

UI/UX Advanced Evaluation Report

CMGTwitch

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1. Usability testing protocol

1.1. Procedure

-Step-by-step procedure that you will follow for your test.-

1. My solution is CMGTwitch, which is the online environment where lectures/online classes can be followed, and recordings be watched.
2. Ask for permission to record screen/voice
3. Start prototype with <https://nilsmeijer349496.invisionapp.com/prototype/ckx6h0c6i006f2i01nyt943nw/play>
4. Start task 1 (observe ONLY, say nothing, even when failing). Record test.
5. See 2.1.

1.2. User tasks

-State the actions you will ask the user to perform with your prototype. More tasks will allow you to get more feedback on your prototype. Copy-paste the table as necessary.-

Task 1	Navigate to the 3D Rendering course page.
Success criteria	The task is successful if the user is viewing the course page.

Task 2	Find the recording of the lecture of 3D Rendering on December 6 th .
Success criteria	The task is successful if the user is located in the recording player.

Task 3	Hide the controls in the video player.
Success criteria	The task is successful if the user only sees the small button for unhiding the controls.

1.3. Measurements

-List what type of data you will collect, and how, from the tester before, during or after the test-

I will only measure these metrics for one task (the first, to ensure consistency) per tester, since the user will already know how to get to a certain page after performing the first task.

Metric	Process
Time to completion (seconds)	I will measure the time it takes for the user to complete the task
Page on which the most time was spent (seconds)	I will measure (watch recording for this) how many seconds the user spends on each page, and note which page has taken the longest.

Tester 1 – Nienke Steinvooort

Metric	Process
Time to completion (seconds)	24s
Page on which the most time was spent (seconds)	Login page: 5s Courses overview: 19s

Tester 2 – Stephanie Temmink

Metric	Process
Time to completion (seconds)	28s
Page on which the most time was spent (seconds)	Login page: 3s Course overview: 25s

Tester 3 – Matthijs Bruins

Metric	Process
Time to completion (seconds)	26s
Page on which the most time was spent (seconds)	Login page: 3s Course overview: 23s

2. Usability testing results

2.1. Individual Results

-Makes notes of the usability tests and fill in the feedback grid for each participant. You need at least 3 testers.-

Tester 1 – Nienke Steinvoot - 475527	
Likes <ul style="list-style-type: none">• The “chat-panel” on the right of the screen, in the lobby window.• The announcement tab on the right in the course overview.	Criticisms <ul style="list-style-type: none">• Feels overwhelmed by the amount of text on the main overview• Feels like the focus is on the course’s <i>content</i> instead of the classes themselves.• Strange placement of the webcam view.• Unclear which of the lobbies is currently live (as in, class being taught as we speak)
Questions <ul style="list-style-type: none">• How do you get the chat back up after clicking “hide chat”?• What happens after clicking “mute session”?	Ideas <ul style="list-style-type: none">• Add the term’s project to the courses• Decrease text size (and decrease button size)• Change webcam placement to top-right (and for recordings: stretch the recording’s “timeline” to cover the full width (excluding chat-panel)
Summary: Likes the overall concept, some criticism/ideas regarding the size and placement of elements. The focus should be placed more on giving live lessons instead of a “replacement of BlackBoard”.	

Tester 2 – Stephanie Temmink - 469722	
Likes <ul style="list-style-type: none">• Layout makes sense/is logical	Criticisms <ul style="list-style-type: none">• A lot of text (in particular on the main page), a lot of elements• “Announcements” tab on course details page is relatively small• Doesn’t like the “personal details” element on the main page
Questions -----	Ideas <ul style="list-style-type: none">• Would relocate the “personal details” element to a dedicated “account” page, or in a corner of the page
Summary: Would separate the personal details and dedicate an account page to it, and decrease the amount of text & the size of the elements on the main page and possibly the course details page. Likes the rest of it.	

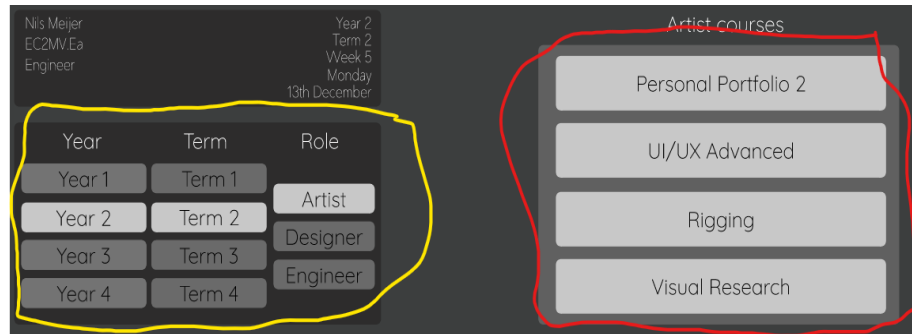
Tester 3 – Matthijs Bruins - 478260	
<p>Likes</p> <ul style="list-style-type: none"> • Likes the fact that you don't have to dig through the tree of "ACT > CMGT" and finally end up at the courses • The search bar on the course <i>overview</i> page makes sense, because there are a lot of pages to navigate to • Loves the hierarchical tree on the main page, where you select the year > term > role, so that the courses get filtered based on the choices 	<p>Criticisms</p> <ul style="list-style-type: none"> • The "personal details" element doesn't need to be on every page, especially on the course details page it's rather unnecessary • Didn't expect the "cross" button in the recording/live session player would hide the controls • No need for the search bar on the course details page • Feels overwhelmed by the amount of buttons and text on the main course page • Background colour is too dark, pulls too much attention (colour palette has not been applied in the Lo-Fi and is subject to change during the Hi-Fi development) • Sort the upcoming & past classes on date
<p>Questions</p> <ul style="list-style-type: none"> • Wonders what the "recents" header means on the course details page (documents that have been added recently?) 	<p>Ideas</p> <ul style="list-style-type: none"> • Should be able to select what year (2020-2021, 2021-2022 etc) on the main page. Doesn't have to stand out, but the option should be there
<p>Summary: A lot of points to improve upon, but also many things that have been well thought out. Colour palette is important to decide where focus should be laid upon.</p>	

2.2. Actions points

-Summarize the outcome of the usability testing in terms of improvements that need to be made to the prototype. Be specific about the improvements that the prototype will undergo and add a screenshot of the relevant Lo-Fi prototype section so the teacher can see the usability problem.-

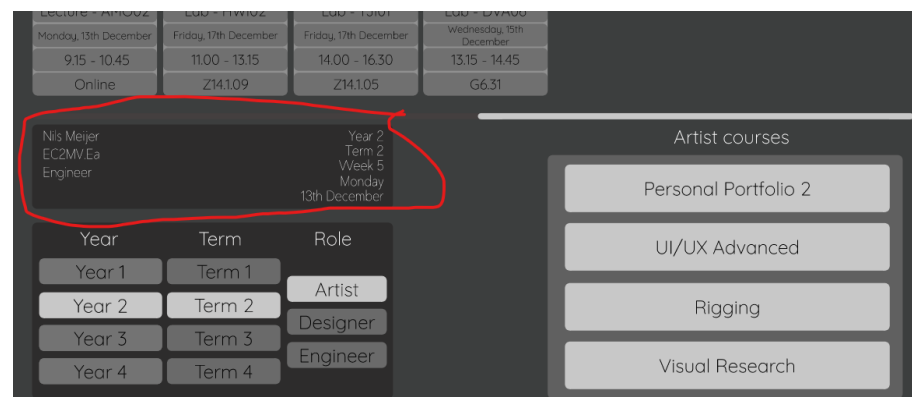
1. Problem: the course overview felt overwhelming due to large elements/large font size. (circled red).

Solution: the elements should be resized to the same size as those circled yellow (or perhaps even smaller).



2. Problem: the “details” tab on the course overview page is unnecessary, since it’s not something that’s needed very often.

Solution: a separate “Profile”/”Account” page is required, where that kind of info is shown.



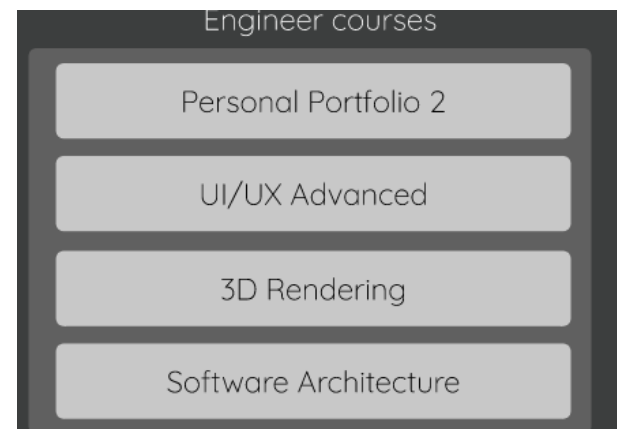
3. Problem: it wasn’t clear that the cross-button (circled red) would hide the controls of the video player.

Solution: consider changing the cross icon to a text element saying “hide controls”.



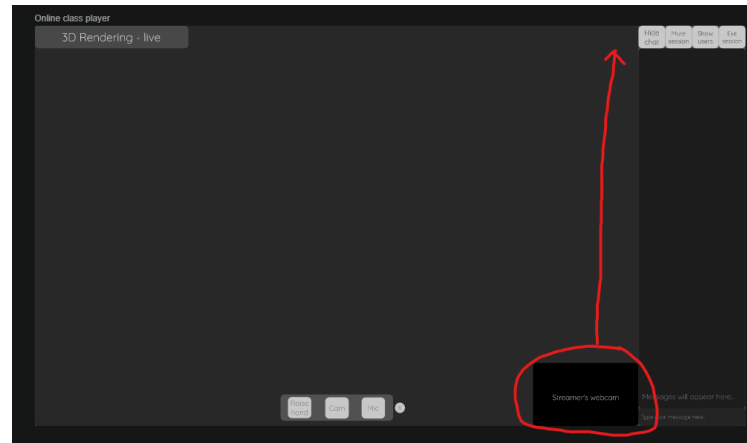
4. Problem: the term’s project isn’t included in the overview.

Solution: to adhere to the previously mentioned improvements by decreasing the elements size/font size, consider a different element shape, or shrink the sizes even further so that the project fits as well.



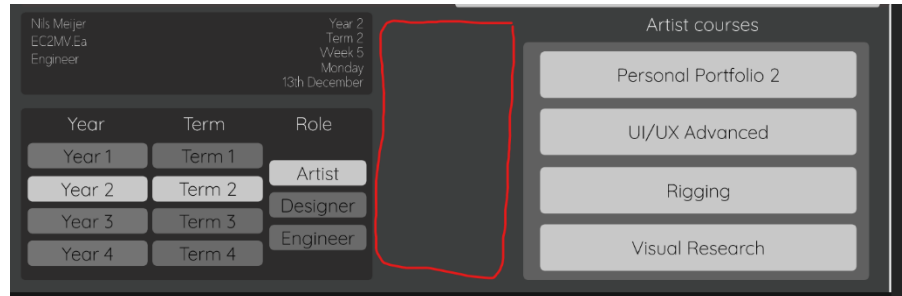
5. Problem: the webcam placement feels strange.

Solution: consider relocating it to (for example) the top right of the screen



6. Problem: a “college-year” button is missing (to select a schoolyear, such as 2020-2021, 2021-2022 etc).

Solution: add a small (doesn't have to stand out, but the option should be there) button to allow for that possibility. For example, it could be placed somewhere in the red area.



7. Problem: it's not quite clear to some testers what these elements are supposed to be (a link to the course page? A shortcut to a live lecture, or a recording?)

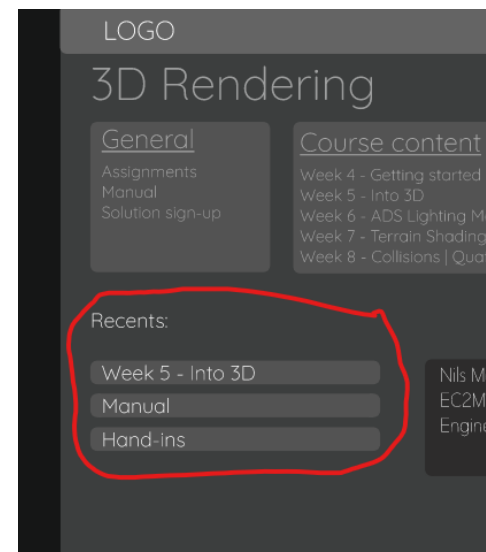
Solution: replace this element with a schedule, where classes that are live will be highlighted and can be clicked on which leads to the online lobby.

This week's classes for you:

UI/UX Advanced	3D Rendering	Software Architecture	Personal Portfolio
Lecture - AMO02	Lab - HWI02	Lab - YJI01	Lab - DVA06
Monday, 13th December	Friday, 17th December	Friday, 17th December	Wednesday, 15th December
9.15 - 10.45	11.00 - 13.15	14.00 - 16.30	13.15 - 14.45
Online	Z14.109	Z14.105	G6.31

8. Problem: it's not clear what this means. Are the elements files/folders that have been added recently?

Solution: change “Recents” into “Recently used”



3. Unmoderated A/B testing protocol

3.1. A/B conditions (Max. 2 sentences)

-Explain the difference between the two versions of your prototype/application. Make sure there is only one thing you are changing so your experimental results are valid.-

In version A, the schedule is displayed in a grid-list combination (with all of the schoolweeks of that term displayed, for all the courses including the project). The most important information (timeframe, date) is immediately visible.

In version B, the schedule is displayed in more of an “agenda” kind of layout. The user is able to switch between weeks. All of the information is visible, but only for the currently selected week, instead of all weeks at once.

3.2. Hypothesis (Max. 1 sentence)

-State what you believe will change, in terms of user behavior, between conditions A and B.-

Users will find version B (agenda-version) more pleasing because the way of presenting the schedule contains much less cramped-up text and is organized on a per-week basis, making it easier to find details about specific classes (classroom, teacher, timeframe etc)

3.3. Variables

-List the aspect of the experiment that you are controlling and changing (independent variable – there should only be one), what is affected by that change (dependent variables), and what aspects you have no control over but could affect the results (confounding variables).-

Independent variable	Layout of the schedule
Dependent variable(s)	<ul style="list-style-type: none">• Search time for a certain piece of information (e.g. timeframe for a class)• Fulfillment of information “desires” (was the user able to find all of the information they were looking for).
Confounding variable(s)	<ul style="list-style-type: none">• Amount of experience with schedule & agenda layouts• Possibility of dyslexia

3.4. User tasks

-State the actions you will ask the user to perform with your prototype/application. Copy-paste the table as necessary.-

Task 1	Find the timeframe at which the 3D Rendering lab on the 24 th of December takes place.
Success criteria	The user has located the lab class for 3D Rendering on the 24 th of December, and finds that the lab starts at 11.00 and ends at 13.15.

Task 2	Find out who your study coach is.
Success criteria	The user has navigated to the “Account” page, and sees that the study coach is Harry Sanderink.

Task 3	Watch the 3D Rendering lecture recording of 6 th December.
Success criteria	The user has navigated to the 3D Rendering course details page, and clicked the lecture recording of 6 th December.

Task 4	Find all the users currently present at the live lab class of 3D Rendering on the 17 th of December.
Success criteria	The user has navigated to the 3D Rendering course details page, and clicked the live lab class, and has clicked the “Show users” button.

3.5. Survey

-Fill in the URL of your survey and the questions you asked your testers. You need at least 4 questions and they should be relevant to your test (should allow you to validate your hypothesis).-

URL	https://forms.gle/pK452gBce6dGnLnCA
Type of answer	Question
Multiple choice	1. How did you find the 3D Rendering course page?
5-point LIKERT scale	2. On a scale of 1 to 5, how difficult did you find it to find the timeslot for the 3D Rendering lab class?
5-point LIKERT scale	3. On a scale of 1 to 5, how difficult did you find it to find the recording for 3D Rendering on the 6 th of December?
Open	4. Do you think it's necessary to have the “Account” page at all? Please explain your answer

4. Unmoderated A/B testing results

4.1. Survey raw data

-Copy-paste the raw data (results) of your survey. These are usually obtained as a table of answers per respondent. Demographic information does not need to be reported here or in the following sections.-

Numbers are on a scale of 1-5, with 1 being hard/bad, and 5 being easy/good.

For multiple choice questions, A = 0, B = 1

Condition A

Tester 1:

2. Through the schedule (A/0)
3. 5
4. –
5. 5
6. –
7. Good point! Maybe not? since everyone knows their own data? but if you want to keep that page.... Maybe cool to add a function so you know where you stayed in the video recordings? I don't know tho.
8. hmm not much negative stuff, everything looks pretty nice to me (very well use of your style! :). Only thing is to maybe use a different color for the courses part (yellow?light grey?) so not everything is in orange? it might look more clear? but just try some stuff out. You did an excellent job! (way better then blackboard lol)

Tester 4:

2. Through the Year > Term > Role filter (B/1)
3. 3
4. –
5. 4
6. –
7. It's not that necessary, but I do think it's a nice feature to have in pretty much any digital thing that requires some form of account, yours included.
8. Although I like the way you've laid out the stuff, my first impression on pretty much any screen was that it looked cramped and overwhelming, especially the 3D Rendering page. There's a lot of text pretty much everywhere on the screen. Now that I've flipped through the pages of the prototype more often I've grown used to the looks of it

Tester 5:

2. Through the Year > Term > Role filter (B/1)
3. 4
4. -
5. 4
6. -
7. Yes, I believe it is easier to keep all important information there, and maybe it will be easier for the students to keep their information updated
8. Looks good. The only thing, I feel that so much orange can be really harsh on the eyes, you could probably try other colours or remove a little of the orange.

Tester 6:

2. Through the schedule (A/0)
3. 2
4. At the beginning, I felt a bit overwhelmed by all the information, so it took me a while to understand everything.
5. 3
6. -
7. I wouldn't say that is super necessary but at least being able to change profile pic and maybe name it's good,
8. No :)

Tester 9:

2. Through the Year > Term > Role filter (B/1)
3. 3
4. The fonts and colors are mostly the same on all places, having things either bold or different colored or differently sized can help navigate attention.
5. 3
6. Same answer as before
7. It's nice to be able to see ECs, but if you do have it like this you could maybe add grades 'n stuff as well.
8. We're in 2021/2022, not in 2020/2021 :) You also get stuck after clicking the searchbar

Tester 11:

2. Through the schedule (A/0)
3. 4
4. -
5. 4
6. -
7. Yes, for changing your profile picture for example.
8. Maybe for in the future it would be nice to maybe fold in the blocks in this term's schedule so it is a bit less crowded?

Condition B

Tester 2:

2. Through the Year > Term > Role filter (B/1)
3. 3
4. -
5. 3
6. -
7. Yes, you can edit your profile picture there and see some valuable information, like the credits that you've earned.
8. The times in the schedule are a bit too dark, it's not easy to read.

Tester 3:

2. Through the Year > Term > Role filter (B/1)
3. 4
4. -
5. 3-
6. Yes, I think it's useful to have a page with some general information, especially which class you are and who your study coach is, because there is not really a good place for that information right now.
7. The course page is really crowded and cluttered, so it's a bit difficult to quickly find stuff there. I think the year/term/role filter is really useful and easy to use!

Tester 7:

2. Through the Year > Term > Role filter (B/1)
3. 4
4. -
5. 5
6. -
7. Yes, it has all the necessary information about the user. It's nice to have it all in one place.
8. Couple of things: - The 2020/2021 thing at the top of the page looks the exact same as a button (in this case the 'account' button). I would maybe change it so it wouldn't have a background and maybe the font to orange. Only so it doesn't look like a button anymore. And if you do mean it as a button (so you can switch between years). Maybe just add a little arrow next to it to make it a drop down. - The times on the schedule are a tad bit hard too read. - The announcements on the course page are quite tiny and hard to read.

Tester 8:

2. Through the schedule (A/0)
3. 4
4. -
5. 2
6. I tried to go there via the schedule but the schedule would not go back far enough, this might only be a prototype thing tho because ofcourse you are limited to what you can create.
7. Yes, it shows your ECs class and study coach abbreviations on there. Which are all very handy to just have one click away instead of having to look for it though different pages.
8. Back to courses when clicking from 3D rendering should not bring you back to 3D rendering I think.

Tester 10:

2. Through the schedule (A/0)
3. 3
4. It took me a bit, but mainly because when you are on week 4 and you click the button to see the next week, the week name changes but the day numbers don't do that was dizzying me.
5. 4
6. -
7. I wouldn't say that is necessary but it's a good thing to have.
8. I feel that there is a lot of contrast with the colours, which is a thing that I don't enjoy that much, but overall I really liked the prototype, really good job. :)

Tester 12:

2. Through the schedule (A/0)
3. 5
4. -
5. 5
6. -
7. Yes so the teachers know who is present and for customization (profile pic ect) it would be a nice thing to have
8. I think the layout is quite clear and i like that the schedule is right there to show you what you have that day, and plan for the next. I like the colours as well, very easy on the eyes.

4.2. Processed results

-Fill in the table with the results of your descriptive statistical analysis of the raw data from your survey. You can choose a different way of presenting your data if the table does not provide a good structure but make sure you show, per question and per condition, the required information.-

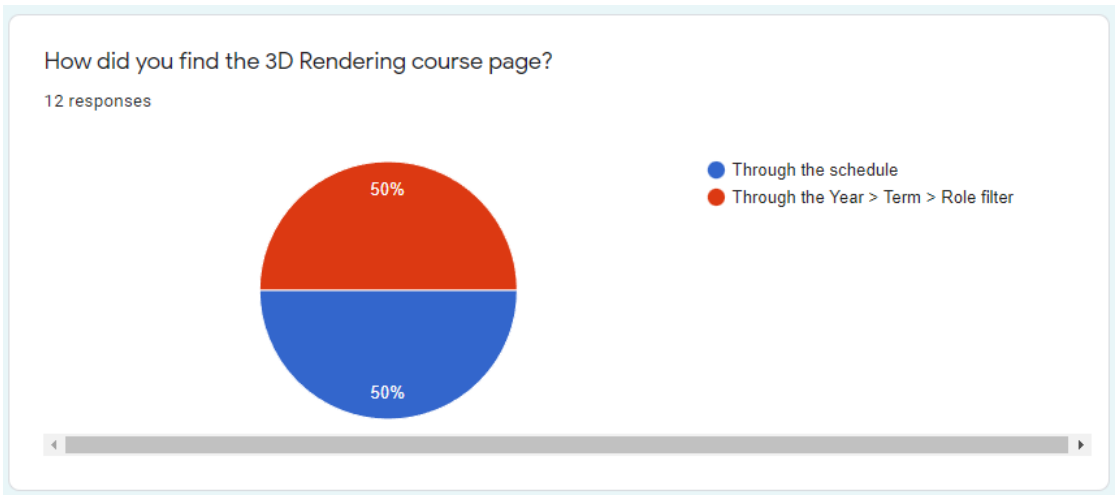
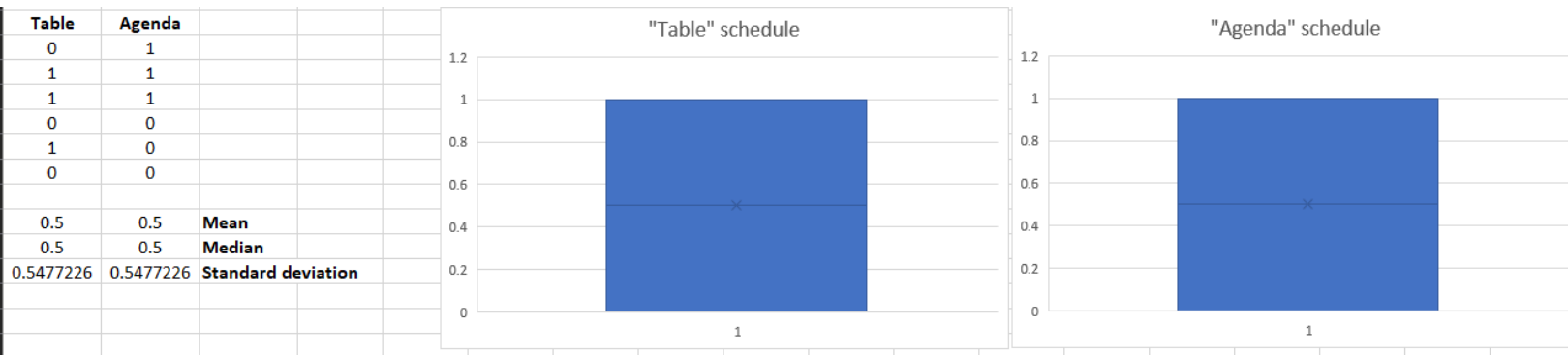
Numbers are on a scale of 1-5, with 1 being hard/bad, and 5 being easy/good.

For multiple choice questions, A = 0, B = 1

Question 1: not included (what version did you test)

Question 2: How did you find the 3D Rendering course page?

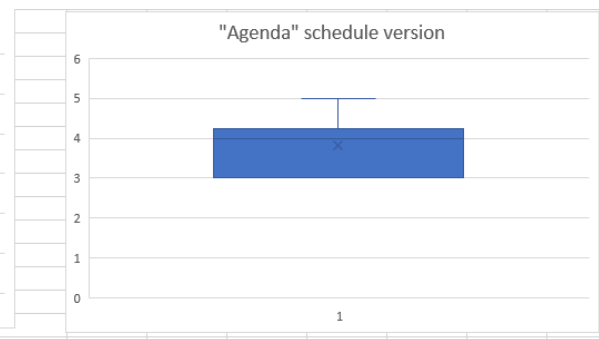
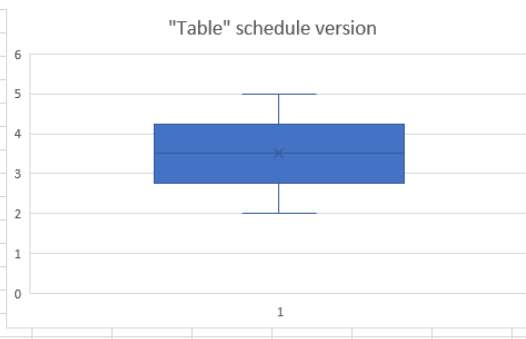
Type of answer: multiple choice (A/B)



Question 3: On a scale of 1 to 5, how difficult did you find it to find the time for the 3D Rendering lab class?

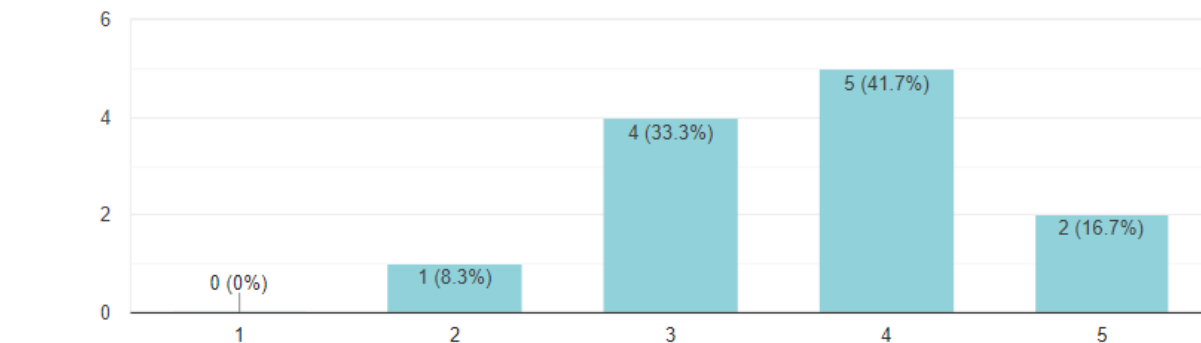
Type of answer: LIKERT-scale, 1-5

Participant	Table	Agenda			
1	5	3			
2	3	4			
3	4	4			
4	2	4			
5	3	3			
6	4	5			
	3.5	3.833333	Mean		
	3.5	4	Median		
	1.0488088	0.7527727	Standard deviation		



On a scale of 1 to 5, how difficult did you find it to find the time for the 3D Rendering lab class?

12 responses

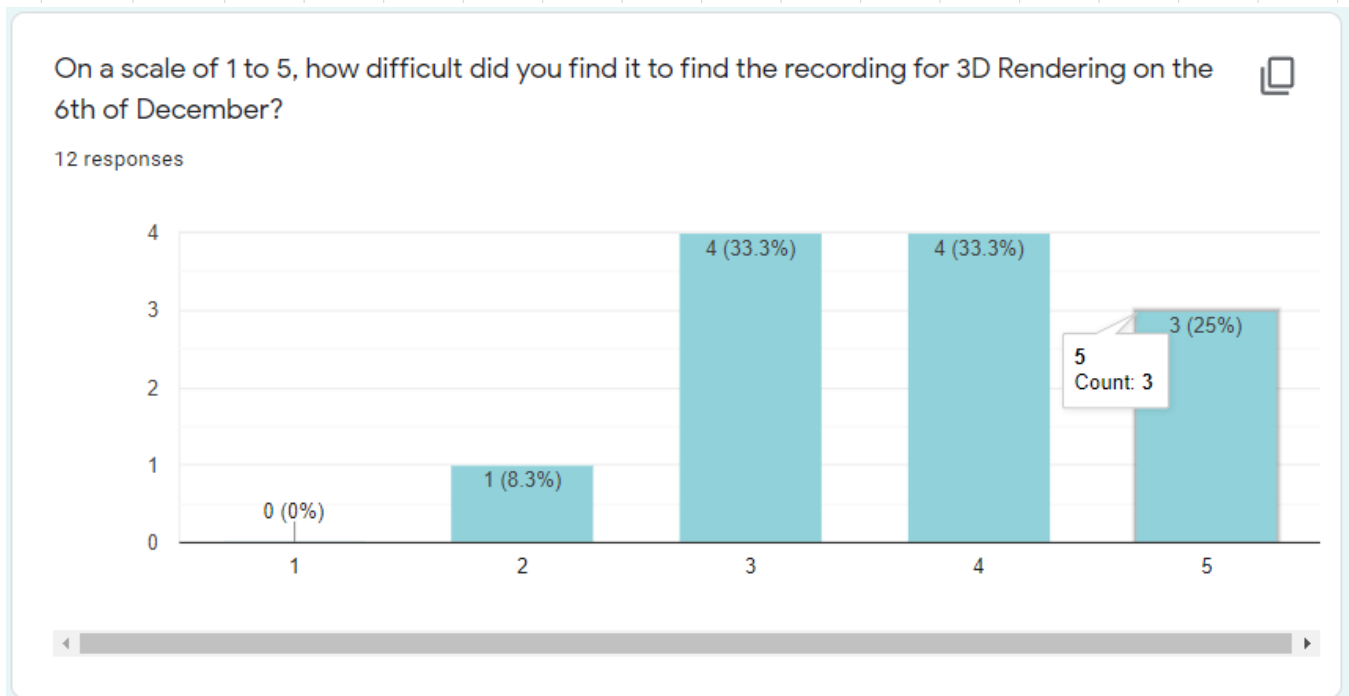
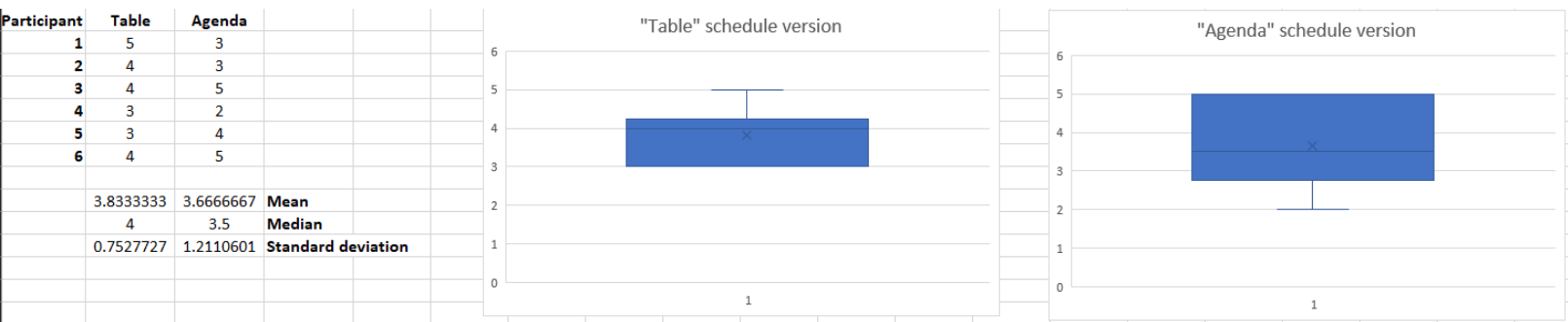


Question 4: If you answered 3 or lower, do you have any tips on how it could be easier?

1. At the beginning, I felt a bit overwhelmed by all the information, so it took me a while to understand everything.
2. The fonts and colors are mostly the same on all places, having things either bold or different colored or differently sized can help navigate attention.
3. It took me a bit, but mainly because when you are on week 4 and you click the button to see the next week, the week name changes but the day numbers don't do that was dizzying me.

Question 5: On a scale of 1 to 5, how difficult did you find it to find the recording for 3D Rendering on the 6th of December?

Type of answer: LIKERT-scale, 1-5



Question 6: If you answered 3 or lower, do you have any tips on how it could be easier?

1. I tried to go there via the schedule but the schedule would not go back far enough, this might only be a prototype thing tho because ofcourse you are limited to what you can create.
2. Same answer as before

Question 7: Do you think it's necessary to have the "Account" page at all? Please explain your answer

1. Good point! Maybe not? since everyone knows their own data? but if you want to keep that page.... Maybe cool to add a function so you know where you stayed in the video recordings? I don't know tho.
2. Yes, you can edit your profile picture there and see some valuable information, like the credits that you've earned.
3. Yes, I think it's useful to have a page with some general information, especially which class you are and who your study coach is, because there is not really a good place for that information right now.
4. It's not that necessary, but I do think it's a nice feature to have in pretty much any digital thing that requires some form of account, yours included.
5. Yes, I believe it is easier to keep all important information there, and maybe it will be easier for the students to keep their information updated
6. I wouldn't say that is super necessary but at least being able to change profile pic and maybe name it's good
7. Yes, it has all the necessary information about the user. It's nice to have it all in one place.
8. Yes, it shows your ECs class and study coach abbreviations on there. Which are all very handy to just have one click away instead of having to look for it though different pages.
9. It's nice to be able to see ECs, but if you do have it like this you could maybe add grades 'n stuff as well.
10. I wouldn't say that is necessary but it's a good thing to have.
11. Yes, for changing your profile picture for example.
12. Yes so the teachers know who is present and for customization (profile pic ect) it would be a nice thing to have

Question 8: Any other positive/negative remarks?

1. hmm not much negative stuff, everything looks pretty nice to me (very well use of your style! :). Only thing is to maybe use a different color for the courses part (yellow?light grey?) so not everything is in orange? it might look more clear? but just try some stuff out. You did an excellent job! (way better than blackboard lol)
2. The times in the schedule are a bit too dark, it's not easy to read.
3. The course page is really crowded and cluttered, so it's a bit difficult to quickly find stuff there. I think the year/term/role filter is really useful and easy to use!
4. Although I like the way you've laid out the stuff, my first impression on pretty much any screen was that it looked cramped and overwhelming, especially the 3D Rendering page. There's a lot of text pretty much everywhere on the screen. Now that I've flipped through the pages of the prototype more often I've grown used to the looks of it
5. Looks good. The only thing, I feel that so much orange can be really harsh on the eyes, you could probably try other colours or remove a little of the orange.
6. No :)

7. Couple of things:

- The 2020/2021 thing at the top of the page looks the exact same as a button (in this case the 'account' button). I would maybe change it so it wouldn't have a background and maybe the font to orange. Only so it doesn't look like a button anymore. And if you do mean it as a button (so you can switch between years). Maybe just add a little arrow next to it to make it a drop down.
- The times on the schedule are a tad bit hard too read.
- The announcements on the course page are quite tiny and hard to read.

8. Back to courses when clicking from 3D rendering should not bring you back to 3D rendering I think.

9. We're in 2021/2022, not in 2020/2021 :) You also get stuck after clicking the searchbar

10. I feel that there is a lot of contrast with the colours, which is a thing that I don't enjoy that much, but overall I really liked the prototype, really good job. :)

11. Maybe for in the future it would be nice to maybe fold in the blocks in this term's schedule so it is a bit less crowded?

12. I think the layout is quite clear and I like that the schedule is right there to show you what you have that day, and plan for the next. I like the colours as well, very easy on the eyes.

4.2.1. Box plots (Optional for Good)

-Draw a box plot to better understand the results from the A/B testing.-

See 4.2. Screenshots include boxplot.

4.2.2. Conclusion (Max. 5 sentences)

-Discuss if your hypothesis was validated or not using the results of your A/B testing.-

Reading the boxplots from question 3 and 5, the testers found version B the most easy to navigate, so this confirms my hypothesis , which was that users would find the Agenda version the most visually pleasing and UX friendly. Although there are still plenty of improvements to be made to the schedule, it's clear people prefer the agenda over the table, speaking in the manner of presenting the schedule.

4.3. Future work (Optional for Good)

-List a set of recommendations for future work for your prototype/application based on the results of your A/B testing.-

- Interactable schedule courses (for example, clicking the schedule items takes you instantly to the class lobby, if it's available. Hovering over the schedule items could put it in focus, so that the element gets larger and the background darker).
- The user should be able to return to the course overview (with the agenda) by clicking on the logo which is present on most screens.
- The search bar should be made functional.
- All of the courses should be added to the course filter, for all years, for all terms, for all roles.
- Improve the colour palette (or at least with the organization of the colours, so what colour is given to what element; what should be seen as important and less important?)
- Improve some UI element's size; they feel overwhelming, as well as the font size. Make sure to balance this well with the white space that's a result of changing these properties.

4.4. Reflection (Optional for Excellent; Max. 3 sentences)

-Discuss what went well and what didn't during the entire A/B testing process. Afterwards, list the things that you would do, or wouldn't do, differently in the future (think about future modules or projects).-

Dos

- Improve time management when working on the prototypes (but especially when working on the Unity prototype, since programming the schedule cost me a lot of time).
- Make sure the A/B test (as in the condition) is okay. For this course, I spent some time working on an A/B test without even knowing if the concept would be approved in the end.

Don'ts

- Do not change the survey questions after sending it out and receiving responses; in this case, I forgot to add an explanation/follow-up question for question 3 & 5. I still did it because I only had received like 2 or 3 responses, so I think it's still valid. But in the future, ask for peers about their opinion on questions and compare the questions with examples.