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Abstract
The aim of this study is to describe how Japanese students’ views on secondary education for the global age evolved between 1999 and 2019. As part of her 1999 doctoral research, the present study’s author distributed a questionnaire to students in Japan and England. Its purpose was to investigate their perspectives on contemporary educational needs. Findings indicated both similar and differing opinions between respondents from each country. Some sentiments, such as the importance of forming good relationships with people, are universal, fundamental aspects of education for the global age. On the other hand, some differences of opinion reflected social, cultural, and educational variances, such as Japan’s hierarchical academic structure, and they should therefore be considered independently. Two decades later, the same questionnaire was redistributed to 130 Japanese students. The intent this time was to explore how Japanese education, social backgrounds, and students’ views on secondary education for the global age may have changed. The findings indicate that students in 2019 are more satisfied with what they have learnt in high school than students were in 1999. Further, the importance of forming good relationships with people is also evidenced in the 2019 survey. More detailed findings are presented, along with descriptions of current issues in Japanese secondary education. This study is part of the author’s preliminary research into development of learning content and effective teaching methods for intercultural training.

Keywords: Global age, secondary education, Japan
Introduction

In this study, ‘global age’ refers to the fact that people from different countries are in contact with one another to a much greater degree than ever before. The Internet has sped up access to information produced in other countries, and many issues, e.g., the environment, human rights, and conflicts between and within countries, are discussed at international levels. Further, many countries have seen an increase in ethnic diversity, with more people studying and working abroad than in any previous era (Kato, 2001, p. 30).

To prepare for life in the global age, a UNESCO report (Delors, 1996) argued that there are four necessary pillars of education: 1) learning to be; 2) learning to do; 3) learning to know; and 4) learning to live together. The present study bases its concept of education for the global age on these four pillars.

In 1999, the researcher investigated views held by students in England and Japan regarding education for the global age. Altogether, 400 Japanese and English university students and 40 teachers participated. The findings indicated that some opinions were common to both countries, yet others, reflective of social and cultural differences, varied.

Similar findings revealed two main objectives of education. The first concerns fundamental priorities, such as forming good relationships with people. For decades, the substance of these concerns has remained the same worldwide. The second objective involves more up-to-date education. This type of instruction should be introduced and improved according to changes in the world. Examples include such topics as information communication technology (ICT) skills, and a greater emphasis on global issues.

Moreover, some respondents believed instructional content may need to shift, moving away from knowledge-based, and toward thinking- skills-based, education. What is required in the global age may not be vast amounts of knowledge, but the skills to fully utilise information in various contexts. Many respondents from the two countries emphasised the importance of continuous assessment, rather than one test which only assesses memory at the end of a course.

Meanwhile, some of the varied findings reflected social, cultural, and educational differences. These issues, such as Japan’s hierarchical academic structure, and political interference with education in England, should be considered independently for each country. Many teacher respondents believed that the world will continue to shrink in the global age. Yet, social and cultural influences on education are enormous, and, in order to improve education in each country, should not be neglected. In this sense, some issues facing education in the global age should be considered carefully, according to each country’s social and cultural situations.

After two decades, the researcher distributed the same questionnaire to 130 Japanese students. This time, its purpose was to explore how secondary education, social backgrounds, and students’ views on education for the global age may have changed. The findings, along with current descriptions of secondary education in Japan, will be presented herein.
Background Information

Before looking at the findings, some general and educational information about Japan should be provided. First, the Japanese population was 126 million as of 2018 (Statistics Japan, 2018a), accounting for about 1.9% of the world’s population (Statistics Japan, 2018b). Japanese people, apart from groups living in Hokkaido in the north and in Okinawa in the south, are basically ethnically homogeneous. Nevertheless, the number of foreign people living in Japan is continually increasing. In 1994, the registered foreign population was 0.8% of the total population. By 2017, it had grown to 1.9% (Ishizaka et al., 1994; Ministry of Justice, 2017).

All education falls under the School Education Act of 1947 (Shimomura, 1998), which establishes the so-called 6-3-3-4 system as Japan’s basic instructional schedule. This includes six years of elementary school, three years of junior high school, three years of senior high school, and four years of university, or, in some cases, two years of college. In this study, ‘secondary school education’ implies junior and senior high school education.

In 2018, public expenditure on primary and secondary education was 2.7% of the Gross Domestic Product (GDP). This is lower than the 3.5% average among Organisation for Economic Cooperation and Development (OECD) countries (OECD, 2018a). Some 98.1% of pupils continue their education from primary to secondary school. Ultimately, 54.8% enter college or university (MEXT, 2011; 2018a).

Methodology

In 1999, a questionnaire was administered to students in two Japanese universities; one public, the other national. In 2019, two other universities, a private and a national, took the same questionnaire. Students’ courses of study varied both in 1999 and 2019.

Quantitative analysis using statistics tests such as ANOVA and chi-square tests and qualitative analysis which considers factors such as social and cultural issues were performed. However, there were no significant statistical differences between the groups. Accordingly, the main analysis method used in this study is qualitative. Thus, the focus of the analysis is highlighting differences and similarities in findings from each group.

Findings

1. Total Respondent Population
The population of responding students was 197 in 1999, and 131 in 2019. It totals 328 responses. Altogether, the respondents consist of 61.9% female and 38.1% male students. This does not mean that there are more females than males enrolled in Japanese higher education. In total, Japanese universities are 66% male and 44% female (MEXT, 2018a). However, one of the universities participating in the 2019 survey has 62.8% female students. Thus, the sex balance of the survey has been influenced. As for age group distribution of the respondents, 78.2% were aged 18 to 20.
2. Views on Secondary Education

Questions 1 to 5 investigated students’ views about the secondary education they received. First, Question 1 assesses respondents’ degree of satisfaction with their secondary education. Findings show that students in 2019 (79.4%) are more satisfied with their secondary school education than students in 1999 (49.6%). A significant statistical difference was not found between the two groups.

Question 2 listed four academic issues (Q 2.1 to 2.4) and three non-academic issues (Q 2.5 to 2.7) in secondary schools. Respondents were asked about their degree of satisfaction with each issue. Listed academic issues were 1). content of school subjects; 2). teaching methods; 3). pace of instruction; and 4). methods of assessment. In the findings, more respondents were satisfied with their academic secondary school education in 2019 than in 1999.

Table 1. Mean percentage of students’ responses to the academic issues listed in Questions 2.1 to 2.4.

<table>
<thead>
<tr>
<th>Respondent Year</th>
<th>Very Satisfied</th>
<th>Neither Satisfied nor Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>25.2%</td>
<td>45.8%</td>
</tr>
<tr>
<td>2019</td>
<td>67.6%</td>
<td>10.2%</td>
</tr>
</tbody>
</table>

Questions 2.5 to 2.7 ask about non-academic secondary school aspects. Listed non-academic aspects are 1). relationships with school friends; 2). social activities; and 3). school events. The findings again revealed that fewer respondents in 1999 were satisfied with the social aspects of secondary school. The mean percentages of students answering ‘very much satisfied’ or ‘a bit satisfied’ were 47.9% in 1999, and 76.3% in 2019.

Both the 1999 and 2019 surveys show that relationships with school friends were a very important issue. Results of Question 2.5 (see Figure 1) show that many respondents were either ‘very satisfied’ or ‘a bit satisfied’ by relationships with school friends.
Moreover, the findings in both 1999 and 2019 show that humanistic development through social activities in secondary school is one of the most important aspects for Japanese students. 43.1% of students in 1999 and 73.2% of students in 2019 were satisfied with social activities. However, some students were negative about social activities, due to bullying and/or strict rules. Although the number of respondents who were satisfied with social activities is higher in 2019, it should be noted that reported bullying and violence continue to increase in primary and secondary education (MEXT, 2018b).

Question 3 asks the degrees of usefulness of what students studied and experienced. The findings show that over 80% of each group felt what they have learnt and experienced is useful. Although more students in 2019 than those in 1999 seem satisfied with their education, there is no statistical difference between the two groups.

In 1999, Questions 4 and 5 asked respondents which subjects and experiences were most useful or useless in their present lives. However, many students mentioned various personal experiences, making it difficult to discern specific academic subjects from the survey. Therefore, in 2019, the focus was on asking about academic subjects. In comparison, the survey in 1999 excluded findings about experiences. Rather, it simply described the academic subjects mentioned in Questions 4 and 5. Findings from Questions 4 and 5 reveal slight differences between the two groups in selecting subjects as ‘useful’ and ‘useless’.

<table>
<thead>
<tr>
<th>1999</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1    • Social studies</td>
<td>• English</td>
</tr>
<tr>
<td>2    • English</td>
<td>• Japanese</td>
</tr>
<tr>
<td>3    • All I have learnt at school (including school events, extra curriculum activities)</td>
<td>• Social studies</td>
</tr>
<tr>
<td>4    • Domestic science</td>
<td>• Mathematics</td>
</tr>
<tr>
<td>5    • Every academic subject</td>
<td>• Domestic science</td>
</tr>
<tr>
<td></td>
<td>• Physical education</td>
</tr>
</tbody>
</table>

While findings showed that social studies was popular, the highest number of students overall selected English as useful. This shows that English is very important for vocational and academic reasons. Moreover, it also serves as an international communication tool.

For many years, foreign language education in Japan’s secondary schools focused on learning grammar by rote. Since the 1940s, English has been a compulsory subject both in secondary education and as a requirement for entering university. Pupils were
expected to have the high-level vocabulary and reading skills necessary to pass extremely competitive examinations.

However, rote learning didn’t work well for Japanese students in developing strong English speaking and listening skills. In the late 1990s, following the 1999 survey, Japanese secondary education introduced a new teaching method called the ‘communicative approach’ (Ogawa, 2017). Unfortunately, Japanese students’ scores on TOEFL iBT tests are still the lowest among Asian countries. Thus, investigations continue into better methods for teaching and learning English. Clearly, however, English has always been a controversial subject in Japanese secondary education.

The second interesting outcome is that there were a few responses indicating the usefulness of studying mathematics, irrespective of students’ course of study. Mathematics was not listed in Table 2 under the 1999 results. However, some students noted things like ‘I thought maths was completely useless. But it was a good lesson to be persevering’ (Kato, 2001, p. 139). Meanwhile, students in 2019 who denoted mathematics as useful stated such things as ‘I like it because I calculate in my head instantly using mathematical knowledge, and I can easily use this knowledge in my daily life’ (Kato, 2001, p. 139). These remarks show that, in many ways, mathematics is a special subject to Japanese students.

Question 5 asks about academic subjects which students did not find useful in their present lives. Table 3 below shows findings from each group:

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mathematics</td>
<td>Mathematics</td>
</tr>
<tr>
<td>2</td>
<td>All academic subjects</td>
<td>Science</td>
</tr>
<tr>
<td>3</td>
<td>Science</td>
<td>Chemistry</td>
</tr>
<tr>
<td>4</td>
<td>Physical education</td>
<td>Physics</td>
</tr>
<tr>
<td>5</td>
<td>English</td>
<td>Biology</td>
</tr>
</tbody>
</table>

The findings from Question 5 show that Japanese students in both 1999 and 2019 felt mathematics and science were useless, regardless of their personal academic focus.

In the 2019 survey, a substantial number of students responded to Question 4 by saying that mathematics is useful. Nevertheless, this result may show a general tendency of Japanese students to have negative attitudes toward mathematics and science. It would appear that this has not changed over the course of two decades.

In 1999, discussion indicated that one of the reasons for this result might be the highly competitive entrance examinations for Japanese universities. As Inui (1993) explained, such responses also reflected the excessive demands of a competitive society. Mathematics and science are often viewed as a typical symbol of Japan’s highly competitive entrance examinations. Consequently, the 1999 findings mentioned these examinations, ranking them sixth in the above table.

However, university entrance examinations have changed greatly. Apart from the academic test, there are now two main types of entrance examinations. The first is an entrance examination prepared by each university’s admissions office. It requires only
interviews, essays, or good records in high school. Recently, 80% of private, half of national and public universities have introduced this type of examination (MEXT, 2018c).

Second, there is an examination for select candidates. Universities set certain standards for high school marks, and pupils who satisfy these requirements can apply to the university. In a way, this examination process fulfils the desires of the 1999 respondents, who emphasised the importance of continuous assessment. Typically, this evaluation includes interviews and essay-writing. This examination type is also quite popular in Japanese universities; 98.2% of private universities and 95.9% of national and public universities have introduced it (MEXT, 2016; 2018c). As a result, 44.3% of all university students enter through one of these examinations (Obunsha, 2018).

Academic testing has also undergone some changes. In the past, almost all national and public universities required pupils to take tests in seven academic subjects, including mathematics and science. However, a few national and public universities now require only three subject tests. As described above, students nowadays do not necessarily have to be good at mathematics and science to enter universities. However, findings show that those subjects are still difficult for Japanese students to tackle.

Regrettably, 8.0% of Japanese students surveyed in 1999 felt all academic subjects were useless in their present lives. In contrast, such negative attitudes toward secondary education weren’t seen in the 2019 survey. Discerning a clear reason is difficult, but it might be helpful to note current teachers’ efforts. Although it has become a serious issue in Japanese education, teachers have the longest working hours of any OECD country (OECD, 2018b). They work longer, and not only in a teaching capacity; they also serve as academic counsellors and managers of extra curriculum activities. Furthermore, they work to take care of their pupils’ personal and social issues. In general, secondary school teachers have become keener to address all aspects of their pupils’ lives. This could be a good reason for the findings in the 2019 survey.

3. Views about Education for the Global Age

3.1. The Aims of Education

Question 6 solicits students’ views on the aims of education in the global age. The aims listed in Question 6 are as follows:

6.1. To help pupils acquire the skills needed to get desired jobs in adult life
6.2. To help pupils acquire a broad, general knowledge base
6.3. To help pupils develop an understanding of other countries and cultures
6.4. To help pupils develop an understanding of different communities in their own country
6.5. To help pupils develop a sense of being a citizen of the world
6.6. To help pupils learn to deal with problematic situations
6.7. To help pupils exercise greater autonomy
First, more respondents in 2019 (mean percentage: 77.3%) than in 1999 (54.2%) felt that the aims listed in Questions 6.1 to 6.7 should be emphasised in education for the global age.

In 1999, the smallest number of students (49.0%) felt that aim 6.4, ‘to help pupils develop an understanding of different communities in their own country’, should be emphasised. However, by 2019, the number of respondents agreeing that the above aim deserved emphasis had increased strikingly to 80.1%.

Meanwhile, in 1999, most Japanese students (64.0%) felt that aim 6.7, ‘to help pupils exercise greater autonomy’, should be emphasized. The same was true for students in 2019 (85.5%; see Figure 3).

<table>
<thead>
<tr>
<th>Scores*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>32.1%</td>
<td>31.9%</td>
<td>14.6%</td>
<td>7.4%</td>
<td>14.0%</td>
<td>2.39</td>
<td>1.37</td>
</tr>
<tr>
<td>2019</td>
<td>39.7%</td>
<td>45.8%</td>
<td>14.5%</td>
<td>0%</td>
<td>0%</td>
<td>1.75</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Figure 3. Question 6.7. To help pupils exercise greater autonomy (learning to be)

In the late 1990s, some movements tried to revise the outmoded, excessively knowledge-based educational structure. They wished to encourage the personal and social development of young people. This philosophy is called ‘kokoro no kyoiku’: i.e., ‘the empowerment of greater autonomy’ (listed in Question 6.7).

In 2019, ‘kokoro no kyoiku’ is no longer the centrepiece of Japanese secondary education. In fact, as described in the previous section, teachers nowadays manage students’ personal and social issues to a greater degree than ever before. However, the 2019 findings show that autonomy is still the main concern of Japanese students. This leads to another possible reason. Personal social development and whole-person education (part of Delors’ ‘learning to be’) has always been extremely important. That is to say, empowerment of greater autonomy is always the central issue in Japanese secondary education. Such is the case regardless of time period and educational movements in each era.

3.2. Curriculum Contents

Question 8 asks about curriculum contents of education for the global age. The curriculum contents listed in Question 8 are as follows:

8.1. Basic skills (literacy, numeracy)
8.2. High skills/knowledge
8.3. Foreign languages
8.4. Learning about other countries and cultures
8.5. Learning about different communities in their own country
8.6. Developing a sense of responsibility toward people living in other countries
8.7. Developing a sense of individual empowerment
8.8. Visiting and living in other countries
8.9. Worldwide issues (e.g. environment, human rights, war and peace)
8.10. Information and communications technology skills
8.11. Activities which take place outside school

In a comparison of mean percentages, more respondents in 2019 (75.8%) than in 1999 (46.2%) felt positively about emphasis on the content items listed in Question 8. The following table shows the three most emphasised curriculum content items:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Content Item</th>
<th>1999</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.3. Foreign languages</td>
<td>58.7%</td>
<td>90.0%</td>
</tr>
<tr>
<td>2</td>
<td>8.9. Worldwide issues</td>
<td>58.5%</td>
<td>88.5%</td>
</tr>
<tr>
<td>3</td>
<td>8.7. Developing a sense of individual empowerment</td>
<td>53.2%</td>
<td>84.7%</td>
</tr>
</tbody>
</table>

‘Learning about foreign languages’ and ‘worldwide issues’ place within the top three in both surveys. This may mean that these content items were not emphasised enough during the two-decade timespan between 1999 and 2019. Apart from that, the curriculum content which students in 1999 were least interested in emphasising was ‘high-level skills/knowledge’ (Question 8.2). This factor was also of least interest to students in 2019. However, a high percentage of students in both eras (52.1% in 1999 and 35.9% in 2019) answered that this instruction should remain the same. This finding may indicate that the excessively knowledge-based education of 1999 had eased by 2019.

### 3.3. Teaching Methods

Question 10 asks about students’ views of teaching methods in the global age, listing five teaching methods. These are as follows:

10.1. Collaborative activities (where small groups of pupils must work together as a team)
10.2. Individualised programmes of work (where each pupil works alone, at his/her own pace)
10.3. Whole-class teaching
10.4. Computer-assisted learning packages
10.5. Activities which take place outside of school (e.g. work experience, exchange visits, outdoor education)

The mean percentages show that more students in 2019 (72.7%) than those in 1999 (42.9%) are positive about emphasising the above teaching methods.
The teaching method which most students in 2019 (83.2%) feel should be emphasised more is ‘computer assisted learning packages’. Over the two decades, the number of schools using computer-based learning has increased, with 19.6% of high schools providing a tablet-type personal computer to each pupil (Obunsha, 2019). However, many teachers (46.3%) feel pupils should learn about ethics using ICT (Obunsha, 2019). In addition, some students still have no opportunity to learn ICT in high school. Needless to say, most companies require young people to possess computer skills. Consequently, respondents in 2019 still feel a need to develop proficiency in using computer assisted learning packages.

Meanwhile, most students in 1999 (53.8%) felt that ‘activities which take place outside of school’ should be emphasised more. This finding may reflect the Japanese educational sensibilities of the time. The contemporaneous government report on educational reform suggests that activities outside of school (i.e., mainly volunteer work) should merit credits in the school curriculum (Nihon Keizai Shinbun, 2000). Activities such as this are also noted as important in the 2019 survey, with 79.2% of respondents feeling they should be emphasised more. However, it is important to note that no activities outside of school are included in students’ academic credits. They are very popular nowadays, however, and may be mentioned in records.

Another interesting finding is that students in both 1999 (59.0%) and 2019 (34.4%) answered that ‘whole-class teaching’ should remain the same. Although there has been much discussion on the advantages and disadvantages of whole-class teaching, students’ opinions suggest that it may remain as the foundation of various teaching methods.

3.4. Assessment Methods

Students’ views on five assessment methods are investigated in Question 12. The listed assessment methods are as follows:

12.1. Written examinations
12.2. Oral examinations
12.3. Presentations in class
12.4. Thesis/research report
12.5. Coursework/projects

The main findings regarding assessment methods show that students in 1999 and 2019 held very similar opinions. Most students in 1999 (53.1%) and 2019 (72.2%) felt ‘course work/projects’ should be emphasized. In addition, students in both 1999 (59.9%) and 2019 (39.7%) felt ‘written examinations’ should remain the same as now. These findings indicate that students prefer an emphasis on continuous assessment methods, although most recognise the value of traditional methods.

Conclusion

It is clear that most students in 2019 are essentially satisfied with what they have learnt in high school. This is a notable difference compared to students in 1999. In addition, more students in 2019 felt positively toward an emphasis on the four main pillars of education. The four central findings from this study are summarised below.
First, relationships with school friends are a very important, non-academic aspect of secondary school. Humanistic development through social activities is also one of the most important factors to Japanese students. These items were also identified as very important in the 1999 survey in England. Thus, it might be said that fundamental educational aspects remain unchanged for decades in countries worldwide, and will prove essential to education for the global age.

Second, in terms of academic disciplines, Japanese students found English most useful. Mathematics is rated least useful. In addition, ‘learning about foreign languages’ and ‘worldwide issues’ are noted as important educational items for the global age. Mathematics was previously found to be disliked because it symbolised Japan’s highly competitive university entrance examinations. However, results from Question 8.2 indicate that the excessively knowledge-based education prevalent in 1999 had eased by 2019. Further, university entrance examinations are not as competitive as they once were. On this basis, findings reveal that mathematics is simply a difficult subject for students to master. In summary, English, mathematics, and learning about worldwide issues seem to be central topics of Japanese education for the global age.

Third, as for teaching methods, most students in 2019 felt ‘computer assisted learning packages’ should be emphasized more. Most students in 1999 said ‘activities which take place outside of school’ should be emphasized more. Since the 1999 survey, activities outside school have increased. Hence, it may be said that students in 2019 are more focused on computer assisted learning. ICT skills are considered increasingly important, and many issues, such as ethics, require more attention.

Fourth, students in both 1999 and 2019 agreed that continuous assessment methods should be emphasised, although most also recognise the value of traditional methods. In considering education for the global age, these will be the core assessment methods. For further discussion, it might be interesting to redistribute the questionnaire in England. Doing so would allow a comparison of findings, leading to further exploration of education for the global age. Finally, based on the findings of this study, content will be developed for an original e-learning programme on intercultural training.

Acknowledgements

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References


