CPSC 481

Human-Computer Interaction I

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P4: Final Report

Group 1

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Introduction

This final report describes the user research that was done for our software tutoring system, MyTutor, that allows the students to search for tutors that will help them in their courses and succeed in their degree. This system will allow students to search for tutors, talk to potential tutors, and set up tutoring sessions. Secondary features include a sessions calendar, an automated payment feature, and a rate and review system.

Design Problem

One of the major problems with conventional tutoring implementations is that the user does not have the ability to see a track record of the tutor and read reviews from other students. This is a major problem because students can only determine the quality of a tutor after they have already attended a session which may result in lost time/money. Our implementation allows users to see tutor's ratings and reviews of past sessions, and tutors will have the ability to rate/review students and determine if a prospective student is the right fit for them.

Another design issue we face is that tutors may face difficulty finding students due to not having time to create/distribute marketing materials (posters, online ads, etc). Our service will allow tutors to quickly create a posting for a given area which details their areas of expertise and schedule. Students will then be able to find tutors based on their needs (budget, schedule, etc) and have the ability to quickly find/book sessions.

User Research and Findings

In our research, we were able to identify three primary stakeholders who will use our service: university students, tutors, and parents of high-school students. For this project, we decided to understand our users by using personas and secondary research. These worked well together as secondary research gave us an idea of the environment, and personas gave us realistic user profiles for that environment. Our user research showed that our system needed to be efficient, cost-effective, and fair to both users and tutors.

Personas turned out to be a successful method of user research since it created relatable characters that we found are relevant to the tutoring topic. We created 3 personas for the 3 main stakeholders: Overachieving Ophelia (Tutor), Concerned Chris (Parent), and Worrisome Whitney (Student). By looking through their perspective, we can see that this system needs to be efficient and cost-effective above all else.

Secondary Research gave us an idea of how current solutions to this problem have been addressed, and what the current strengths/shortcomings of those solutions are. As shown in our industry investigation, tutors are inappropriately compensated and given zero support while students/parents are overcharged. Comparisons of similar websites show that they

have similar usability issues and can be improved upon to create a high-quality, cost-effective tutoring service.

Design and Justification

After doing user research using the persona method, we discovered all three groups have ease of use as a major requirement. Additional requirements for all three groups are transparency through past user reviews of both students and tutors, and a service that works around the schedules of the users, rather than users having to plan around the schedule of the service. The other research method used in this stage of production was secondary research. While conducting our secondary research we focused on industry issues and a competitor website evaluation.

In our industry investigation, we discovered that tutors are generally unmotivated because the companies that they work for generally take a large percentage of the revenue generated through sessions.

In our website comparison, we found two major flaws with the websites researched: slow loading, and search features (when implemented) do not allow users to search for tutors beyond the subject they teach.

With the information discovered in our user research, we were able to determine the following requirements for our design:

1. Give students the ability to search for tutors by course or topic
2. Increase tutor comfort by matching them with students only in their area of expertise
3. Allow students and tutors to communicate with each other through a chat feature
4. Platform built on trust and user feedback by allowing students and tutors to rate each other based on their experiences with the tutoring session1
5. Maximize tutor profits by reducing the cost of platform service fees

Heuristic Evaluation and Findings

During our heuristic evaluation, we worked with the Money Watch group and exchanged heuristic evaluations. In our evaluation, we were able to score an 88 percentile score with 23 passing checkpoints, 2 failing checkpoints, and five "not applicable" checkpoints. See Appendix A for full details.

In terms of navigation, the only issue encountered was that we were missing an about us page in our high fidelity prototype. Layout and design received a perfect score, with the exception of inapplicable points. Finally, in content and design, the only issue encountered was that fields in data entry screens did not contain default values when appropriate to show the structure of the data and the field length. This was later fixed by adding examples to each field. However, this is less of an issue because our prototype generally does not require user input beyond registration and filling in their profile.

User Testing and Findings

After looking at our heuristic review, we decided to make our user testing revolve around 3 basic tasks. Each task would have a rating from 1 (very difficult) to 5 (very easy), and would have a section for the user to leave a comment. After all the tasks have been completed there is an additional section for further comments. See Appendix B for more details.

Our first task was "From the login page, please try to cancel a tutoring session". This task was mainly chosen because it is a critical part of our design. We received 4 ratings that have an average value of 3, indicating an average difficulty in completing this task. From the comments the users left, it would seem that the task was relatively straightforward, however based on user feedback there could be some issues if the user did not know about any active tutoring sessions.

Our second task was "Now please try to change your password". This task was chosen in part because it is a critical part to any service that provides a user account, but also because of the results of our heuristic analysis. As one of the areas of concern highlighted in the evaluation was some data entry points and their default values, we decided to test this feature to the best of our ability. We received 4 ratings that have an average value of 3, indicating an average difficulty in completing this task. From the comments the users left, it would seem this task was very straightforward. A couple users did comment on how it was not possible to type in a new password, but for our prototype we think this is not an issue as the users were able to find the password reset relatively easily.

Our third task was "Now please try to find a tutor and book a tutoring session with them". This task was chosen because, similar to the first task, it is a critical part of our design. We received 4 ratings that have an average value of 3.75, indicating an average to above average ease of completing this task. The user feedback was fairly positive, with a couple exceptions. The first comment about an actual calendar view with the proposed session times was pointed out, and something we will take into consideration. The second comment was in regards to being able to interact with the calendar/clock more, but as stated above we do not consider this a major issue at this time.

After these tasks were complete, users were given a chance to leave more feedback, positive and negative. For the overall weaknesses of the website, the main issue we have taken from the response is the lack of responses from the prototype, but this can be addressed in the full website. Additionally, there was comments about more information regarding the tutors, such as the list of courses they have taught in the past.

Recommendations for Next Iteration of Design

Based on our heuristic evaluation and user testing, we have made the following changes to our design:

1. Add the missing "About Us" page as noted in the Navigation section of the heuristic evaluation.
2. As noted in the Content & Data Entry section of the heuristic, we added the missing help menus/pop-ups throughout the design.
3. From user testing, we need to make the "Options" button larger/clearer.
4. From user testing, we need to add rating functionality via clicking on tutor's names or profile pictures.
5. From user testing, we need to add better clarification for sessions in calendar.

We have directly addressed the last point by adding a notification to the sessions in the calendar. The unconfirmed sessions are a different colour from the confirmed ones, and show an icon the top corner so the user knows they have to confirm the appointment.

Conclusions

After completing this iteration of the design, we believe the current direction of the project is in a positive direction. After completing our heuristic evaluation for the project, we had a very positive overall score (88%), and had relatively minor issues. After user testing, we discovered larger issues not found by heuristic testing, such as the session booking calendar not being user friendly as the user cannot see other sessions. This feedback makes up the bulk of the recommendations for the next iteration.

Appendix

Appendix A - Heuristic Evaluation

Appendix A1 - MyTutor Evaluation Summary

Summary of results				
	Raw score	# Questions	# Answers	Score
Navigation	8	10	10	90%
Layout & Design	9	10	10	95%
Content & Data Entry	6	10	10	80%
Overall score	23	30	30	88%

Appendix A2 - MyTutor Evaluation Navigation

Checkpoint	
The home page looks like a home page; pages lower in the site will not be confused with it	1
The home page contains a search input box	1
The home page will create a positive first impression	1
Useful content is presented on the home page or within one click of the home page	1
By just looking at the home page, the first time user will understand where to start	1
All corporate information is grouped in one distinct area (e.g. "About Us")	-1
There is a convenient and obvious way to move between related pages and sections and it is easy to return to the home page	1
There are clearly marked exits on every page allowing the user to bale out of the current task without having to go through an extended dialog	1
The terms used for navigation items and hypertext links are unambiguous and jargon-free	1
The navigation system is broad and shallow (many items on a menu) rather than deep (many menu levels)	1

Comments
it looks nice, Good job - Mr. Jacob

Its in the top right where you expect search bars to be.

logo on the bottom left, location centered, available tutors visable right away

same as above, searh, tutors, and hamburger menu contains relevent info such as scheduling and contacts
the map icons are our first attempt at using the application and it was clickable with information that was expected. The hamburgur menu was on the top left and search making things accessable.
No about us page found

The hamburger menu allows to for this to be achieved

The hamburger menu allows users to return to a menu, or another page. Could include a back button if needed.
Yes

Appendix A3 - MyTutor Evaluation Layout & Design

Checkpoint	
When a page presents a lot of information, the user can sort and filter the information	1
Information is presented in a simple, natural and logical order	1
The number of screens required per task has been minimised	1
On all pages, the most important information is presented on the first screenful of information ("above the fold")	1
Fonts are used consistently	1
The relationship between controls and their actions is obvious	1
There is a clear visual "starting point" to every page	0
Each page on the site shares a consistent layout	1
There is a good balance between information density and use of white space	1
Colour is used to structure and group items on the page	1

Comments

Application is designed in a way which is easy to use, however there should be a video, or someway to help users see what you offer and how they can do it in the app (Doesnt have to be a video could be step popups along the way.

* Each page is consistent in colours and layouts except for the homepage map.

Color could be beter used to llistrate the clickable icons. For example on the homepage, the tutors location should pop up and have their own brighter/more pronounced color from the background map. While the map could be made a more of background silent colour as its essentially used as a background. (Recomendation white or light map)

Overall* : Very intuitive application and well designed layout.

Appendix A4 - MyTutor Evaluation Content & Data Entry

Checkpoint	
Fields in data entry screens contain default values when appropriate and show the structure of the data and the field length	-1
Acronyms and abbreviations are defined when first used	1
Forms are validated before the form is submitted	1
Field labels on forms clearly explain what entries are desired	1
The words, phrases and concepts used will be familiar to the typical user	1
There is a clear distinction between "required" and "optional" fields on forms	1
The same form is used for both logging in and registering (i.e. it's like Amazon)	0
Questions on forms are grouped logically, and each group has a heading	1
The site avoids cute, clever, or cryptic headings	0
Text is concise, with no needless instructions or welcome notes	1

Comments
Data entry is generally intuitive.

7

Help Menu should be added somewhere*.

Header section at top in chat could make application look more consistent.

*Optional Suggestion: neat header menu instead of hamburger dropdown could help usability by reducing amount of clicks/task. Try to design as to not visually clutter the application.

generally very concise which is good.

*Overall: Very good, could only use a few minor tweaks.

-evaluation by Amine Benaceur, feel free to contact for clarification :)

Appendix A5 - Money Watch Evaluation Summary

Summary of results				
	Raw score	# Questions	# Answers	Score
Navigation	8	10	10	90%
Layout & Design	5.95	10	10	80%
Content & Data Entry	3.5	10	10	68%
Overall score	17.45	30	30	79%

Appendix A6 - Money Watch Evaluation Navigation

Checkpoint	
The home page looks like a home page; pages lower in the site will not be confused with it	1
The home page contains a search input box	1
The home page will create a positive first impression	1
Useful content is presented on the home page or within one click of the home page	1
By just looking at the home page, the first time user will understand where to start	-1
All corporate information is grouped in one distinct area (e.g. "About Us")	1
There is a convenient and obvious way to move between related pages and sections and it is easy to return to the home page	1
There are clearly marked exits on every page allowing the user to bale out of the current task without having to go through an extended dialog	1

| The terms used for navigation items and hypertext links are unambiguous and jargon-free | 1 |
| The navigation system is broad and shallow (many items on a menu) rather than deep (many menu levels) | 1 |

Comments

Homepage contains a video template which should contain mission statement and value proposition

No search box on home screen (not sure if applicable)

Homepage gives impression that this product will be easy to use

Every link in the initial pipeline is directly available from the home screen

The user may be confused between going to the marketplace or the dashboard

The about section is always next to the dashboard button

Every page is right on the toolbar and the homepage is always the logo

Every page can navigate back to the home page (the pipeline page is missing the back button)

Each item only branches off at most twice

Appendix A7 – Money Watch Evaluation Layout & Design

Checkpoint	
When a page presents a lot of information, the user can sort and filter the information	-1
Information is presented in a simple, natural and logical order	0.25
The number of screens required per task has been minimised	1
On all pages, the most important information is presented on the first screenful of information ("above the fold")	1
Fonts are used consistently	0.9
The relationship between controls and their actions is obvious	1
There is a clear visual "starting point" to every page	1
Each page on the site shares a consistent layout	0.

There is a good balance between information density and use of white space	0.5
Colour is used to structure and group items on the page	0.5

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Comments	

It seems users should know what are the filters, it would be better if you have predifined filters
In the home page I was not sure what I am seeing, it would be better to provide some sort of information.

Login font is not consistent

In dashboard how could I access my profile?

I found the home page over populated

The color theme is too dark

Appendix A8 - Money Watch Evaluation Content & Data Entry

Checkpoint	
Fields in data entry screens contain default values when appropriate and show the structure of the data and the field length	0
Acronyms and abbreviations are defined when first used	1
Forms are validated before the form is submitted	-1
Field labels on forms clearly explain what entries are desired	1
The words, phrases and concepts used will be familiar to the typical user	0.5
There is a clear distinction between "required" and "optional" fields on forms	-1
The same form is used for both logging in and registering (i.e. it's like Amazon)	0
Questions on forms are grouped logically, and each group has a heading	1

The site avoids cute, clever, or cryptic headings

Text is concise, with no needless instructions or welcome notes

| 1 |
| 1 |

Comments

The website does not currently have fields where default values would be relevent

Any previously unknown terms are explained within the website

No current visible form validation for the only current form: password reset

The password reset form's field labels are common and intuitive

There is more complex jargon from computer science and economics, but the common user of this system will likely be familiar with this language
The password reset form's field labels did not indicate mandatory fields

N/A There is no register page at this time

The main data entry (Pipeline and graph creation) is fluid and graphical with the needed questions implemented with simple button selection
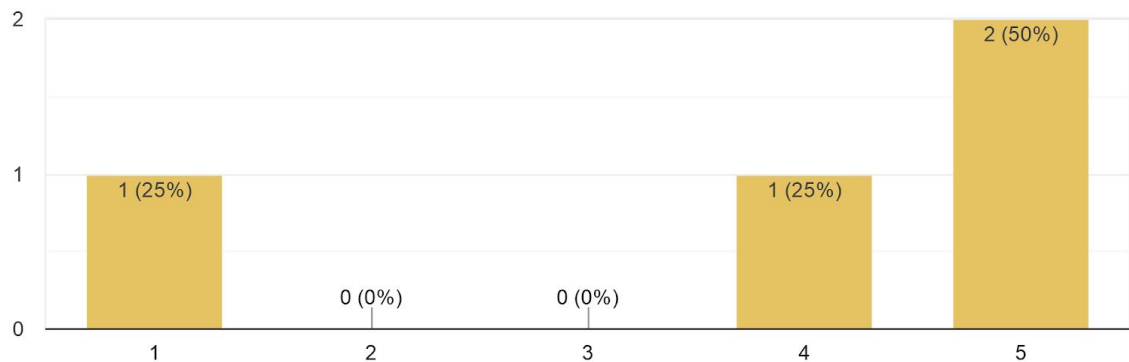Each heading is self-explanitory and nessessary

Text is only applied when needed and not excessively

Appendix B - User Testing Report

Appendix B1 - Task 1

1) Q: Did you find this task difficult or easy?

4 responses

1) Q: Please write any comments on your experience with this task:

4 responses

Straight forward. Would a more visible link be helpful? e.g. place a create/cancel session from home screen

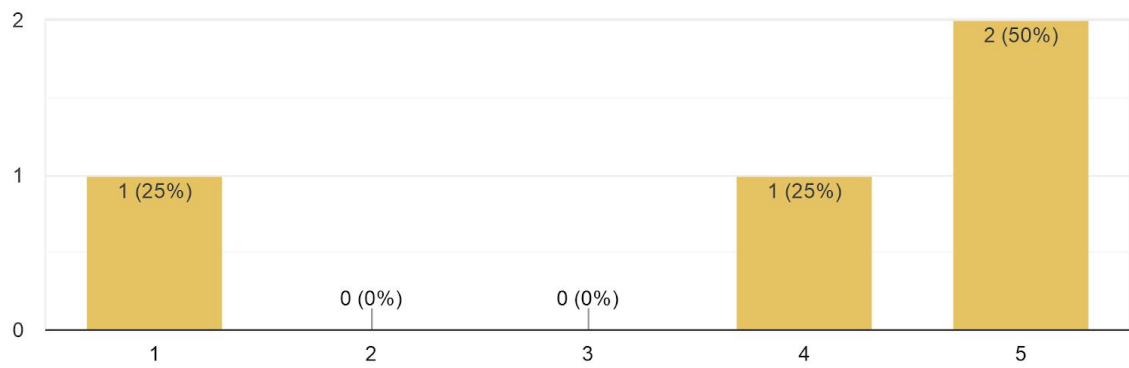Did not know there was an active tutoring session to cancel

Worked super well

Cancelling a session was straightforward and simple

Appendix B2 - Task 2

1) Q: Did you find this task difficult or easy?

4 responses

2) Q: Please write any comments on your experience with this task:

4 responses

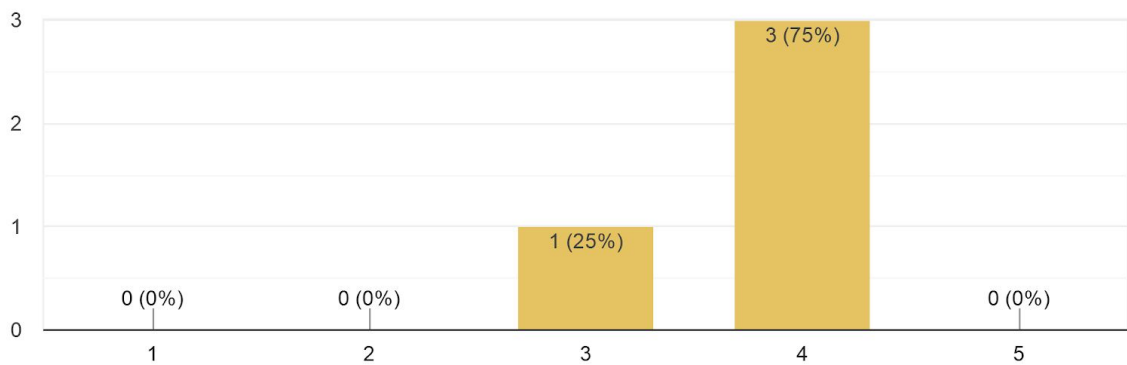| |
|---|
| Easy. No problems at all. |
| Impossible. |
| Maybe be able to type in a password |
| Also straightforward |

Appendix B3 - Task 3

3) Q: Did you find this task difficult or easy?
4 responses

3) Q: Please write any comments on your experience with this task:
4 responses

I appreciate the picture of the tutor. List the times the tutor is available.

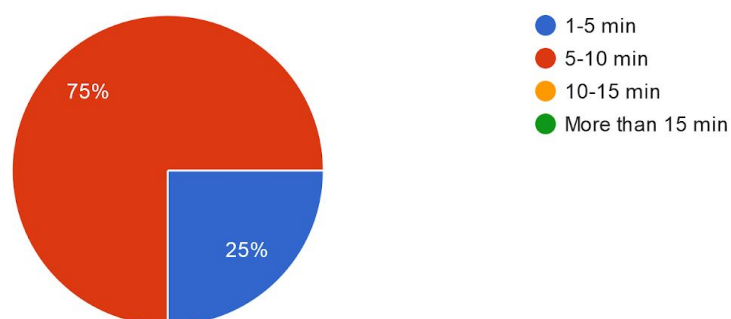An actual calendar view with the times on the particular day would be more intuitive

Again, maybe being able to interact with the time/calendar bits would be good

I think the website would benefit with a list view in addition to the map.

Appendix B4 - Time

TIME: How long did it take you to complete the tasks?
4 responses

- 1-5 min
- 5-10 min
- 10-15 min
- More than 15 min

Appendix B5 - Overall Strengths

OVERALL STRENGTHS: What did you like most about the website, if anything? What is worth keeping when they update their website?

4 responses

I like the map, the picture of the tutor, the easy accessibility.

I liked the pictures/colour scheme

User interface was really neat, Map idea with surrounding tutors is a good idea. If possible, a zoom in to the closest tutors would be good to show tutors that are in the immediate vicinity would be excellent.

The sessions page is great. I like that you can click on an appointment to start or cancel a session and also contact the tutor directly. The chat feature is also useful.

Appendix B6 - Overall Weaknesses

OVERALL WEAKNESSES: What did you find most frustrating or annoying about this website? What requires fixing right away?

4 responses

Update calendar

Confusing survey instructions given the sites current state

Maybe having the amount of previous students that have been helped by a tutor or the specific courses/topics they can on the map. Also clicking on the name or image of the tutor should Link to tutor comment reviews and other stuff in a more detailed profile breakdown.

I wish there was more information about the tutors, such as the list of courses that they have taught in the past/areas of expertise

Appendix B7 - Ideas

IDEAS: Do you have any suggestions to improve their website?

4 responses

Movement and sound added would be appealing.

Make the thingys work:)

See above

Like I said earlier, being able to view tutors as a list and also more information about the tutors.