

Software Engineering

Name: Group 7

August 25, 2017

i) A choice of a software development life-cycle. Recommendation is to choose an Agile SDLC ,preferably SCRUM.

We chose the Agile Scrum approach because it would allow us to expect changes and integrate them, we will also be more in control of project schedule and it would ensure better quality of our product. We can work with any technology and programming language.

ii) A choice of an architecture, e.g., client server - two tier or three tier, etc.

a) Client layer

This layer will contain user interface part of our application. We will use this for designing, where data is presented to the user or input is taken from the user. For example, on our website we will have registration and login layouts which contain buttons, text boxes, etc;

b) Business logic layer

In this layer we will have all business logic like validation of data, calculation like calculating standard deviation for given data, data input like entering marks, displaying graphs etc. This acts as an interface between our Client layer and our Database Layer.

c) Database layer

In this layer the actual database comes in the picture. Our database layer will contain methods to connect with database and to perform insert, update, delete, get data from database based on our input data, etc.

iii) An appropriate front-end user interface method - preferable through a browser.

We had initially decided to design a mobile application using xml, as our front-end user interface but this would have been difficult to *** integrate through a browser so instead we chose to design a website using HTML, CSS, JAVASCRIPT etc, as our front-end user interface.

iv) "To do"

v) "To do"

INTERVIEW

We decided to conduct an interview to get input on what is lacking in some of the systems that we already have in place at, our university for example, as this would help us to know how to make our product more convenient and faster in terms of retrieving data. Some of the systems we were targeting were the Wits Sakai and Wits Students Self-Service since they meet some of the requirements of our projects. For our interview we took two approaches; we did face-to-face interviews and also set up a written online survey using the Survey monkey website.

Our questions mainly ask about the drawbacks of the Wits Sakai and Wits Students Self-Service systems and what improvements could be made to them. We will then apply these improvements to our website with the aim of having a better and more efficient system. We used the following questions for both our online survey and face-to-face interviews: <https://www.surveymonkey.com/r/PZR2Q6N>

1. Would you be open to using a system where you can have both Sakai and Student-Self service integrated into one?

We ask this question to see if targeted audience (in this case the students, course co-ordinators, school administrations) would like to adapt to another system that integrates Wits Sakai and Wits student self-service. We have 5 select buttons ranging from extremely likely to Not at all likely. Conclusion will be more based on the majority of them clicking a button.

2. Overall, how satisfied or dissatisfied are you with sakai and/or Student self-service?

This question is asking the targeted audience that are currently using Wits sakai and Wits student self-service to perceive their experience and this is going to be the central job of our website.

3. Which of the following words would you use to describe sakai and/or Student self-service?

For this question we want to know from the targeted audience whether the systems in place are, for one, reliable or unreliable in terms of them being consistently in good standards or performance and able to be trusted. Secondly we have high quality and poor quality where we want to know the degree of excellence of the system. Thirdly we have usefulness, ineffectiveness and impracticality of the system, whether the systems meet their academic needs. Lastly we have uniqueness where aim to see whether they are satisfied with the design of user interface and how we can improve it on our website.

4. What recommendation would you give us for our website that would make your experience better than that of sakai?

This question is about how the Wits Sakai and Wits Student self-services can be improved. This will help us to know what these systems lack and what we must have versus what is attractive to the user, to make our website more efficient and less time consuming.

INTERVIEW RESULTS

We generated graphs depicting results we got from the online and face-to-face survey. Below is a link to our online survey results :
<https://www.surveymonkey.com/results/SM-XXFX59S5/>

1. Would you be open to using a system where you can have both Sakai and Student-Self service integrated into one?

- | | |
|--|---|
| <input type="radio"/> Extremely likely | <input type="radio"/> Not so likely |
| <input type="radio"/> Very likely | <input type="radio"/> Not at all likely |
| <input type="radio"/> Somewhat likely | |

2. Overall, how satisfied or dissatisfied are you with sakai and/or Student self-service?

- | | |
|--|---|
| <input type="radio"/> Very satisfied | <input type="radio"/> Somewhat dissatisfied |
| <input type="radio"/> Somewhat satisfied | <input type="radio"/> Very dissatisfied |
| <input type="radio"/> Neither satisfied nor dissatisfied | |

3. Which of the following words would you use to describe sakai and/or Student self-service? Select all that apply.

- | | |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> Reliable | <input type="checkbox"/> Impractical |
| <input type="checkbox"/> High quality | <input type="checkbox"/> Ineffective |
| <input type="checkbox"/> Useful | <input type="checkbox"/> Poor quality |
| <input type="checkbox"/> Unique | <input type="checkbox"/> Unreliable |

4. What recommendation would you give us for our website that would make your experience better than that of sakai?

Q1

Show Benchmark

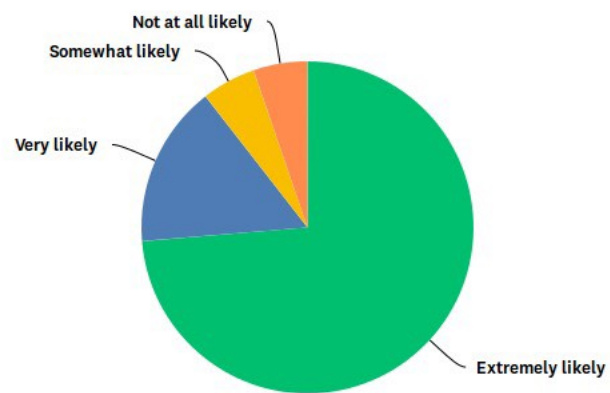


Customize

Export

Would you be open to using a system where you can have both Sakai and Student-Self service integrated into one?

Answered: 19 Skipped: 0



ANSWER CHOICES	RESPONSES	
Extremely likely	73.68%	14
Very likely	15.79%	3
Somewhat likely	5.26%	1
Not so likely	0.00%	0
Not at all likely	5.26%	1
TOTAL		19

Q2

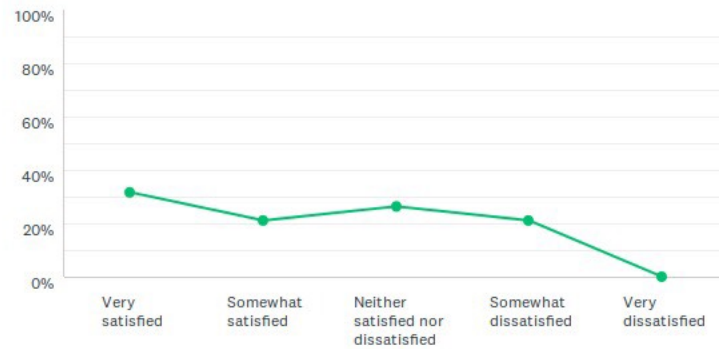
Show Benchmark

Customize

Export

Overall, how satisfied or dissatisfied are you with sakai and/or Student self-service?

Answered: 19 Skipped: 0



ANSWER CHOICES

RESPONSES

Very satisfied	31.58%	6
Somewhat satisfied	21.05%	4
Neither satisfied nor dissatisfied	26.32%	5
Somewhat dissatisfied	21.05%	4
Very dissatisfied	0.00%	0

TOTAL

19

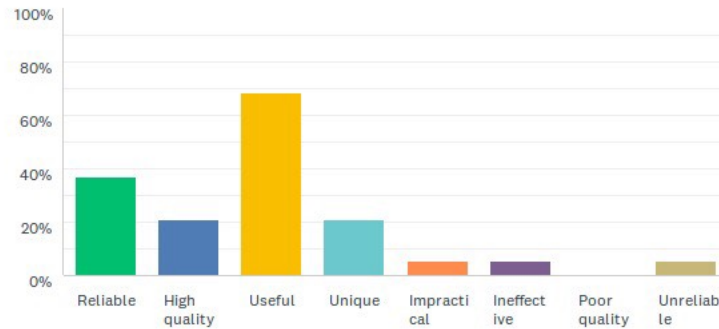
Q3

Customize

Export ▼

Which of the following words would you use to describe sakai and/or Student self-service? Select all that apply.

Answered: 19 Skipped: 0



ANSWER CHOICES	RESPONSES
Reliable	36.84% 7
High quality	21.05% 4
Useful	68.42% 13
Unique	21.05% 4
Impractical	5.26% 1
Ineffective	5.26% 1
Poor quality	0.00% 0
Unreliable	5.26% 1
Total Respondents: 19	

Q4

What recommendation would you give us for our website that would make your experience better than that of sakai?

- 1) Integrate all wits logins to 1 to avoid using a lot of data/wifi.
- 2) It must include a portal where students can save their materials.
- 3) Better communication between students and lecture
- 4) sometimes i get problems when i wanna view my fee statement on self-service so if you can fix that.

- 5) Incorporate it with the student self service so can access everything in one site
- 6) Ease of use
- 7) direct communication with the lecturers
- 8) I would like to see all the activities that i am involved in on the particular year. Also that year's academic progress
- 9) You should try by all means not to include courses from previous years on our sakai page
- 10) I dislike how slow student self service is if there would be a way to make it faster in terms of displaying like my marks or even generating stuff like my fee statement takes a very long time, so generally a faster system would be greatly appreciated
- 11) it must be eye catchy and fast
- 12) no,figure it yourself
- 13) Make it to be fast and stop it from login out every 10 minutes, it's annoying

CONCLUSIONS FROM OUR INTERVIEWS

We made the following conclusions from the interviews we conducted:

Q1.Based on the graph for the first question, the targeted audience is receptive towards using our website.

Q2.Based on the graph of the second question, most of the audience are satisfied with systems currently in place but not everyone is satisfied therefore we will capitalize on this since there is room for improvement.

Q3.Based on the graph for the third question, a good number of the audience found the system reliable, useful, of high quality and effective, so will aim to make our website all of these. As for uniqueness, we found that not many of the audience found the system to be unique so we will make our website to be user friendly and at the same time be attractive to the users.

Q4. Based on the feedback we chose to apply the recommendations that relate to our project as below:

Recommendation : 3) We will solve this by including the email address and office number of the course coordinators for specific courses for the students to be able to communicate with their lecturers.

Recommendation : 4) For our website we will aim the issue of how fast one can retrieve data from our database.

Recommendation : 8) Since we are limited to students' marks by our project we are unable to include all activities in the course-related records.