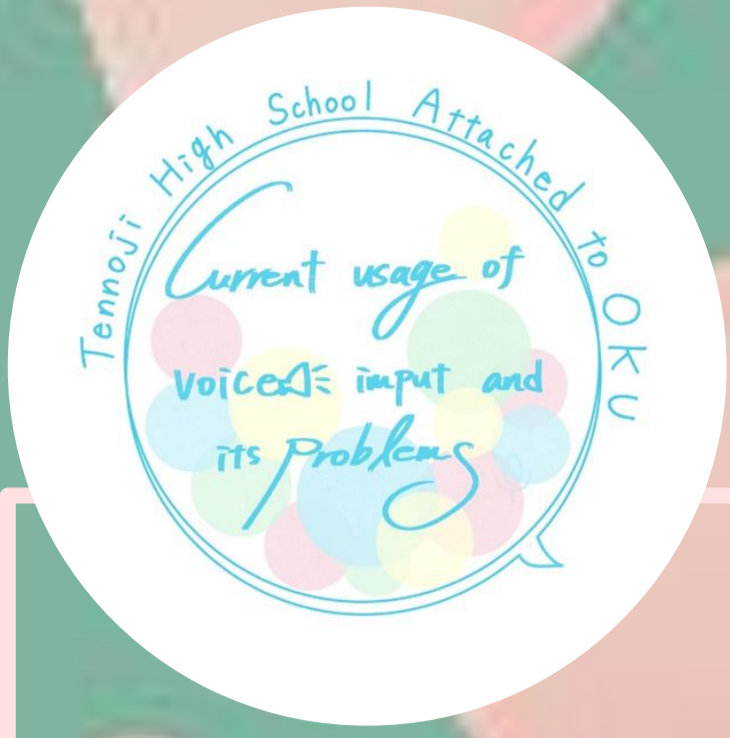


# Current usage of voice input

## and its problems

Anju Nishimura  
Sakura Yamamoto



### Problem

This research is about voice input. In our high school, we feel that only a few students use voice input. We are interested in this situation and will survey how much voice input is actually used by high school students. If they are not using it, we would like to find out why, and see if there is anything we can do to develop voice input technology in the future. We would also like to find out how many people use voice input outside of Japan and how much accuracy varies between languages.

### Introduction



### Question 2

A survey on the most common issue raised in (1), which is frequent input errors. The detailed procedure is described below.

- ① 「新しいパソコンの設定が思ったより面倒で、結局カレーを作った。」  
(1) "The / setting / of / the / new / computer / was / more / troublesome / than / I / expected, / and / in the end / I / made / curry."
- ② 「あの映画の結末は、予想以上にびっくりだったと友達が言っていた。」  
(2) "My friend / said / that / the / ending / of / that / movie / was / more / surprising / than / expected."
- ③ 公園で、見かけた猫が、なぜか青いリュックを背負っていた。  
(3) The cat / that I saw / in the park / was carrying a blue / backpack.
- ④ 最近、妹がやたらとトランポリンに夢中で、夕食をよく食べる。  
(4) Recently, my sister / is / crazy / about / the trampoline, / and / eats / a lot of / dinner.
- ⑤ 冷蔵庫の中に、いつの間にか謎の瓶が増えてた。  
(5) In the refrigerator, there were more mysterious / bottles/ before I knew it.

思ったより純情な彼女の惨状  
She is more pure-hearted than I expected.

こんな日々もはや懲り懲り  
I've had enough of these days.

ハサミで切った洋服を着る  
She wears clothes cut with scissors.

英語を話す魚を放してあげた。  
I let the English-speaking fish go.

五月一日は日曜日で祝日、曇りの日でしたが、  
でも散歩日和でした。  
May 1st was a Sunday, a national holiday,  
and although it was cloudy, it was a beautiful day for a walk.

- A. The bear had a tear in its ear near the pier.
- B. Wanna grab a bite after this?
- C. The bass was difficult to catch because it was swimming near the bank.
- D. I saw a sea of seaweed
- E. He knew the new rules for the crew

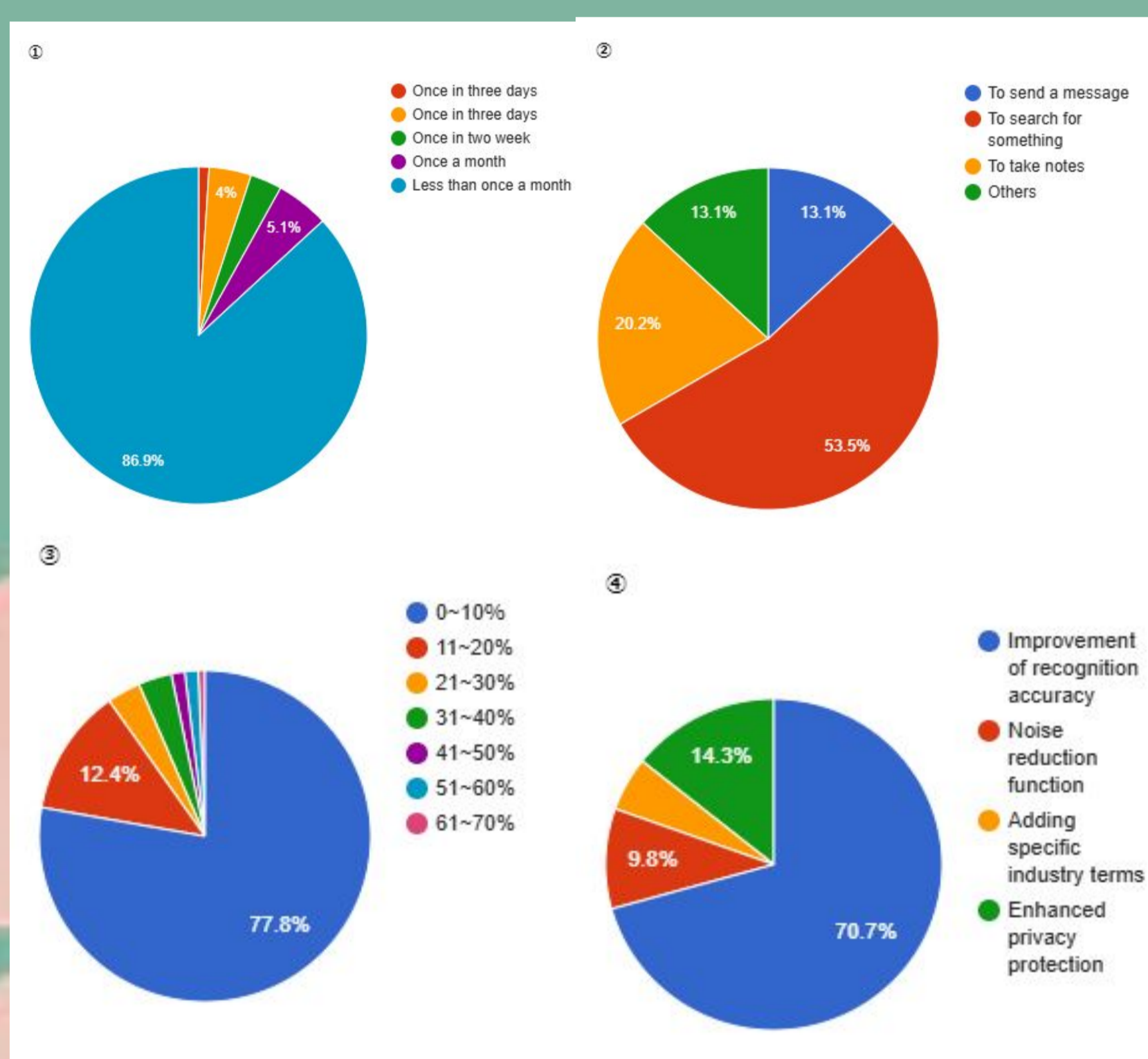


### Question 1

A questionnaire to determine how often the voice input function is used by high school students to input what.

- ① Frequency of use
- ② Purpose of use
- ③ Usage rate of people around you
- ④ Features you want to improve

### Results



Almost 90% of the students used the voice input less than once a month. About 50% of the students use voice input for searching. Moreover, 70% of the students wanted to improve the recognition accuracy of voice input, and the low accuracy of voice input led to the low usage rate.

### Results2 (1...Anju, 2...Sakura)

Japanese sentence

- 1) wrong words 6%
- 2) wrong words 9%

English sentence

- 1) wrong words 3%
- 2) wrong words 6%

### Conclusion 2

The percentage of words identified with incorrect content was less than 10%. This shows that they are mostly accurate.



### Conclusion 1

We found that many high school students do not use voice input on a daily basis, and a major reason for this is the low accuracy of voice input. Therefore, we decided to examine the accuracy of voice input, which is supposed to be improved every day, and to measure the degree of problems.

### Conclusion of all

While many people believe that voice input is inaccurate, the actual input is less than 10% wrong. Therefore, the benefits of voice input and the voice input of itself have not been sufficiently communicated.

These facts lead us to believe that the usage rate can be increased by communicating more loudly about voice input.

### Reference

音声認識技術の現状と将来展望 河原 達也 京都大学(2013)