions of the passages were categorized according to the cognitive levels of Anderson's Taxonomy (2001), which revealed different patterns in IB textbooks and Japanese textbooks. The former had tasks of both lower- and higher-order thinking skills, while the latter focused on lower-level thinking skills such as understanding and remembering.

Keywords: textbook analysis, taxonomy, International Baccalaureate, cognitive demand, questions and tasks

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Introduction

The Ministry of Education, Culture, Sports, Science, and Technology (MEXT) claims that it is of crucial importance to raise globally minded youths for the future prosperity of the country. Yet, in Japan, it is an issue that its nationals have become increasingly introverted. MEXT announced that school education should focus more on logical and critical thinking skills in the current Course of Study (2009). According to the PISA reading literacy test conducted in 2009, Japan was ranked 7th place among 64 nations and areas in “integrating and interpreting texts” and in “reflecting and evaluating texts,” while it ranked 4th in “retrieving texts and accessing to them”. It was also noted that Japanese test takers tended to leave open-ended questions blank (OECD, 2010). PISA defines reading literacy as understanding, using, reflecting on and engaging with written texts in order to achieve one’s goals, developing one’s knowledge and potential, and participating in society (2013). The results of PISA indicate that Japan needs to boost reading programs at schools in order to foster the critical thinking skills of reading literacy.

Although PISA reading texts are intended to measure the reading skills in their first language, raising reading literacy in the second language is important in the second language education. Students are expected to develop academic language skills, or CALP (Cummins, 1981) in their target language in order to participate in international communities. In case of English education in Japan where communication skills have been greatly focused, policy makers are shifting an emphasis towards raising logical thinking skills in the second language.

As an initiative, the MEXT aims to increase the number of International Baccalaureate (IB) schools in Japan to 200 by 2018 (MEXT, 2012), though there are only 26 IB diploma schools in Japan as of May 2016 (IBO, 2016). Although IB diploma programs award an international qualification recognized as a strong high-school exit certificate, not many educators in Japan are familiar with the programs and there have been few studies conducted in Japan to elucidate their concepts and features. In this paper, I will attempt to compare and contrast the second language education of IB Diploma programs and of Japanese senior high schools in the perspective of reading in the second language. I will analyze the English textbooks used in IB Diploma programs and those of the senior high school textbooks approved by MEXT, especially from the perspectives of topics, text types of the passages, and cognitive levels of tasks and questions.

Before I discuss my research in detail, I will briefly summarize overviews of IB Diploma programs and the Japanese Senior High School Course of Study. First, there are four phases of IB programs based upon the age groups, and in this paper I shall focus on the Diploma Program for students enrolled in the last two years of secondary education. The Diploma program requires students to take a subject called Language Acquisition. Categorized in this subject is English B which is a course for ESL/EFL students. The IBO specifies the themes of English B as follows (<http://www.ibo.org>):

The course is organized into themes. Three core themes are required: communication and media, global issues, and social relationships.

Key features of the curriculum are:

- Intercultural understanding and plurilingualism are key goals of the course.
- Students are exposed to a variety of authentic texts and they produce work in a variety of communicative contexts.

Second, according to the MEXT Course of Study, most senior high school students in Japan study Communication English which mainly focuses on reading and communicative activities related to reading. Communication English II is the subject for senior high school second-year students. Students are to read stories, narratives, essays, reports, discussions, and expository passages and engage in reading them extensively (MEXT, 2010). All the textbooks are screened by the MEXT, and they play a crucial role in education in Japan.

In this study, I will compare English B textbooks of IB diploma programs with MEXT approved textbooks for Japanese senior high schools from the perspective of L2 reading. As for age, high school 2nd year students are roughly equivalent to first-year senior high school students in IB Diploma programs. Though the levels of English in IB schools and those at Japanese senior high schools may be different, both textbooks are for those who are learning English as the second or additional language.

Therefore, I hope to gain some insights about fostering L2 reading literacy through an investigation of textbooks used in two systems. The following two research questions were posed in the present study: 1) What are the themes and text types of reading passages in the textbooks and 2) what are the cognitive levels of questions and tasks of reading passages in the textbooks?

Now I would like to turn to the existing research in the relevant area. Textbooks have been a source of useful information for researchers by providing reliable data of content analysis. However, few studies have been conducted to investigate L2 reading literacy in IB schools. On the other hand, several research have been conducted at high school settings in Japan. Fukazawa reviewed questions from reading passages in reading textbooks and found that the answers to most questions were easily found or clearly written in the texts (2008). Tanaka claimed that the questions of reading passages in textbooks are largely divided into two categories, i.e. fact-finding and inferential questions (2010). The former type of questions checked understanding of passages, and the latter required understanding the context and the background of the passages, as well. Indeed such questions may lead to PISA reading literacy. A group of researchers conducted research on the questions and tasks of six major junior high school textbooks with the framework of Bloom's revised taxonomy, or Anderson's taxonomy (2001) and found that approximately 40 to 80 percent of questions and instructions in the textbooks studied were categorized as a low-order thinking skill (Hirai, 2014). The method used in this study was effective in clearly characterizing questions and tasks in terms of cognitive demand, thus, I decided to adopt this framework to investigate the cognitive domains of textbooks in this study. The content analysis of textbook yields objective and reliable data from which teachers and can make best use of the textbooks.

Methods

Four textbooks were analyzed in this study. Textbooks A and B are commercial IB textbooks of English B, and textbooks C and D are MEXT-approved senior high school textbooks of Communication English II. All four books are widely adopted and used at schools.

The research procedures were conducted in two steps. First, the reading passages were categorized and tallied according to their themes and text styles. Second, the questions and tasks were categorized according to Anderson's taxonomy.

Table 1
Anderson's Revised Taxonomy (2001)

Level	Categories	Subcategories
1	Remember	Recognizing, Recalling
2	Understand	Interpreting, Exemplifying, Classifying, Summarizing, Inferring, Comparing, Explaining
3	Apply	Executing, Implementing
4	Analyze	Differentiating, Organizing, Attributing
5	Evaluate	Checking, Critiquing
6	Create	Generating, Planning, Producing

For example, a question, "What did Hayabusa's operation team get from Dr. Itokawa?" was classified as Level 1, as it is a fact-finding question about the text. An instruction, "Explain what Dr. Itokawa and Dr. Kuninaka have in common." was a Level 2 task, as it is asking to compare two characters in a story. Two researchers first tallied the questions and tasks independently and then compared their results. The results were almost identical, except for a few items that were then discussed and agreed upon.

Results

Themes and Text Types

As a result of content analysis, the themes of the IB textbooks are specified in the syllabus, i.e. communication, global issues, and social relationships. English B can be taken as Standard or Higher Level, and in this study I focused on the reading passages that are covered at Standard Level. The topics that are dealt with in two years of IB Diploma course are as follows:

Textbook A (English B):

Core (required)

Communication and media

The Internet, Gaming, Blog

Global issues

Ending poverty, Global warming, Speeches

Social relationships

Minorities and education, Partners for life, Letter writing

Elective

Cultural diversity

Migration, Third culture kids

Customs and traditions

Pilgrimage, School uniform, Guidelines

Health

Alternative medicine, Beauty and health, Writing a news report

Leisure

Great hobbies, Extreme sports, Brochures

Science and technology

Future humans, Animal testing, Official report

Textbook B (English B):

Communication and media

Advertising, Radio and television, Advertising effects, Media and violence

Global issues

Global warming and issues, Energy conservation, Prejudice, Racism, Substance abuse, Drug abuse

Social relationship

Linguistic dominance, Cultural identity, Language and culture identity, Education and minorities, Stereotypes and gender roles, Homeschooling and social relationships, Education, Effects of alcoholism on social relationships

Cultural diversity

Language and cultural identity, Self-identity, Subcultures, Population diversity, Interlinguistic influence, Multilingual identity

Customs and traditions

Uniform, Tattooing: A tradition, Workplace dress codes and tattooing

Health

Mental health, Eating disorders, Traditional medicine,
Alternative medicine

Science and technology

Computers, Mobile phones, Weapons

Leisure

International youth festivals, Book festivals

On the other hand, the themes and topics of English Communication II are not clearly delineated by the MEXT, leaving textbook writers to choose themes and topics on their own. This subject, being a year course for the second year senior high school students, has about half number of lessons, compared to IB textbooks. The two textbooks C and D had similar themes and topics to IB textbooks, such as environmental problems and communication; they differed in their coverage of topics such as language and culture, biographies, and science and technology. The themes and the topics in each textbook are listed below.

Textbook C (English Communication II)

Language and culture

Non-verbal communication, Journalism

Eco-system

Recycling used bikes, Shortage of water around the
globe, Space junks

Biography

Steve Jobs, A nurse stood up against Nazis

Science and technology

Development of iPS cells, Selective breeding of dogs, Da Vinci
Codex

Textbook D (English Communication II)

Language and culture

Facts about the Internet

History

History of a church in Germany

Biography

A generous Taiwanese lady, A Japanese car designer,
Norman Rockwell and his works

Science and technology

Research on sleep, Asteroid explorers, Facts about loggerhead

As these data show, textbooks A and B are covering themes related to contemporary culture and society where students might consider the relationships of a citizen (individual) and his/her communities, while textbooks C and D cover themes of language, culture, important historical figures, science, and technology. The IB textbooks reflected reality and controversial issues such as stereotypes and eating disorders, while Japanese textbooks included themes and topics which might be inspiring, informative, and instructive for high school students.

Next, I classified the text types of reading passages in the four textbooks examined. The numbers of text types for each textbook are shown in parentheses:

- Textbook A: expository(5), newspaper article(3), report(3), opinion(2), brochure(2), narrative(2), guidelines (1), poem(1), blog (1), advertisement (1), diary(1)
- Textbook B: expository(10), report(5), newspaper article(5), narrative(4), opinion(2), brochure(3), advertisement (2), letter(1), diary(1),
- Textbook C: expository(8), narrative(1), speech(1)
- Textbook D: expository(6), diary(1), narrative(1)

There are about ten types of reading passages in both of the IB textbooks including authentic readings such as opinions and reports. On the contrary, in Japanese textbooks, the majority of reading passages are expository writing. There were no passages of advertisements or brochures.

Questions and Tasks of Reading Passages

In total, 510 questions and tasks related to reading passages in four text books were classified according to the Anderson's taxonomy. Level 1-Remember accounted for 20 to 30 percent for IB textbooks, while accounting for 70 to 90 percent in Communication English II. Level 2-Understand accounted for more than a fourth in IB textbooks, and 5 to 14 percent in Japanese textbooks. There were less than 10 percent of Level 3-Apply questions and tasks in all four textbooks. The IB textbooks had 11 to 22 percent of Level 4-Analyze questions, while Communication English II had 0 or 1 percent of questions and tasks from Level 4. As for Levels 5-Evaluate and Level 6-Create, IB textbooks had 7 to 14 percent, while Japanese textbooks had 0 to 5 percent.

As shown in Table 2, it was revealed that textbooks A and B included Level 1 and 2 questions as half of the total tasks and questions and that upper level questions and tasks were also included. In other words, IB textbooks had questions and tasks which were well-balanced in terms of cognitive levels; students would be engaged in a variety of activities in class. On the other hand, questions and tasks in textbooks C and D are mostly at Level 1. There were few activities requiring higher-order thinking skills.

Table 2
Tasks and Questions in its levels of Anderson's Taxonomy

Level (n)	1-Remember	2-Understand	3-Apply	4-Analyze	5-Evaluate	6-Create
A (121)	28.1%	25.6%	7.4%	11.6%	14.9%	12.4%
B (70)	21.4%	31.4%	8.5%	22.9%	8.6%	7.1%
C (178)	90.1%	5.7%	0.1%	0%	2.1%	0.1%
D (141)	70.1%	14.6%	5.6%	1.7%	1.7%	5.6%

As the next step, I conducted a close examination of the questions and tasks of a passage at three stages: pre-reading, main reading, and post-reading questions and tasks. All of the four textbooks were designed to start with pre-reading questions and/or tasks for a passage. For instance, common warm-up questions were those questions asking about the experiences or knowledge of the readers related to the topic of the passage. It was noted that textbooks A and B included Level 2 and higher-level activities such as grouping target words and phrases into categories and judging the effectiveness of an advertisement. The activities also instructed students to work in groups, in pairs, or in class. On the other hand, textbooks C and D asked simple short questions about students' knowledge, preference, experiences, school life, and so forth. Although these questions would activate their schema about the topics of reading passages, they would not necessarily encourage students to think deeply or to communicate with other students at the pre-reading stage.

The main reading questions and tasks were found to have a similar tendency in all the textbooks; they were largely comprehension questions at Levels 1 and 2. As textbooks for second language readers, they are naturally equipped with an array of comprehension questions to see if readers understand the passages correctly. Some questions required Level 2 thinking skills - comparing and inferring; differentiating facts from opinions is an example of such activities.

Post-reading activities had similarities and differences among the four textbooks. As a similarity, summarizing tasks were included; "summarize in a few sentences," or "choose a heading for a paragraph," and "arrange the events in chronological order" were common tasks. There were also activities of ordering events as they happened. A difference was seen in the pattern of the levels found in the four textbooks; textbook A posed questions and tasks from Levels 4 and 5 as post-reading activities. For example, textbook A asked students if they would change their opinions of a topic after reading the passage. This question is categorized as Level 5, since it is requiring readers to reflect on the passage and evaluate its effectiveness. Textbook B suggests further projects related to the topics, which are categorized as Levels 3 and 6. Advice on how to carry out such projects are explained step by step in detail so that students are able to follow the procedures on their own. Textbook C has questions and tasks which are mostly categorized as Level 1. They are multiple choice questions about the content, and even in summary questions, students are to fill in the blanks from a list of words. Textbook D includes questions and tasks of higher-order thinking skills as post-reading activities. However, some of these follow-up questions are not really connected to the passage. For instance, in a chapter about Norman Rockwell's life, a question reads, "In what situation do you feel sympathy and compassion for others in your daily life?" Although this question is classified as Level 3-Applied, it is not based on the passage in terms of content and target language features. Therefore, students would not utilize any information they learned to answer this unrelated question.

Conclusion

In this study, two research questions were posed; the first question pertained to the themes and text types of reading passages in the textbooks. As a result of content analysis, the IB textbooks were seen to cover topics related to communication, global issues, and social relationships, while the Japanese textbooks, though they included such topics as environmental problems and communication, focused more on

biographies, science, and technology. As for the text types of passages, reports in the newspapers and on the Internet accounted for more than half of those included in IB textbooks, though they covered a wide range of text styles; the Japanese textbooks included mostly exploratory writing. In other words, the former reflected authenticity of reading materials, and it intended to prepare students to read critically in their actual future lives. On the other hand, the latter was more focused on the expository passages which would give students some information, especially in science, and possibly teach ethical lessons from important figures to the students.

From the viewpoint of raising critical awareness, IB textbooks seem to be more suitable for raising thinking skills to higher cognitive levels. When students are exposed only to informative, instructive, and flawless texts, which are the type included in Communication English II textbooks, it may be difficult for students to infer, apply, analyze, and evaluate the texts. As suggestions to teachers using textbooks C and D, it is recommended to adopt some authentic materials such as email messages, blog entries, dialogues, and advertisements in their teaching practices.

The second research question was to probe the cognitive levels of questions and tasks from reading passages in the textbooks. The analysis using the framework of Anderson's Taxonomy (2001) revealed different patterns in IB textbooks and Japanese textbooks. The former had tasks of both lower- and higher-order thinking skills, while the latter focused on lower-level thinking skills such as understanding and remembering. Therefore, in order to raise critical reading ability, it is necessary to supply activities where students engage in activities requiring higher-level thinking skills, and which are closely connected to the passage. Also, the textbooks should provide step by step models and guidance in terms of vocabulary, sentence patterns, and research procedures as scaffoldings in the target language.

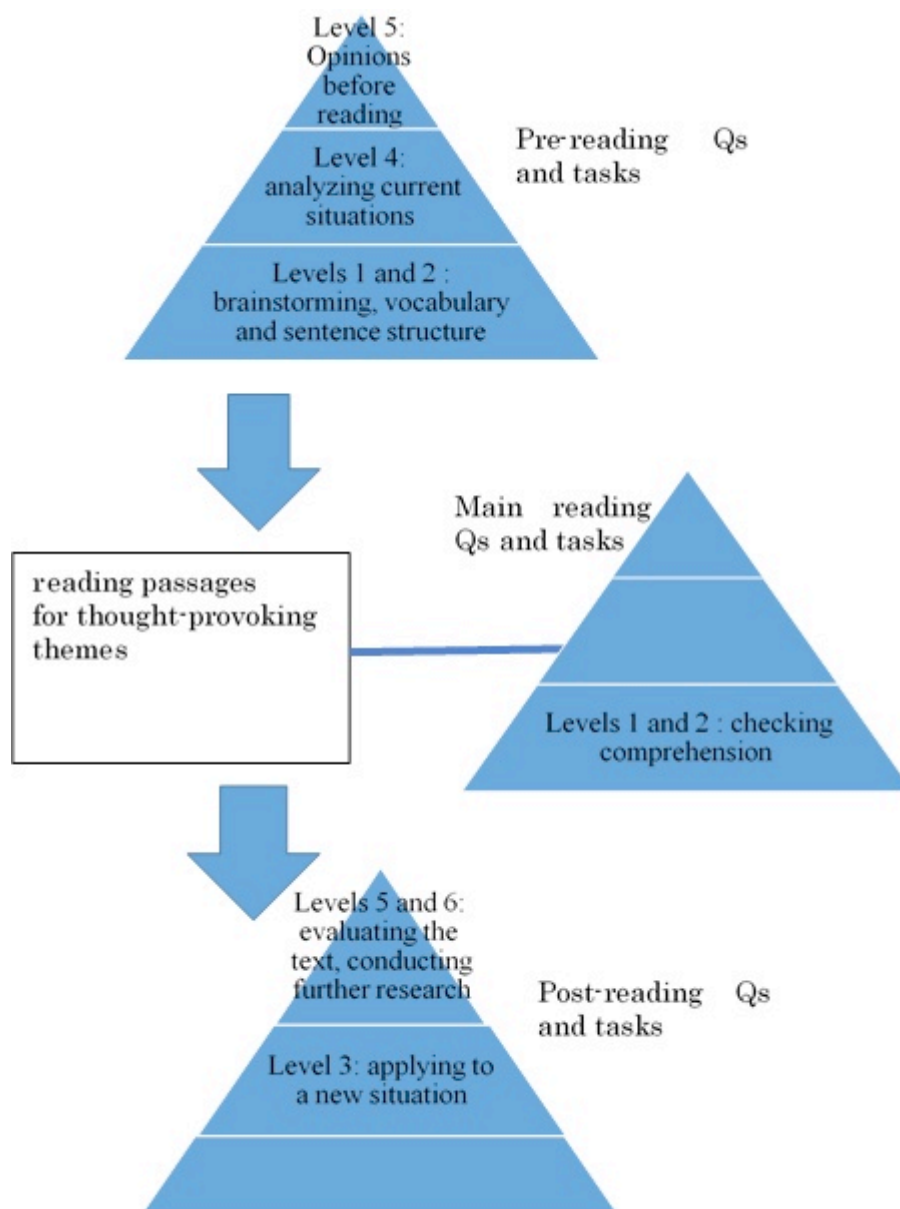


Figure 1: Concept chart of questions and tasks to foster critical reading skills

A model of reading passages, questions and tasks seen in IB textbooks can be conceptualized as in Figure 1. Ideally a textbook should include reading passages of themes and topics which would provoke discussions among students. At the pre-reading stage, students should engage in ample tasks from different cognitive levels. The main reading tasks will be comprehension questions for passages which would stimulate discussions among students. At this stage, students will have chances to clarify misunderstandings and gain new knowledge about the target language. Post-reading activities may include an evaluation of the passage in relation to their knowledge and experiences. Students can apply the information to a new situation and further carry out a creative project.

This study is a preliminary step in probing into the issue of raising critical reading skills in second language teaching and learning. As suggestions for future research, factors such as readability and vocabulary of passages in the textbooks would reveal

what L2 reading literacy involves. Furthermore, research on teaching methodologies and student portfolios would shed light on how critical thinking skills are raised in L2 reading classes.

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