

KAI'STEER – A campus democracy platform

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ABSTRACT

This paper suggests a platform for conveniently sharing opinions, gathering support and showing support or opposition in causes on a university campus. After being tested on target users, positive results have been achieved, that make our platform promising.

Video: <https://youtu.be/UahLdmT6JsA>

Author Keywords

Social computing; direct democracy; social media, civic engagement.

ACM Classification Keywords

Human-centered computing → Collaborative and social computing systems and tools

INTRODUCTION

On the campus of the Korean Advanced Institute of Science and Technology (KAIST), there is no convenient way for all the students to express their opinions and suggest changes. The existing services are partly successful but none of them have the following characteristics in common, voicing one's opinion, gathering support, showing support, and doing so conveniently.

In this paper, we present the platform KAI'STEER where the students can freely voice their opinion, anonymously to others. It takes the form of a social media platform, where the opinions take the form of posts. The crowd then agrees or disagrees with the posts. Their "agrees" or "disagrees" are then accumulated until the amount has reached a point where action is taken, which means that the decision makers are contacted. This way, the poster will know whether other students support them, without exposing themselves and making themselves vulnerable.

The progress of the post will be updated and shown to everyone, for example if it received a lot of "disagrees" the post will be "closed". If the post has been acted upon

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In this way we hoped to create a platform for something similar to a direct democracy platform, where people's opinions and suggestion for changes are unfiltered and unbiased.

The platform has been tested on a group of KAIST students. Even though it had some limitations, most of the feedback received was positive. Most importantly, the assumption that students would want to actively participate in school's "political life" got supported.

BACKGROUND AND RELATED WORK

We review some alternative solutions of voicing student's thoughts and opinions and present their functions and differences below.

Surveys

The official way for departments and facilities to collect the students' opinions is by sending out surveys. These are satisfaction surveys, for example the quarterly food & beverage satisfaction survey [1] that asks students to grade their experiences on various aspects. These surveys are biased in the way that the surveyor is the one deciding the questions, and have probably already decided what can be changed and what can't be changed.

Undergraduate/Graduate Student Council Discussion Board

The undergraduate student council board is an official discussion forum [2] which serves a similar purpose to our platform. There is a similar one for graduate students [3]. Each post has a "hit" counter which counts how many times it has been clicked. Unfortunately as of today, none of them has very much activity; each post has about two or three clicks. They also have a like/dislike count, but all of the existing posts have zero likes and dislikes. Furthermore, there aren't many replies or clear responses or actions from the student council.

Ara

Ara is an external discussion board platform for university campuses, and there is one for KAIST [4]. It is a forum where student can discuss various things, not necessarily school related. For example there is a buy and sell forum. It is similar to our in the way that it also has an "upvote/downvote" function, called "like/oppose". It is different in the way that it is not mobile friendly and most importantly that the forum serves several purposes rather than being focused on campus issues.

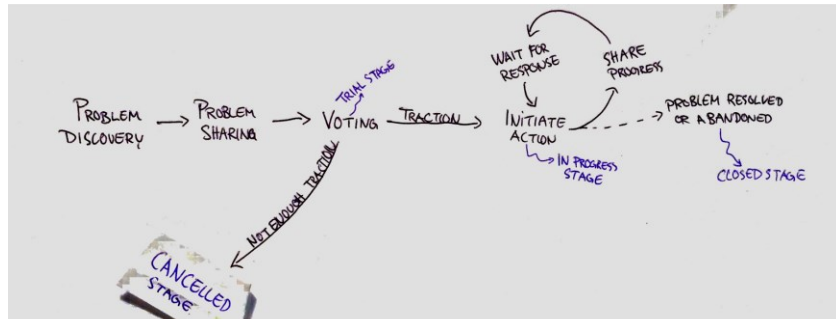


Figure 1 - Post lifecycle

SYSTEM

KAI'STEER is an online platform where students of KAIST can share issues, show support of others' posts and follow the progress of said posts. Below is a description of the main tasks.

Post generation

With few clicks and a small text you are able to create, describe and share what you want to raise awareness of (see Figure 2). This will from now on be referenced as posts.

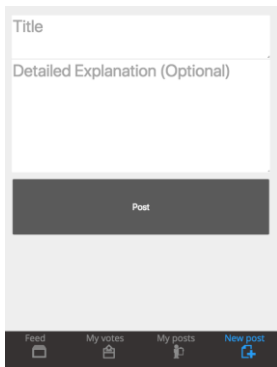


Figure 2 - Creating a post

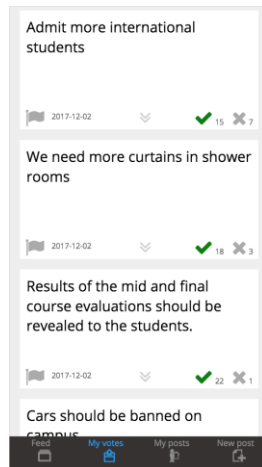


Figure 3 - Voting

Voting

As a user of the application/platform you are presented with a feed of everyone's posts. Here you can investigate the content of the posts and vote if you agree or disagree with the post. The amount of support received by a particular post will determine its future fate (see figure 3).

Feedback

It is very important that the platform is completely transparent. That is why you always can see how many people have voted for or against a post, and what the status of a post is. When a post gets created it enters a "trial stage". Here it is seen whether or not the post can get traction or if

people are not interested. If a posts sits too long without enough students voting for it, it will enter the "Cancelled stage". If it on the other hand exceeds a certain threshold of votes it goes to the "In progress stage". In this stage a platform employee will investigate the post and choose whom to contact to try to resolve the issue. All steps taken in this process are shortly documented and made visible on the platform. All stages of the posts are clearly visible except for the initial trial stage. Above is the lifecycle of the posts (see Figure 1).

Below is an example of a post which status has moved from the Trial stage to in progress. Note the very visible "in progress" stamp and the small progress updates. The example is mock data and is only shown for illustrative purposes.

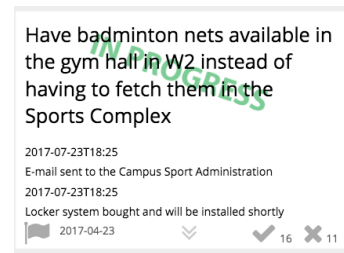


Figure 4 - Post In Progress

Motivation and quality control

Two important focus areas of crowdsourcing is quality control and motivation of the crowd. Both are described below.

Motivation

To make crowdsourcing happen you need a motivated crowd. In many crowdsourcing systems monetary rewards serve as the main motivational factor. However, a voluntary crowd was needed for KAI'STEER to ensure feasibility of the solution and genuine contributions from the crowd. Therefore an emphasis was put on the benefits for the participants themselves for participating (giving them the power to change things they really care about). Furthermore, a "you cannot lose"-mentality was sought through the extremely quick post generation and the anonymity the platform provides. This way you might as well post the issue you find, since you will not waste time and you should not fear the social prosecution of your fellow students.

It was also sought to make the voting as fast as possible to make it as easy for the users to show their support. This manifested in the one-click voting workflow that make the voting one of the best procrastination tasks, which is something students love.

Quality control

Quality control is a vital part of making crowdsourcing successful. KAI'STEER biggest challenge in this regard was the intentional trolls and the unintentional irrelevant poster.

During the deployment, the system had not been integrated with the real KAIST login system. Therefore, the system didn't check whether the users who registered actually used their real KAIST ID. This made the system vulnerable to trolls.

Users could add posts that could be considered spam and/or flag other's posts without merit. 3 functionalities were implemented to safeguard from this malicious behavior: the natural selection through voting, flagging and a maximum of 3 posts you can create per day. The community did a great job of weeding out bad posts through down-voting and in extreme cases flagging. To make sure that trolls were not able to spam the feed with multiple posts a daily maximum of three posts were added, since it was unlikely the students had more to report than that.

EVALUATION

The system was deployed over the course of one week. The main goal of the user testing was to see whether people are willing to engage in campus politics if they had a convenient tool for it. We also tested the usability and learnability of our platform. Undergraduate and graduate KAIST students, were recruited through our personal connections. They were asked to use all the features of the system, but weren't given any specific instructions. Users were recruited gradually, and all users could see posts created by users who came before them. We also created some mock data before first users started using the system. After using it for several days, they were asked to evaluate the system along several dimensions. Gradual recruitment had its own advantages: it lead to us receiving feedback gradually as well. After receiving feedback from one group of users, we had time to reflect on it and make necessary changes to the system before the next group was recruited. This led to fast development.

Statistics

- Number of participants: 46
- Demographics: undergraduate and graduate students in KAIST
- Number of survey responders: 15
- Number of posts created by the users: 21
- Number of posts created by us: 15
- Number of posts with 20+ people voted on them: 15

Deployment results

Participants showed a very high level of user engagement. They created 21 new [completely 'valid', and not blank] posts, voted on about 10 posts on average, and 15 posts had

20+ people voted on them. 15 participants also left very extensive feedback, which will be mentioned later in the paper. In general people found our platform to be very easy to learn and use. They also found it fun to use (in particular, reading about the issues that bother their peers), which is reflected in high voting activity.

Survey details

Below are some of the questions we asked in our survey and participants' responses. (Figure 5 and 6)

Please state how much you agree with the following statements.

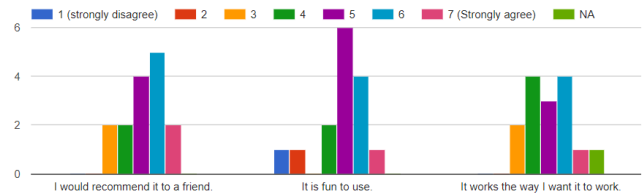


Figure 5 - People agree that it is fun to use, but don't agree on whether it's how they expect it to work

Please state how much you agree with the following statements.

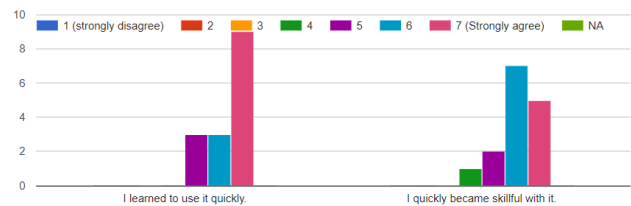


Figure 6 - Users learned how to use it quickly

Positive feedback

Some of the comments left by the participants about different aspects of the user experience:

- Learnability: "The fact that it is that easy takes away a bit of the seriousness"
- Usefulness: "It's a need. I think students need this to protect their rights"
- Fun-ness: "Nice to know what a subset of people think"

Negative feedback

- Users felt that the UI wasn't 'shiny' enough. However, we weren't aiming for the best look in our high-fi prototype, focusing on simplicity.
- People are only willing to invest their time in using the platform if administrations will take their opinions into consideration. Participants wished that there were more visual clues suggesting that it's not just an opinion sharing platform, but that posts will be send to the administrations and taken care of.
- The exact rules according to which feed is regulated, weren't clear to the users. [after 100 upvotes posts are sent to administrators; when the decision has been made, they're closed; when not

enough upvotes have been generated over a certain period of time, posts are cancelled]. In other words, they did not understand at which stage administrators come into play.

DISCUSSION

We discuss the deployment and the future of the platform.

Trolling

One of the most obvious takeaways from the deployment is that “trolls” exists. Since our prototype didn’t have the intended log in system, which should have been the KAIST single sign on-system, people could be truly anonymous and therefore make some less serious content. For example “Women should be allowed at kaist” and some other spam like posts. This brought up the question whether there is a need for quality control in the form of post reviewing. Do the posts need to be reviewed by a moderator before posting or would the trolling decrease if the real login system had been in place? This is an aspect that needs further studying.

Motivation

When it comes to making this kind of platform, there is always a doubt whether the platform will be used or not. Will there be enough motivation for users to be active on the platform? When deploying KAI’STEER, we didn’t explicitly ask the users to create content. The users were asked to use the platform freely, and the fact that the users actually created some valid content and did quite a lot of voting, indicates that there is indeed interest and motivation for the students to use it. The test users weren’t awarded in any way.

Further development

We have a vision of crowdsourcing the entire process, making the need of moderators less or completely necessary. For example, when the agrees or disagrees has reached a certain threshold, a form is generated for the post, where the users can voluntarily enter contact information for the correct department or facility. After that, when for example three people has entered the same information, a user can take on the “task” of contacting them. The person updates the post with some kind of proof, and a status message. The crowd can then vote to close the post when it is “completed”. This is an idea of how to crowdsource the process.

Limitations

There is a limitation to our implementation, which is that the second half of the workflow has not been tested. That is, we did not follow up on any of the posts, or in other words, no posts were put “in progress”. Partly, because there was a limitation in time, and partly because since it was on test, the tests users might not have been truly serious about their opinions (posts) and votes. So no decision makers have been contacted, and therefore no post reached the end of their lifecycles. This is a key aspect to further investigate. One thing that we would like to do is to interview some of the administrations that would be involved.

Another limitation to our project is that the product was only tested on non-native KAIST students, because the project members’ networks consisted of mainly such people, and none of the team members are Korean speakers. That makes our testing group not so representative of the target crowd.

CONCLUSION

We have created a web application with the potential of becoming a platform for conveniently expressing opinions and suggesting changes on campus. The platform needs further development with the results of the deployment in consideration. The motivating factor for people to use it is their own interest in other people’s thoughts about campus.

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