Human-Computer Interaction INFR11017

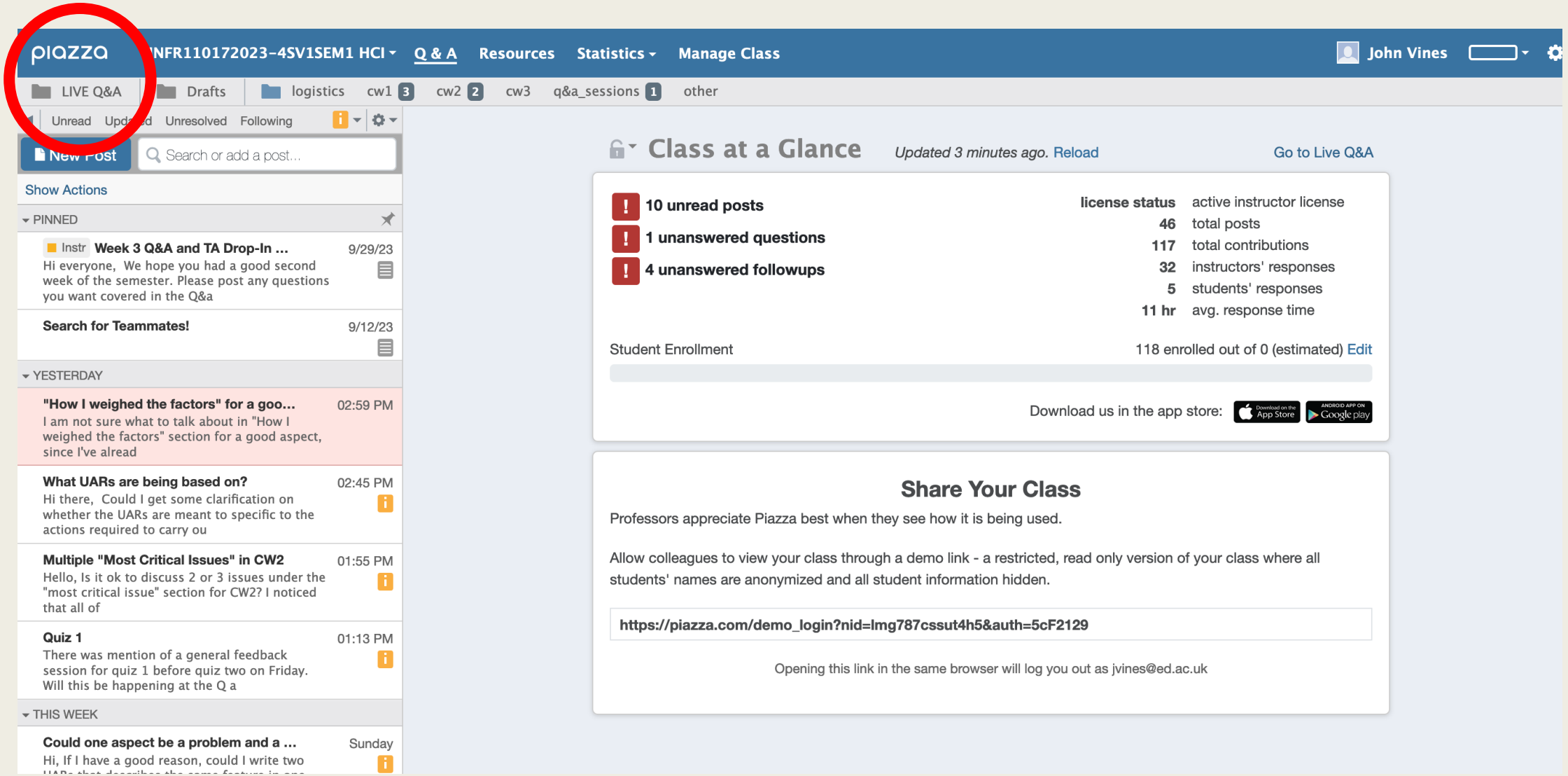
Week 7: CW1 (feedback) and CW2 (questions)

31st October 2023

John Vines

Overview of today’s session

- Looking at CW1 and Quiz 1
- Questions to do with CW2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John Vines
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Instr Week 3 Q&A and TA Drop-In ...
9/29/23
Hi everyone, We hope you had a good second week of the semester. Please post any questions you want covered in the Q&a
Search for Teammates!
9/12/23
YESTERDAY
"How I weighed the factors" for a goo...
02:59 PM
I am not sure what to talk about in "How I weighed the factors" section for a good aspect, since I've alread
What UARs are being based on?
02:45 PM
Hi there, Could I get some clarification on whether the UARs are meant to specific to the actions required to carry ou
Multiple "Most Critical Issues" in CW2
01:55 PM
Hello, Is it ok to discuss 2 or 3 issues under the "most critical issue" section for CW2? I noticed that all of
Quiz 1
01:13 PM
There was mention of a general feedback session for quiz 1 before quiz two on Friday. Will this be happening at the Q a
THIS WEEK
Could one aspect be a problem and a ...
Sunday
Hi, If I have a good reason, could I write two
Class at a Glance
Updated 3 minutes ago. Reload
Go to Live Q&A
10 unread posts
1 unanswered questions
4 unanswered followups
license status active instructor license
46 total posts
117 total contributions
32 instructors' responses
5 students' responses
11 hr avg. response time
Student Enrollment
118 enrolled out of 0 (estimated) Edit
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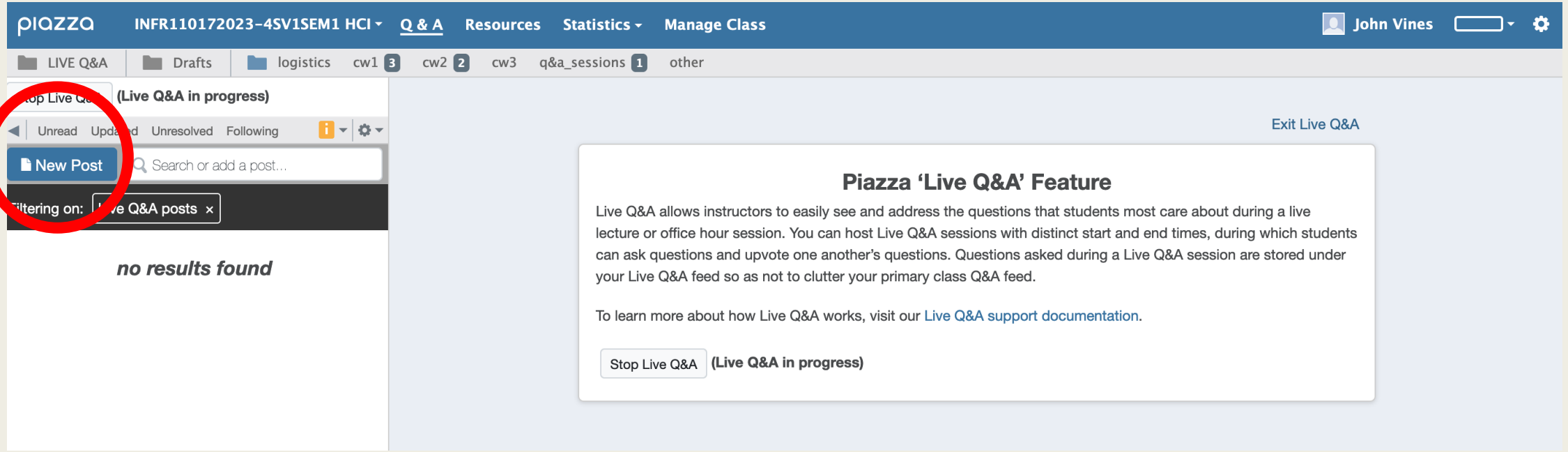
Opening this link in the same browser will log you out as jvines@ed.ac.uk



Post questions related to CW2 in Live Q&A and I will answer them after CW1 feedback

Also you can just ask them directly afterwards!

CW1 feedback

Identified problem(s)

A short paragraph explaining the problem that your team has identified with the current course or Learn design. Think about it in terms of your persona rather than specific UI elements.

Identified problem(s)

The organization of the current Learn design can be improved in terms of the ease of finding specific course information and course materials on both the course pages and Learn home page. For example, there is a long list of lecture slides and videos in the Secure Programming course schedule page, with no clear delineation of which materials are for what topic and what week. Although there is a small table at the bottom of the page outlining each week's topics, it is not immediately obvious or convenient to scroll back and forth to find out which materials are appropriate for some week. Particularly for new or international students who might be used to a different course structure, teaching style, or learning management platform, the course webpage design should be easily navigable to facilitate class preparation, effective learning and revision. Students should be able to focus on the content of the course, rather than occupied with trying to find it.

Students are often juggling schedules between academic, work, and personal lives. Although there is a Calendar function on Learn, it is not obvious and rarely used, although there is potential for effective time management that is integrated with other functions of learn such as course lecture timings and online meeting platforms.

Design centric from the start, not user and person centric

Statements around design elements not being "obvious" or "convenient" – start to bring user in but not clear on **who** the user is.

Students brought in near the end of problem statement – good points raised here around time management and hectic schedules.

Identified problem(s)

1. **Lacks Clear Outlines and Flow**
   - Issue: Undefined content sections and erratic flow.
   - Impact: Hinders user engagement and information retention.
2. **Poorly Laid Out Scheduled Files and Lectures**
   - Issue: Scheduled files lack logical layout and date markers.
   - Impact: Can cause missed events and user frustration.
3. **Confusing Menu Structure**
   - Issue: Non-intuitive and complex menu layout.
   - Impact: Causes navigational issues and can lead to site abandonment.
4. **Insufficient Colour Contrast and Unreadable Fonts**
   - Issue: Hard-to-read text due to poor contrast and font choice.
   - Impact: Limits accessibility and diminishes user experience.
5. **Unappealing and Cluttered Design**
   - Issue: Design is outdated and overly complex.
   - Impact: Lowers perceived credibility and user engagement.

This focuses on problems with the design – it is design-centric, not user-centric.

References to “users” are vague and not specific, same with statement like “not intuitive” – needs to be contextualized as for whom it is not intuitive for.

Statements such as “unappealing” and “outdated” need to be qualified.

Identified problem(s)

Francis Sanchez, a master's student from Peru, is facing a tough time with the university's Learn page for the Secure Programming module. The page is disorganized - the course materials, rather than being systematically categorized and easily navigable, are presented in a cluttered manner, making it complex for him to locate and prioritize essential resources and information. Important details like where and when lectures are, information on practical lessons, and when coursework is due are either hard to find or missing altogether. For Francis, who's juggling studies, family life, and learning about Scottish culture, this confusing layout makes everything more stressful. He needs information to be clear and easy to find to keep up with his busy life and study commitments. The current design of Learn is making his university journey harder than it needs to be.

Places the user and person (the Persona) front and centre. Clear who the user is and goes straight into telling a story of a problem they face.

Highlights struggles Persona has with finding specific information that is important in the context of their multiple responsibilities in life.

Work-balance and multiple commitments is a focus throughout.

Design goals

List the main goals you have when creating the design. This can be a paragraph or it can be a bullet point list. Think of the big points that you want to make sure to accomplish.

Design goals

- Include all essential course information in a concise and intuitive interface.
- Navigate to complete tasks in as few clicks as possible.
- Accept that there are multiple reasonable ways to do certain tasks. For example, students searching for lecture recordings may naturally click on the ‘Lecture recordings’ menu item if they know the date of the lecture they’re looking for. Otherwise, they might go to ‘Content’ and select the week they missed a lecture, and we have made the recordings directly accessible from there. These are both intuitive ways to search for a recording so we enable both.

- First two bullet points are too general and vague – would be better by qualifying more what “essential” information is, and what intuitive means
- The third bullet point makes a good point around redundancy and building in multiple ways of accessing the same materials and content. This is a stronger designer goal.

Design goals

In our design goals, we decide to solve the following problems:

1. We design a new interface for users which is more convenient for them, but we do not change too much on the layout of the interface. We intend to keep a similar layout for users, so they may not feel a sense of fragmentation.
2. We design a new navigation bar for a one-level menu. This makes the whole panel look tidy and clean, and easy to use.
3. We introduce an accordion menu in **"Course Materials"**. The original web page did not use this kind of design, and users found it a bit messy while navigating.
4. We add the location and time of each lecture within the **"Course Materials"** section. When users expand this section, they can check the time of the lecture and be redirected to Google Maps when they click on the location address.
5. We add a **"Contact"** page to our designed learning page. This design makes it more convenient for users to find classmates and get support from lecturers.

There is nice detail in this example of design goals, but again there are terms that need to be better qualified – e.g. "convenient" (what does this mean?) and "fragmentation".

Design goals should be statements of a general nature that will influence design decisions – what we have here is more an outline of the design changes and decisions rather than goals.

Design goals

- **Learn-level**:
  - The way Learn course pages slide over from the right and overlay the course selection page is inconsistent with modern web design patterns and doesn't make sense. It implies that the panel is temporary, but the course page is where students spend the vast majority of time on Learn. We therefore replaced this sliding behaviour with a familiar Left-Top menu layout, where the main sidebar is always visible. This makes Learn considerably less disorientating and enables navigation between courses in two clicks instead of three.
  - The organisation of courses on the *Courses* page is unintuitive. We created two distinct sections: current and past courses, and placed current at the top. The only way to achieve this in Learn right now is to manually favourite your current courses.
- **Course-level**:
  - There are two *Assessment* menu items in the sidebar that both lead to different pages, which is confusing. We consolidated these.
  - Many menu items lead to external websites which are just raw HTML. We bring these back into Learn and structure them in a way that is easier to navigate and read.

This example nicely outlines the design goals in relation to goals at the level of Learn (across courses) and the specific Course.

Again though these are more descriptions of problems in the current design and then what was changed, rather than outlining high-level goals.

For example, a design goal for the last bullet might be “Ensure learning content is kept within Learn and avoids external websites, and has consistent structure and layout”.

Design goals

- How can we lower the time and effort taken to access a week's material?

  It varies from course to course, but we realised that some of the more poorly structured courses would require the user to go through many 'folder' links before they could access the material they would need for that week. This could also mean that supporting materials required you to navigate out of the section you are currently in and to a new area entirely. We recognise that in the long run this is quite tiresome for the user and wanted to focus on a design structure that removed useless hierarchy in favour of transparent efficiency.

  Goal – Display course materials cohesively and intuitively.

  Solution – Allow a 'Course Schedule' that contains an overview of all the key materials for every week. This is in a table format which simplifies navigation to the correct resource and cells can also be colour coded to reflect relation to central topics of the course. We discussed adding a calendar function, but this was decided to be needless repetition from the learn landing page. Supplementary materials could be added at the bottom of this page or in a separate 'Course Materials tab' but as we realise that informatics courses usually stick to providing key resources, we decided to not add excess functionality to the template.

Very nicely detailed example and very different to others – starts with a question (grounded in identified problem section) and outlines why this is important.

The design goal itself though is a little vague and could be written to more directly relate to the question.

The discussion of the design solution is nice and demonstrates iteration and transparency of process – but is what was intended with the design goal section

Design goals

1. Establish Clear Content Hierarchy and Logical Flow
Objective: Develop a clear, structured layout.
Key Actions: Utilise defined headings, subheadings, and colour blocks for effective section separation.

2. Enhance Clarity and Accessibility of Scheduled Files and Lectures
Objective: Ensure scheduled files offer clear information.
Key Actions: Employ a clear layout, distinct date markers, and user-friendly navigation.

3. Simplify and Make Menu Structures Intuitive
Objective: Design smooth, straightforward navigation through menus.
Key Actions: Implement logical menu item organisation and clear labelling. More importantly keeping it consistent has headings, separate tabs and sections.

4. Optimise Text Readability and Visual Accessibility
Objective: Ensure all text is easily readable and meets accessibility standards.
Key Actions: Use web-friendly fonts and colour contrast.

5. Modernise and Declutter Design Aesthetics
Objective: Deliver a clean, modern, user-focused design.
Key Actions: Apply modern design principles and streamline visual elements.

A very clear and well structured set of design goals – they are high-level and general, but have some specific detail.

Breaking down as a statement, objective and key actions make these very clear.

Point 5 is weaker as statements like “modernize” and “streamline visual elements” are not very specific.

Quiz 1 feedback

What went well, what could have been better

Reflect on your coursework 1 group project work. Describe one thing you or your group did in coursework 1 that worked very well and helped you complete the coursework to a high standard. Describe one thing that you or your group did that worked less well and how you might improve that aspect in future projects.

- - - - -

In this question we are looking for evidence of engagement with the group coursework. We are also assessing on the following points:

•Correct understanding of course material.
•Ability to self-reflect.
•Ability to identify not only what was done correctly, but also that improvement is always possible.

Note: This was marked at 6/10 if you answered, and 0 if not answered.

What went well, what could have been better

One thing my group did well was deciding on a basic design and features that would exist across all pages before going off and designing those pages individually. This meant our pages were much more cohesive together before submission.
One thing my group didn't do that we will improve in future projects was keeping focused on the persona that we picked and keep relating it back to the work we did.

One thing that worked well that my group did for coursework 1 was create a page for the student to watch the recorded lecture that displayed a summary of the key points. The student would also be able to check a box to show that they watched the lecture on the schedule page. The persona we chose wanted these features as they often missed classes. I think this worked well for us and we were able to add something to the Learn page to help this persona. One thing that my group did the worked less well was we didn't focus a lot on the visual appearance. We focused more on getting the features that the persona wanted and making sure everything worked to get from one page to the next. For future projects, I think focusing more on the design and where all the buttons are located could help to improve the user experience.

Top example – brief, lacking detail, but point around keeping persona in focus is good. Passable.

Bottom example – much more detail and related back to persona throughout. Reflective point on what could have been better is interesting as it sounds like the team demonstrated good practice in focusing on content rather than visual aesthetics.

What went well, what could have been better

We did well in time management when making group project. I think it would be better if we get to know more about the persona we chose.

I did well in cutting all the pictures for the same series the same size, and make the assignment more beautiful. While I did bad in learning new applications. Therefore, I need to get in touch with more unfamiliar applications.

My group and I met every week to discuss our goals of the week, so we would know what needed to be done by the end of the week. That helped to keep track with our works regularly. However, we didn't assign roles to each team member, hence some people ended up working much more than other team members.

All these examples are far too simple and brief – although the bottom example is significantly stronger. All would likely not get a pass mark for this question however.

The reflection around not assigning roles in teams was a very common one across answers.

What went well, what could have been better

What worked well

During our first meeting, we identified requirements for our persona. Bearing these in mind, we then organised all the data types present in our chosen course into a structure. We did this in a process similar to card sorting (but with phrases in a nested bullet point structure), where we tried to the best of our ability to embody our persona's point of view. This generated a document we could all reference back to, which gave us a really good idea of how the big-picture layout of our course should be and how the specific requirements of our persona fit into it. This made it much easier to organise the rest of the project.

What worked less well

Once we had identified views for our project, we worked individually on designing those we had each been assigned. We didn't collaborate on the design specifics of each until it came time to build the prototype. If we had collaborated more at the stage of designing individual views, I think we could have used a more uniform design language, which would have led to a prototype which was more intuitive to interact with.

This is an overall strong answer to the question – it's structured and written well, with specific examples to the work of the group (i.e., the points are not more abstract statements around dividing up tasks, better time management etc.).

What went well, what could have been better

One thing that we did well and helped us all was dividing the designing step among us equally and then we conducted two feedback cycles where in the first one, member B reviewed what A did, A reviewed C's work, and C reviewed B. Then each one of us implemented the feedback they got. In the second cycle, we all sat together and each two of us reviewed the third member's work. This helped us significantly because it gave each of us the chance to implement our own design ideas at first and then incorporate the whole team's vision by listening to the feedback and improving our work based on them.

The thing that we didn't take good care of with the first CW was our time management because we were keen on dividing the CW into our own logical steps and making sure that no one of us started working separately on a task without having the other two starting it at the same time so we can all be working together with the same perspective at each step in the CW which eventually made us waste time.

This example is nicely detailed compared to the previous ones. The reflection on what went well is very specific and detailed and also demonstrates quite an innovative approach. This is very strong.

The reflection on what could have been better is less clear – one very long sentence so it’s a bit hard to parse. There is not a clear point about what would be done differently other than “better time management”.

What went well, what could have been better

One thing that worked:
When coming up with features for our coursework, we focused most of our changes on the issues that our persona dealt with, rather than random features we thought would be fun to implement. For example, Francis Sanchez is a parent who struggles with balancing school, parenting and networking, and as a result, may not be able to attend class all the time. So, we focused on making changes that told the users about explicit deadlines to help Francis balance their priorities.
1) On the Learn page, we added a button showing if classes were live, to make the course more accessible if Francis didn't have time to commute to campus that day.
2) We added an extra tab to the course page showing the attendance policy and late submission policy, so that Francis would know what affect missing class or turning in something late would have on their grade. This way, Francis could plan their parental responsibilities and social obligations around important deadlines and around mandatory class times. We also added a calendar feature where Francis could view this information and add specific deadlines to their calendar.
3) On the home page, we added a grading breakdown and a schedule of important deadlines so Francis would know which deadlines were particularly important for the course.
This was helpful because it made our features more cohesive, and made sure that we were solving problems rather than making things more convoluted by adding unnecessary features.

One thing our group did less well:
We could have made our design more accessible through multiple rounds of critique. We created mockup sketches and critiqued them as a group before implementing our designs in Figma, but we did not critique our Figma mockups before submitting CW1. After Tuesday's accessible design lecture, I realized that the font color we chose might be inaccessible to someone with vision impairment. We could have avoided this mistake if we'd asked a classmate to interact with our design before submitting our mockup, or tested our mockup using Funkify before submitting it.

This was was the longest answer to this question – and goes into a lot of detail, and is specific to the work of this group.

The point about ensuring the persona was in focus is great – but there is also then some unnecessary details around the design decisions made which is a bit distracting from the main point being made.

Identifies something that did not work well and also how to act on it, with reference to lectures.

If you were to do the project properly

In coursework 1 you were provided with a detailed list of steps to complete the coursework with your group. The steps represent a reasonable approach to the usability problem at hand, but they were also designed with the constraints of this course in mind, such as lack of money to pay participants and limited student time.

Imagine that these constraints were removed and your team was provided with a proper budget and you had dedicated time available to spend on the project. Describe a better approach to identifying problems, design goals, and creating an initial design mock-up.

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We were looking for answers that:

- Demonstrated engagement with course materials and also going beyond these
- Reflected the specifics of the coursework project
- That did not just list approaches but explained in detail the approach

Note: This was marked at 15/25 if you answered, and 0 if not answered.

If you were to do the project properly

Having some sort of interaction with our target user group would be the first one, spending some time on low-fidelity mock-ups and evaluating these and then allocating more time to learning about Figma as a tool and some best practices in setting up projects there would increase the quality of our design goals and mock-up considerably.

I think interviewing students who were in the class before could've provided important insight. This would give us first-hand feedback on what users would like to see implemented. Also having feedback in between prototype versions would've been useful.

First we would have done user research, then analyzing other platforms such as Learn that other universities use. Afterwards develop a prototype based on the features that users liked most from the other platforms, and ask users of the current platform for feedback on this prototype. Then improve it based on these feedbacks and repeat this cycle a couple more times in an iterative design manner.

These are examples that represent many of the answers to this question – brief and very (overly) concise answers that can be summarized as “we would interview users” and “get more feedback”.

The bottom example is a little more detailed and would have got a higher mark – likely only a borderline pass however.

If you were to do the project properly

What is needed/wanted?

- Perform unstructured interviews with students and lecturers to gather an understanding of tasks that are important to them.
- Perform a more formal literature review of material such as that of the Learn Foundation.
- Use both of these methods to extract initial design goals.

Analysis

- Perform a card sorting task with a student to understand where menu items should live/be grouped.
- Create initial personas of the users gathered in the previous stage
- We could move to more structured interviews or focus groups asking questions we know have for initial investigations.

Design

- Create storyboards for each task we have selected and work with students to give feedback on these design flows.
- We could also use our low-fidelity prototypes to get fast feedback where participants will add post-it notes around each page of the design.

Prototype

- We would create mockups in Figma, building on our prototypes and initial feedback.
- This section would remain largely similar as the section least limited by our budget

This is a tricky one to assess, as it does cover a lot of points and does infer that the course materials have been engaged in. But it refers to aspects of the HCI and design process in a very high-level manner.

Lacks any narrative about why this approach would be better and lead to better insights and designs.

If you were to do the project properly

I would start the research by producing a larger formal interview (most likely online as a google form), asking students from all years questions relating to their experience with learn. Important questions like "what feature do you want in learn?", "What do you find most difficult about learn?", "Do you have any learn courses that you think the layout is good and which course is this?" , "Do you have any learn courses that you think the layout is bad and which course is this?".

From this data, we could analyse to see which trends there are from a large group of people. For example " wanting a calendar that stores assignments from all courses in one spot". Then Semi- and unstructured interviews would be used to further understand the problem and features that could improve it.

Then a few group Focus group sessions could be set up, where tasks such as card sorting and storyboards could be used to generate a rough mock-up of a new learn page.

Then a few groups could design a few mock-ups, and then students could have access to all these mock-ups and vote on which ones they prefer.

This is stronger as it places the plan for the project in a narrative rather than a set of more abstract bullet points. It also focuses on fewer points, but gives a bit more detail on each one – this is much stronger than listing many things and not really explaining them.

The opening point is nicely detailed – but you would not use an online form to do an interview.

If you were to do the project properly

The first thing I would do would be to recruit a diverse set of students to take part in a focus group. In this focus group, I would first allow each participant to individually complete a set of tasks on Learn whilst we watched as part of a Contextual Inquiry. Once the participants had finished, we'd gather them together to do a grouped semi-structured interview. By having them in a group, they can not only share their thoughts and opinions, but they can also build on each others ideas should they have any thoughts about how they would improve the Learn page.

After this, we would then analyse their responses and our observations to develop a comprehensive requirements document that would lay out what the system actually needs to allow students to do, as well as non-functional requirements in relation to usability of the user interface.

From here, we can start brainstorming different ideas for how to layout the Learn page. To do this we would potentially have another Focus Group (or part of the same one) and have the participants complete a card sort. We would then develop a vast range of layouts (including obviously bad ones) to ensure we explore all possibilities. Pros and Cons lists of each can then be made as we whittle down out layout ideas.

Lastly, taking our best resulting ideas, we can build an interactive mock up as out first draft prototype. Using this prototype, we would iterate and get feedback on it and produce new prototypes several times until we and users were sufficiently happy with it.

This is stronger again, getting into the 60% area. There is good detail here that is specific to the projects you have been briefed on for the HCI assignments.

Clear referencing of a range of course content, and referencing back to earlier stages of the project in later stages.

Unsure if contextual enquiry is conveyed correctly. Later points a little less detailed.

If you were to do the project properly

Identifying Problems:
During the analysis phase, I would hold semi-structured interviews with several students and teachers at the University of Edinburgh about what they liked about Learn, issues they had with Learn and suggestions they might have for how to fix issues with Learn. Ideally, the students in these interviews would be from a mix of ages, majors and backgrounds, and have different goals when using the Learn webpage, so that our team could receive a holistic view of the different kinds of issues students had with Learn. After receiving feedback through these interviews, our team could use card sorting to organize these issues into different themes. We could also conduct structured interviews asking students at the University of Edinburgh to rank how important certain information is for them to find on a course page.

Design Goals:
Once our group has a list of issues received from interviews, we could come up with a list of tasks we want users of the new Learn page to be able to accomplish. For example, if students said that it's hard to figure out where to turn in coursework, we could set a goal that users should be able to find the portal to turn in coursework for a certain assignment in less than 30 seconds. We can also use the data gathered from semi-structured interviews to create an information hierarchy. For example, if several students said they cared a lot about finding the times a class meets, but not so much about reviewing the own work declaration, we can come up with a storyboard for a home page where the class meeting times are at the top and the own work declaration is at the bottom of the page or in another tab.

Mock-up:
For our mock-up, we could create storyboards based on our design goals, and show them to students from the semi-structured interview to see if they are intuitive and address the problems they raised in the semi-structured interview. If the students don't find the pages intuitive to use, we can iterate through storyboards and brainstorm as a group until we find a solution that works. Then, we can build a mockup in Figma or another site, and either test the mockup using disability tools like Funkify, or reach out to students with different accessibility levels to ask them to test the design. Once the design is more accessible, we can begin building the last draft of the mock-up before the actual design is programmed.

One of the strongest submissions. Very well detailed, very clearly organized around specific steps of the initial design and user research process.

Specific in reference to how the alternative project would be conducted, with whom, and refers to additional methods and techniques within and beyond the course.

Could have included actual references!

Any questions …

For the next week

- CW 2 due on Thursday (2nd November) – finalizing your UARs and report
- Quiz 2 happening on Friday (3rd November)
- Watching the videos and additional readings for Week 8 – People and Layout