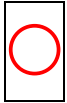


Supplementary Materials

S11. Questionnaire

Q1. First, please fill the number below on your Scantron to confirm your survey document.



Please answer the following questions about yourself. Please fill in the number that best describes you on your Scantron.

Q2. Year of study

①First year ②Second year ③Third year ④Fourth year ⑤Fifth year or above

Q3. Gender

①Male ②Female

Q4. Are you currently working part time?

①Yes ②No

Q5. Usually, how many days a week do you come to OIC (Monday-Friday)?

①Once a week ②Twice a week ③Three times a week ④Four times a week ⑤Every day (Five times a week)

Q6. When you are at OIC, what kind of beverage container do you usually drink from? (Multiple answers allowed)

- ① PET bottles or plastic bottles
- ② Paper Cartons
- ③ A reusable bottle with water or tea brought from home
- ④ Others (Tea or water from the cafeteria, etc.)

The following questions will ask about sustainability.

Q7. Do you think campus maintenance, development and management should prioritize sustainability?

- ① Strongly Agree ② Agree ③ Neutral
- ④ Disagree ⑤ Strongly Disagree

Q8. Do you think every member of the university should support sustainable solutions?

- ① Strongly Agree ② Agree ③ Neutral
- ④ Disagree ⑤ Strongly Disagree

Q9. Do you want to be part of creating of a sustainable campus, community and/or world?

- ① Strongly Agree ② Agree ③ Neutral
- ④ Disagree ⑤ Strongly Disagree

Q10. Would you support and/or participate in environmental conservation activities put on by the university?

- ① Strongly Agree ② Agree ③ Neutral
- ④ Disagree ⑤ Strongly Disagree

Q11. What activities do you do that contribute to sustainability? (Multiple answers allowed)

① I recycle. ② I use environmentally-friendly products. ③ I take environmentally-friendly public transportation. ④ I do not do anything.

Q12. Are you or, have you ever taken a class related to campus sustainability?

① Yes ② No

The following questions will ask about your drinking water preferences.

When it comes to your drinking water preferences (tap water versus PET/plastic bottles), please rank how important the following reasons are to you. Please choose which reason is most important to you and which is least important to you. There are five different groups.

Q13. Please choose from Group 1 which is most important to you.

Q14. Please choose from Group 1 which is least important to you.

Group 1 :

① water quality and/or impact on health ② Taste and/or smell ③ Convenience ④ Cost

Q15. Please choose from Group 2 which is most important to you.

Q16. Please choose from Group 2 which is least important to you.

Group 2 :

① water quality and/or impact on health ② Convenience ③ Cost ④ Environmental impact

Q17. Please choose from Group 3 which is most important to you.

Q18. Please choose from Group 3 which is least important to you.

Group 3 :

① water quality and/or impact on health ② Taste and/or smell ③ Convenience ④ Environmental impact

Q19. Please choose from Group 4 which is most important to you.

Q20. Please choose from Group 4 which is least important to you.

Group 4 :

① water quality and/or impact on health ② Taste and/or smell ③ Cost ④ Environmental impact

Q21. Please choose from Group 5 which is most important to you.

Q22. Please choose from Group 5 which is least important to you.

Group 5 :

①Taste and/or smell ② Convenience ③ Cost ④ Environmental impact

Water Bottle Refill Station Installation

Please take a look at the PowerPoint slides for an explanation before answering the following questions.

Q23. If you were asked to contribute 〇〇 JPY, would you? (The contribution would be paid just once while enrolled in school.)

Naturally, if you were to contribute, that would mean you would have less money for other goods and services.

①I would contribute

②I would not contribute

Q24. Those who marked (① I would contribute) for question 23, please answer the following question.

Q25. Those who marked (② I would not contribute) for question 23, please answer the following question.

If you were asked to contribute OO JPY (a larger amount) would you?

① I would contribute ② I would not contribute

If you were asked to contribute OOJPY (a smaller amount), would you?

① I would contribute ② I would not contribute

Note to readers:

One of the bid amounts 250, 500, 1000, 2000, 4000, 8000, and 16 000 JPY is randomly presented in Q23 (and Q32). Then if a respondent says yes, a higher bid is offered in Q24 (and Q33). If the respondent says no, a lower bid is offered in Q25 (and Q34).

First bid	Second bid if yes to the first	Second bid if no to the first
500	1000	250
1000	2000	500
2000	4000	1000
4000	8000	2000
8000	16000	4000

Q26. Those who marked they would contribute in questions 23-25, even for just one of the scenarios please answer the following question.

Why would you agree to contribute? (Multiple answers allowed)

- ① It seems like it would be fun to use a water bottle refill station.
- ② I want to drink water from a water bottle refill station.
- ③ I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus.
- ④ I think it is good to give money to public schools, regardless of the benefits of water bottle refill stations.
- ⑤ Other

Q27. Those who marked they would NOT contribute any of the amounts in questions 23-25, please answer the following question.

Why would you NOT want to contribute? (Multiple answers allowed)

- ① The contribution amount is too expensive.
- ② This is not important to me.

- ③ I do not feel like it is my responsibility to have to pay.
- ④ It does not sound like a realistic plan.
- ⑤ Other

Q28. If a water bottle refill station were to be installed, what kind of beverage container would you drink from? Note that using the station would be free of charge. (Multiple answers allowed)

- ① PET bottles or plastic bottles
- ② Paper Cartons
- ③ A reusable bottle with water or tea brought from home
- ④ Water from the water bottle refill station
- ⑤ Others (Tea or water from the cafeteria, etc.)

Q29. Please only answer the following question if you chose (④) for question 28.

Why would you choose to drink from the water bottle refill station? (Multiple answers allowed)

- ① It seems like it would be fun to use a water bottle refill station.
- ② I want to drink water from a water bottle refill station.
- ③ I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus.
- ④ Other

Q30. Please answer the following question if you marked you would not want to use water bottle refill stations.

Why would you not want to use water bottle refill stations? (Multiple answers allowed)

- ① I'm concerned about water quality and/or the impact on my health.
- ② I'm concerned about taste and/or smell.
- ③ It's annoying to bring a refillable water bottle around. I feel like I'm going to forget to bring it.
- ④ I do not care about the environment.
- ⑤ Other

Please take a look at the PowerPoint slides for an explanation before answering the following questions.

Q31. Did you know about water bottle refill stations before this survey?

- ① I knew about them. ② I did not know about them.

Q32. If you were asked to contribute OO JPY, would you? (The contribution would be paid just once for your 4 years at university.)

Naturally, if you were to contribute, that would mean you would have less money for other goods and services.

- ① I would contribute ② I would not contribute

Q33. Those who marked (① I would contribute) for question 32, please answer the following question.

If you were asked to contribute OO JPY (a larger amount) would you?

- ① I would contribute ② I would not contribute

Q34. Those who marked (② I would not contribute) for question 32, please answer the following question.

If you were asked to contribute OO JPY (a smaller amount), would you?

- ① I would contribute ② I would not contribute

Q35. Those who marked they would contribute in questions 32-34, even for just one of the scenarios please answer the following question.

Why would you agree to contribute? (Multiple answers allowed)

- ① It seems like it would be fun to use a water bottle refill station.
② I want to drink water from a water bottle refill station.
③ I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus.
④ I think it is good to give money to public schools, regardless of the benefits of water bottle refill stations.
⑤ Other

Q36. Those who marked they would NOT contribute any of the amounts in questions 32-34, please answer the following question.

Why would you NOT want to contribute? (Multiple answers allowed)

- ① I cannot afford it. The contribution amount is too much.
- ② This is not important to me.
- ③ I do not feel like it is my responsibility to have to pay.
- ④ It does not sound like a realistic plan.
- ⑤ Other

Q37. If a water bottle refill station were to be installed, what kind of beverage container would you drink from? Note that using the station would be free of charge. (Multiple answers allowed)

- ① PET bottles or plastic bottles
- ② Paper Cartons
- ③ A reusable bottle with water or tea brought from home
- ④ Water from the water bottle refill station
- ⑤ Others (Tea or water from the cafeteria, etc.)

Q38. Please only answer the following question if you chose (④) for question 37.

Why would you choose to drink from the water bottle refill station? (Multiple answers allowed)

- ① It seems like it would be fun to use a water bottle refill station.
- ② I want to drink water from a water bottle refill station.
- ③ I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus.
- ④ Other ()

*If you would like to mention another reason, please indicate Q38 and your reason on the other side of your Scantron.

Q39. Please answer the following question if you marked you would not want to use water bottle refill stations.

Why would you not want to use water bottle refill stations? (Multiple answers allowed)

- ① I'm concerned about water quality and/or the impact on my health.
- ② I'm concerned about taste and/or smell.
- ③ It's annoying to bring a refillable water bottle around. I feel like I'm going to forget to bring it.
- ④ I do not care about the environment.
- ⑤ Other ()

*If you would like to mention another reason, please indicate Q39 and your reason on the other side of your Scantron.

This is the end of the survey. Thank you for participating.

SI2. PowerPoint Slides for the questionnaire survey (Translated)

Please do not fill in your
name or student number.

1

Scenario

From here, think of the following passage as a hypothetical situation. This is a hypothetical situation based solely on academic interest, there is no real discussion about this topic at Ritsumeikan University.

- The water bottle refill stations will be installed in 3 places around OIC.
- Anyone can get free water using a reusable water bottle from this station.

2

Water bottle refill station (image)

- Due to copyright issues, we have deleted this image for publication.
- The image shows American students having fun using the WRS.

Main feature

- You can use a reusable water bottle.

出典：ELKAY (<http://www.elkay.com/drinking-solutions/lzsBwssp>)³

Installation location #1

- 2nd floor, near the vending machine area



4

Installation location #2

- 3F PS Lounge



5

Installation location #3

- 4th floor, near the vending machine area



6

Methods and Necessities to Secure Funding

- Keep in mind there are costs for maintenance and installation.
- In order to secure funding for those costs, we are asking for donations. This payment would be a one-time payment while you're in school.
- Regardless of whether or not you make a donation, you will still be able to use the WRS once its installed.

7

Turn your attention back to your survey sheet.

8

Background of Introducing WRS

9

Campus Sustainability

A sustainable campus, while mindful of the environment, is defined by its contribution to society.

(Ministry of Education, 2013)

10

Campus Sustainability

Ritsumeikan University has created a **guideline for pro-environmental behavior** in order to positively contribute to the realization of a sustainable society by seeking out the independent actions from each member of the university.

環境負荷削減の中長期目標

年度 (目標)	2016年 (達成状況)	2020年 (中期目標)	2050年 (長期目標)
エネルギー (1人あたり消費量)	約17.0% 削減	25% 削減	65% 削減
水 (1人あたり消費量)	約9.1% 削減	25% 削減	50% 削減
一般廃棄物 (1人あたり)	約11.9% 削減	25% 削減	50% 削減

注: 環境負荷削減は、様々な分野での環境負荷削減を、環境負荷削減の観点から一貫して実施する。

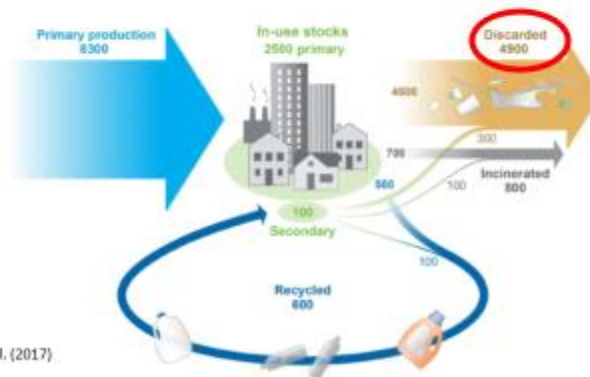
Source: Ritsumeikan (2014)

11

Plastic Waste

Out of the massive amounts of plastic waste disposed of now, some of it has ended up the natural environment.

Approximately 4.8 million ~12.7 million (?) tons of plastic waste has ended up in the oceans.



Source: Geyer et al. (2017)

12

Plastic Waste

Plastic waste includes

- 1) Microscopic plastics broken down to their cellular size
- 2) Toxins from plastics
- 3) Parasites or pathogens attached to plastics

Due to this, there is a fear about what kind of an impacts these could have on humans, animals and the ecosystem (Vethaak and Leslie, 2016).

13

Global Warming

CO2 emissions from one bottle

230 grams

Source: Association of Industrial Environmental Management (2009)

CO2 emissions (total)

		2004年度	2016年度	2016/2004比
PETボトル出荷本数	億本	148	227	1.54倍
環境負荷 (CO ₂ 排出量)	千トン-CO ₂	1,683	1,736	1.03倍

Source: Conference on the Promotion of PET Bottle Recycling (2017)

14

Popularization of WRS

For American Universities, popularity of WRS has spread due to the increased interest in sustainability.

Due to copyright issues, we have deleted this image for publication.

Newspaper clippings of universities in the U.S. implementing WRS

15

Benefits of WRS

Decrease the use of PET bottles

- You can check how many bottles you would have saved by looking at the station's counter.
- You can decrease the amount of CO2 emissions produced from plastic bottles.

Due to copyright issues, we have deleted this image for publication.

Image of a student refilling utilizing the WRS.

Source : Syracuse University.
<https://news.syr.edu/2013/12/water-bottle-refilling-stations-contribute-to-greener-campus-46686/>

16

Benefits of WRS

You can drink cold water.

17

Benefits of WRS

You can drink water with the same quality as bottled water.

- With the filter, there is advanced water purification

Takatsuki City's water popularity vote 6/6/10

Type of water	Poll (546 ballots)	
Tap water (with advanced purification)	288 ballots	52.70%
Natural Mineral Water	258 ballots	47.30%

Source : Takatsuki City
(http://www.city.takatsuki.osaka.jp/kakuka/suido/soumukikaku/suido_osaka/22.html)

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Summary of Benefits

1. You can drink delicious, clean water.
2. You can fill up your reusable bottle as many time as you want.
3. You can drink cold water.
4. You will decrease the amount of plastic waste.
5. You can see how many bottles you save by looking at the counter.
6. Though the practices at a sustainable campus, you can also contribute to society as a whole.

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WRS (Image)

- Due to copyright issues, we have deleted this image for publication.
- The image shows American students having fun using the WRS.

Main features (example)

- Use your own bottle
- Cold water
- Save electricity
- Filtered tap water
- Indicates the amount of water used
- Hands-free device
- Antibacterial

Source : ELKAY (<http://www.elkay.com/drinking-solutions/lzs@wssp>)

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Scenario

With the information just provided, think about the same scenario mentioned before and the method of payment.

- The water bottle refill stations will be installed in 3 places around OIC.
- Anyone can get free water using a reusable water bottle from this station.

21

Methods and Necessities to Secure Funding

- Keep in mind there are costs for maintenance and installation.
- In order to secure funding for those costs, we are asking for donations. This payment would be a one-time payment while you're in school.
- Regardless of whether or not you make a donation, you will still be able to use the WRS once its installed.

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Turn your attention back
to your survey sheet.

23

S13. Summary tables

Q2. Year of study

	Frequency	Percentage
First Year	268	86%
Second Year	10	3%
Third Year	3	1%
Fourth Year	7	2%
Fifth Year or above	0	0%
No Answer	25	8%
Total	313	100%

Q3. Gender

	Frequency	Percentage
Male	172	55%
Female	114	36%
No Answer	27	9%
Total	313	100%

Q4. Are you currently working part time?

	Frequency	Percentage
Yes	193	62%
No	79	25%
No Answer	41	13%
Total	313	100%

Q5. Usually, how many days a week do you come to OIC (Monday-Friday)?

	Frequency	Percentage
Once a week	5	2%
Twice a week	5	2%
Three times a week	14	4%
Four times a week	111	35%
Five times a week (Everyday)	149	48%

No Answer	29	9%
Total	313	100%

Q6. When you are at OIC, what kind of beverage container do you usually drink from? (Multiple answers allowed)

	Frequency	Percentage
PET bottles or plastic bottles	166	53%
Paper Cartons	38	12%
A reusable bottle with water or tea brought from home	139	44%
Others (tea or water from the cafeteria, etc.)	77	25%

Q7. Do you think campus maintenance, development and management should prioritize sustainability?

	Frequency	Percentage
Strongly Agree	72	23%
Agree	160	51%
Neutral	45	14%
Disagree	6	2%
Strongly Disagree	3	1%
No Answer	27	9%
Total	313	100%

Q8. Do you think every member of the university should support sustainable solutions?

	Frequency	Percentage
Strongly Agree	85	27%
Agree	132	42%
Neutral	51	16%
Disagree	14	4%
Strongly Disagree	4	1%
No Answer	27	9%
Total	313	100%

Q9. Do you want to be part of creating of a sustainable campus, community and/or world?

	Frequency	Percentage
Strongly Agree	75	24%
Agree	145	46%
Neutral	53	17%
Disagree	11	4%
Strongly Disagree	1	0%
No Answer	28	9%
Total	313	100%

Q10. The university supports putting efforts into environmental conservation activities, do you participate?

	Frequency	Percentage
Strongly Agree	66	21%
Agree	141	45%
Neutral	62	20%
Disagree	11	4%
Strongly Disagree	5	2%
No Answer	28	9%
Total	285	91%

Q11. What activities do you do that contribute to sustainability? (Multiple answers allowed)

	Frequency	Percentage
I recycle	142	45%
I use environmentally-friendly products	52	17%
I take environmentally-friendly public transportation	72	23%
I do not do anything	56	18%

Q12. Are you or, have you ever taken a class related to campus sustainability?

	Frequency	Percentage
Yes	147	47%
No	133	42%
No Answer	33	11%
Total	280	89%

Q26. Those who marked they would contribute in questions 23-25, even for just one of the scenarios please answer the following question.

Why would you agree to contribute? (Multiple answers allowed)

	Frequency	Percentage
It seems like it would be fund to use a WRS.	36	12%
I want to drink water from a WRS.	67	21%
I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus	46	15%
I think it is good to give money to public schools, regardless of the benefits of water bottle refill stations.	23	7%
Other	18	6%
No Answer	123	39%

Q27. Those who marked they would NOT contribute any of the amounts in questions 23-25, please answer the following question.

Why would you NOT want to contribute? (Multiple answers allowed)

	Frequency	Percentage
The contribution amount is too expensive.	43	14%
This is not important to me.	56	18%
I do not feel like it is my responsibility to have to pay.	27	9%
It does not sound like a realistic plan.	10	3%
Other	17	5%
No Answer	160	51%

Q28. If a water bottle refill station were to be installed, what kind of beverage container would you drink from? Note that using the station would be free of charge. (Multiple answers allowed)

	Frequency	Percentage
PET bottles or plastic bottles	90	29%
Paper Cartons	28	9%
A reusable bottle with water or tea brought from home	109	35%
Water from the WRS	146	47%
Others (Tea or water from the cafeteria, etc.)	35	11%

Q29. Please only answer the following question if you chose (4) for question 28.

Why would you choose to drink from the water bottle refill station? (Multiple answers allowed)

	Frequency	Percentage
It seems like it would be fund to use a WRS.	30	10%
I want to drink water from a WRS.	78	25%
I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus	30	10%
Other	50	16%
No Answer	125	40%

Q30. Please answer the following question if you marked you would not want to use water bottle refill stations.

Why would you not want to use water bottle refill stations? (Multiple answers allowed)

	Frequency	Percentage
I'm concerned about water quality and/or the impact on my health.	23	7%
I'm concerned about the taste and/or smell	24	8%
It's annoying to bring a refillable water bottle around. I feel like I'm going to forget to bring it.	38	12%
I do not care about the environment.	8	3%
Other	35	11%

Q31. Did you know about water bottle refill stations before this survey?

	Frequency	Percentage
I knew about them.	48	15%
I did not know about them.	222	71%
No Answer	43	14%
Total	313	100%

Q35. Those who marked they would contribute in questions 32-34, even for just one of the scenarios please answer the following question.

Why would you agree to contribute? (Multiple answers allowed)

	Frequency	Percentage
It seems like it would be fund to use a WRS.	39	12%
I want to drink water from a WRS.	71	23%
I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus	59	19%
I think it is good to give money to public schools, regardless of the benefits of water bottle refill stations.	23	7%
Other	23	7%

Q36. Those who marked they would NOT contribute any of the amounts in questions 32-34, please answer the following question.

Why would you NOT want to contribute? (Multiple answers allowed)

	Frequency	Percentage
The contribution amount is too expensive.	42	13%
This is not important to me.	35	11%
I do not feel like it is my responsibility to have to pay.	25	8%
It does not sound like a realistic plan.	5	2%
Other	10	3%

Q37. If a water bottle refill station were to be installed, what kind of beverage container would you drink from? Note that using the station would be free of charge. (Multiple answers allowed)

	Frequency	Percentage
PET bottles or plastic bottles	85	27%
Paper Cartons	27	9%
A reusable bottle with water or tea brought from home	110	35%
Water from the WRS	145	46%
Others (Tea or water from the cafeteria, etc.)	39	12%

Q38. Please only answer the following question if you chose (4) for question 37.

Why would you choose to drink from the water bottle refill station? (Multiple answers allowed)

	Frequency	Percentage
It seems like it would be fun to use a WRS.	31	10%
I want to drink water from a WRS.	73	23%
I can reduce the environmental impacts and/or because I can contribute to society through practices at a sustainable campus	53	17%
Other.	36	12%

Q39. Please answer the following question if you marked you would not want to use water bottle refill stations.

Why would you not want to use water bottle refill stations? (Multiple answers allowed)

Count	Frequency	Percentage
The contribution amount is too expensive.	26	8%
This is not important to me.	16	5%
I do not feel like it is my responsibility to have to pay.	25	8%
It does not sound like a realistic plan.	5	2%
Other	23	7%