

# Effects and Limitations of University Information Disclosure: A Study on the Impact on Prospective Students' University Choice

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## Abstract

It is important for universities to disclose sufficient information about educational outcomes and quality to prevent prospective students from being disappointed after enrollment. However, the disclosure of the aforementioned information, which is strongly recommended by the "*Educational Management Guidelines*," is not yet sufficient. In order to improve the disclosure of university information, this study aims to clarify the impact of educational information on university choices of prospective students. We conducted a questionnaire survey targeting university students to examine whether the information required to be disclosed by universities was perceived at the time of university selection and to what extent this information was helpful in making their university choices. The results showed that the overall perception of university educational information was low, but the information that was perceived was helpful in guiding career choices. Additionally, differences in participants' attributes such as post-graduation career aspirations, academic fields at the university, and entrance exam formats also showed variations in perception of the information. These results imply the value of the information provided for prospective students when choosing a college and a major academic field.

*Keywords:* publication of educational information, university information disclosure, university information transparency, academic fields, impact on university choice for prospective student, Educational Management Guidelines

## 1 Introduction

### 1.1 The growing importance of disclosing information on university educational outcomes and quality in Japan

The importance of transparency in university information disclosure has been emphasized not only in Japan but also internationally. In Europe, the Bologna Process promotes standardized disclosure frameworks, ensuring students can make informed decisions [2]. Similarly, in the

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United States, the College Scorecard provides university performance data, including graduation rates, employment outcomes, and tuition costs, to promote accountability and transparency [3].

These initiatives highlight the growing global demand for transparency, while Japan is also working to enhance university information transparency in line with these global trends. In its report, *Grand Design for Higher Education toward 2040*, the Central Council for Education pointed out the need to enhance visualization and disclosure of information regarding educational achievements and the quality of university education in Japanese universities from the perspective that each university should be aware of and actively fulfill its accountability to the voices and expectations of external entities such as local communities and industries [4].

Furthermore, based on this report, in its report, *Educational Management Guidelines*, the Special Committee on Educational Management noted expectations for voluntary and autonomous information disclosure by each university under their independent judgment and responsibility, citing instances where "insufficient information provision before enrollment has led to student disappointment in some universities" [5]. In Appendix 3 of *Educational Management Guidelines*, examples of 26 types of information are listed (see Table 2 for details), which are considered significant to disclose as information related to academic achievements, educational outcomes, and conditions ensuring these outcomes at universities.

A FY2021 survey indicated that although all universities have disclosed a certain amount of information about 100% of universities disclose information on educational and research activities, the disclosure of the aforementioned information, which is strongly demanded by the *Educational Management Guidelines* is not yet sufficient. For instance, about 51% of universities disclose students' study hours, about 39% of universities disclose students' perceptions of growth and satisfaction through the university's educational and research activities and, about 64% of universities disclose student staff ratio [6].

Although there has been considerable discussion regarding the necessity and room for improvement of university information disclosure for prospective students, studies on how prospective students perceive and utilize disclosed information remain limited, particularly in Japan. In particular, little study has been conducted to investigate which information in the guidelines prospective students are interested in. To contribute to improvement of university information disclosure, this study aims to clarify the impact of educational information on the university choices of prospective students, providing internationally comparable data.

## **1.2 Previous research on important factors considered by prospective students when choosing a university**

It has been shown that decision factors in choosing a university are influenced by respondents attributes. In Portugal, for example, a survey of 1641 first-time enrollees at a Portuguese university revealed that the university website is one of the top information sources for respondents and that geographical proximity is the most important factor in choosing a higher education institution [7]. Other examples include a survey of first-time enrollees at a state university in North Cyprus, which found that university websites were the most frequently referenced sources, while job and scholarship opportunities were top concerns for international students [8]. In Japan, a survey conducted in March 2024 among 2479 Japanese high school students found that the most important factor in choosing a university was "content that can be learned" (51.6%), followed by "qualifications that can be obtained" (48.5%) [9].

Previous research related to this study has revealed the impact of information regarding the post-graduation career paths of graduates disclosed by universities on prospective students' university choices [10]. The researchers selected information related to post-graduation career paths from among 26 examples listed in the *Educational Management Guidelines*. They then surveyed university students to examine the extent to which this information was important in their university selection process. The results indicated that positive responses ranging from "somewhat important" to "extremely important" totaled 42% to 62%, suggesting this information was somewhat important in university choice. Furthermore, variations in the importance of information were observed depending on the academic fields students intended to major in, with a significantly higher number of students majoring in Health Sciences and Home Economics considering the "number/rate of national qualification holders" important when choosing a university, whereas this was significantly less important for students in Science and Engineering.

However, as Steffel *et al.* point out, few studies "have looked at the impact of disclosure policies on behavioral outcomes," which are students' university selection *per se*, and "few disclosure studies have used field testing to study the effects of disclosure." [11]. Additionally, factors such as post-graduation career aspirations and the form of university entrance exams, along with the academic field of the university, could influence the perception and utilization of information, but their effects have not been examined. As for the factor of post-graduation career aspirations, having a long-term vision for a future career at the stage of college selection will provide clearer foresight for the chosen field of study and relevant aspired occupation, and will lead to higher satisfaction in college life and higher a success rate in future job-hunting [12]. Based on this, the influence of information perception and utilization may differ depending on these factors. Furthermore, in terms of university entrance exam formats, for example, in recommendation exams, factors such as self-recommendation letters, transcripts, reasons for applying, and plans after enrollment are emphasized. Therefore, it is expected that the perception and utilization of information during university selection will differ between those who have experienced recommendation exams and those who have experienced general entrance exams.

### 1.3 Purpose of this study and research question

To improve the disclosure of university information, this study aims to clarify the impact of 26 types of information, which are strongly recommended by the "*Educational Management Guidelines*," on the university choices of prospective students, providing internationally comparable data. To investigate this, we conducted a questionnaire survey targeting university students to examine whether such information required to be disclosed by universities was perceived at the time of university selection and to what extent this information was helpful in making their university choices. By analyzing Japan's disclosure practices, this study establishes a basis for comparing them with global trends and offers a new perspective on international research in university information transparency.

Specifically, we examine three main research questions: (RQ1) whether the information required to be disclosed by universities was perceived at the time of university selection, (RQ2) to what extent this information was helpful in making their university choices, and (RQ3) what factors could influence the perception and utilization of information, hypothesizing that factors such as post-graduation career aspirations and the form of university entrance exams, and the academic field of the university, could influence the perception and utilization of information, In addition, we examine other sources of information beyond the 26 types of information, that

were helpful in their university selection process, as well as the individuals students consulted with and sources of information they used during their university selection process.

This study aims to build on existing research and provide insights for the improvement of Japanese university information disclosure, ensuring alignment with global standards. It also seeks to contribute for the enhancement of career guidance and education in high schools to support efficient and appropriate career path selection.

## 2 Method

### 2.1 Participants

In the questionnaire survey that was conducted from 15 to 21 March 2024, a thousand undergraduate students (492 male, 500 female, 8 other) registered with Cross Marketing Inc. participated. The demographic characteristics of the participants, including gender, age, post-graduation aspirations, academic field, and entrance exam type, are summarized in Table 1. The majority of participants' residential areas, current university locations, and high school locations were concentrated in Tokyo and Osaka, followed by other prefectures, as shown in Appendix, Table 6. Informed consent was obtained from all participants.

Table 1: Demographic Characteristics of Participants (N = 1000). This table summarizes the demographic characteristics of the participants, including gender, age, post-graduation aspirations, academic field, and entrance exam type.

Attribute	Category	n (%)
Gender	Male	492 (49.2%)
	Female	500 (50.0%)
	Other	8 (0.8%)
Age group	18-20 years	418 (42.0%)
	21-23 years	538 (54.0%)
	24-26 years	44 (4.0%)
Post-graduation career aspiration	Aspiring to employment	681 (68.1%)
	Aspiring for graduate school	149 (14.9%)
	No clear aspirations	167 (16.7%)
	Other	3 (0.3%)
Academic fields at the university	Humanities	179 (17.9%)
	Social Sciences	307 (30.7%)
	Science	54 (5.4%)
	Engineering	139 (13.9%)
	Agriculture	37 (3.7%)
	Merchant Marine Science	2 (0.2%)
	Health Sciences	131 (13.1%)
	Home Economics	25 (2.5%)
	Education	59 (5.9%)
	Art	39 (3.9%)
	Others	28 (2.8%)
Entrance exam format	General Exam	513 (51.3%)
	Recommendation Exam	487 (48.7%)

Note: n represents participants, and percentages indicate each group's proportion.

## 2.2 Format and procedure of questionnaire survey

The questionnaire was divided into parts: the part for screening participants' attributes and the part for the main survey body. Regarding participants' attributes, information such as gender, age, residential area, type of high school graduated from, location of current university, location of high school graduated from, desired post-graduate path at the time of university selection, specialized field of study at university, types of university entrance exams experienced, and professional qualifications acquired after university admission were requested. In the main survey questionnaire items, to answer RQ1, participants were asked if they perceived 26 types of information regarding educational outcomes and conditions for ensuring these outcomes in the *Educational Management Guidelines* shown in Table 2, and if they perceived them at the time of their university selection. If they responded affirmatively, to answer RQ2, they were asked to rate how helpful this information was in their university selection on a 4-point Likert scale from 1 (not helpful at all) to 4 (extremely helpful). A neutral option was intentionally excluded to encourage participants to take a clear stance rather than selecting an undecided or ambiguous response. This approach helps minimize central tendency bias, which often occurs when respondents opt for a neutral answer instead of reflecting on their actual opinion. Additionally, the 4-point scale simplifies data interpretation, making it easier to distinguish between positive and negative perceptions. Each of the 26 types of information has been publicized along with examples of contents to be disclosed, in Appendix 3 of the *Educational Management Guidelines* as supplementary information in the questionnaire (see Table 2 for details).

Additionally, besides the 26 types of information, participants were asked to provide information about other factors that were helpful in their university selection process, as well as individuals they consulted and sources of information they used during their university selection process.

Table 2: Examples of 26 types of information with contents listed in Appendix 3 of *Educational Management Guidelines*. This table provides examples of 26 types of university information recommended for disclosure in the *Educational Management Guidelines*. These categories cover academic programs, admission policies, student outcomes, and institutional management.

	Educational information	Contents to be disclosed
1	Achievement status of goals in each course subject	The average number of credits registered and the average number of credits earned per year by students in the faculty and department.
2	Degree attainment status	The nomenclature of academic fields of academic degrees awarded by the faculty and department and the number of degree recipients.
3	Students' perception of growth and satisfaction	The annual average values and distribution of students' subjective evaluations regarding the development of qualities and abilities specified in the "Diploma Policy" of the faculty and department, as well as other overall trends.
4	Post-graduation situations such as career decisions	The rates of advancement to graduate schools or other institutions, employment rates, and main destinations for further education or employment for students of the faculty and department.

5	Percentage of students graduating within the prescribed period, retention rate, and dropout rate	The number and percentage of graduates, enrolled students, and dropouts at the end of the prescribed period for each academic degree program in each academic year.
6	Study hours	The average time that students spend learning both inside and outside the classrooms and its distribution, as well as other overall trends.
7	Achievement status of goals in courses directly assessing specific qualities and abilities as outlined in the "Diploma Policy"	<ul style="list-style-type: none"> <li>• Course titles, learning objectives, the correspondence between the learning objectives and the "Diploma Policy," grading criteria, and assessment methods.</li> <li>• Overall status of achievement for the qualities and abilities specified in the "Diploma Policy" that can be directly measured through the courses.</li> </ul>
8	Level of graduation thesis or research	<ul style="list-style-type: none"> <li>• The number and percentage of students engaged in graduation theses or research projects.</li> <li>• Representative topics of graduation theses or research.</li> <li>• Evaluation criteria for students' graduation theses or research.</li> <li>• The average values and distribution of evaluations for graduation theses or research, as well as other overall trends.</li> </ul>
9	Results of assessment tests	The status of students' test-taking, along with the average scores, score distribution, and other overall trends.
10	Scores of external examinations such as language proficiency tests	The status of students' participation in external examinations, along with the average scores, score distribution, and other overall trends.
11	Status of qualification acquisition	The number of students who have obtained qualifications and the qualification acquisition rate.
12	Status of awards, honors, etc.	The number of students who have received awards or honors, along with specific examples.
13	Evaluation of graduates by employers or academic advisors of graduates	Evaluations of graduates by employers or academic advisors at their postgraduate institutions, based on the qualities and abilities outlined in the "Diploma Policy," including representative examples and other overall trends.
14	Evaluation from graduates	Evaluations from graduates regarding which qualities and abilities learned at the university have been useful, categorized by their respective career paths, such as further education or employment.
15	Conditions of admissions selection	<ul style="list-style-type: none"> <li>• Subjects and methods of individual academic ability tests, basic information regarding subjects, examination methods, and other fundamental matters related to entrance examination selection</li> <li>• Methods and criteria for pass/fail determination, examination questions and their answers</li> <li>• Number of examinees, successful candidates, and number of entrants according to categories of examination methods.</li> </ul>
16	Student staff ratio	The ratio of faculty members to enrolled students for each university, faculty, and department.
17	Status of flexibility in academic calendar	Specific details regarding the class periods and other aspects of the academic calendar for each university, faculty, and department.
18	A mechanism that stipulates the upper limit on the number of course credits	The presence or absence of a system that sets an upper limit on the number of course credits that can be registered, specific details of the system such as the maximum number of credits, and the specific requirements for exceptions.

19	Methods, content, and course plans as described in the syllabus	Policies regarding the creation of syllabi at the university level, as well as the syllabi for individual courses.
20	Situation regarding early graduation or enrollment in graduate school	Requirements for early graduation and direct entry into graduate school, along with the number and percentage of early graduates and students who have directly entered graduate school for each faculty and department.
21	Implementation status of Faculty Development (FD) and Staff Development (SD)	Details and frequency of FD and SD programs implemented by the university, as well as the participation rate of university faculty and staff.
22	Utilization status of GPA	The method of calculating GPA, its average value and distribution, and how GPA is utilized (for example, in academic guidance, selection of scholarship recipients or tuition fee exemptions, early graduation, or direct entry into graduate school, etc.).
23	Utilization status of curriculum maps, curriculum trees, etc.	Curriculum maps and curriculum trees for each faculty and department.
24	Implementation status of course-numbering	The university's policy regarding the numbering and lists of courses that have been numbered in each degree program.
25	Status of faculty performance evaluation	The university's policy regarding the faculty performance evaluation.
26	Status of institutional research for enrollment management	Examples of IR activities for enrollment management conducted by the university, cases of educational improvement, the organization responsible for IR, and internal regulations related to IR.

### 2.3 Data calculation and analysis

The following figures and tables show the frequency of responses for each of the 26 types of information. To answer RQ3, we examined the impact of participants' attributes— such as desired post-graduate path at the time of university selection, specialized field of study at university, and types of university entrance exams experienced as factors influencing the perception of each of the 26 types of information using a Chi-square test for independence with R software (version 4.4.0) [13]. Multiple comparisons were performed using the Bonferroni method. In multiple comparisons, the adjusted standardized residual (ASR) values indicate statistical significance, with positive values meaning that the observed count is significantly higher than expected and negative values meaning that the observed count is significantly lower than expected. In this study, we focused on relative evaluations using ASRs rather than absolute counts. This approach was chosen to identify significant deviations from expected values based on sample distributions. While absolute counts provide raw frequencies, ASRs highlight statistical tendencies, making it possible to interpret whether specific groups perceive information more or less than expected.

Additionally, we provided descriptive statistics for responses related to information other than the 26 types of information such as information about different factors that were helpful in their university selection process, as well as individuals they consulted and sources of information they used during their university selection process.

### 3 Results and Discussion

#### 3.1 Perception and evaluation of the helpfulness of university information by 26 categories related to RQ1 and RQ2

Since there were no missing values, the analysis was conducted with 1000 responses. Figure 1 shows the number of responses regarding whether the information was perceived. In response to RQ1, the average number of participants who perceived the 26 information categories was 366 ( $SD = 109.87$ ), indicating that the overall level of perception was low. The results showed a tendency for participants to perceive two items among the 26 recommended disclosure categories: (4) post-graduation situations such as career decisions (637 participants) and (15) conditions of admissions selection (561 participants). In contrast, most other information categories were not widely perceived by participants. Among the remaining 24 categories, the item with the highest number of participants who perceived it was (2) degree attainment status (505 participants), while the lowest was (21) implementation status of FD and SD (152 participants). In addition to these, we also collected data on other factors that influenced university selection, including sources of information used and individuals consulted during the decision-making process. The descriptive statistics for these additional factors are presented in Appendix, Figures 3–5 for reference. These results suggest considerable differences in information perception among prospective students.

In response to RQ2, Figure 2 showed that, regarding the helpfulness when perceived, positive responses ranging from "somewhat useful" to "extremely useful" varied between 55% to 78%. Across all 26 information categories, the average positive response rate was 66.4% ( $SD = 4.63$ ), reflecting a moderate overall level of helpfulness. The highest positive responses were for (4) post-graduation situation such as career decisions (78.3%), followed by (15) conditions of admissions selection (76.3%), while the lowest was for (12) status of awards, honors, etc. (56.0%). The results reveal a significant gap between highly rated items, such as (4) and (15), and less frequently rated items, such as (12). These results highlight a considerable disparity in perceived helpfulness, with certain types of information considered substantially more helpful than others. This suggests the need to improve the perceived helpfulness of less frequently rated information to better support prospective students in their decision-making process.

When comparing Figure 1 and Figure 2, it was revealed that information with a high perceived value had a high helpfulness rating. This alignment indicates that widely recognized information is more likely to be considered useful. Additionally, since post-graduation situations had a high perceived value and a high helpfulness rating, a similarity was found with prior research that considered this information to be somewhat important [7].

These results indicate that prospective students show interest in specific input and output information, such as entrance exam-related and post-graduation career information, but lack awareness of many other types of input, throughput, and output educational information. This highlights the need to enhance both the visibility and utility of less recognized information categories and improve university information dissemination methods to better address the diverse needs of prospective students.



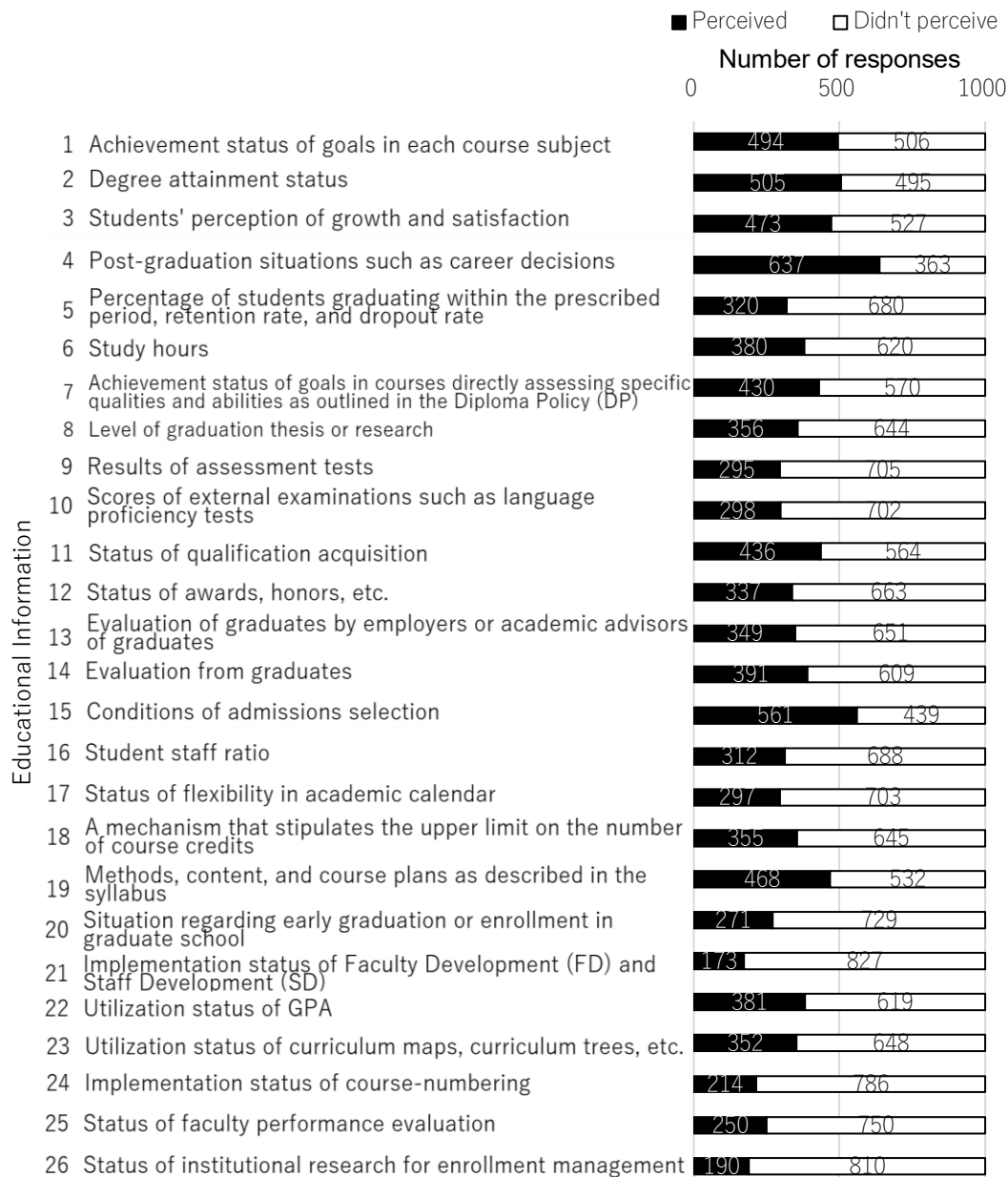


Figure 1: Number of responses regarding whether the information was perceived (corresponding to RQ1). The average number of participants who perceived the 26 information categories was 366 ( $SD = 109.87$ ), indicating a relatively low overall perception level. The most perceived items were (4) post-graduation situations (637 participants) and (15) conditions of admissions selection (561 participants), while (21) implementation status of FD and SD (152 participants) were the lowest. These results suggest notable differences in information perception among prospective students.

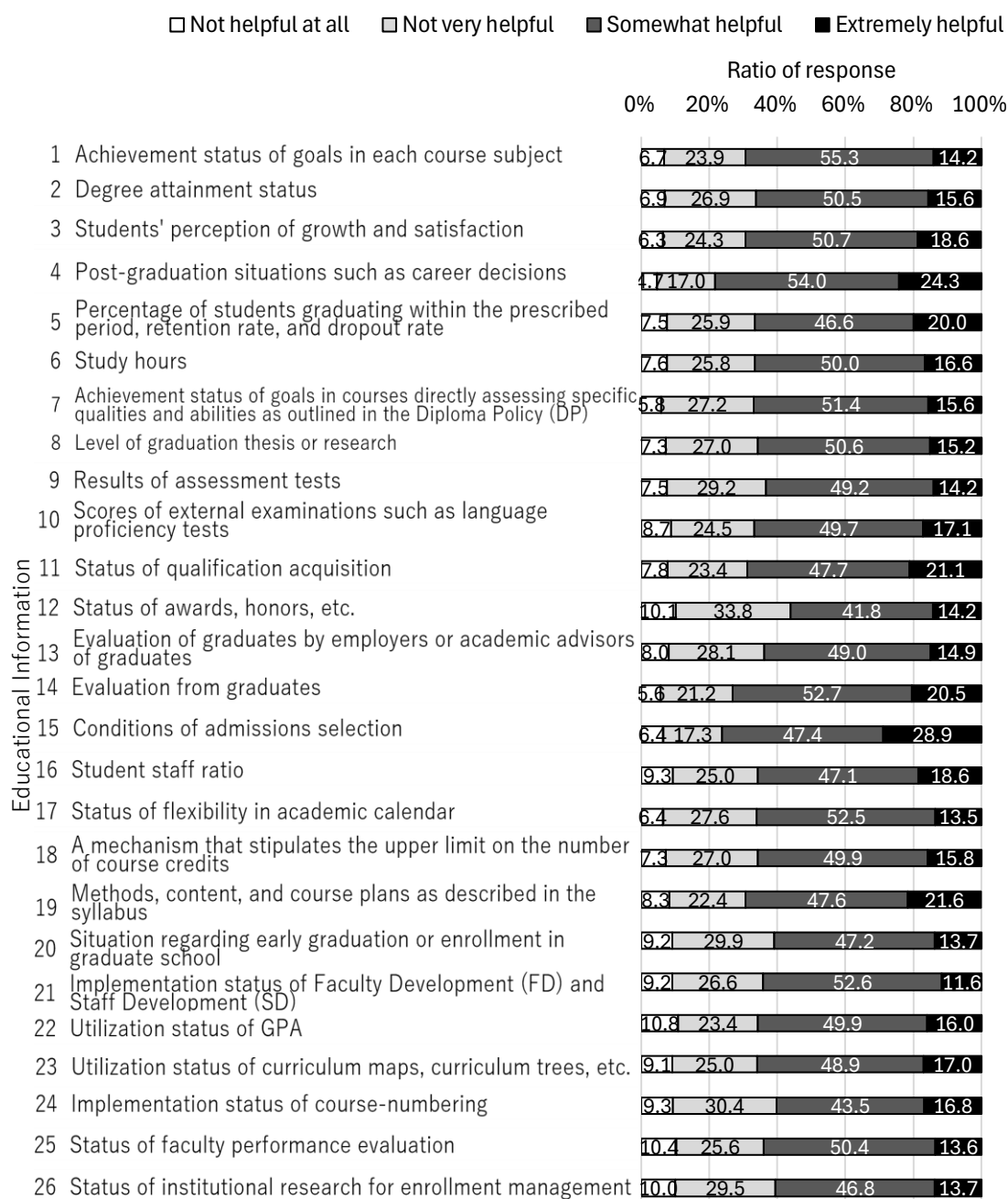


Figure 2: Number of responses and ratio regarding the helpfulness of perceived information (corresponding to RQ2). Regarding helpfulness when perceived, positive responses ranging from "somewhat useful" to "extremely useful" were between 55% and 78%. Across 26 information categories, the average positive response rate was 66.4% ( $SD = 4.63$ ), reflecting a moderate level of helpfulness. The highest positive responses were for (4) post-graduation situations such as career decisions (78.3%), followed by (15) conditions of admissions selection (76.3%), while the lowest was for (12) status of awards, honors (56.0%). These results highlight a disparity in perceived helpfulness, with certain types of information considered more helpful than others. This suggests the need to improve the perceived helpfulness of less frequently rated information to better support prospective students in decision-making process.

## 3.2 Differences in response trends regarding RQ3

### 3.2.1 Post-graduation career aspirations at the time of university selection

The response options for questions about post-graduation career aspirations at the time of university selection were as follows: aspiring to employment after graduation, aspiring for further education such as graduate school after graduation, no clear aspirations, and others. Responses categorized as "others" were excluded from the Chi-square test for independence due to their small number. The analysis results are shown in Table 3, indicating only the information with significant difference.

As for RQ3, the analysis presented in Table 3 suggests that factors such as post-graduation career aspirations significantly influence the perception of university information. The group that reported having no clear aspirations indicated that they did not perceive most of the information, including (1) achievement status of goals in each course subject ( $p < .001$ ), (2) degree attainment status ( $p < .001$ ), (3) students' perception of growth and satisfaction ( $p < .001$ ), (4) post-graduation situations such as career decisions ( $p < .001$ ), (6) study hours ( $p < .001$ ), (7) achievement status of goals in courses directly assessing specific qualities and abilities as outlined in the DP ( $p < .001$ ), (10) scores of external examinations such as language proficiency tests ( $p < .01$ ), (11) status of qualification acquisition ( $p < .001$ ), (14) evaluation from graduates ( $p < .01$ ), (15) conditions of admissions selection ( $p < .001$ ), (16) student staff ratio ( $p < .001$ ), (17) status of flexibility in academic calendar ( $p < .01$ ), (18) a mechanism that stipulates the upper limit on the number of course credits ( $p < .001$ ), (19) methods, content, and course plans as described in the syllabus ( $p < .001$ ), (20) situation regarding early graduation or enrollment in graduate school ( $p < .01$ ), (22) utilization status of GPA ( $p < .01$ ), (24) implementation status of course-numbering ( $p < .001$ ), (26) status of institutional research for enrollment management ( $p < .001$ ).

On the other hand, students aspiring to employment showed higher recognition rates for several types of information compared to those with no clear aspirations. Specifically, they were more likely to perceive information such as (1) achievement status of goals in each course subject ( $p < .01$ ), (2) degree attainment status ( $p < .001$ ), (3) students' perception of growth and satisfaction ( $p < .01$ ), (4) post-graduation situations such as career decisions ( $p < .01$ ), (7) achievement status of goals in courses directly assessing specific qualities and abilities as outlined in the DP ( $p < .01$ ), (11) status of qualification acquisition ( $p < .001$ ), (19) methods, content, and course plans as described in the syllabus ( $p < .01$ ), (24) implementation status of course-numbering ( $p < .01$ ), and (26) status of institutional research for enrollment management ( $p < .001$ ). This group demonstrated particular interest in both input and throughput information, reflecting their focus on career-oriented outcomes such as (4) post-graduation situations and (11) status of qualification acquisition, and practical achievements during their university studies such as (1) achievement status of goals in each course subject, (2) degree attainment status, (7) achievement status of goals in courses directly assessing specific qualities and abilities, and (19) methods, content, and course plans as described in the syllabus.

Additionally, students aspiring to graduate school reported particularly perceived in the information regarding (20) early graduation or enrollment in graduate school ( $p < .05$ ). These results suggest that graduate school aspirants tend to prioritize information directly relevant to advanced academic pursuits.

These results indicate that prospective students who with aspirations such as employment and graduate school perceived a wide variety of information regarding educational achievements and the quality of university education at the time of university selection compared to students who have no clear aspirations. Considering the process outlined in prior research [8], students with long-term vision for their future careers at the stage of college selection might develop greater interest in the university and a better understanding of what information to focus on to achieve those goals.

Table 3: Number of responses regarding whether the information was perceived based on participants' post-graduation career aspirations (corresponding to RQ3). The results indicate that students with no clear aspirations showed significantly lower perception rates across various university information categories, including (4) post-graduation situations, (15) conditions of admissions selection, and (11) status of qualification acquisition (all  $p < .001$ ). Conversely, students aspiring to employment demonstrated significantly higher recognition of multiple information categories, particularly (4) post-graduation situations ( $p < .01$ ), (2) degree attainment status ( $p < .001$ ), and (11) status of qualification acquisition ( $p < .001$ ), highlighting their emphasis on career-oriented and practical university outcomes. Additionally, students aspiring to graduate school showed a significantly higher perception of (20) early graduation or enrollment in graduate school ( $p < .05$ ), suggesting a strong focus on academic progression.

	Educational Information		Perceived	Didn't perceive	$\chi^2$
1	Achievement status of goals in each course subject	Aspiring to employment	356 (2.72**)	325 (-2.72**)	17.15***
		Aspiring for graduate school	78 (0.79)	71 (-0.79)	
		No clear aspirations	58 (-4.14***)	109 (4.14***)	
2	Degree attainment status	Aspiring to employment	365 (2.92***)	316 (-2.92***)	23.07***
		Aspiring for graduate school	82 (1.21)	67 (-1.21)	
		No clear aspirations	56 (-4.79***)	111 (4.79***)	
3	Students' perception of growth and satisfaction	Aspiring to employment	337 (2.08**)	344(-2.08**)	15.53***
		Aspiring for graduate school	78 (1.35)	71 (-1.35)	
		No clear aspirations	56 (-3.89***)	111 (3.89***)	
4	Post-graduation situations such as career decisions	Aspiring to employment	452 (2.59**)	229 (-2.59**)	15.56***
		Aspiring for graduate school	99 (0.76)	50 (-0.76)	
		No clear aspirations	84 (-3.94***)	83 (3.94***)	
6	Study hours	Aspiring to employment	266 (1.10)	415 (-1.10)	9.22**
		Aspiring for graduate school	65 (1.56)	84 (-1.56)	
		No clear aspirations	47 (-2.85***)	120 (2.85***)	
7	Achievement status of goals in courses directly assessing specific qualities and abilities as outlined in the DP	Aspiring to employment	311 (2.66**)	370 (-2.66**)	11.57**
		Aspiring for graduate school	64 (0.03)	85 (-0.03)	
		No clear aspirations	52 (-3.35***)	115 (3.35***)	

10	Scores of external examinations such as language proficiency tests	Aspiring to employment	206 (0.47)	475 (-0.47)	7.69*
		Aspiring for graduate school	54 (1.87)	95 (-1.87)	
		No clear aspirations	37 (-2.36**)	130 (2.36**)	
11	Status of qualification acquisition	Aspiring to employment	328 (4.43***)	353 (-4.43***)	21.16***
		Aspiring for graduate school	55 (-1.74)	94 (1.74)	
		No clear aspirations	50 (-3.86***)	117 (3.86***)	
14	Evaluation from graduates	Aspiring to employment	277 (1.58)	404 (-1.58)	6.06*
		Aspiring for graduate school	61 (0.52)	88 (-0.52)	
		No clear aspirations	51 (-2.46**)	116 (2.46**)	
15	Conditions of admissions selection	Aspiring to employment	394 (1.58)	287 (-1.58)	9.58**
		Aspiring for graduate school	90 (1.13)	59 (1.13)	
		No clear aspirations	76 (-3.04***)	91 (3.04***)	
16	Student staff ratio	Aspiring to employment	223 (1.55)	458 (-1.55)	8.94*
		Aspiring for graduate school	52 (1.06)	97 (-1.06)	
		No clear aspirations	36 (-2.95***)	131 (2.95***)	
17	Status of flexibility in academic calendar	Aspiring to employment	205 (0.52)	476 (-0.52)	7.07*
		Aspiring for graduate school	53 (1.74)	96 (-1.74)	
		No clear aspirations	37 (-2.31**)	130 (2.31**)	
18	A mechanism that stipulates the upper limit on the number of course credits	Aspiring to employment	253 (1.69)	428 (-1.69)	15.10**
		Aspiring for graduate school	62 (1.72)	87 (-1.72)	
		No clear aspirations	38 (-3.75***)	129 (3.75***)	
19	Methods, content, and course plans as described in the syllabus	Aspiring to employment	333 (2.01**)	348 (-2.01**)	19.27***
		Aspiring for graduate school	80 (1.84)	69 (-1.84)	
		No clear aspirations	53 (-4.26***)	114 (4.26***)	
20	Situation regarding early graduation or enrollment in graduate school	Aspiring to employment	183 (-0.11)	498 (0.11)	10.00**
		Aspiring for graduate school	53 (2.56**)	96 (-2.56**)	
		No clear aspirations	33 (-2.30**)	134 (2.30**)	
22	Utilization status of GPA	Aspiring to employment	267 (1.14)	414 (-1.14)	8.05*
		Aspiring for graduate school	64 (1.35)	85 (-1.35)	
		No clear aspirations	48 (-2.71**)	119 (2.71**)	
24	Implementation status of course-numbering	Aspiring to employment	160 (2.65**)	521 (-2.65**)	10.68**
		Aspiring for graduate school	31 (-0.12)	118 (0.12)	
		No clear aspirations	20 (-3.19***)	147 (3.19***)	
26	Status of institutional research for enrollment management	Aspiring to employment	145 (2.89***)	536 (-2.89***)	10.18**
		Aspiring for graduate school	25 (-0.70)	124 (0.70)	
		No clear aspirations	18 (-2.92***)	149 (2.92***)	

Note: figures in () indicate adjusted standardized residuals (ASRs). A positive ASR indicates that the observed count is significantly higher than expected, while a negative ASR indicates that the observed count is significantly lower than expected. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### 3.2.2 Academic fields at the university

The response options for questions about academic fields at the university were as follows: Humanities, Social Sciences, Science, Engineering, Agriculture, Merchant Marine Sciences, Health Sciences, Home Economics, Education, Art, and Others. Responses categorized as "Merchant Marine Sciences" were excluded from the Chi-square test for independence due to their small number. The analysis results are shown in Table 4, indicating only the information with significant difference.

As for RQ3, the results showed in Table 4 suggests that factors such as academic fields at the university significantly influence the perception of university information. Regarding (8) the level of graduation thesis or research, a higher perception was observed in Humanities ( $p < .01$ ), while fewer students showed such perception in Social Sciences ( $p < .05$ ). Regarding (11) the status of qualification acquisition, students in Health Sciences and Others had a higher perception ( $p < .001$  and  $p < .05$ , respectively), while Sciences, Engineering, and Art students showed lower perception on it ( $p < .05$ ,  $p < .01$  and  $p < .01$ , respectively). Regarding (15) the conditions of admissions selection, students in the 'Others' category had a higher perception ( $p < .05$ ), while Social Sciences had fewer responses indicating such perception ( $p < .05$ ).

Previous research found similar results regarding the status of qualification acquisition [7]. This result might be interpreted as follows: Health Sciences is a field deeply connected to national qualifications, such as medical licenses. In contrast, Science and Engineering have less direct associations with specific national qualifications. Therefore, it is expected that the importance of information regarding qualification acquisition varies among students in each field.

Regarding the level of the graduation thesis or research and the conditions of admissions selection, other factors may be influencing these outcomes; therefore, further research on these topics may be necessary.

Table 4: Number of responses regarding whether the information was perceived based on participants' academic fields at the university (corresponding to RQ3). Students in Humanities had a higher perception of (8) the level of graduation thesis or research ( $p < .01$ ), while those in Social Sciences perceived it less ( $p < .05$ ). Regarding (11) the status of qualification acquisition, students in Health Sciences and Others had higher perception ( $p < .001$ ,  $p < .05$ ), whereas those in Science, Engineering, and Art showed lower perception ( $p < .05$ ,  $p < .01$ ,  $p < .01$ ). Additionally, students in Others had a higher perception of (15) conditions of admissions selection ( $p < .05$ ), while those in Social Sciences perceived it less ( $p < .05$ ). These findings highlight the role of academic disciplines in shaping students' information perceptions.

Educational Information		Perceived	Didn't perceive	$\chi^2$
8	Humanities	81 (2.99**)	98 (-2.98**)	20.36 *
	Social Sciences	94 (-2.18*)	213 (2.18*)	
	Science	17 (-0.65)	37 (0.65)	
	Engineering	45 (-0.85)	94 (0.85)	
	Agriculture	16 (0.99)	21 (-0.99)	
	Health Sciences	40 (-1.29)	91 (1.29)	
	Home Economics	12 (1.31)	13 (-1.31)	
	Education	25 (1.13)	34 (-1.13)	
	Art	11 (-0.98)	28 (0.98)	
	Others	14 (1.62)	14 (-1.62)	

11	Status of qualification acquisition	Humanities	79 (0.16)	100 (-0.16)	39.48 ***
		Social Sciences	129 (-0.67)	178 (0.67)	
		Science	16 (-2.13*)	38 (2.13*)	
		Engineering	46 (-2.69**)	93 (2.69**)	
		Agriculture	15 (-0.38)	22 (0.38)	
		Health Sciences	77 (3.76***)	54 (-3.76***)	
		Home Economics	15 (1.68)	10 (-1.68)	
		Education	31 (1.43)	28 (-1.43)	
		Art	9 (-2.63**)	30 (2.63**)	
		Others	18 (2.24*)	10 (-2.24*)	
15	Conditions of admissions selection	Humanities	110 (1.56)	69 (-1.56)	17.08 *
		Social Sciences	156(-2.29*)	151 (2.29*)	
		Science	25 (-1.51)	29 (1.51)	
		Engineering	79 (0.16)	60 (-0.16)	
		Agriculture	24 (1.08)	13 (-1.08)	
		Health Sciences	78 (0.82)	53 (-0.82)	
		Home Economics	14 (-0.02)	11 (0.02)	
		Education	37 (1.04)	22 (-1.04)	
		Art	17 (-1.62)	22 (-1.62)	
		Others	21 (2.03*)	7 (-2.03*)	

Note: figures in () indicate adjusted standardized residuals (ASRs). A positive ASR indicates that the observed count is significantly higher than expected, while a negative ASR indicates that the observed count is significantly lower than expected. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### 3.2.3 Entrance exam formats

Based on questions regarding the type of entrance examination, participants were divided into two groups: those who had experienced only general entrance examinations and those who had experienced recommendation examinations. The analysis results are shown in Table 5, indicating only the information with significant difference.

As for RQ3, the analysis presented in Table 5 suggests that factors such as entrance exam formats significantly influenced the perception of university information. The group that experienced general entrance examinations reported particularly perceiving (15) the condition regarding admission selection ( $p < .01$ ). In contrast, the group that experienced recommendation examinations reported not perceiving this information ( $p < .01$ ). Additionally, the group that experienced general entrance examinations responded that they were perceived of (20) the situation regarding early graduation and admission to graduate schools ( $p < .05$ ), whereas the group that experienced recommendation examinations answered that they were not perceived of it ( $p < .05$ ).

These results indicate that prospective students who experienced general entrance exams perceived information regarding educational achievements and the quality of university education at the time of university selection more than those who experienced recommendation exams. The information related to conditions of admissions selection includes about subjects and methods of individual academic ability tests, basic information regarding subjects, examination methods, and other fundamental matters related to entrance examination selection, methods and criteria for pass/fail determination, examination questions and their answers, number of

examinees, successful candidates, and number of entrants according to categories of examination methods. Students in the general entrance exam are likely to gather information about the entrance exam, making them more inclined to focus on this information. These findings suggest that students who undergo general entrance exams are more likely to seek information on academic performance and admission criteria, whereas those from recommendation-based pathways may rely on different sources of information. The result regarding early graduation or enrollment in graduate school may be due to the higher number of graduate school applicants in the general entrance exam group.

Table 5: Number of responses regarding whether the information was perceived based on participants' entrance exam formats (corresponding to RQ3). Students who took general entrance exams showed higher perception of (15) conditions of admissions selection ( $p < .01$ ) and (20) early graduation and admission to graduate schools ( $p < .05$ ). In contrast, students who took recommendation-based exams perceived these information categories significantly less ( $p < .01$ ,  $p < .05$ ). These findings suggest that students who undergo general entrance exams are more likely to seek information on academic performance and admission criteria, whereas those from recommendation-based pathways may rely on different sources of information.

Educational Information		Perceived	Didn't perceive	$\chi^2$	
15	Conditions of admissions selection	General entrance exam.	309 (2.70**)	204 (-2.70**)	7.31**
		Recommendation exam.	252 (-2.70**)	235 (2.70**)	
20	Situation regarding early graduation or enrollment in graduate school	General entrance exam.	154 (2.13*)	359 (-2.13*)	4.54*
		Recommendation exam.	117 (-2.13*)	370 (2.13*)	

Note: figures in () indicate adjusted standardized residuals (ASRs). A positive ASR indicates that the observed count is significantly higher than expected, while a negative ASR indicates that the observed count is significantly lower than expected. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## 4 Summary and Conclusions

### 4.1 Summary

This study involved a questionnaire survey targeting university students to investigate whether the information universities are required to disclose was perceived during the university selection process and how helpful this information was in influencing their university choices. The findings related to RQ1 and RQ2 revealed that the overall perception of university educational information was low, but the information that was perceived tended to be beneficial in guiding career decisions. Additionally, regarding RQ3, variations in perception and helpfulness were observed based on participants' characteristics, such as post-graduation career aspirations, academic fields of study at the university, and entrance exam formats. These findings suggest that while prospective students demonstrate interest in certain input and output information, such as details related to entrance exams and post-graduation career prospects, they lack awareness of numerous other aspects of input, throughput, and output educational information.



These results suggest the need for universities to make greater efforts to communicate their information more effectively. Additionally, they highlight the importance of implementing career education at the pre-university stage to enable prospective university students to interpret this information accurately.

This study contributes to global discussions on university transparency by examining how prospective students in Japan perceive and use disclosed information. While initiatives like the Bologna Process and College Scorecard promote transparency, little research has explored student engagement with such information. By analyzing student awareness and utilization in Japan, this study provides insights for improving university information disclosure both nationally and internationally.

## 4.2 Conclusion

In this study, to improve the disclosure of university information, we aim to clarify the impact of the 26 types of information, which are strongly recommended by the "*Educational Management Guidelines*," on the university choices of prospective students. At the same time, we attempted to provide insight into an aspect that is considered to be lacking in research internationally, which is to clarify the impact of information disclosure on behavior through field study. A questionnaire survey targeting university students was conducted to examine the research questions. The results reveal the following findings: regarding the research question (RQ1) and (RQ2), the overall perception of university educational information was low, but the information that was perceived tended to be beneficial in guiding career decisions such as post-graduation career information and entrance exam-related information. As for the research question (RQ3), differences in participants' attributes, such as post-graduation career aspirations, academic fields at the university, and entrance exam formats, also affect the variations in their perceptions.

There are several major limitations in this study that could be addressed in future research. First, this study only asked participants to rate the perception and usefulness of the information without delving into the reasons behind these perceptions, which limits our ability to explore those reasons in depth. The way the questions were phrased might have influenced participants' responses, leading to potential response biases. For example, the wording of perception and usefulness questions may have shaped participants' interpretations, affecting the consistency of their responses. By including open-ended questions, future research could gain deeper insights into the factors influencing students' perceptions, thereby helping to improve information disclosure methods by universities and career education for prospective university students.

Secondly, there are concerns about social desirability bias and central tendency bias in responses. Participants may have rated university-disclosed information more positively than their actual evaluations. To address this, the questions were designed to encourage responses based on real experiences, and a 4-point Likert scale was used to avoid central tendency bias. However, this approach forced participants without clear opinions to choose a side, potentially causing response bias. Future research should consider using a 5-point scale to allow for neutral responses and examine its impact on response tendencies. Additionally, this study may have sample bias due to the concentration of participants in specific academic fields (Table 1) and regions (Appendix, Table 6), as well as the online survey favoring individuals with high-information literacy. This could lead to an overestimation of university information awareness and an overrepresentation of certain opinions. Future studies should improve sampling balance

and survey methods to enhance reliability.

Third, this study relies solely on 2024 survey data, emphasizing the need for longitudinal research to verify its findings in subsequent years. Along with the expected progress in educational information disclosure under the *Grand Design for Higher Education toward 2040* and *Educational Management Guidelines*, temporary restrictions on face-to-face sessions, such as open campuses during COVID-19 may have accelerated online information dissemination. Therefore, further investigation is warranted. Future studies should collect multi-year data to better capture trends and changes in university information perception, enabling a more comprehensive evaluation of information disclosure policies.

## Appendix

Table 6: Geographic Distribution of Participants (N=1000). This table presents the distribution of participants based on their residential areas, current university locations, and high school locations. The majority were concentrated in Tokyo and Osaka, with participants from other prefectures listed in the appendix.

Prefectures	residential areas	current university locations	high school locations
	n (%)	n (%)	n (%)
Hokkaido	32 ( 3.2%)	35 ( 3.5%)	31 ( 3.1%)
Aomori	9 ( 0.9%)	8 ( 0.8%)	8 ( 0.8%)
Iwate	7 ( 0.7%)	8 ( 0.8%)	6 ( 0.6%)
Miyagi	22 ( 2.2%)	25 ( 2.5%)	24 ( 2.4%)
Akita	8 ( 0.8%)	14 ( 1.4%)	8 ( 0.8%)
Yamagata	13 ( 1.3%)	12 ( 1.2%)	11 ( 1.1%)
Fukushima	11 ( 1.1%)	10 ( 1%)	8 ( 0.8%)
Ibaraki	21 ( 2.1%)	32 ( 3.2%)	12 ( 1.2%)
Tochigi	13 ( 1.3%)	11 ( 1.1%)	11 ( 1.1%)
Gunma	13 ( 1.3%)	13 ( 1.3%)	10 ( 1%)
Saitama	65 ( 6.5%)	49 ( 4.9%)	29 ( 2.9%)
Chiba	52 ( 5.2%)	43 ( 4.3%)	39 ( 3.9%)
Tokyo	153 ( 15.3%)	143 ( 14.3%)	236 ( 23.6%)
Kanagawa	66 ( 6.6%)	57 ( 5.7%)	46 ( 4.6%)
Niigata	13 ( 1.3%)	12 ( 1.2%)	15 ( 1.5%)
Toyama	5 ( 0.5%)	7 ( 0.7%)	4 ( 0.4%)
Ishikawa	12 ( 1.2%)	10 ( 1%)	14 ( 1.4%)
Fukui	5 ( 0.5%)	7 ( 0.7%)	5 ( 0.5%)
Yamanashi	4 ( 0.4%)	7 ( 0.7%)	3 ( 0.3%)
Nagano	9 ( 0.9%)	15 ( 1.5%)	8 ( 0.8%)
Gifu	15 ( 1.5%)	20 ( 2%)	8 ( 0.8%)
Shizuoka	12 ( 1.2%)	22 ( 2.2%)	13 ( 1.3%)

Aichi	65 ( 6.5%)	57 ( 5.7%)	69 ( 6.9%)
Mie	11 ( 1.1%)	8 ( 0.8%)	8 ( 0.8%)
Shiga	16 ( 1.6%)	10 ( 1%)	14 ( 1.4%)
Kyoto	48 ( 4.8%)	39 ( 3.9%)	61 ( 6.1%)
Osaka	76 ( 7.6%)	74 ( 7.4%)	78 ( 7.8%)
Hyogo	42 ( 4.2%)	43 ( 4.3%)	48 ( 4.8%)
Nara	11 ( 1.1%)	11 ( 1.1%)	4 ( 0.4%)
Wakayama	3 ( 0.3%)	5 ( 0.5%)	5 ( 0.5%)
Tottori	5 ( 0.5%)	6 ( 0.6%)	3 ( 0.3%)
Shimane	3 ( 0.3%)	7 ( 0.7%)	3 ( 0.3%)
Okayama	12 ( 1.2%)	15 ( 1.5%)	12 ( 1.2%)
Hiroshima	24 ( 2.4%)	27 ( 2.7%)	22 ( 2.2%)
Yamaguchi	9 ( 0.9%)	8 ( 0.8%)	11 ( 1.1%)
Tokushima	6 ( 0.6%)	7 ( 0.7%)	4 ( 0.4%)
Kagawa	5 ( 0.5%)	13 ( 1.3%)	5 ( 0.5%)
Ehime	8 ( 0.8%)	6 ( 0.6%)	10 ( 1%)
Kochi	8 ( 0.8%)	5 ( 0.5%)	7 ( 0.7%)
Fukuoka	34 ( 3.4%)	30 ( 3%)	38 ( 3.8%)
Saga	2 ( 0.2%)	4 ( 0.4%)	1 ( 0.1%)
Nagasaki	4 ( 0.4%)	7 ( 0.7%)	2 ( 0.2%)
Kumamoto	17 ( 1.7%)	16 ( 1.6%)	17 ( 1.7%)
Oita	5 ( 0.5%)	5 ( 0.5%)	4 ( 0.4%)
Miyazaki	8 ( 0.8%)	8 ( 0.8%)	5 ( 0.5%)
Kagoshima	6 ( 0.6%)	10 ( 1%)	6 ( 0.6%)
Okinawa	11 ( 1.1%)	16 ( 1.6%)	11 ( 1.1%)
In the case of foreign countries	1 ( 0.1%)	3 ( 0.3%)	3 ( 0.3%)

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Note: n represents participants, and percentages indicate each group's proportion.

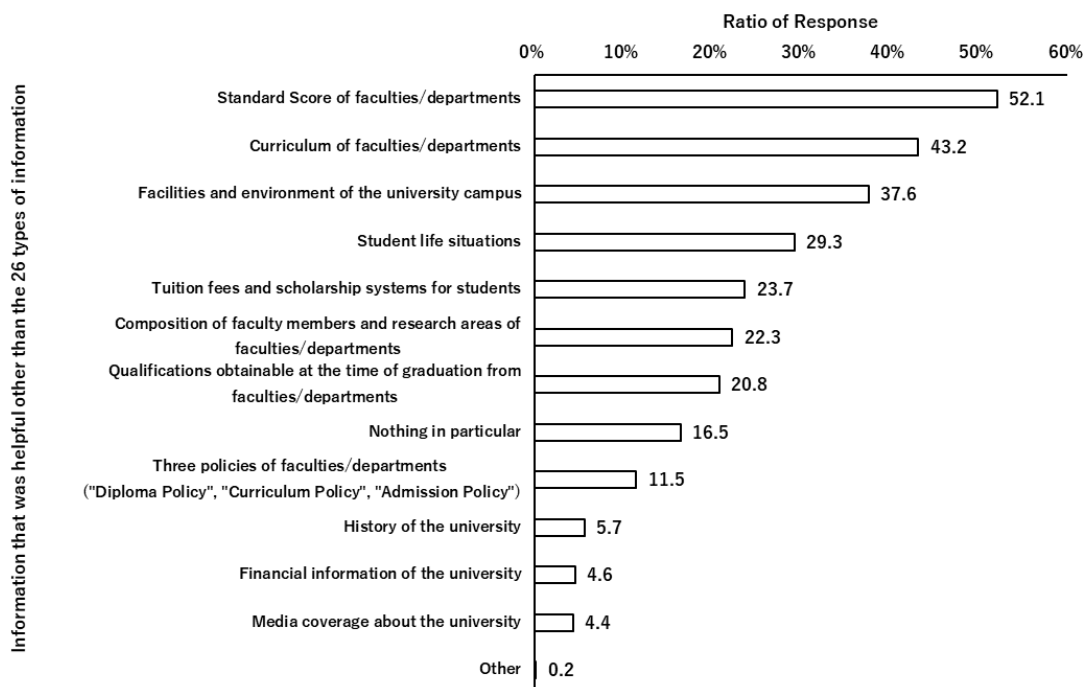


Figure 3: Information that was helpful beyond the 26 types of information. The figure presents tendency of all educational information, excluding the 26 designated items, that was helpful in university selection is presented. The most helpful information was the standard score of faculties/departments (52.1%), followed by the curriculum of faculties/departments (43.2%) and the facilities and environment of the university campus (37.6%). The helpfulness of all other information was below 30%.

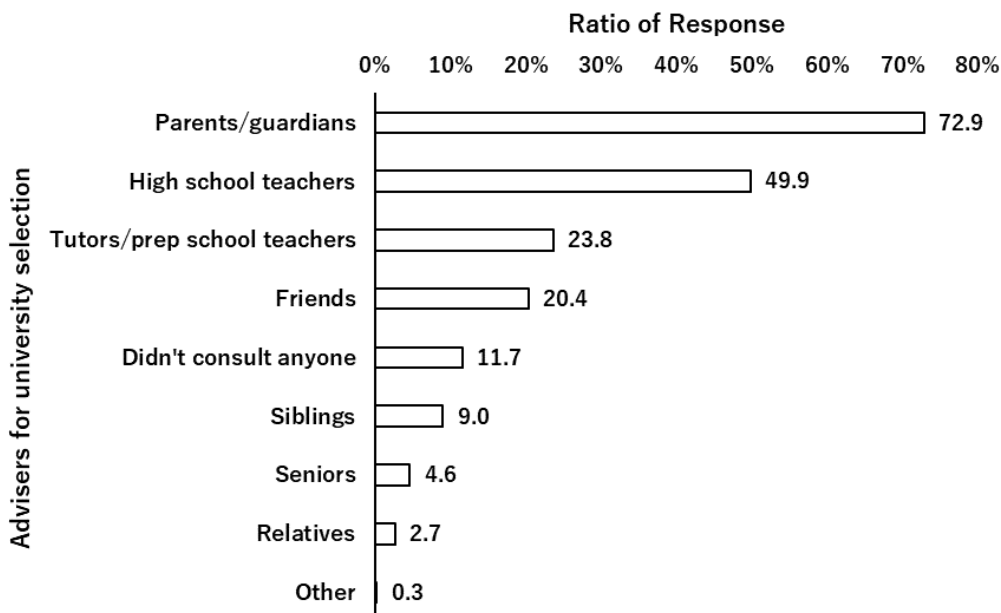


Figure 4: Advisers for university selection. Regarding advisers for university selection, parents/guardians were overwhelmingly the most common (72.9%), followed by high school teachers (49.9%). All other advisers accounted for less 30.0%.

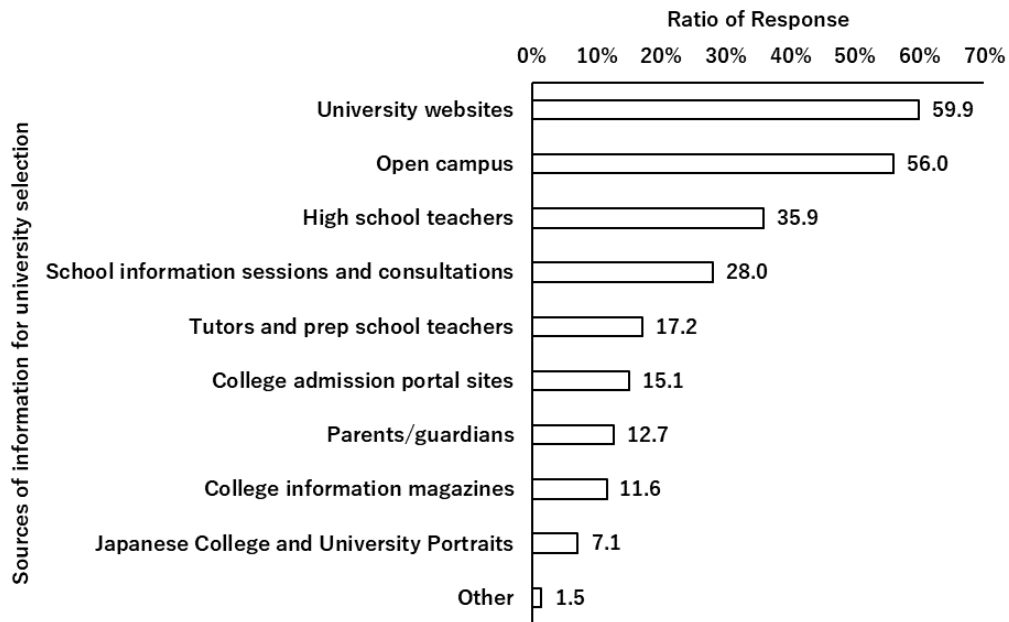


Figure 5: Sources of information for university selection. The sources of information used by prospective students for university selection varied. University websites were the most commonly used source (59.9%), followed by open campus events (56.0%) and high school teachers (35.9%). All other sources accounted for less than 30.0%.

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