

MIRAI Field Project



Analysis of bike-sharing survey

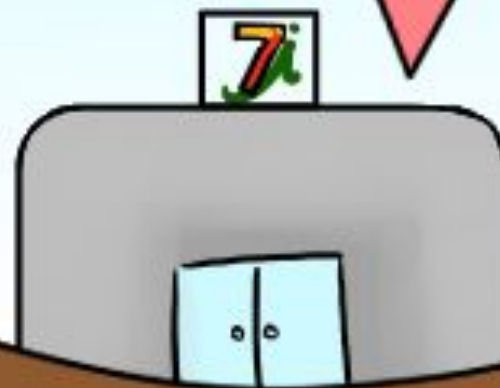
シェアサイクルの実施可能性アンケート結果分析

Shonandai



Solution Design for Policies and
Environments (SDPE) 研究会
(國枝美佳GIGA生研究会)

June 22 - July 6



with Odakyu

Survey Background

Objective:

To determine the feasibility of implementing an *Electric Bike Sharing System* (EBSS)

Difference from previous survey:

We specified features that might be implemented to give respondents a clearer idea of the system.

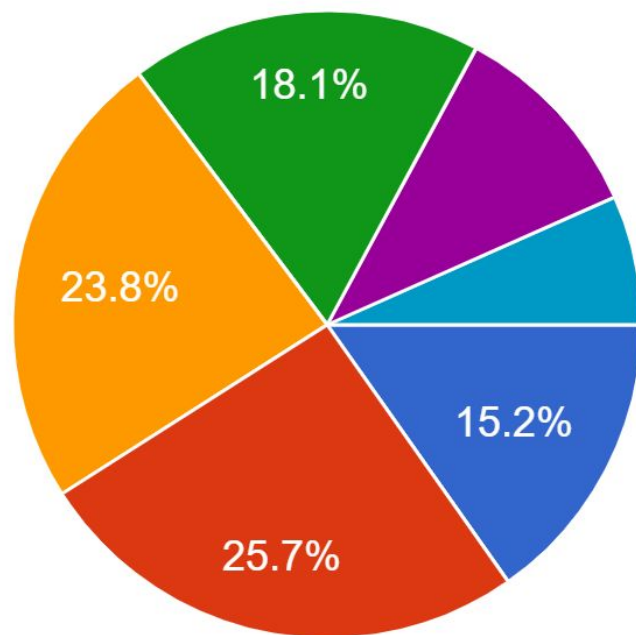
Survey structure:

- Basic information was gathered (gender, grade, commuting behavior).
- Respondents were allowed to leave the survey if they felt it was irrelevant to them to avoid skewing the results.
- A preference-seeking method of questioning was used to identify features in the EBSS that would increase the likelihood of respondents joining the system.

General Information

What grade/role are you in? 学年をお答えください。

105 responses

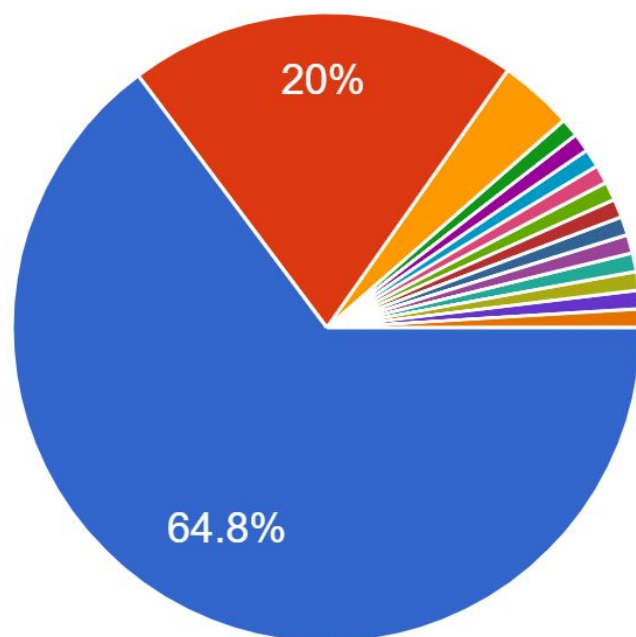


- Freshmen 1年生
- Sophomore 2年生
- Junior 3年生
- Senior 4年生
- Graduate student 大学院生
- Staff/Faculty 職員・教員

General Information

How have you usually commuted to school from Shonandai Station? (Please elaborate under Other if your route is different) 普段はどの...ない方は Other を選択して自分のルートを教えてください。)

105 responses

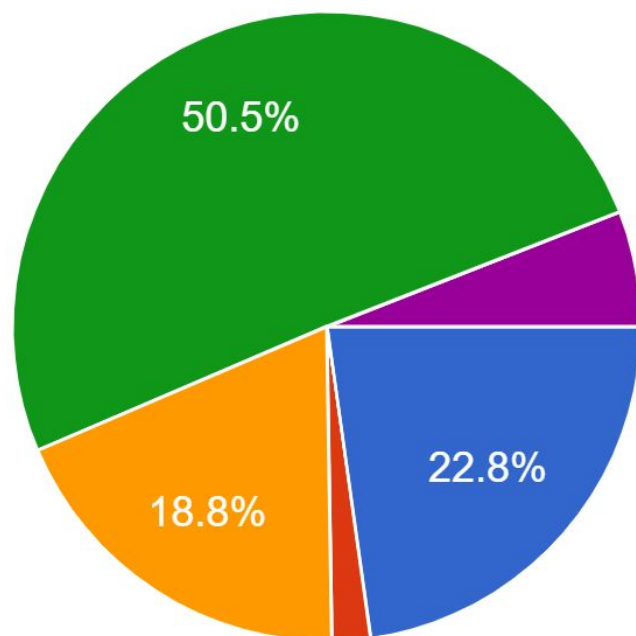


- Bus バス
- Bicycle (I live close enough) 自転車 (...)
- Walk 徒歩
- 自転車(バス代、混雑を考慮して)
- A mixture of all, depends on the weath...
- 通ったことがない
- Bicycle from Minami Ooyama
- バイク (自宅からSFCまで)

Preference-seeking (1)

Currently, due to the current COVID-19 pandemic, practices such as social distancing are vital for us in order to adapt to the new ...での交通手段として電動シェアサイクルについてどうお考えですか？

101 responses

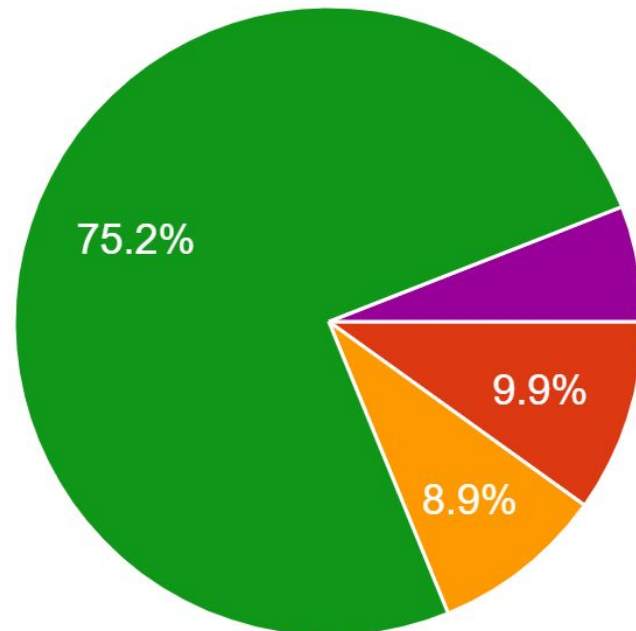


- I would still prefer taking the bus それでもバスに乗る
- I would still prefer walking それでも歩く
- I would still prefer to use my own bicycle それでも自分の自転車にのる
- I would switch to bike-share from Shonandai to school 湘南台ーキャンパス間はシェアサイクル利用を始める
- I don't commute from Shonandai station, I would still use my usual route 湘南台...

Preference-seeking (2)

PE credits are vital towards advancement and graduation, yet a significant number of students tend to fall short. If riding a bicycle to school would earn PE credits, would you switch to a bicycle commute? (If riding a bicycle to school would earn PE credits, would you switch to a bicycle commute?)

101 responses

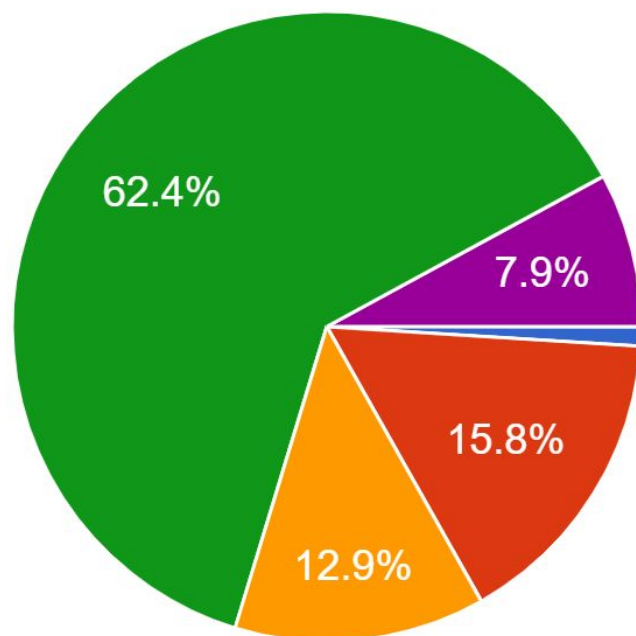


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Preference-seeking (3)

If there were multiple docking stations for the electric bicycles spread throughout Shonandai, would you consider taking the b...シェアサイクル駐輪場があれば、シェアサイクルを利用しますか？

101 responses

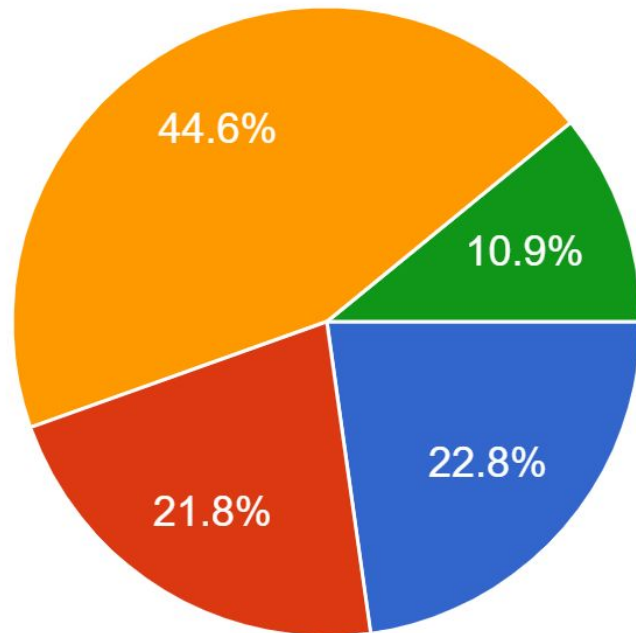


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Willingness to redistribute

In order for the bike-sharing system to work effectively, we would require some users to ensure that the bikes are being redistribr... (生協で使えるポイントなど) があれば、参加したいと思いますか？

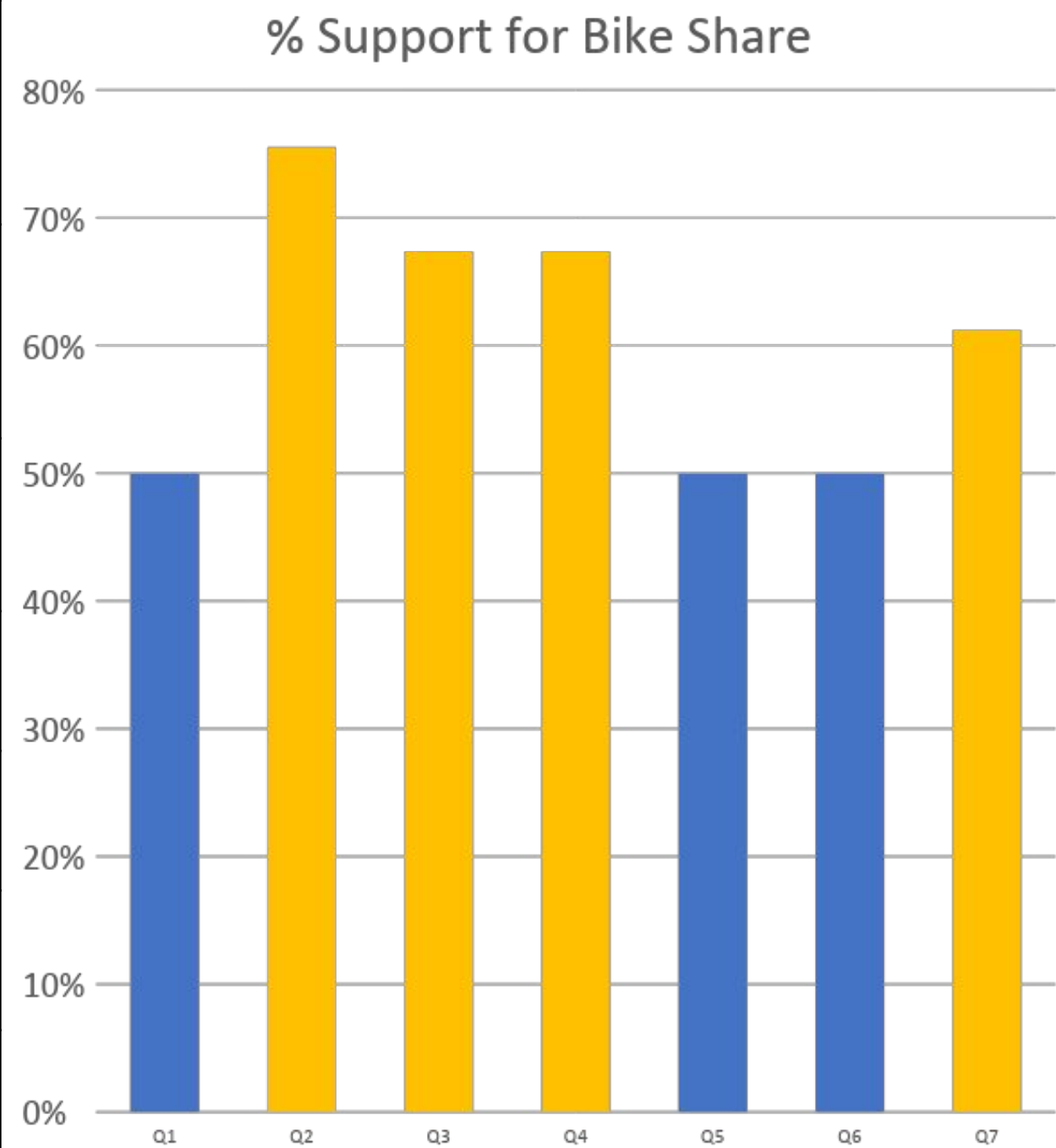
101 responses



- I definitely will 見返りがあれば参加する
- I will try as often as possible 見返りがあれば、もらえるよう努力する
- If I have time I will 時間があれば協力する
- I would rather not. どちらにしても協力しない・できない

Further Analysis

Q1	Currently, due to the current COVID-19 pandemic, practices such as social distancing are vital for us in order to adapt to the new normal in school and daily life. How do you feel about the implementation of electric bicycle as an alternative mode of transportation from Shonandai station to SFC campus?
Q2	PE credits are vital towards advancement and graduation, yet a significant number of students tend to fall short. If riding a bicycle for a set number of times from Shonandai to SFC could provide students with credits, would it affect your decision to ride a bicycle to school?
Q3	If riding a bicycle for a set number of times from Shonandai to SFC could provide students with credits that can be used to purchase items at Seikyo , how would it affect your decision to ride a bicycle?
Q4	Electric bicycles significantly reduce the effort required to pedal to and from, compared to ordinary bicycles. How would this affect your decision?
Q5	One of the biggest problems cyclists encounter in SFC is the lack of biking spaces, if there were better-organized parking spaces, how would you feel about this?
Q6	A monthly commuter pass for the bus is around 8000 yen. If bike-sharing was available at roughly 4500 yen/month, (4x a week), how would you feel about this?
Q7	If there were multiple docking stations for the electric bicycles spread throughout Shonandai, would you consider taking the bike more often?



Findings

✓ What matters more

- Earning PE Credits
- Ability to purchase items (with proposed SFC point system)
- Appeal of reduced effort
- Multiple docking stations around Shonandai

✗ What matters less

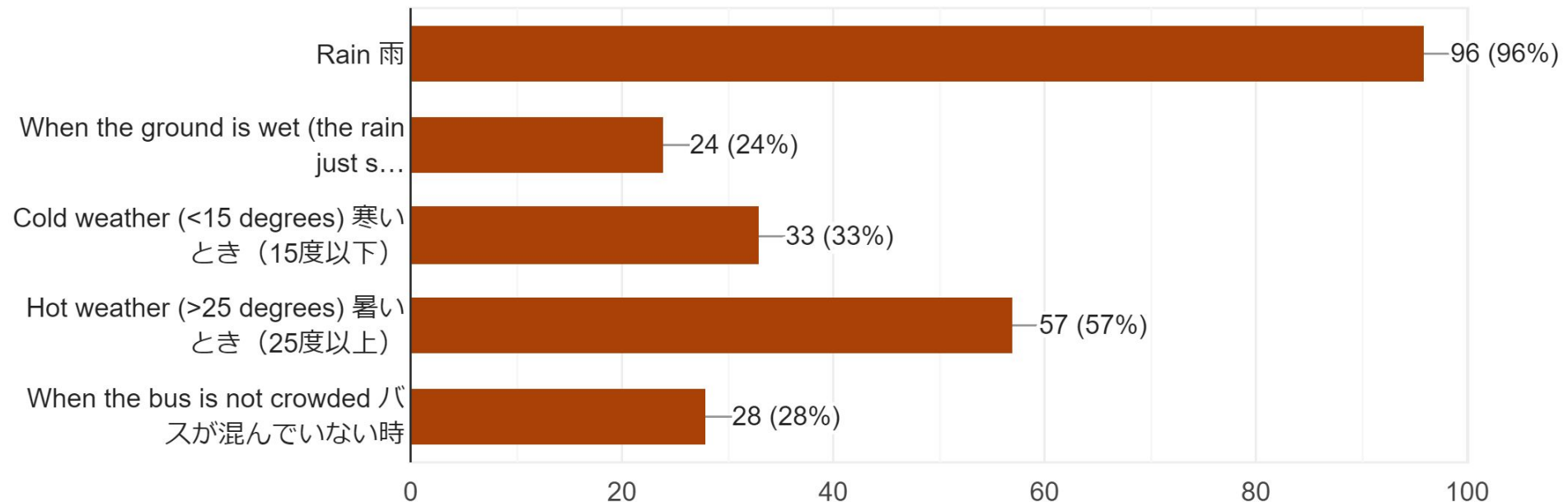
- Economic concessions
- Lack of biking spaces

Findings

- Rain is a very strong deterrent for the usage of electric bicycles
- Limits the system's ability to solve this problem.

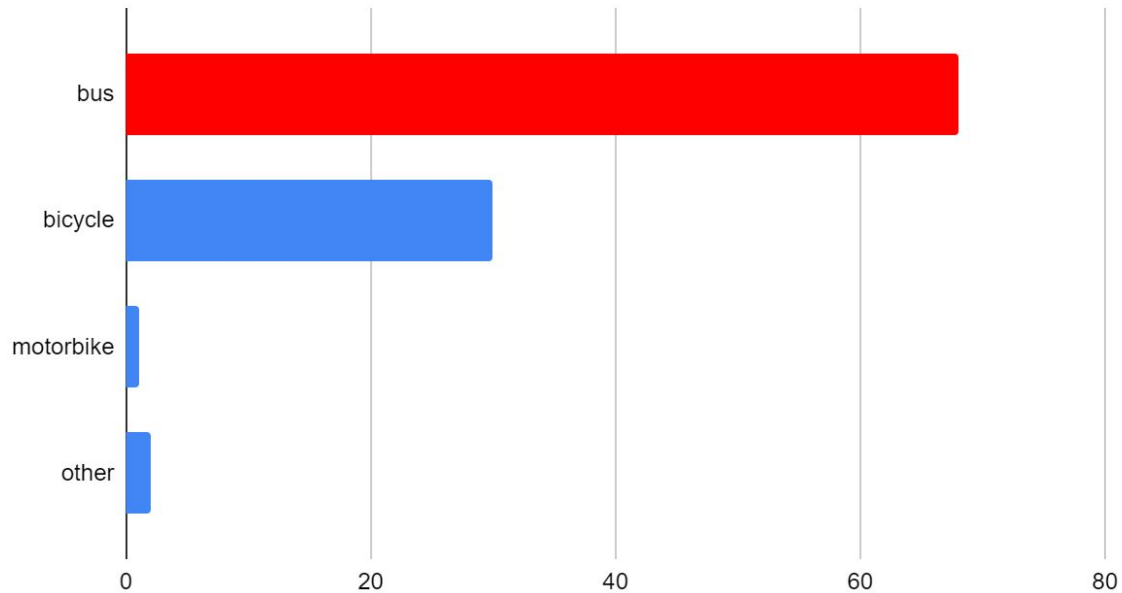
In which scenario would you choose not to ride an electric bicycle? 電動自転車を使わない、もしくは使いたくない状況を教えてください。

100 responses

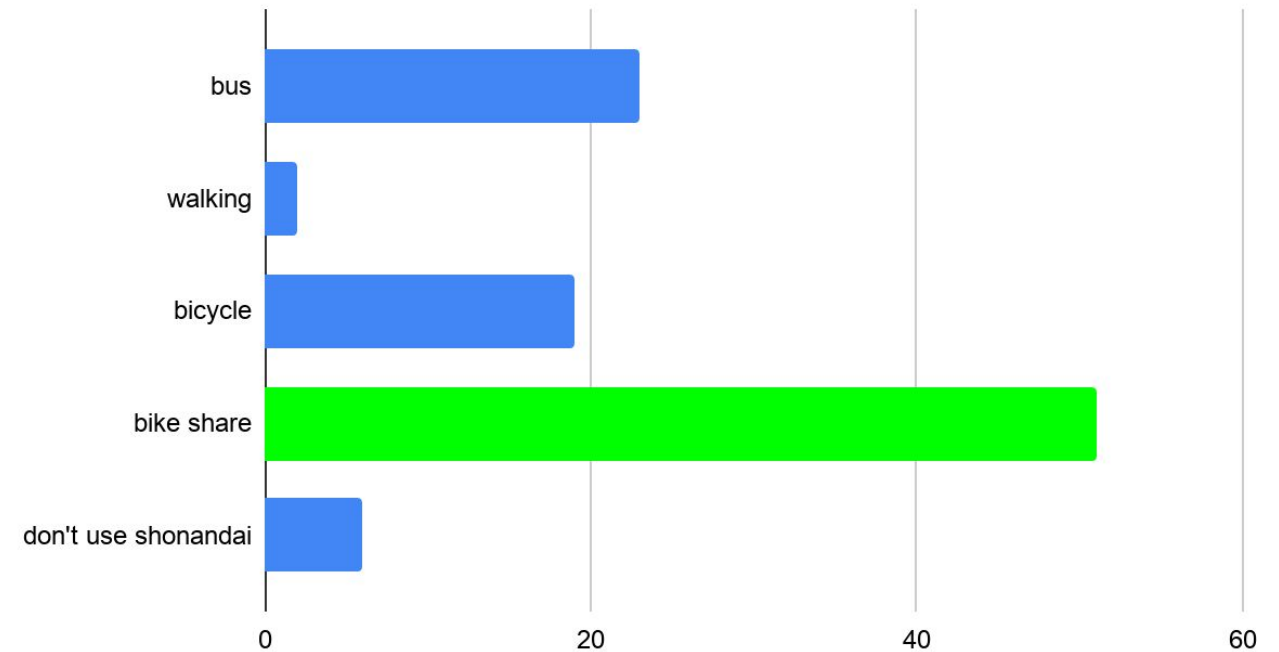


Possibility of shift from bus to bike share

Before Corona



With Corona



[Link](#) to spreadsheet

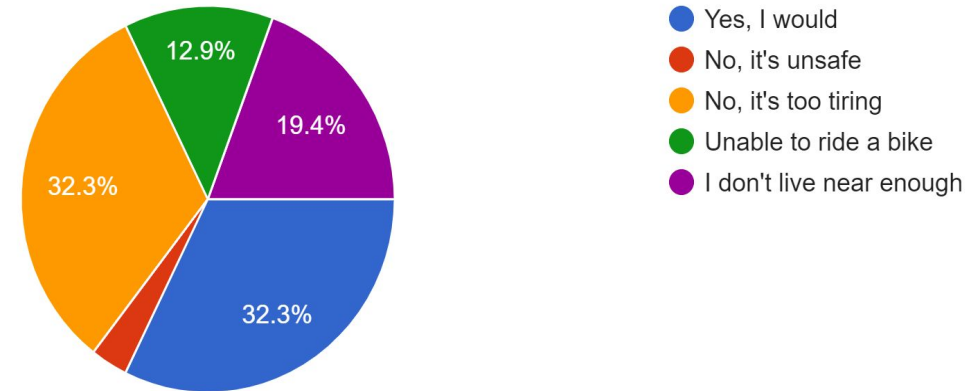
Significant differences between 2 surveys

- In the initial survey:
 - 32.3% & 23.9% of GIGA and non-GIGA students respectively considered using a bike if it was an option
- In the second survey:
 - Due to COVID-19 more than 50% would like to use the EBSS
- Additional features such it being an electric bike, the ability to earn P.E credits and Seikyo points increased the willingness to 68.3%, 75.2% and 68.3% respectively

Survey 1

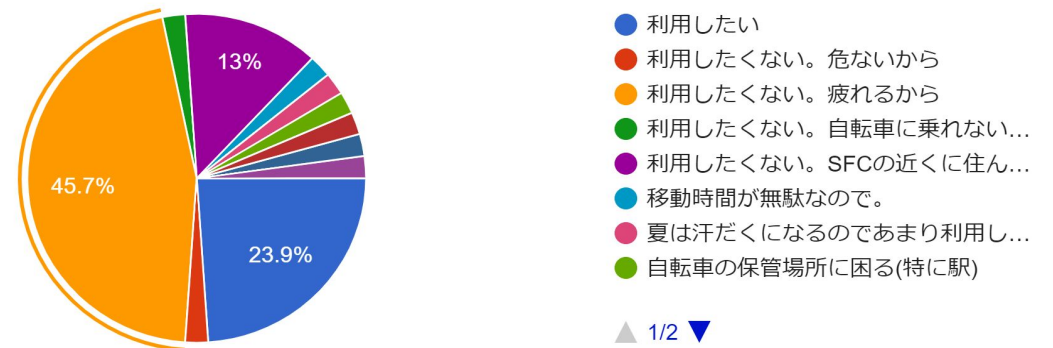
*For those who currently don't ride a bicycle to school: Would you ever consider riding a bike to school if you had access to one? If no, please select the most accurate reason.

31 responses



もし自転車があれば、通学に利用したいと考えますか？
利用したくないと答えた方は、その理由を選択してください。

46 responses



Thoughts

Change of context: COVID-19, campus closure, dramatic drop in demand for bus services

- With the popularity of online learning, the bus lines were no longer a major problem or bottleneck. Pre-COVID-19, survey results show that a bus + EBSS hybrid system would have helped alleviate problem of crowded buses.

Safety

- Some students were concerned about the safety of riding a bike, alternative routes that are more bike-friendly should be suggested.

Hygiene

- The bike parking space could also be equipped with UV lights where the bike handles could be automatically sterilized.

Qualitative Interviews

[Interview Recordings](#) (Zoom)

[Interview Findings](#)



Evidence for Action

COVID-19, campus closure dramatically affected demand for bus services. The data of this survey was handed over to SFC management (Dean Wakita) and this was used as rationale for EBSS parking stand in SFC and Shonandai areas.