

HOW THE INTERNATIONAL BACCALAUREATE (IB) EXTENDED ESSAY PREPARES IB STUDENTS FOR JAPANESE HIGHER EDUCATION

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ABSTRACT

Okayama University was the first National University in Japan to accept the International Baccalaureate (IB) Diploma and exempt IB students from taking the University Entrance Exams. In a span of 12 years, from April 2012 to April 2024, 143 IB students have enrolled in 10 Faculties and one special program. The IB Diploma (IBDP) curriculum comprises the IBDP Core and 6 subject groups. The extended essay (EE) is one of the 3 required components of the IBDP core, which prepares IB students for undergraduate research and also allows IB students to explore a topic that interests them, related to one of their 6 IBDP subjects, or it could also be an interdisciplinary approach of a World Studies EE. Previously, the authors conducted a study comparing the EE with the Japanese Kadai Kenkyu or Themed Research at several Japanese Super Global High Schools (SGH). This research is a continuation of the first study focusing on the EE experiences of IB students enrolled at two Japanese National and Public Universities, namely Okayama University and Yokohama City University, and the usefulness of their EE experience in their University academic life.

Keywords: International Baccalaureate, Extended Essay, Japanese Higher Education, Research Education

INTRODUCTION

The International Baccalaureate Diploma (IBDP) program is a two-year course that prepares students for admission into Universities worldwide. This inquiry-based secondary educational program aims to provide students with in-depth knowledge and equip them with skills to obtain an optimum balance physically, intellectually, emotionally, and ethically. In Japan, the IBDP received recognition from the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in 1979 as an equivalent qualification to Japanese High School graduation. Presently, students who have completed the IBDP either from an International school or an IB-accredited Japanese High School (also known as “Article One” school) are eligible to apply to both National and Public Japanese Universities (1, 2, 3). Okayama University was the first National University in Japan to establish the IBDP admission policy in 2012, exempting IBDP students from taking the National University Entrance Exam or any other written exams for admission into the undergraduate course (4). By 2015, there was a University-wide acceptance and recognition, and presently, all 10 Schools/Faculties accept and have IBDP students, including the special program (Discovery Program for Global Learners), which accepts both IBDP and IB Course (Certificate) students. Over a period of 12 years, from 2012 to 2024, a total of 143 IB students have been admitted into Okayama University, and among them, 51 have already graduated. Over a decade of experience observing, advising, and following up IB students from entry to graduation and post-graduation has revealed that IB students seem exceptionally good at research. This led to a

detailed exploration of the core subject, the Extended Essay (EE), and a comparison with the Japanese High School “Themed Research” (TR) in the previous research (5), which found significant differences and some similarities between EE and TR. It was seen that the EE prepares IB students to be independent researchers who can work on a global platform. To verify how and which aspects of the EE experience are helping IB students studying at Japanese Universities, Okayama University carried out a joint research with the Admission Center at Yokohama City University, both of which host IB students from International Schools abroad, International Schools in Japan and Article one schools in Japan.

METHODOLOGY

In collaboration with the School of Education, Okayama University, and the Admission Center at Yokohama City University, the IB Office at Okayama University carried out a joint research to obtain feedback from IB students admitted to Yokohama City University and Okayama University via a Google form regarding the usefulness of their EE experience in Japanese higher Education. A Google form with questions was created for IB students, including an additional consent form. There were 14 questions included in the Google form. Questions 1-4 were regarding the student background: type of IB School they graduated from (IB School Abroad; International School in Japan; Article 1 School); present University; Faculty and Department. Questions 5-9 were basic information regarding their EE (title, what language they wrote the EE in; English, Japanese, Other) and the benefits and hurdles of doing independent research subject. Questions 10-14 focused on the transferable skills in EE, management of EE workload, the role of Supervisor and Librarian in EE, and the overall EE experience. Questions were divided into multiple-choice, short, or long answer questions. Once the form was created, it was peer-reviewed, discussed with the co-researchers, and finalized through several face-to-face and online Zoom meetings. Following approval from all concerned parties and the ethical committee, the Google form link with the consent form and research explanation was sent to IB students at both institutions from first year to post-graduation. The Survey period was designated from January 10th, 2024, to January 31st. 2024. The Google survey form questions were created in English and Japanese, considering the various types of IB graduates from International Schools and IB-accredited Japanese High Schools, also known as Article One Schools. Informed consent was obtained from all students, and IB students at both institutions were given the choice of whether to participate in the survey. It was not mandatory.

RESULTS

A total of 32 IB students responded to the survey during the survey period. Seventy-five percent of the responses came from IB students at Okayama University, while the remaining 25% were from IB students at Yokohama City University. Regarding the kind of IB schools that students came from, 43.8% were from IB-accredited Article 1 schools in Japan, 37.5% from International Schools in Japan, and 18.8% from IB schools abroad. Based on the breakdown of students by School or Faculty, 19 students belonged to the Medical School, which included 1 student in Health Science. Four students were from the School of Engineering, 3 from the School of Pharmacy, 2 from Dental School, 2 from the School of International Liberal Arts, and 1 each from the School of Education, Data Science, and the Global Discovery Program, respectively (Table 1).

Table 1 IB Student Breakdown by School/Faculty (Total No. of Students = 32)

Medical School = 19 (including 1 from Health Science)
 School of Engineering = 4
 School of Pharmacy; Dental School; School of Liberal Arts = 2 each
 School of Education; School of Data Science; Global Discovery Program = 1 each

Next, based on the breakdown of students' subjects chosen for the EE, 10 chose Biology, 5 chose Japanese Language A, 4 chose Physics, 3 chose Mathematics, 3 chose Psychology, 2 chose English B, 2 chose History, and 1 each chose Chemistry, International Politics, and Japanese Dance Culture, respectively (Table 2).

Table 2 IB Student Breakdown based on EE subject choices (Total No. of Students = 32)

Biology = 10
 Japanese Language A = 5
 Physics = 4
 Mathematics; Psychology = 3 each
 English B; History = 2 each
 Chemistry; International Politics; Japanese Dance Culture = 1 each

When asked what language students wrote their EE in, 78.1% responded that they wrote in English, while 21.9% said they wrote in Japanese. Of the 25 students (78.1%) who wrote their EE in English, 11 were from IB schools abroad, 9 were from Article One schools in Japan, and 5 were from International Schools in Japan. Of the remaining 7 students (21.9%) who wrote their EE in Japanese, 5 were from Article One schools in Japan, 1 was from an International School in Japan, and 1 was from an IB school abroad (Table 3).

Table 3 Language Chosen to Write EE (Total No. of Students = 32)

English = 25 (78.1%)



11 = IB School Abroad
 9 = Article One School in Japan
 5 = International School in Japan

Japanese = 7 (21.9%)



1 = IB School Abroad
 5 = Article One School in Japan
 1 = International School in Japan

When IB students were asked about doing independent research such as the EE, 90.6% said it helped them achieve high-level research skills, while 78.1% responded that it improved their writing skills, and 59.4% said it also helped them acquire time management skills. As individual comments, students added that EE helped them figure out their interests, pursue them, improve problem-solving skills, learn research methods, how to do citations and give them knowledge about information literacy (Table 4).

Table 4 Benefits of Doing Independent Research as EE (Total No. of Students= 32)

Helped achieve high-level research skills = 90.6%
 Improved writing skills = 78.1%
 Acquire time management skills =59.4%

Additional Individual Comments:

Helped figure out their individual interests
 Helped pursue their individual interests
 Improve problem-solving skills
 Learn research methods
 Learn to do citations
 Provide knowledge about information literacy

Regarding the hurdles associated with EE-type independent research, over 45% of students stated poor time management of their writing schedule; over 40% said they did not understand how to do the EE well, and almost 20% said they could not reference all the sources properly. Students also stated that they had trouble dealing with data that did not follow their hypothesis, getting sufficient research reliable data from resources, exploring unfamiliar topics, deciding on an appropriate topic, and staying motivated (Table 5).

Table 5 Hurdles associated with doing EE (Total No. of Students= 32)

Poor time management skills => 45%
 Lack of understanding of how to do EE => 40%
 Could not reference all the sources properly = 20%

Additional Individual Comments:

Trouble dealing with data that did not follow their hypothesis,
 Trouble getting sufficient reliable data from resources,
 Difficulty in exploring unfamiliar topics,
 Difficulty in deciding on an appropriate topic
 Difficulty in staying motivated

Finally, students were asked about the “transferable skills from EE” to undergraduate education. Students' answers were divided into two categories: skills directly related to research and additional skills. Skills directly related to research included thinking hypotheses, planning experiments, data analysis, referencing, evaluating errors, citing resources, research independence, gathering information, formulating a research question, and solving research questions. Additional skills included reading journals, writing in English, time management, critical thinking, logical thinking, communication, academic integrity, information literacy, comprehension, and creative thinking (Table 6).

Table 6 Transferable skills from EE to Undergraduate Education (Total No. of Students= 32)**Research Skills**

Thinking hypothesis

Additional Skills

Reading journals

Planning experiments	Writing in English
Data Analysis	Time management
Referencing	Critical thinking skills
Evaluating errors	Logical thinking
Citing resources	Communication skills
Research independence	Academic integrity
Gathering information Comprehension skills	
Forming research question-	Solving research questions

In the final part of the survey, IB students were also asked about how they managed the overall EE workload, their roles, and their IB school's role in carrying out the tasks. Students' efforts included breaking down the workload and setting deadlines; working on EE during the summer break; having joint EE study sessions with peers and motivating each other; setting several days only for EE; creating bullet points and graphs for easy understanding; trying to make the EE process fun. Support from their respective IB schools included regular interviews with the supervisor to check progress, schools' efforts to schedule EE due dates for better time management, and additional help from other school sources besides the Supervisor. About the respective roles of the Supervisor and School Librarian in assisting with the EE, almost all students (96.8%) replied that they received full supervision from their Supervisor. In comparison, nearly 70% stated that their school librarian did not assist with their EE. Among the 30% who said they received support from the school librarian, it included advice on finding resources, help with referencing, technical support, and instructions on writing essays.

DISCUSSION

As the number of IB student admissions at Okayama University increases each year, the University is proactively following up IB students to accommodate them well and to let them utilize all the skills they have mastered in the IB (6,7,8,9). In this research and the previous research, emphasis was placed on one of the main core skills in the IB Diploma curriculum, EE. As a research university, Okayama University nurtures students to develop advanced knowledge through educational research and develop research skills to work locally and globally. On the other hand, the core of IB education is critical thinking, research skills, and community service. This IB learning experience makes IB students independent-minded and helps them acquire lifelong skills to succeed on a global platform (10). The percentage of IB students who took part in the survey was higher from Okayama University as Okayama University has the highest number of IB students enrolled among all National and Public Universities in Japan. Regarding the significantly higher number of responses from IB students in the Medical and Science Fields in comparison to Liberal Arts, it could be because IB students entering National and Public Universities tend to seek licensed professions in Japan in the future, with their primary focus on Medical school and then other Science Faculties. Moreover, since in National and Public Universities, the language of instruction is mainly Japanese, IB students who prefer to study Liberal Arts subjects in English choose private Universities.

Their choice of subjects for the EE seemed to lean more toward science subjects than liberal arts or language, as most students were from medical science or science departments. More than two-thirds of IB students wrote their EE in English, which could be because they studied at an IB school abroad, an International School in Japan, or an Article One School in Japan, where most IB subjects are taught in English, similar to International Schools. Over 90% of

IB students agreed that EE helped them achieve high-level research skills, improve their writing skills (78.1%), and helped them manage time better (59.4%), in addition to many other added skills, which directly correlated with all the essential skills that are necessary for University Students(11).The three main hurdles that IB students faced while doing the EE were poor time management, lack of understanding of how to do the EE, and not being able to reference all the sources properly. This could be because the IB Diploma course is very intensive, and IB students must multi-task to meet all the assignment deadlines. Moreover, since EE is an independent research, IB students do not get much help or assistance besides their supervisor or rarely the librarian, and this varies greatly from school to school. All IB students highlighted many transferable skills from the IB to undergraduate education, which they found extremely helpful. This reconfirms that IB education prepares the diploma students well for undergraduate and postgraduate education. The role of the Supervisor in assisting with the EE seems very important, and almost all IB students agreed that their Supervisor was very helpful throughout the EE process. However, most librarians did not actively assist students with their EE, as is usually thought. This could be due to differences in school culture or a lack of staff at some IB schools. From the overall IB student feedback at one National and one Public University in Japan, it seems that as one of the central core components of the IB Diploma curriculum, EE not only develops research and communication skills in IB Diploma students but also helps to develop research creativity through critical thinking and engages students in a systemic process to explore a subject of their choice and also experience the excitement of their intellectual discovery.

CONCLUSIONS

According to IB students who participated in this research survey, EE has helped them immensely, from planning an experiment to reading English journals effortlessly, analyzing data, and mastering cross-referencing and citations. EE has also improved their writing, time management, PC, and multitasking abilities. The skills gained from EE seemed to have prepared them well for research at university and beyond.

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