

PREDICTORS OF INTENTION TO ENROLL IN EDGE COURSES: APPLYING THE THEORY OF PLANNED BEHAVIOR—A PILOT STUDY

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Abstract

Hitotsubashi University students have a wide array of foreign-language course options available to them. This study focuses on one of those options: EDGE (English Discourse for Global Elites) courses in communicative English. In preparation for a full-scale survey of student beliefs about the EDGE program, this pilot study investigated a selection of potential survey items. These items were designed based on the theory of planned behavior and piloted on 62 undergraduate students from all four faculties. Results of the pilot survey and early results to open-ended questions about the EDGE program are presented.

Keywords: education, theory of planned behavior, pilot study

I. Introduction

EDGE (English Discourse for Global Elites) courses have been on offer to Hitotsubashi University undergraduate students since April 2017. EDGE is a relatively small program that employs three assistant professors providing compulsory English instruction to the Graduate School of Administration's MBA program and elective courses to the Shibusawa Scholar program as well as eight bi-weekly undergraduate elective courses. Students who have already completed the compulsory first-year PACE program can take EDGE classes as elective courses. While the program is part of the School of Business Administration, students from all departments are welcome to enroll and can use EDGE credit toward their required foreign language credits, or to simply further their studies in English. EDGE undergraduate courses can be divided into three main types: academic English, business English, and conversational English.

EDGE classes employ a communicative approach to language teaching. Communicative language teaching (CLT) is a set of principles that places importance on meaningful communication rather than a traditionally structured, or grammar-based approach. Emphasis is often placed on group work and task-based language teaching (TBLT), whereby students are expected to complete meaningful activities and tasks that are designed to improve their language ability. In order to achieve this goal, class sizes are purposefully capped at 20 students to ensure student participation is maximized.

In the six years that EDGE courses have been available, class numbers have varied considerably. As the program has become more popular, class numbers have seen increases, particularly in the first semester of 2022. However, whether these numbers will remain high or decrease in the coming months and years remains unclear. In order to guide future decisions about course content and scheduling, a strong understanding of student needs and demand would be an invaluable asset. A pilot survey was devised to aid in the development of an instrument that will eventually be used to gain a better understanding of why some Hitotsubashi University undergraduate students make the decision to enroll in these courses, and why some do not. At first glance, this may appear to be a relatively straightforward question. Yet, upon conducting the pilot survey, it would appear that there may be many variables at play in the decision-making process.

Developing a survey capable of investigating the many psychological factors involved in decision making requires a clear framework. Social psychologists Ajzen and Madden (1986) developed the theory of planned behavior as a way of predicting and explaining goal-directed human behavior. Unlike the classical psychology of Freud and Jung, the theory contends that humans are rational actors who make purposeful decisions based on the intention to achieve personal goals. The theory is explained in detail below.

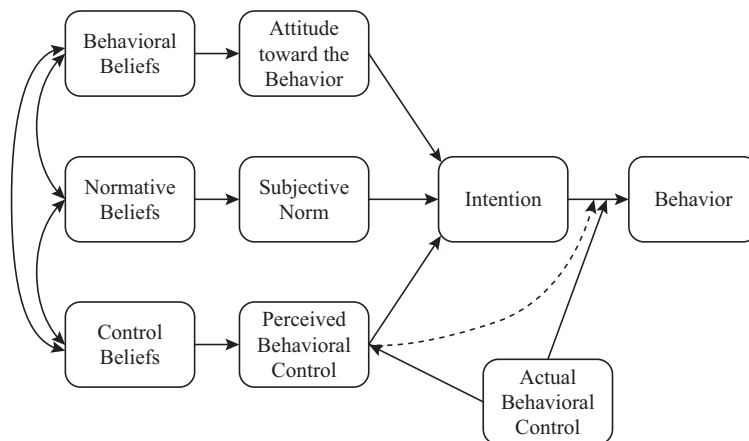
1. Theory of Planned Behavior

The theory of planned behavior (Ajzen, 1985) has become an increasingly popular framework for identifying motivations behind decision making and predicting motivational influences on future behaviors. It is an extension of Ajzen and Fishbein's (1980) theory of reasoned action, which posits that identifying behavioral intentions through behavioral and normative beliefs directly determines behavioral outcomes. The theory of planned behavior increases the scope of inquiry by including a third antecedent to intention, namely perceived behavioral control, which includes beliefs associated with available resources, perceived support, and accessibility. Figure 1 identifies the three determinants of human behavior that the theory of planned behavior focuses on.

According to Ajzen (2006), behavioral beliefs produce either favorable or unfavorable attitudes towards the behavior in question. These beliefs can be identified from a direct line of questioning on a person's judgement about performing a behavior. Behavioral beliefs and the resulting attitude toward that behavior can also be recognized from questions related to a person's perceptions of the consequences of performing an action. In the example of studying English, students can be asked directly about their attitudes towards English and any benefits they see as a result of their studies.

Normative beliefs account for the social component of the theory of planned behavior. How a behavior is viewed by those who are close to us can be considered a powerful predictor.

FIGURE 1. MODEL OF THE THEORY OF PLANNED BEHAVIOR



Note: Figure taken from Ajzen (2006)

Attitudes toward a behavior held by friends, family members, peers, and significant others often influence decision making. Figure 1 shows a direct link between normative beliefs and subjective norms, or the perceived expectations of those close to us. In the context of studying English, students can be surveyed on societal and social pressures they perceive as impacting their decision.

The final component to Ajzen's model is control beliefs, or the perceptions of the presence of factors that "... facilitate or impede performance of the behavior" (Ajzen, 2019, p.1). Directly related to control beliefs is perceived behavioral control, which refers to beliefs regarding the opportunities and resources that are available to perform the behavior. In the case of studying English, it refers to physical factors such as the number and times of available classes and the quality of teaching. On a more personal level, it may also refer to a person's view of their level of English proficiency and their capacity to succeed in passing the course.

Put simply, the theory of planned behavior proposes that a behavior can be predicted by considering three factors: a person's attitude toward the behavior, the social pressure to perform the behavior, and the available support and resources to perform the behavior. In practice, the theory has been used extensively in predicting health related behaviors, but less so for education related behaviors. According to Taylor (2014), only a handful of studies have been undertaken, and largely within a secondary school context (e.g., Armitage, 2005; Conner, Norman, & Bell, 2002; Crawly & Black, 1992; Norman, Conner, & Bell, 1999). Overall, these studies have shown clear connections between attitudes, social norms, and intentions to take specific academic courses.

Of note, Randall (1994) applied the theory of planned behavior to examine and predict why graduate students in Ireland selected an elective business ethics course. Her findings that intention to enroll in the course was largely predicted by attitudes rather than behavioral control can be viewed as important and relevant to the current study for several reasons. Firstly, she examined the question of whether people who enrolled in the course "... already valued ethical analysis, [and if so,] elective ethics courses may simply be preaching to the converted" (p.

370). This would seem in line with the possibility that EDGE courses are popular among students who value English and perceive their skill level as high. Secondly, her results answered questions about the validity of an elective subject offered and the impact of scheduling choices.

However, for the study at hand, beliefs about the benefits of studying English may play a secondary role to beliefs about the benefits of taking EDGE courses rather than the other foreign language courses offered at Hitotsubashi University. This is because students must take a required number of foreign language credits in order to progress to their third year of study and in order to graduate. Therefore, the beliefs that guide a student's decision to enroll in an EDGE course may not be guided so much by their beliefs about English study in general but more about the specific benefits of enrolling in an EDGE course rather than another English language course.

II. *Methods*

In this pilot study, we sought to develop an instrument that would allow us to identify the factors that impacted a student's decision to enroll in an EDGE course or an alternative English language course. We began first with an informal focus-group session to identify themes for the survey and other themes that may fall outside the scope of the theory of planned behavior. We next created survey items designed to investigate the three dimensions of the theory: behavioral beliefs/attitude, normative beliefs/subjective norm, and control beliefs/perceived behavioral control.

1. **Focus Groups**

Participants

The participants were 13 students from an intact EDGE class, two from the economics faculty, five from the law faculty, and six from the social sciences faculty. Nine of the students were in their second year of study, while the remaining four were third-year students.

Procedure

In Summer term 2022, the small focus group session was held before an EDGE class and was led by an EDGE instructor. The participants were asked to discuss in small groups their views of EDGE courses and why they had decided to take an EDGE course. As the focus group session was led by an EDGE instructor, and there was a significant risk of courtesy bias, students were not asked to evaluate either EDGE courses nor the other English courses on offer at the university, and no such statements were made by the participants. The participants then reported the topics they had discussed in their groups. The investigator took notes during these reports and asked clarification questions where necessary to ensure the accuracy of the data collected.

Data Analysis & Results

As the focus group session was short and casual in nature, the amount of data collected

was minimal. A number of factors that may affect the choice to take EDGE courses emerged. First, it appeared that many students did not know a great deal about EDGE courses during their studies in PACE. Those who knew about EDGE courses heard about them from senior students who had taken the courses or from PACE teachers. Second, most students seeking to meet the foreign language credit requirement use the university registration system to filter results for foreign language courses. However, as EDGE appears only in general education classes, many students do not see the option to select EDGE when choosing foreign language courses. Students also mentioned that the use of the lottery system for enrollment makes taking EDGE courses more difficult for them. In general, students mentioned that EDGE was seen as similar to PACE classes, with a focus on communicative English. From these results, we identified concerns among the students regarding the content of their English classes (communicative English or not) and the process of registering.

2. Survey

Survey Preparation

Based on the focus group discussions, a number of statements were generated regarding students' impressions of EDGE. These statements were generated under the three dimensions of the theory of planned behavior. Next, a second statement mirroring the meaning of the first or representing the opposite opinion was created for most of the original statements so that correlations between the original and the second statements could be checked. Correlations would provide evidence that the two statements (henceforth, items) were being interpreted as intended. For example, if the first item was, "the weather today is good," a second statement might be, "the weather today is bad." Responses on a Lickert scale would then be correlated, and, if a significant correlation was found (negative in the case of this example), there would be some evidence that the items were being interpreted in the same way and represented the same construct. If there was no significant correlation between the two items, it would suggest that the participants were interpreting the items differently, and those items would need revision to ensure that they were measuring the desired construct. All items were to be answered on a 7-point Lickert scale with 1 representing *Disagree* and 7 representing *Agree*. The items generated are presented below. The headings have been added. The participants only saw the bulleted items, which were presented in a random order.

Influence of Behavioral Beliefs/Attitude on the Intention to Take EDGE Courses

EDGE courses are easy.

- Taking an EDGE course is an easy way to get foreign language credit.
- Non-EDGE English courses are more difficult than EDGE courses.

EDGE courses are good for improving communicative English skills.

- EDGE courses provide more chances to use English for communication than other non-EDGE courses.
- If I take EDGE courses, it is more likely that my ability to communicate in English will improve, than if I take non-EDGE English courses.

I select EDGE courses because I am interested in their content.

- How well the English language class fits into my schedule is more important than the content of the class.
- I select my English language class based on the content, not the time of the class.

Influence of Subjective Norms on the Intention to Take EDGE Courses

My university friends would support me taking an EDGE course.

- People in my social circle would approve of me taking EDGE courses.
- My friends at Hitotsubashi don't see any difference between EDGE courses and other English language courses.

Professors in my disciplinary courses would support me taking an EDGE course.

- It's important for the professors in my major that I take EDGE courses.
- The professors from my core courses don't mind which English language courses I take.

My parents would support me taking an EDGE course.

- I think my parents would approve of my taking EDGE courses.

Influence of Perceived Behavioral Control on the Intention to Take EDGE Courses

My English level is good enough to take EDGE courses.

- My English skills are good enough to do well in an EDGE course.
- Non-EDGE English courses are better suited to my English ability.

The number of required foreign language credits means I have to take a mixture of EDGE and Non-EDGE courses.

- The number of foreign languages credits I have to take before third year requires me to take a mixture of EDGE and non-EDGE foreign language courses.
- It's impossible for me to take all my foreign language credit in EDGE courses.

The lottery system prevents me from taking EDGE courses.

- I would take more EDGE courses if enrolment was not based on the lottery system.

An additional item was added regarding the intention to take an EDGE course in the future. This item will eventually become the dependent variable in the study-proper to follow this pilot study. Students were also invited to write open-ended responses for two further items: a) Please list any factors or circumstances that would make it easy or enable you to take EDGE courses, and b) What factors or circumstances would make it difficult or prevent you from taking EDGE courses. The survey was then translated into Japanese and converted into a digital survey using Google Forms.

Participants

The participants for the survey were students who had enrolled in an EDGE course in the Spring or Summer terms of 2022. Although such a sample would be problematic for assessing the reasons why students chose to enroll in an EDGE course, given that all participants had chosen to do so, the sample was judged to be appropriate for the limited purpose of testing the proposed survey questions in this pilot investigation.

An invitation to participate in the survey was sent to students through Google Classroom or by email. The survey included an informed consent form and was sent to 108 students who had registered for EDGE courses (this figure represents unique registrations as many students took more than one course in Spring and Summer). There were 62 responses, making the response rate 57.4%. The make-up of the sample is shown in Table 1.

Analysis

Correlation analysis was used to ascertain the degree to which the items that were hypothesized to be measuring the same construct were doing so. As the data collected from the responses were not normally distributed, Kendall's tau was chosen as the appropriate non-parametric correlation. All data were analyzed using SPSS 23 (IBM, 2015). Table 2 shows the correlations for the expected pairing of items.

TABLE 1. CHARACTERISTICS OF THE SAMPLE:
FACULTY OF STUDY AND YEAR OF STUDY N=62

Faculty of study	Number of students
Commerce and Management	16
Economics	9
Law	20
Social Sciences	17
Total	62
Year of study	
2 nd	43
3 rd	14
4 th	3
5 th	1
6 th	1
Total	62

TABLE 2. CORRELATIONS (1-TAILED) FOR ITEMS HYPOTHEZIZED TO BE MEASURING
THE SAME CONSTRUCT

Test item	τ	p
Influence of behavioral beliefs/attitude on the intention to take EDGE courses		
<i>EDGE courses are easy.</i>		
<ul style="list-style-type: none">• Taking an EDGE course is an easy way to get foreign language credit.• Non-EDGE English courses are more difficult than EDGE courses.	.059	.283
<i>EDGE courses are good for improving communicative English skills.</i>		
<ul style="list-style-type: none">• EDGE courses provide more chances to use English for communication than other non-EDGE courses.• If I take EDGE courses, it is more likely that my ability to communicate in English will improve, than if I take non-EDGE English courses.	.525	.001
<i>I select EDGE courses because I am interested in their content.</i>		
<ul style="list-style-type: none">• (Reverse Scored) How well the English language class fits into my schedule is more important than the content of the class.• I select my English language class based on the content, not the time of the class.	.397	.001
Influence of subjective norms on the intention to take EDGE courses		
<i>My university friends would support me taking an EDGE course.</i>		
<ul style="list-style-type: none">• People in my social circle would approve of me taking EDGE courses.• (Reverse Scored) My friends at Hitotsubashi don't see any difference between EDGE courses and other English language courses.	-.076	.236
<i>Professors in my disciplinary courses would support me taking an EDGE course.</i>		
<ul style="list-style-type: none">• It's important for the professors in my major that I take EDGE courses.• (Reverse Scored) The professors from my core courses don't mind which English language courses I take.	.029	.390
Influence of perceived behavioral control on the intention to take EDGE courses		
<i>My English level is good enough to take EDGE courses.</i>		
<ul style="list-style-type: none">• My English skills are good enough to do well in an EDGE course.• (Reverse Scored) Non-EDGE English courses are better suited to my English ability.	-.031	.381
<i>The number of required foreign language credits means I have to take a mixture of EDGE and Non-EDGE courses.</i>		
<ul style="list-style-type: none">• (Reverse Scored) The number of foreign languages credits I have to take before third year requires me to take a mixture of EDGE and non-EDGE foreign language courses.• (Reverse Scored) It's impossible for me to take all my foreign language credit in EDGE courses.	.199	.022

As can be seen from Table 2, of the seven pairings of items, three correlate (albeit moderately) and four do not. These results suggest that the participants may have been interpreting these items differently.

III. Discussion

Based on the correlations produced in the analysis, it seems that the participants interpreted some of the items that were hypothesized to measure the same construct differently. The first pair of non-correlating items and the responses to them are shown in Figure 2:

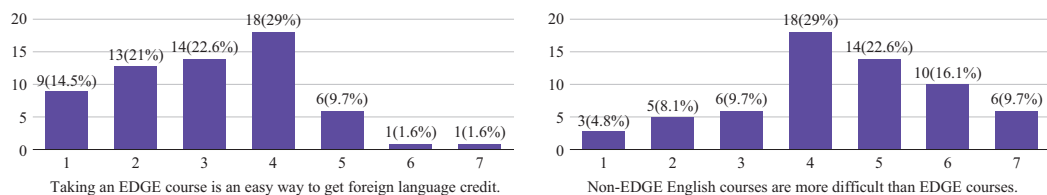
EDGE courses are easy.

- Taking an EDGE course is an easy way to get foreign language credit.
- Non-EDGE English courses are more difficult than EDGE courses.

While Figure 2 would seem to visually confirm the hypothesized relationship between the two items, individual responses did not correlate. It seems that the comparison suggested by the second item may have led participants to interpret it differently to the first item. In other words, when participants replied to the statement that EDGE was an easy way to get foreign language credit, they may not have been comparing it with alternative ways to get foreign language credit, as was specified in the second item. In the future iterations of this survey, this comparison will have to be clarified in the wording of the item.

The next item pairing that did not significantly correlate was as follows:

FIGURE 2. RESPONSES ON A 7-POINT LICKERT SCALE FOR
“EDGE COURSES ARE EASY”

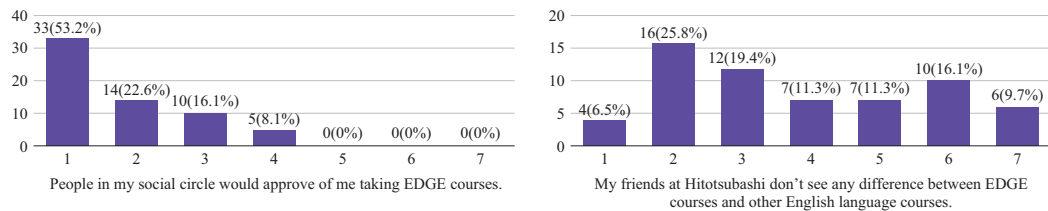


My university friends would support me taking an EDGE course.

- People in my social circle would approve of me taking EDGE courses.
- (Reverse Scored) My friends at Hitotsubashi don't see any difference between EDGE courses and other English language courses.

These items sought to explore whether participants felt any social support from their peers to enroll in EDGE courses. Responses to the first item (Figure 3) regarding people in their social circle were heavily weighted toward agreement, with over half (53.2%) choosing the strongest agreement option. However, responses to the second item, regarding whether or not friends differentiated between EDGE and other English courses, were much more varied.

FIGURE 3. RESPONSES ON A 7-POINT LICKERT SCALE FOR
“MY UNIVERSITY FRIENDS WOULD SUPPORT ME TAKING AN EDGE COURSE”



It would appear, therefore, that these two items are measuring very different constructs. Once again, one item implies a comparison between English courses on offer at the university (the second item) and the other does not. Similarly, one item asks about approval of taking a course and the other asks about differentiating between two courses. These items will require significant editing in future iterations of the survey.

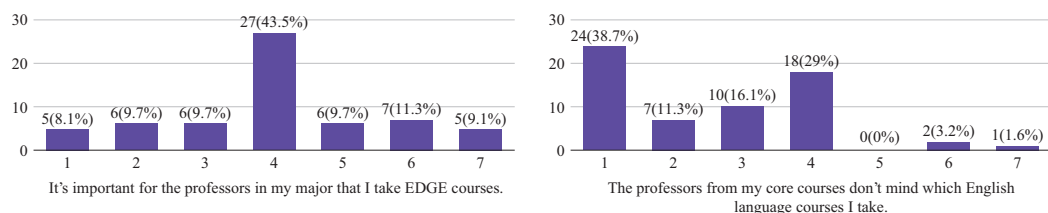
The next two items are as follows:

Professors in my disciplinary courses would support me taking an EDGE course.

- It's important for the professors in my major that I take EDGE courses.
- (Reverse Scored) The professors from my core courses don't mind which English language courses I take.

As with previous comparisons, it seems that the comparison implied by one item is not clear in the other item. Responses to the first item were extremely ambivalent, with 43.5% of participants choosing 4 (Figure 4), which would correspond to *neither agree nor disagree*. Responses to the second item were weighted more toward agreement. We may interpret the results from these two items as both suggesting that disciplinary professors do not mind which language courses the participants take. Therefore, the wording of the items has led to the responses not correlating while both items seem to be suggesting the same finding.

FIGURE 4. RESPONSES ON A 7-POINT LICKERT SCALE FOR
“PROFESSORS IN MY DISCIPLINARY COURSES WOULD SUPPORT ME TAKING
AN EDGE COURSE”

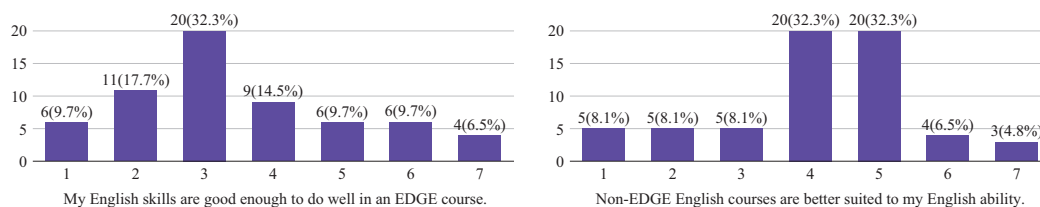


Finally, the last pair of items is as follows:

My English level is good enough to take EDGE courses.

- My English skills are good enough to do well in an EDGE course.
- (Reverse Scored) Non-EDGE English courses are better suited to my English ability.

FIGURE 5. RESPONSES ON A 7-POINT LICKERT SCALE FOR
“MY ENGLISH LEVEL IS GOOD ENOUGH TO TAKE EDGE COURSES”



The intended focus of these items was whether participants felt they had sufficient English proficiency to pass an EDGE course. The lack of correlation between these two items could be a result of the implied grouping together of all non-EDGE courses into a single difficulty level. As can be seen in Figure 5, most responses to the second item fell in the *neither agree nor disagree* category or *slightly disagree*. Perhaps this ambivalence is a recognition that non-EDGE courses are offered at a range of difficulties, some of which are better suited to the participants and some of which are not. This second item will be removed from any further iterations of the survey.

Open Ended Items

The final two items included in the pilot survey were related to the third determinant of intention, namely control beliefs. These items differed from the other survey items in that they were optional and required an open answer.

The two items:

1. List the factors and circumstances that make it easy for you to take an EDGE course.
2. List the factors and circumstances that make it difficult for you to take an EDGE course.

There were 26 responses to each item, making the response rate 41.9% (of those who participated in the survey) for both. A breakdown of the responses is given in Table 3.

From the wide variety of responses to the first item, the most popular answer was *suitable class times*. Scheduling conflicts between the students' compulsory subjects and EDGE subjects have always been an unavoidable issue. Of note, the second highest response to the item were comments about a lack of clarity in EDGE syllabuses, or a desire for more detailed breakdowns of lessons. The final response worth mentioning was that the lottery system for entry was also seen as an impediment to taking classes.

Responses from the second item on which factors make it difficult to take courses proved to be somewhat more informative with 10 responses being directed at the level of difficulty. Five answers were from students who found the classes too difficult, and the other five answers were from students who speculated that other students would avoid EDGE classes because they seem difficult. Other noteworthy responses, both at three responses each, were scheduling conflicts followed by no remote classes available.

According to TPB Questionnaire Construction (Azjen, 2006), the responses to these items should be used to construct sets of beliefs. The idea being that the most commonly held beliefs about the behavior can be identified and used in the main study. As Azjen explains, "a content analysis of the responses to the above items results in lists of modal salient outcomes, referents,

TABLE 3. OPEN RESPONSES TO ITEMS 13 AND 14
IN ORDER OF FREQUENCY

Please list any factors or circumstances that would make it easy or enable you to take EDGE courses.	Number of similar responses
Suitable class times	4
Syllabus clarity	3
No lottery	3
No factors suggested	2
More advertising	2
High level classes	2
Clearer levels	2
Variety of subjects	1
Japanese professors	1
Importance of English	1
More detailed information	1
Remote classes	1
Friends in classes	1
Group work	1
Classes seem too advanced	1
Total	26
What factors or circumstances would make it difficult or prevent you from taking EDGE courses?	
Classes are too difficult	5
Classes seem too advanced	5
Suitable class times	3
No remote classes	3
No reasons	3
Lack of information	2
Not easy credit	1
Classes are too easy	1
Class names difficult to understand	1
No friends in class	1
Courses are listed as general education subjects	1
Total	26

and control factors. These lists are used to construct items to be included in the final questionnaire” (p.5). By shortlisting the most popular control beliefs, more astute items can be formulated, which will hopefully lead to more useful data in a future survey.

IV. Conclusion

This study sought to pilot survey items designed to ascertain the factors that lead a student to choose to enroll in an EDGE course. While it is tempting to begin to analyze the responses obtained from the survey as the results and discussion above have shown, there is still significant work to be done in editing many survey items before we can have any confidence in the data they produce. In addition, as mentioned earlier, the sample used for this pilot survey is not appropriate for investigating reasons to take or not take EDGE courses; therefore, any temptation to interpret the results for that purpose or to compare EDGE and non-EDGE course

should be resisted.

In future iterations of the survey items, we will have to be careful not to overlook an implied comparison in one item that does not exist in the other. Similarly, wording of items can lead to data not correlating even when the data are in fact suggesting similar responses across the two items. Lastly, more thought will have to be given to what we are asking the participants to compare EDGE courses to: Hitotsubashi University offers a diverse range of foreign language courses and comparisons between EDGE courses and every other foreign language course would be near impossible for participants to make.

To conclude, the open-ended responses have indicated a few areas where EDGE courses can be improved. Although a decision was made in 2021 to add recommended proficiency levels to the title of each EDGE course, there still seems to be some confusion for students about which courses are best suited for them. The EDGE instructors can add more recommended-proficiency guidance to their syllabuses as well as the additional detail requested by some students. It may also be wise to add more courses designed for lower proficiency students as most comments complained about the “high-level” of EDGE courses, with only one response requesting more challenging courses.

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