

Self-Check / Evaluation of “APU Data Science Program (Basic)” in the AY 2023 Fall Semester

1. Background to the Self-Check / Evaluation

The government’s “AI Strategy 2019 ~ AI for all People / Industries / Regions / Government (Resolved 2019.06.11, Integrated Innovation Strategy Promotion Council) set as a major goal “basic knowledge required for a digital society (reading, writing, and abacus) as well as knowledge and skills related to mathematics, data science, and AI, basic skills necessary to design new ways of society and products and services for a sustainable society, and for human resources to play an active role in all fields of society.”

In response to this, as part of our “APU Data Science Program (Basic),” we began offering on-demand courses: “Special Lecture (Liberal Arts Course)” in the AY 2022 fall semester, and “Information Literacy” in the AY 2023 fall semester. On August 25, 2023 this program was certified by the Ministry of Education, Culture, Sports, Science and Technology as a Mathematics, Data Science, and AI Education Program (Literacy Level) (“Accreditation as a Mathematics, Data Science, and AI Education Program (Literacy Level)” 2023.09.20, APU Executives’ Meeting).

To ensure the quality of this educational program, and to make further improvements, we herein report and analyze the results of the class evaluation surveys and course-original surveys for these courses, and carry out self-check and self-evaluation as shown below.

2. Self-Check / Self Evaluation of “APU Data Science Program (Basic)”

(1) Course Overview

Subject Name	AY 2023 Fall Semester Classes Information Literacy JB Information Literacy EB Information Literacy EC Information Literacy ED
Field	Common Liberal Arts (Societal Needs / Fundamental Skills)
Grade Level	100 Level
Targets	All 1 st Semester 2023 Curriculum students
Course Registration Method	Automatically registered by the university in the 1 st semester. If students decide they do not need to register the course, they can drop it themselves during course registration period B or Course Correction period 1. Can also re-register the course themselves after dropping it. Students in their 2 nd semester or higher, or transfer students in their 2 nd year or above, cannot register the course.
Language	J/E
Class Size	245 students

Course Format	On Demand
Grading	P/F
Semester	Spring / Fall
Course Description (from syllabus)	This course will discuss introductory topics of internet and data science in terms of basic concepts, data processing skills, entry level knowledge to data science, and awareness on business applications and information ethics, in real-world context. (1) Internet, information and changes happening in society (2) collecting, reading, processing and utilizing data (3) technology trends in AI in data science (4) state of the art business trends in AI and data science applications and information ethics.
Instructor in Charge of Grading	AY 2023 Fall Semester Instructors in Charge of Grading NISHANTHA Giguruwa APS Professor NGUYEN Chung Huu EDLSC Part Time Lecturer
TA	3 TAs

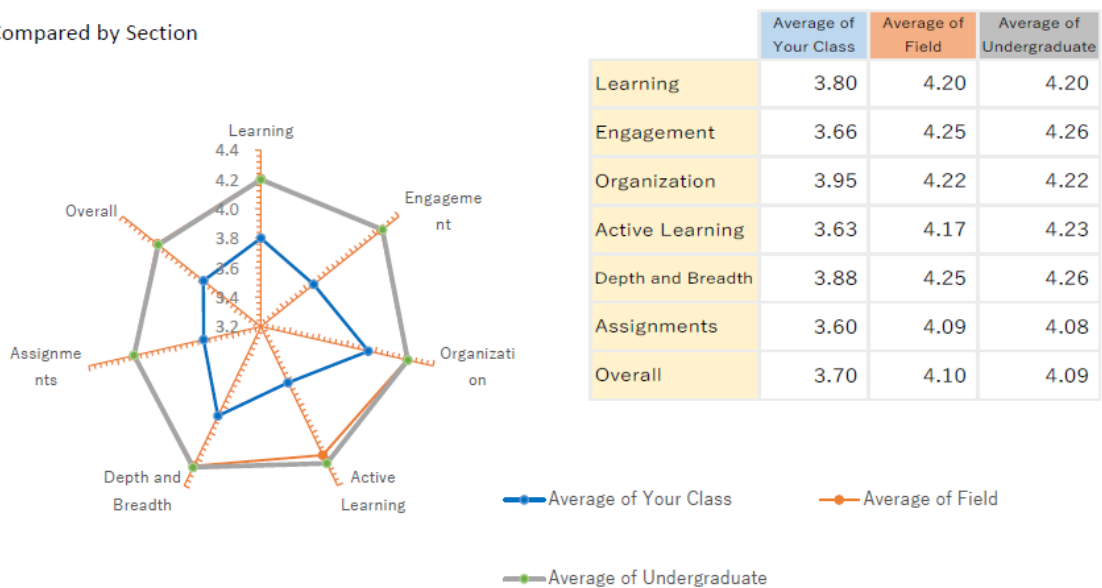
(2) No. of Students who Registered for and Passed the Course

Course Name	Registered	Passed	Pass Rate
Information Literacy JB	25	24	96.0%
Information Literacy EB	122	109	89.3%
Information Literacy EC	121	106	87.6%
Information Literacy ED	120	109	90.8%

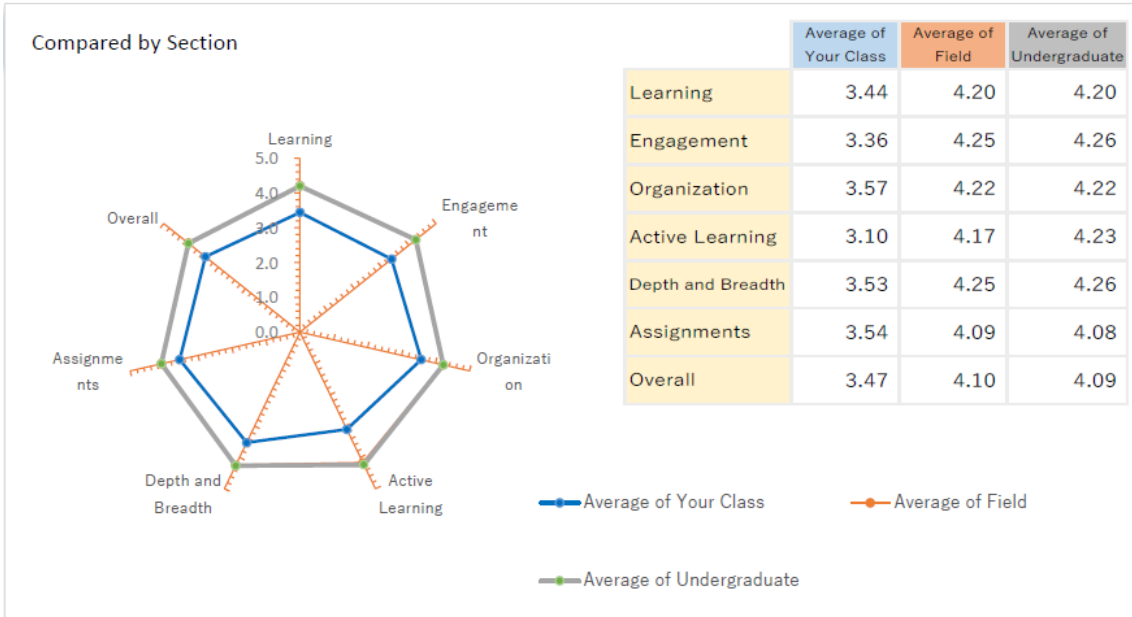
(3) Class Evaluation Survey

• Information Literacy JB: Survey Respondents: 10, Response Rate: 38.5%

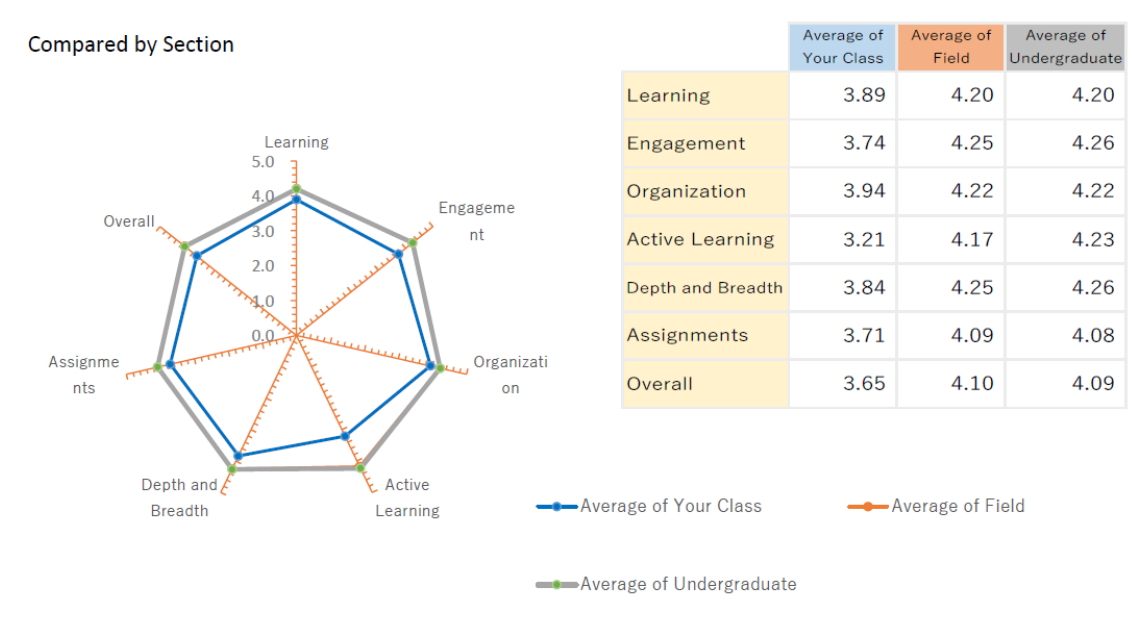
Compared by Section



• Information Literacy EB : Survey Respondents: 49, Response Rate: 39.5%

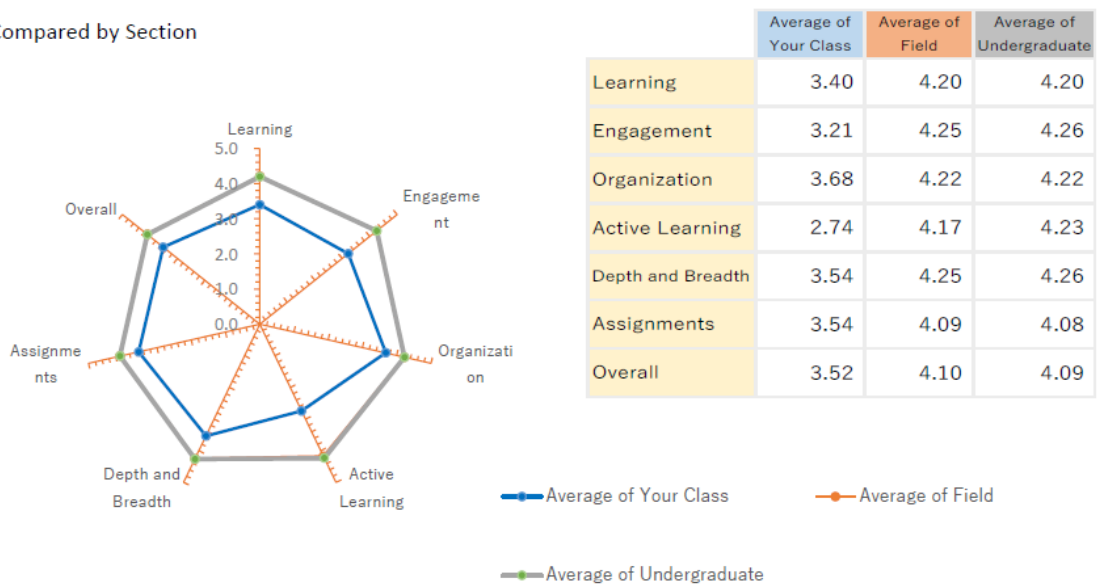


• Information Literacy EC : Survey Respondents: 26, Response Rate: 21.1%



• Information Literacy ED : Survey Respondents: 28, Response Rate: 23.1%

Compared by Section



• Comparison with AY 2022 Fall Semester “Special Lecture (Common Liberal Arts Subject)” (On-Demand) and 2023 SP “Information Literacy”

Question Type	2023 FA Information Literacy Average	2023 SP Information Literacy Average	2022 FA Special Lecture (On Demand) Average
Learning	3.63	3.40	4.26
Engagement	3.49	3.34	4.08
Organization	3.79	3.59	4.23
Active Learning	3.17	2.60	3.25
Depth and Breadth	3.70	3.66	4.23
Assignments	3.60	3.34	4.10
Overall	3.59	3.15	4.01

• Self-Check / Self Evaluation

Compared to the AY 2023 spring semester, the scores for all items were higher. There are various reasons for this increase compared to the AY 2023 spring semester, but it can be said that the different qualities of the students enrolling each semester also affect the survey results. As such, in the future it would be more appropriate to compare results by year rather than semester to semester.

Just as in the AY 2023 spring semester, this year the max class size was set to 245 students and only 1st semester students were automatically registered for the course. It also should be noted that the scores for active learning, which had been of concern in the past, increased.

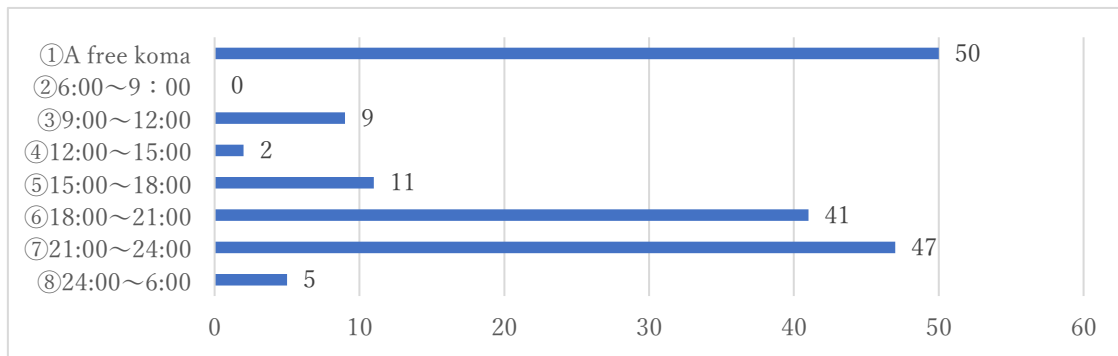
We would like to note that the assignment of TAs to classes has been improved.

(4) Original Survey of “Special Lecture (Common Liberal Arts)”

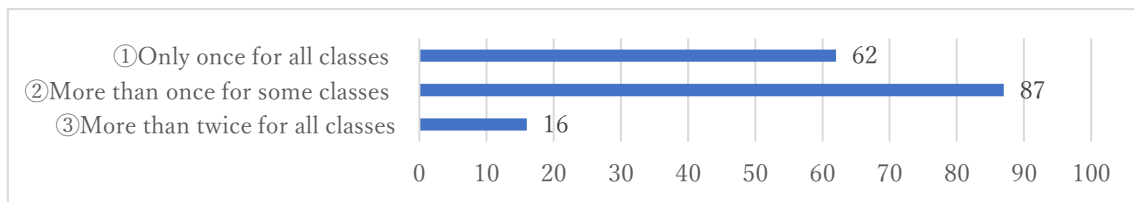
Since this course is different from other regular courses, in addition to the regular class evaluation survey we held an additional survey with questions just for the On-Demand course.

• Survey respondents: 165

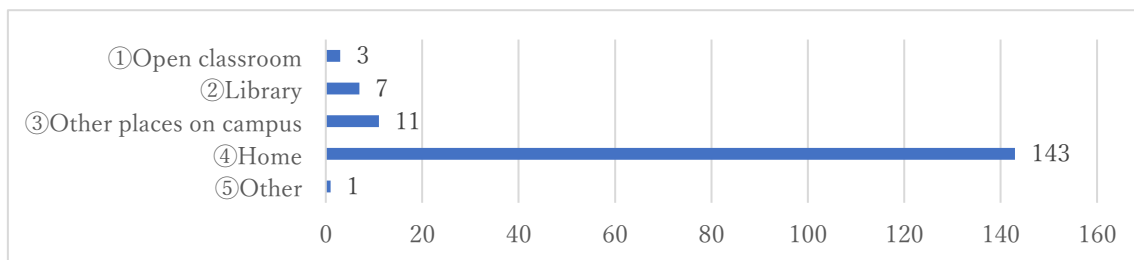
Q1: Please tell us the main times when you watched this course.



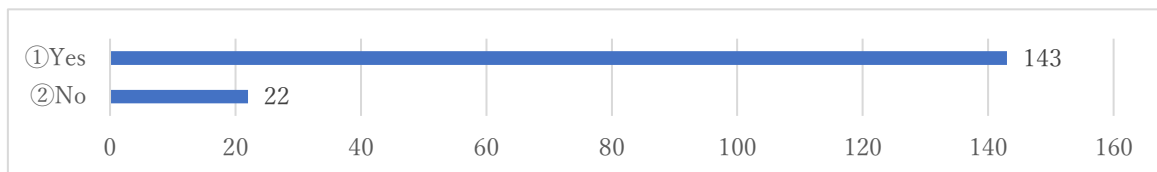
Q2: Please tell us the number of times you watched the classes.



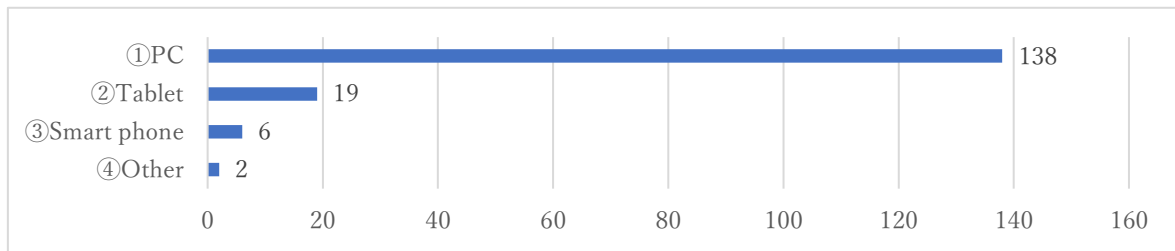
Q3: Where did you mainly watch the classes?



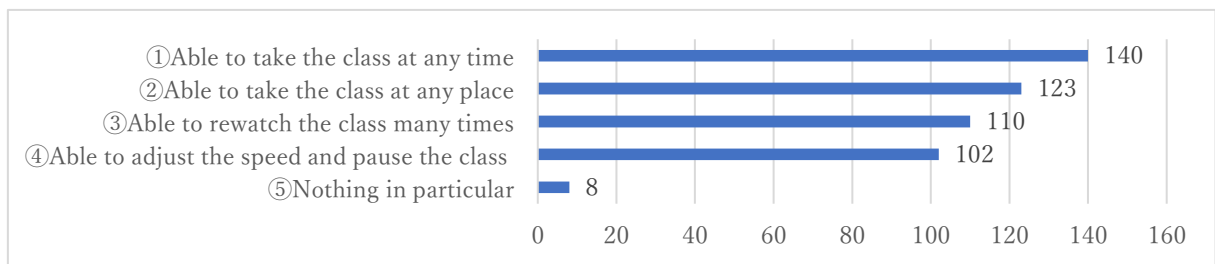
Q4: Did you pause, fast forward, or rewind the videos?



Q5: What device did you use to watch the classes?



Q6: Please tell us the good points of on-demand courses. (Multiple answers accepted)



Q7: Please tell us any negative points about your on-demand classes. (Free response) (Copied as-is, excerpted from student responses)

- I personally sometimes forgot the assignment due date because of on-demand courses.
- Assignments not being posted when they said they would be posted.
- I disliked that the questions in the course all happened while the course was running. It meant I was just answering questions about things I just heard, instead of having everything tested at the end and seeing what I remembered, if anything.
- No contact with professors at all.
- Too many professors are assigned to that information literacy course and didn't know which one to approach when there were some errors in taking quizzes.
- I wasn't really familiar with this kind of teaching style so it felt a bit off.
- Student could forget to do the quiz.
- Sometimes I find it uncomfortable with Internet connection problems, which may lead to late submissions.
- The requirements for passing the course were unclear, so I failed the course. I thought it was enough to just do the assignments.
- Since it's online course with recorded video, it cannot catch my attention enough compared to in-person classes.

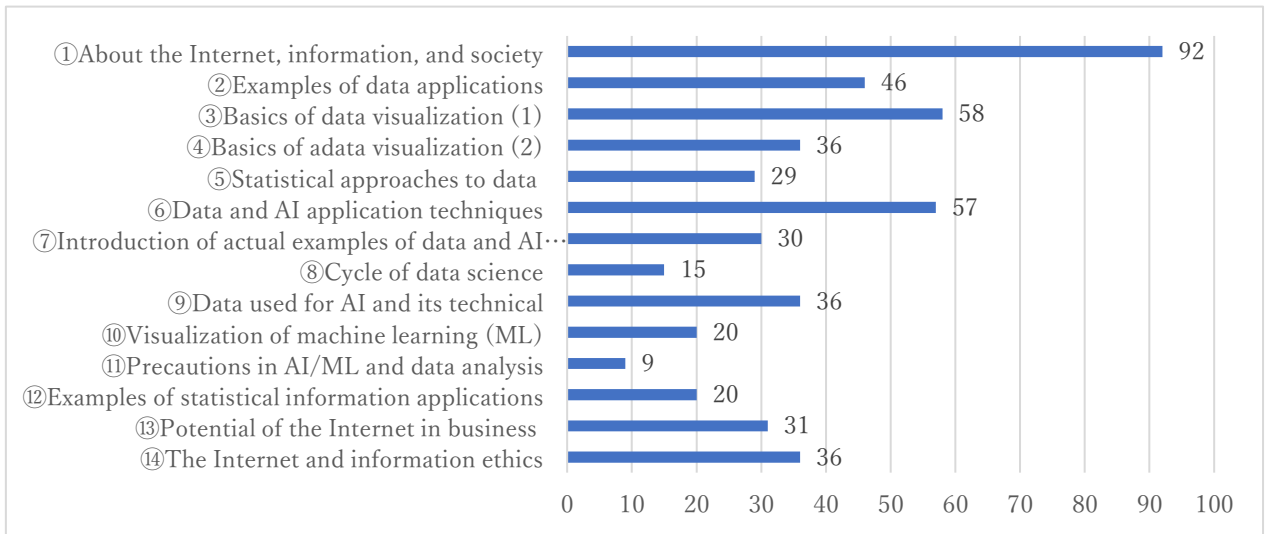
Q8: Did you have any difficulties with your on-demand classes? (Free response) (Copied as-is, excerpted from student responses)

- difficult to keep up with the deadline
- Can't ask any question during watching the lecture.
- It would be no interaction with professors.
- Actually, I am not interested in IT related courses and I've never learned that kind of courses, so I

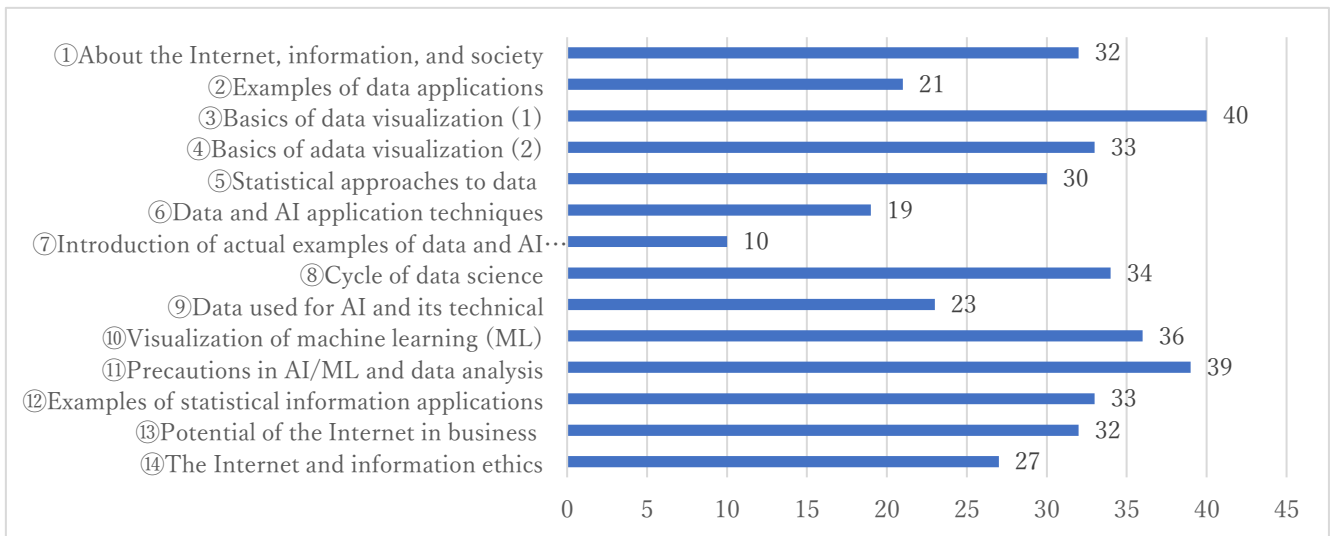
feel it difficult and sometimes, I find it uninteresting.

- It being on demand, it's so hard to focus
- easy to procrastinate to watch the videos and do the quizzes
- Sometimes it don't feel like i'm actually participating and it hurts my interest and focus
- Internet problem
- Some parts were hard to understand and it is hard to search for help to the professor
- Sometimes I forget to do it regularly

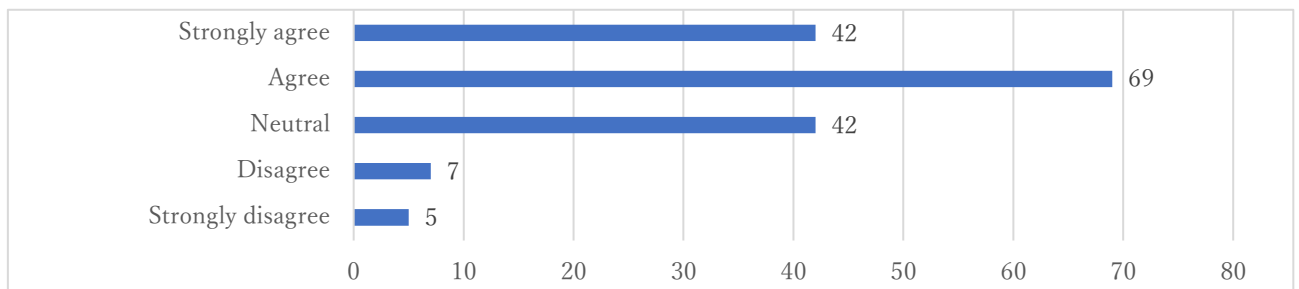
Q9: Please choose your 3 favorite topics from the list of on-demand course class topics. (Multiple answers)



Q10: Please choose your 3 least liked topics from the list of on-demand course class topics. (Multiple answers)



Q11: Would you recommend this course to your juniors?



Q12: Do you have any suggestions for further promoting learning between the instructor, TAs, and other students? (Free response) (Copied as-is, excerpted from student responses)

- Study this course with a group of friends to hold each other accountable and not miss due dates
- I think students should study this course hard, because it is very helpful for students to watch it repeatedly when they don't understand it.
- I think there should be at least in person class for this course.
- Sometimes, classes we are taking went lower of what we expected and we don't know what to do or how. There's no TAs as well. Even if there were TAs, I want TAs who would listen to the students and maintain the class between professor and students.
- In my opinion, the class should be optional and not mandatory. Although it's not mandatory, it's already registered by university, so many students chose not to drop it.
- I think for the instance reply and support for the students, the TAs is needed.
- maybe the quizz deadline should be set properly for online video classes as students like me tend to procrastinate

- Self-Check / Self Evaluation

Looking at the times students viewed the videos in Question 1, a significant number of students responded that they watched the classes during their free periods or late at night. In the AY 2023 SP survey, most students said they tended to watch the videos during their free periods. While the percentage of students watching during free periods is still high, there are more students who tend to watch the videos after 6pm. In addition, the responses to Questions 3 and 5 show that students were also taking the course at home on their PCs. As in the AY 2023 spring semester, few students watched their classes on-campus in the open classrooms.

About the number of times students viewed the recordings, 62% of students responded that they watched some or all of the classes at least 2 times, more than the 38% of students who watched them only once. This semester more students watched the recordings multiple times compared to the AY 2023 spring semester. In Question 4 we can see that most students paused or rewound the videos, so from the responses to Questions 2 and 4 we can see that students took advantage of the strengths of on-demand courses in their classes. In Question 6, almost all students responded that the strengths of on-demand classes were that they could take classes whenever and wherever they wanted, and that they could pause or rewind.

Questions 7 and 8 were about the bad or difficult aspects of on-demand courses. Many respondents said there were no issues in particular, but a number of respondents also said they had no interaction with their professors and it was difficult to manage their schedule for submitting assignments. There were no particular comments about maintaining motivation this time, but as in the previous survey multiple students mentioned the difficult of communicating with their instructors, TAs, and other students.

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