

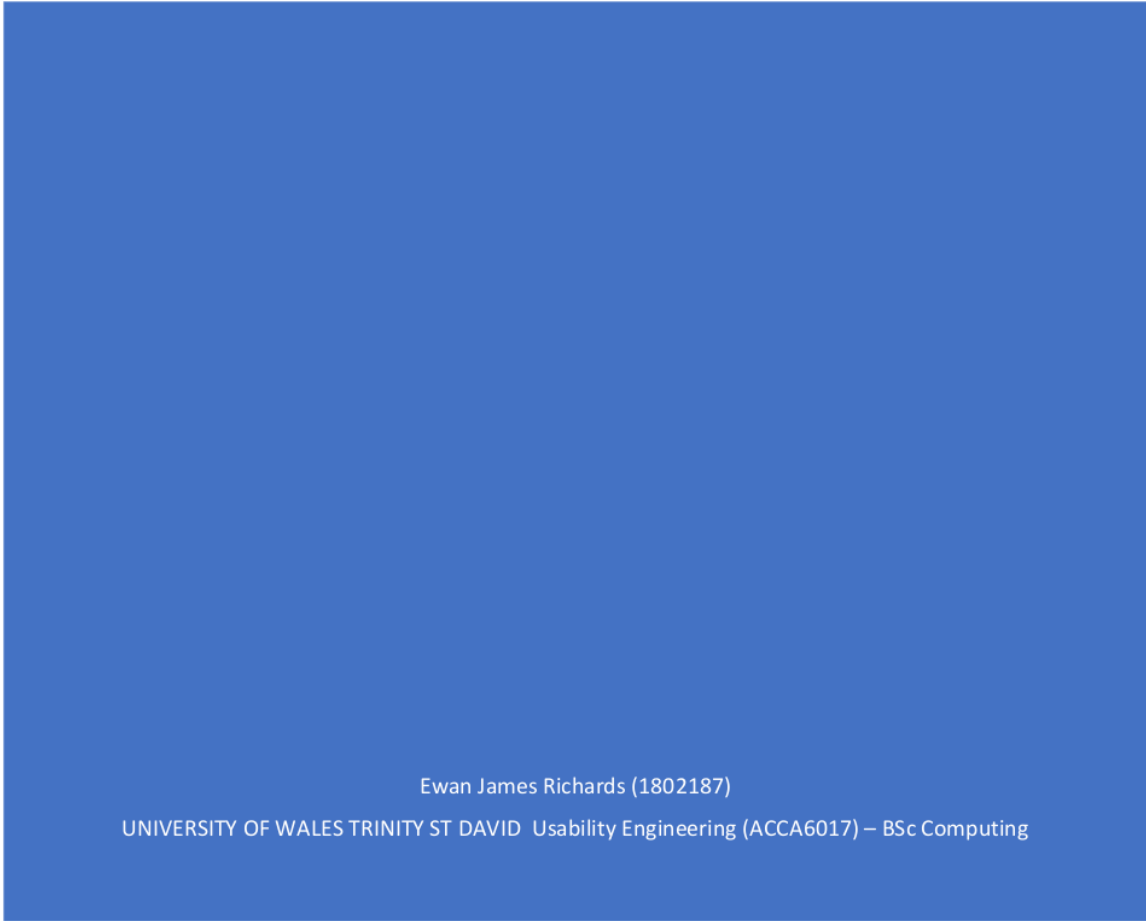
Ewan Richards FINAL Submission

by Ewan James Richards

FILE	12082_EWAN_JAMES_RICHARDS_EWAN_RICHARDS_FINAL_SUBMISSION_34 2856_1682873231.DOCX (10.02M)		
TIME SUBMITTED	01-APR-2021 03:03PM (UTC+0100)	WORD COUNT	4113
SUBMISSION ID	148566424	CHARACTER COUNT	21953



UNIVERSITY ONLINE RESOURCE PROTOTYPING



Ewan James Richards (1802187)

UNIVERSITY OF WALES TRINITY ST DAVID Usability Engineering (ACCA6017) – BSc Computing

Contents

Table of Figures.....	2
Introduction	4
Task Introduction	5
Theory Explanations.....	5
Usability	5
Human Reasoning	6
Affordance	6
Human Memory.....	7
Task analysis	7
Target User Group Investigation	7
Task Analysis	7
Evidence of user input	8
How often do you log into Moodle?	8
How often do you have to submit an assignment?	8
What of the following tasks do you perform?	8
Is there anything on Moodle you would like to do but is not available?	8
How did you learn how to submit an assignment on Moodle?.....	9
How do you usually submit your assignments?	9
Have you ever made a mistake or had an error when submitting an assignment?	9
How do you find the process of submitting an assignment?	9
Using Moodle	10
Summary	17
Paper Prototype.....	18
Storyboard.....	20
Walkthrough	21
Designs	21
Log in Page	21
Home Page.....	21
Module Page.....	21
Turnitin	21
File Submission	21
Assignment Submitted	21

File Submission Completed.....	22
Log Out.....	22
Paper Prototype Evaluation	22
Participate as user for class member design.	22
Software Prototype	23
Log in Page.....	23
Home Page	23
Module Page	24
Assignment Submission.....	24
File Submission	25
Assignment Submitted	25
File Submitted	25
Log Out	26
Evaluation.....	27
References	28
Appendix.....	30
Task Analysis (Appendix A)	30
Feedback of the developers paper prototype.....	30
Student 1 (Appendix B)	30
Student 2 (Appendix C)	31
Student 1 (Appendix D)	32
Student 2 (Appendix E).....	33

Table of Figures

Figure 1: Types of human reasoning [6]	6
Figure 2: Desired tasks.....	8
Figure 3: Performed tasks.	8
Figure 4: Log in page.....	10
Figure 5: Home page	11
Figure 6: Module page	12
Figure 7: Turnitin submission.....	12
Figure 8: Choosing a file.....	13
Figure 9: Submitting.	14
Figure 10: Assignment submitted.	14
Figure 11: Digital receipt.	15
Figure 12: Resubmitting an assignment.	16

Figure 13: Log out.	17
Figure 14: Paper prototype.....	19
Figure 15: Storyboard	20
Figure 16: Walkthrough.....	21
Figure 17: Log in page	23
Figure 18: Home page	23
Figure 19: Module page.....	24
Figure 20: Turnitin	24
Figure 21: File Submission	25
Figure 22: Assignment Submitted.....	25
Figure 23: Upload completed.	26
Figure 24: Log out	26
Figure 25: Paper Prototype	32
Figure 26: Paper Prototype	35

Total document word count	4,132
Word count (not including: front cover, table of contents, word count table, references, table of figures and appendices)	2,000

Introduction

A prototype has been designed based on the Moodle interface, which has assisted staff and student to stay connected during the Covid-19 pandemic. The resource has been evaluated and a front-end web prototype with improved usability has been created. Paper prototypes by other students have been evaluated and have received feedback. The author has sent their paper prototype to other students and collected feedback to assist with the front-end development.

Task Introduction

The chosen task decided upon, is to improve the usability of the University's Moodle site, which is used by staff and students; assessment submissions are completed, and resources are accessed on Moodle.

Many Moodle pages do not contain many visuals, and the topics move around every time a user visits the home page. This could cause confusion as students understand an interface and then they need to adapt because of moving topics. A calendar feature is to be introduced to show upcoming assessment deadlines. This improves usability as students would be directed to Turnitin immediately rather than going through the module page. For users with short term memory challenges (STM) this could prove to be difficult to read as they may not be able to take in all of the different choices in one attempt and the home page looks quite busy with all of the different pages available to them.

On Turnitin, the submission button could be made bigger to locate and interpret the information. The post-date is when feedback would be available. Not that many students would need the use of the start date as that is when the lecturer allows submissions, and the post-date would be renamed to feedback date.

Students need to click on a tick box to confirm the work is their own. The student should not be able to click on the 'Add Submission' button until this is done. The full document name should be shown during submission, so students know what document they are submitting.

To improve usability for the digital receipt, an acknowledgement alert would be demonstrated at the top of the page, so students know that the work has been submitted. Because of short-term memory challenges, users may not be able to retain all the information on the current initial receipt as they can only hold limited details at any given time [1].

E-mail receipts are beneficial which mentions the submission and author name, module and date submitted. This is useful so when students know what document they just submitted and they can keep track of progress, particularly during busy assessment seasons.

To enhance usability for the log out stage, an alert stating are you sure you want to log out would appear for the user to confirm their exit.

The user story for this project would be for a student to click on the module of choice and submit an assignment through the relevant submission methods.

Theory Explanations

Usability

Usability measures how appropriately a website visitor in a specific environment can use a layout to complete their objective successfully. Designers normally conduct usability tests during implementation to ensure that the product is as usable as

possible. Some users sometimes fail to differentiate usability with user knowledge. Usability is an essential element of user experience (UX) [2].

The most efficient methodologies to improve website usability is to have limited navigation and scrolling, ensure that it is simple for users to complete their errands, finding a page with not that many clicks, not asking users to complete long forms, ensuring that users can find links and call-to-action buttons effortlessly and ensuring important information are discoverable so that users can find them with easy [3].

Human Reasoning

Human reasoning is the consumption of expertise we use when we make decisions [4].

Human reasoning takes no apparent difference among deduction, induction, and abduction as it usually utilizes what humans know. It is a model of the world placed with all the required expertise, and a conventional falsification of the rational plans of verdicts. Humans make psychological simulations, which signify many options, or that get revealed in due course in a series, and humans support their decisions based on the evidence [5].

Reasoning	Definition
Deductive	Deductive reasoning is a rudimentary method of rational reasoning. Deductive reasoning begins with a report or theory and it then explores the options to achieve the main outcome. Deductive reasoning typically follows a series of measures. The opening step is that there is a principle, then another principle, and then ultimately an assumption.
Inductive	Inductive reasoning makes comprehensive conclusions from detailed studies. The methods on which inductive reasoning works is that there is information, then decisions are drawn from the information available. This is named inductive reasoning.
Abductive	Abductive reasoning normally begins with an unfinished study and advances to the most possible solution for the study series. It is based on creating and analysis of hypotheses using the available data. It often includes making an informed guess after studying a trend for which there is no evident justification.

Figure 1: Types of human reasoning [6]

Affordance

Affordance denotes to the tangible assets of the item; mostly those important assets that decide how the idea might be applied. Affordances must not be seen as reliant on culture or beliefs of the user [7]. According to Norman affordance makes 'suggestions or clues as to how to use the properties' and 'it can be dependent on the experience, knowledge, or culture of the actor' [7]. In contrast, Gibson states that affordance is 'independent of the actor's experience, knowledge, culture or ability to perceive' and that its 'existence is binary – an affordance exists or it does not exist' [7].

Human Memory

Humans preserve many variations of memory for various time ranges. Short-term memories typically last for a few seconds, while long-term memories usually last for a few years. Humans have an operating memory, which allows them to retain information in their memory for a small amount of time by replicating it. Whenever humans say a phone number continuously to retain the information, humans are using their operating memory [8].

Sensory memory is a short memory that permits humans to remember reactions of physical data after the initial stimulus has ended. It is believed as the first phase of memory that includes remembering a lot of data regarding the situation, but for a short amount of time [9].

Task analysis

Task analysis involves a variety of techniques deployed by computing engineers to assess the connections that users conduct whilst using software. Task analysis can be specified as the research of what an operative is needed to complete, in terms of either actioned or intellectual procedures, to accomplish the aims and objectives of the system [10].

Using task analysis assists users to understand what their objectives are: what the user is wanting to complete, what tasks users do to attain their objectives, how users are prejudiced by their own surroundings and how users' prior involvement impacts how they consider the tasks needed to be executed to complete the errands [11].

Cognitive task analysis is concentrating on identifying tasks that need judgments to be made, error resolving, recollection, awareness and understanding. Hierarchical task analysis is concentrating on breaking down a high-level task subtask [11].

Target User Group Investigation

Some users would understand what the assignment submission process is.

Task Analysis

Submission could happen on Campus or at home, as it is not restricted on what machines users can submit. Refer to Appendix A to view the tasks in detail.

Old tasks	New tasks
Log In	Log in
See long list of all available pages and modules	View active modules on home page
Locate <u>dropbox</u>	Locate <u>dropbox</u> at the top of the page
	Read submission information from <u>simplified dropbox</u>
Upload document	Upload document
Own work confirmation	Dropdown confirmation of own work
Digital receipt	Simplified digital receipt
Log out	Log out

Figure 2: Desired tasks

Evidence of user input

A set of questions relating to tasks analysis for Moodle was sent to an existing student, below are their responses.

How often do you log into Moodle?

Options were given to the student (daily, weekly, monthly, never) and they had said that they log in weekly.

How often do you have to submit an assignment?

Options were given (weekly, monthly, termly, semester or other) and the student stated every semester.

What of the following tasks do you perform?

This was a multiple-choice question; the options and responses can be seen in figure 3.

Task	Performed
Submitting assignments	Yes
Accessing reading lists	No
Downloading lecture notes and resources	Yes
Contacting fellow students and lecturers	No
Look at upcoming events on the calendar	Yes
Using the links on the home page to access other University services	Yes
Using the dashboard (different to the home page)	Yes
Download the similarity report for the submitted assignment?	No
Other: Look at completed and future/other modules	

Figure 3: Performed tasks.

Is there anything on Moodle you would like to do but is not available?

The student stated that there was nothing on Moodle that they would like to see which is not available, evidencing that Moodle does have a wide range of facilities available to use.

How did you learn how to submit an assignment on Moodle?

The student said that they learnt to submit in a lecture, however it is not very intuitive.

How do you usually submit your assignments?

The student was asked to place three options in the order they would usually submit an assignment. The order the student gave is below.

1. Turnitin
2. File upload dropbox
3. Email

This result shows that the student mostly uses Turnitin for their submissions, it should be easy to use if they are using this regularly.

Have you ever made a mistake or had an error when submitting an assignment?

The student said they have had no issues or made mistakes.

How do you find the process of submitting an assignment?

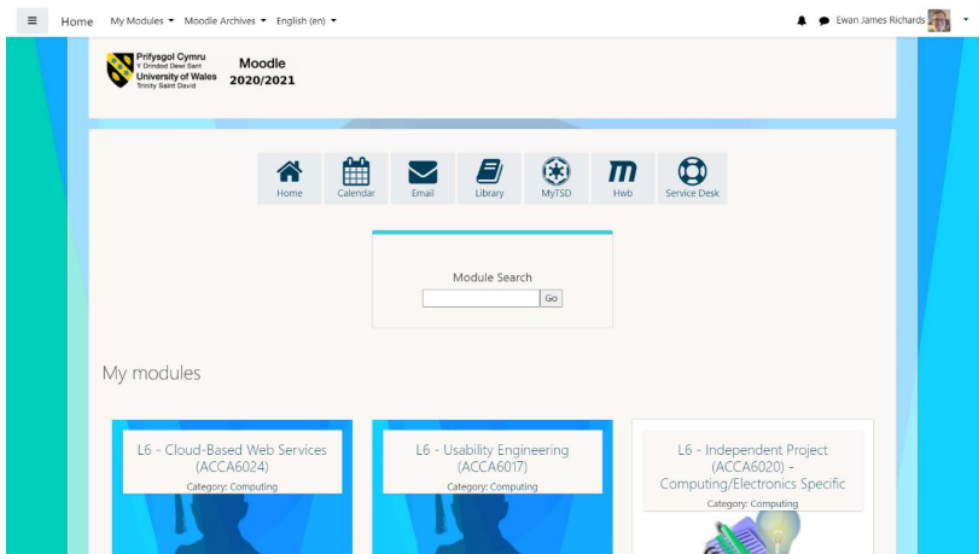
The student said that they find it cumbersome. It could be made simpler to upload assignments and, later, access assignment feedback. This analysis shows that improvements could be made to the submission process.

Using Moodle

Below is a step-by-step analysis of submitting an assignment.



Figure 4: Log in page



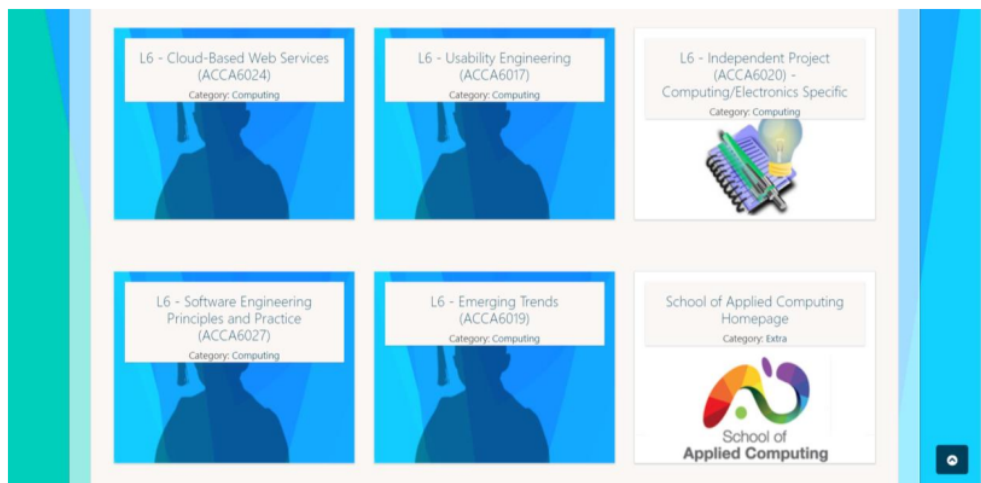
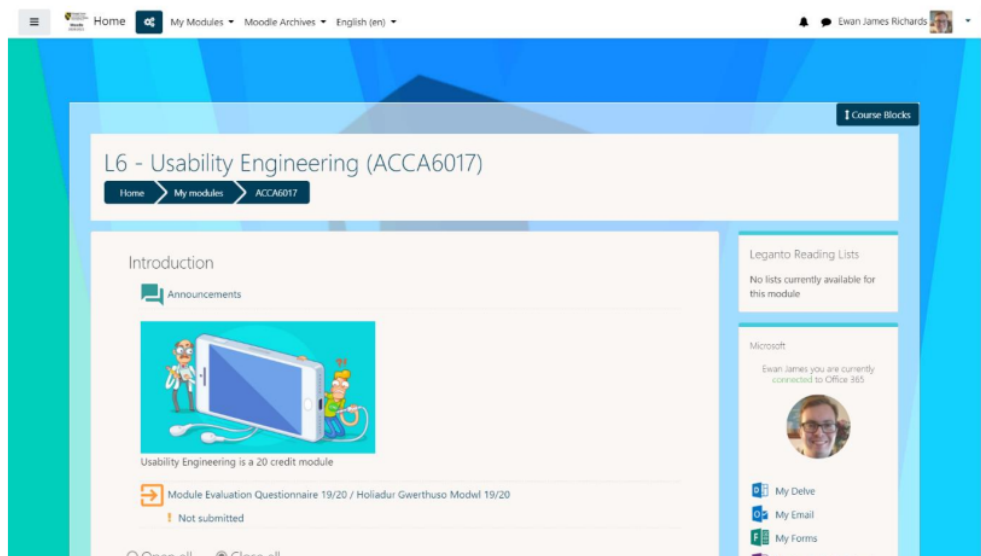


Figure 5: Home page



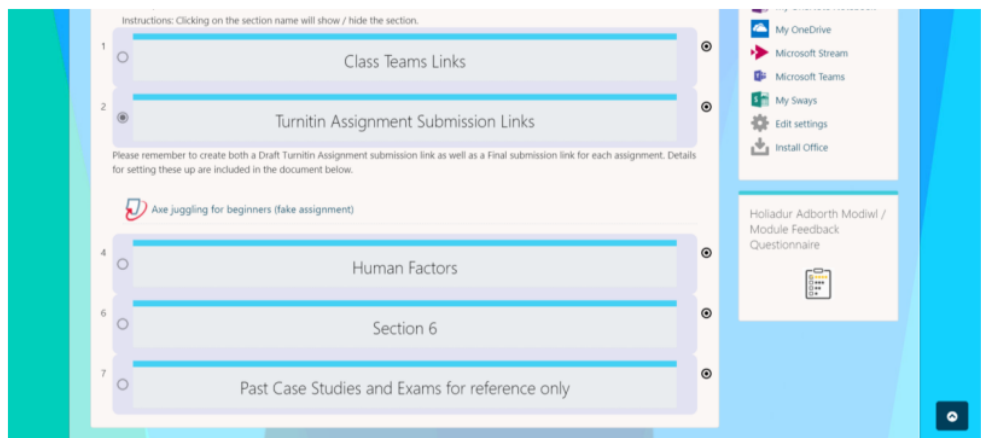


Figure 6: Module page

L6 - Usability Engineering (ACCA6017)

Home > My modules > ACCA6017 > Turnitin Assignment Submission Links > Axe juggling for beginners (fake assignment)

My Submissions

Part 1

Title	Start Date	Due Date	Post Date	Marks Available
Axe juggling for beginners (fake assignment) - Part 1	25 Feb 2021 - 08:18	31 Mar 2021 - 08:18	4 Apr 2021 - 08:18	100

Refresh Submissions

Submission Title	Turnitin Paper ID	Submitted	Similarity	Grade
--	--	--	--	--

Submit Paper

Figure 7: Turnitin submission

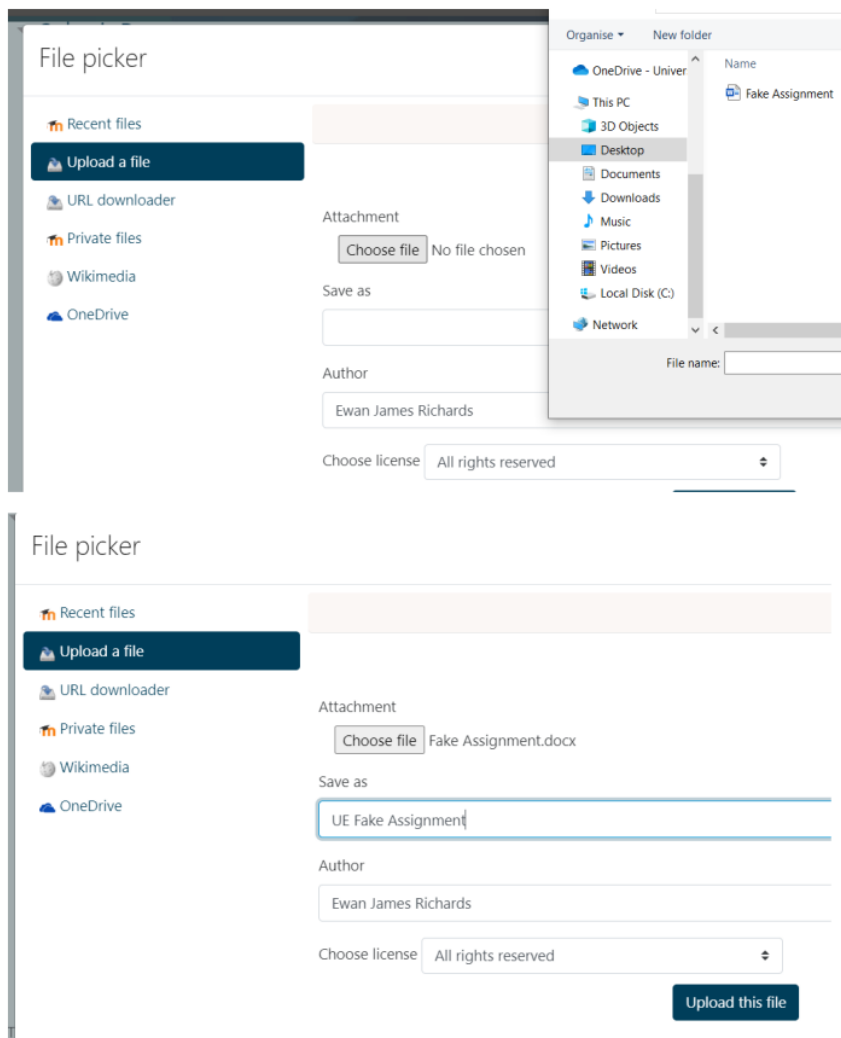


Figure 8: Choosing a file.

Submit Paper

Submission Type

File Upload

Submission Title

EJR Fake Assignment

File to Submit

Files

W

UE Fake Assig...

☒ By checking this box, I confirm t
infringement that may occur as

Add Submission

Figure 9: Submitting.

Your submission has successfully been uploaded to Turnitin.

Digital Receipt

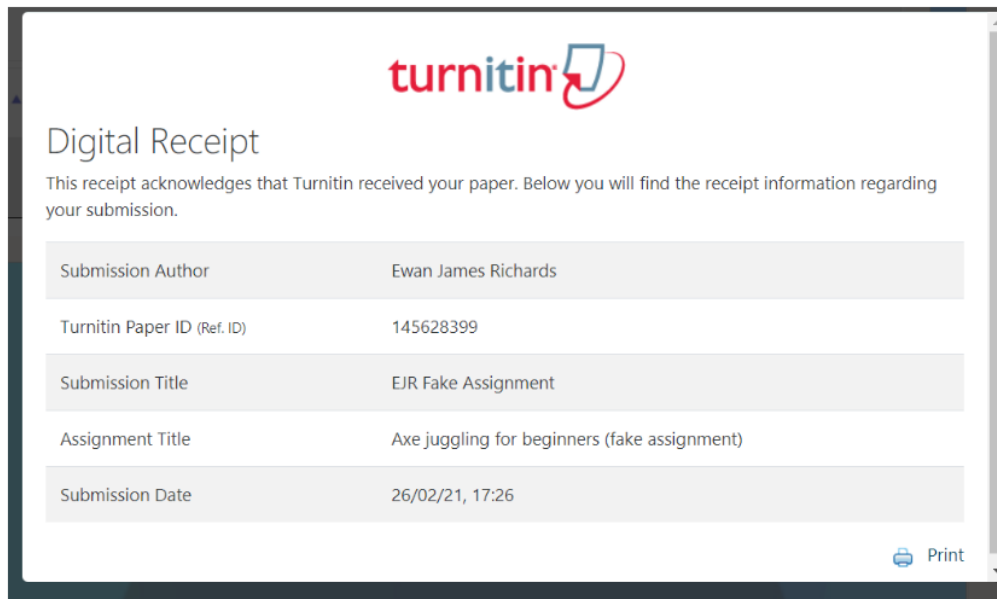
Turnitin submission id: 145628399

Submission extract:

centercenter Ewan James Richards (1802187) University of Wales Trinity St. David BSc Computing Fake Assignment8820090900 Ewan James Richards (1802187) University of Wales Trinity St. David BSc Computing Fake Assignment Contents Introduction2 Main Body3 Conclusion5 References6 Table of Figures6 Appendices7 Undergraduate Courses7 Postgraduate Courses7 Total document word count 361 Word count (not including: front cover, table of contents, word count table references, table of figures and appendices) 171 Introduction This report shall explicitly describe the wide range of courses available within the University of Wales Trinity Saint David's (UWTSD) School of Applied Computing (SOAC) department. Main Body Figure 1: Computing page on the UWTSD Website [1]. The SOAC department at UWTSD offers a wide range of Computing courses available for students. Technology is changing the way people are living our lives, however, are now beginning. The increasing expansion within the industry allows for a ongoing need for students with the necessary credentials. To convene this requirement UWTSD presents a variety of classes accredited by The Chartered Institute for IT (BCS) [1]. The illustration of figure 1 shows the layout of the Computing page on the UWTSD website, which has a range of text, dropdown menus and visuals such as images and videos available. Conclusion This report has explicitly described the range of courses available within the UWTSD SOAC department. It has been determined that the SOAC department in UWTSD has a wide range of degree courses for all students. References [1] University of Wales Trinity Saint David, "Computing," University of Wales Trinity Saint David, 2021. [Online]. Available: https://www.uwtsd.ac.uk/computing/. [Accessed 26 February 2021]. Table of Figures Figure 1: Computing page on the UWTSD Website [1].3 Appendices Below are a list of courses provided by the SOAC department at UWTSD. They are all either BSc, BA or MSc level unless otherwise stated. Undergraduate Courses Cloud Computing Cloud Software Development Computer Animation Computing and Electronics – Foundation Year Applied Computing Computer Networks and Cybersecurity Data and Information Engineering Games Development Software Engineering Web Development Computer Games Design Digital Skills (CertHE) Electrical and Electronic Engineering Electronics Engineering Skills for Electronics (CertHE) Postgraduate Courses Computer Networks and Cyber Security Data and Artificial Intelligence Data Science and Analysis Software Engineering Software

Part 1				
Title	Start Date	Due Date	Post Date	Marks Available
Axe juggling for beginners (fake assignment) - Part 1	25 Feb 2021 - 08:18	31 Mar 2021 - 08:18	4 Apr 2021 - 08:18	100
Refresh Submissions				
Submission Title	Turnitin Paper ID	Submitted	Similarity	Grade
View Digital Receipt EJR Fake Assignment	145628399	26/02/21, 17:26	--	--
Submit Paper				

Figure 10: Assignment submitted.



This is your Turnitin Digital Receipt

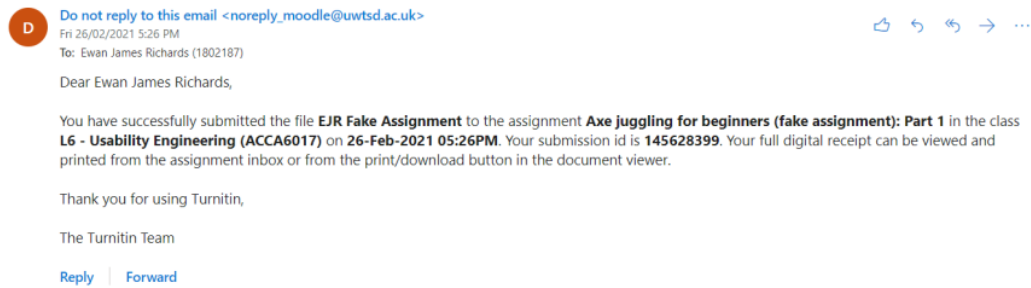


Figure 11: Digital receipt.

Students receive a receipt and e-mail confirmation.

The screenshot shows a submission form with the following fields and elements:

- Submission Type:** A dropdown menu set to "File Upload".
- Submission Title:** A text input field containing "UE Fake Assignment Result".
- File to Submit:** A section for uploading files. It includes a "Files" header, a file icon with a "W" (likely a Word document), and a filename "Fake Assignm...".
- Confirmation:** A checkbox that is checked, with the text "By checking this box, I confirm that this infringement that may occur as a result".
- Resubmission:** A blue button labeled "Resubmission" at the bottom of the form.

Figure 12: Resubmitting an assignment.

In the case of a draft submission which allows multiple submissions once a submission has been made the 'Add Submission' button is now shown as 'Resubmission'.

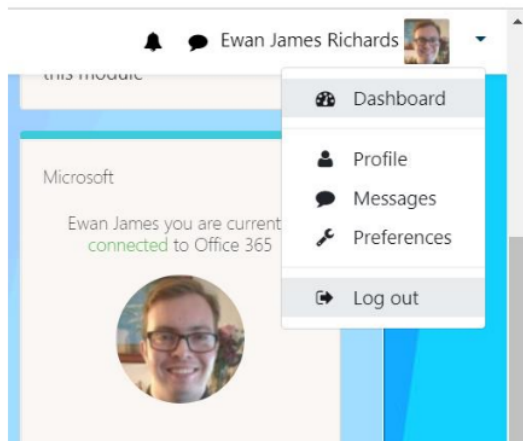




Figure 13: Log out.

Summary

It took 14 mouse clicks to submit the assignment.

Paper Prototype

The main difference is the home page now having separate tiles for modules, archives and extra pages as well as Turnitin being re-designed for consistency with the file upload dropbox.



File Submission

Home Return to Module Account

Submission Title

File to Submit

Confirmation of own work

Tick box or Drop down box

Submit Yes/No

Assignment Submitting

Author Name

Submission Title

Assignment Title

Submission Date

Module Name

Submission received with thanks

Close

File received

Home Return to Module Account

Thank you for Submitting!

Receipt Receipt

Resubmit

Log out

Home Return to Module Account

Are you Sure you want to Logout?

Yes No

Figure 14: Paper prototype

Storyboard

Figure 15 is demonstrating the storyboard, which shows the process with two additional pages shown for the module layout and file explorer.

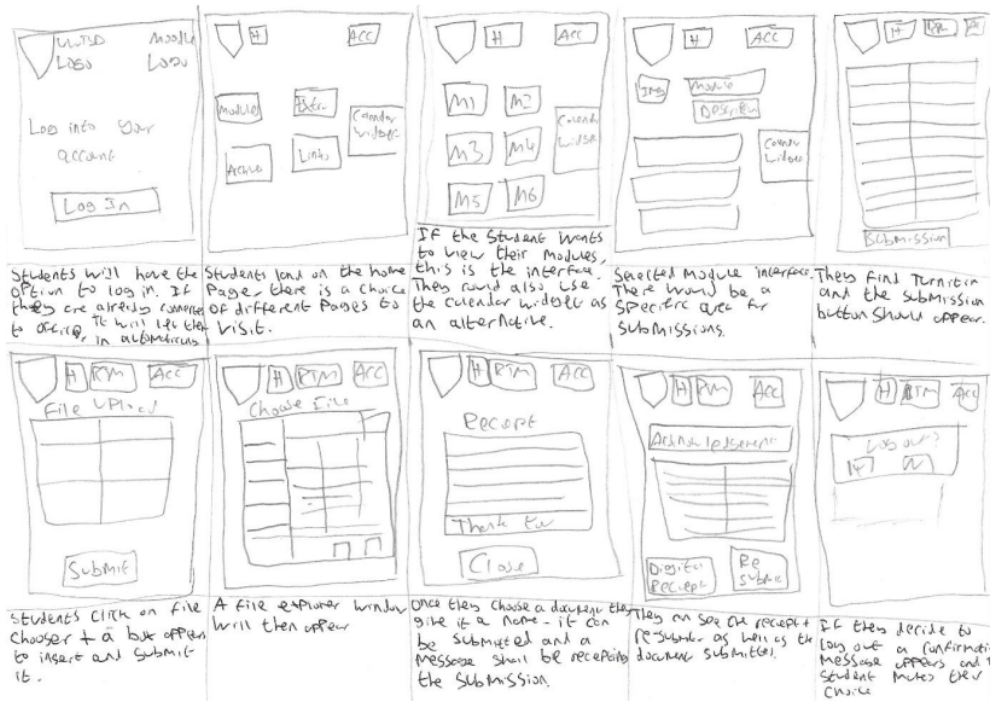


Figure 15: Storyboard

Walkthrough

Step Number	Description
1	Student to log into Moodle using their University E-mail and Password.
2	Select a module to submit an assignment to.
3	Locate the Turnitin dropbox.
4	Add the submission by locating the file using the file explorer feature on the PC.
5	After the submission, the user should be able to view a similarity report which states what sections in the document have the most parts similar. They should also have access to their digital receipt.
6	Student should be able to access the digital receipt after the submission to prove that their work has been uploaded onto Moodle.
7	If the student is using the draft submission dropbox they should be able to resubmit again to get their similarity report updated.
8	The student will then be able to log out of the system. A confirmation message shall appear, confirming they want to do this action.

Figure 16: Walkthrough

Designs

Log in Page

Some of the buttons are clearer and the cookies notification has been removed.

Home Page

It has been re-designed with categories having their own tile. Archives have moved to the home page only as students may not need access to it once their viewing the module page. The calendar widget will be on this and the module page.

Module Page

A short description will be at the top of the page and lecture notes, class links and submission areas will have its own section.

Turnitin

The deadline and other features of Turnitin will be visible and it will be re-designed to make it consistent with the file upload dropbox.

File Submission

A dropdown menu would appear with yes/no options for students to confirm the work.

Assignment Submitted

Once the assignment has been submitted an automated digital receipt appears.

File Submission Completed

An acknowledgement alert will be shown as well as a digital receipt.

Log Out

An alert shall appear, confirming this action.

Paper Prototype Evaluation

- Active module shall be shown.
- The titles will not move around.
- Feedback was collected, see Appendices B and C

Participate as user for class member design.

Refer to Appendices D and E for feedback.

Software Prototype

Adobe XD was used to develop the prototype. A scroll bar has been added and the Moodle logo is the log out button. A new colour scheme has been introduced, shown from figure 17.

Log in Page

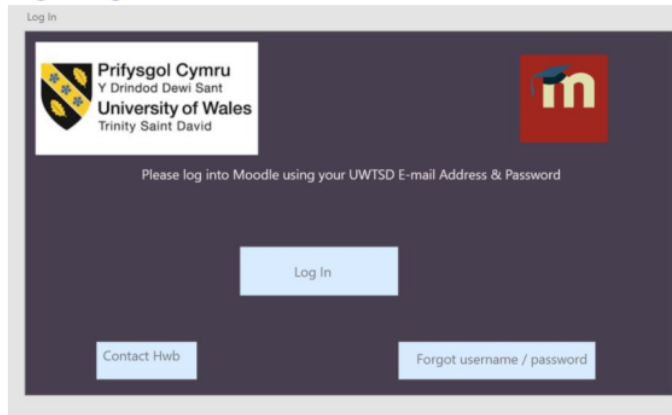


Figure 17: Log in page

The 'Contact Hwb' button is now clearer.

Home Page

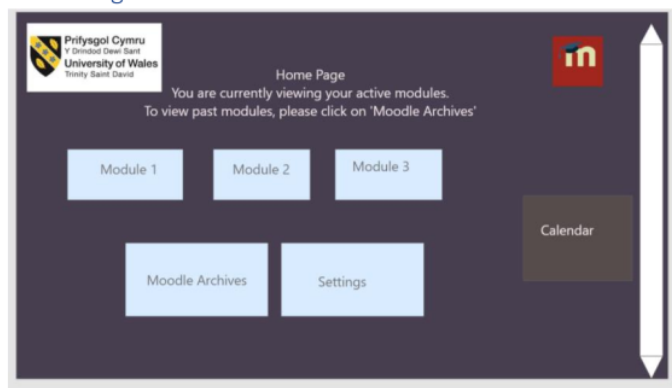


Figure 18: Home page

Module Page

The Module Page interface features a dark purple header with the Prifysgol Cymru logo and navigation links for Home and Account. A red LinkedIn icon is positioned on the right. Below the header, a 'Visual' section contains input fields for 'Code: Module Name' and 'Description'. A toggle switch allows users to 'Open All Sections' or 'Close All Sections'. A list of links includes 'Turnitin Submission Links', 'Online Lecture Links', 'Lecture 1', and 'Lecture 2'. A 'Calendar' button is located on the right side of the page. A vertical scrollbar is visible on the right edge.

Figure 19: Module page

Open/close all section implemented.

Assignment Submission

The Assignment Submission interface has a dark purple header with the Prifysgol Cymru logo and navigation links for Home and Return to Module. A red LinkedIn icon is on the right. A purple 'Submission for Assignment' button is centered below the header. The main content area is a table with the following rows: Assignment Title, Due Date, Feedback Date, Date Submitted, Similarity, Grade, Submission Title, Comments, and Document. At the bottom, there are buttons for 'Digital Receipt' and 'Submit'. A vertical scrollbar is visible on the right edge.

Figure 20: Turnitin

Changes to dropbox design and post-date.

File Submission

The screenshot shows the 'File Submission' interface. At the top left is the University of Wales Trinity Saint David logo. Navigation links 'Home' and 'Return to Module' are at the top right. A purple button 'Submit Your Documentation' is centered. Below it is a form with two columns. The left column has 'Submission Title' and 'File to Submit' (a large text area). The right column has 'Drag & Drop your documents here' (a large area with a dashed border) and 'Confirmation of Own Work' (a dropdown menu). At the bottom are 'Digital Receipt' and 'Submit' buttons.

Submission Title	
File to Submit	Drag & Drop your documents here
Confirmation of Own Work	

Figure 21: File Submission

The text upload option has been removed as this is not widely used.

Assignment Submitted

The screenshot shows the 'Assignment Submitted' confirmation screen. It features the same header as Figure 21. A purple button 'Digital Receipt' is centered. Below it is a form with a table containing the following fields: Author Name, Submission Title, Assignment Title, Submission Date, and Module Code and Name. A red message 'Submission received with thanks' is displayed below the table. A 'Close' button is at the bottom.

Author Name	
Submission Title	
Assignment Title	
Submission Date	
Module Code and Name	

Figure 22: Assignment Submitted.

File Submitted

The screenshot shows the 'File Submitted' confirmation screen. It features the same header as Figure 21. A purple button 'Thank you for submitting!' is centered. Below it is a form with a table containing the following fields: Assignment Title, Due Date, Feedback Date, Date Submitted, Similarity, Grade, Submission Title, Comments, and Document. At the bottom are 'Digital Receipt' and 'Submit' buttons.

Assignment Title	
Due Date	
Feedback Date	
Date Submitted	
Similarity	
Grade	
Submission Title	
Comments	
Document	

Figure 23: Upload completed.

Re-submission available if it was a draft submission.

[Log Out](#)



Figure 24: Log out

Evaluation

- Task analysis assisted with documenting steps.
- Issues discovered.
- Appreciation of how system works.
- Adobe XD beneficial
- Range of set ups available.
- Made the prototype interface easily interpretable.
- Improves accessibility of Moodle for visually impaired users.
- Human reasoning improved – site now includes calendar and students know deadline dates (deductive reasoning).
- Affordance improved – the images are obvious and are relevant to the site, and the actions are clear.
- Home page views active modules.
- Walkthrough was beneficial in the development stage.
- Feedback assisted with prototype improvements.
- Buttons improved.
- Module page structure improved.
- Turnitin redesigned.
- Digital receipt improved.
- Log out confirmation.

References

- [1] J. Nielsen, "Short-Term Memory and Web Usability," Nielsen Norman Group, 6 December 2009. [Online]. Available: <https://www.nngroup.com/articles/short-term-memory-and-web-usability/>. [Accessed 3 March 2021].
- [2] Interaction Design Foundation, "Usability," Interaction Design Foundation, 2021. [Online]. Available: <https://www.interaction-design.org/literature/topics/usability>. [Accessed 2 March 2021].
- [3] H. Raoult, "5 Quick Ways To Improve Your Website's Usability," Usability Geek, 2021. [Online]. Available: <https://usabilitygeek.com/5-quick-ways-to-improve-your-websites-usability/#:~:text=Not%20asking%20users%20to%20fill,can%20find%20them%20with%20ease>. [Accessed 16 March 2021].
- [4] S. Maw, "Human Reasoning," 2021. [Online]. Available: <https://moodle.uwtsd.ac.uk/course/view.php?id=2554>. [Accessed 17 March 2021].
- [5] J. S. Wilkins, "Human reasoning," Evolving Thoughts, 27 October 2010. [Online]. Available: <https://evolvingthoughts.net/2010/10/27/human-reasoning/#:~:text=Reasoning%20is%20more%20a%20simulation,base%20our%20conclusions%20on%20them..> [Accessed 17 March 2021].
- [6] A. Bradford, "Deductive Reasoning vs. Inductive Reasoning," Live Science, 25 July 2017. [Online]. Available: <https://www.livescience.com/21569-deduction-vs-induction.html>. [Accessed 16 March 2021].
- [7] M. Soegaard, "Affordances," Interaction Foundation Design, 2021. [Online]. Available: <https://www.interaction-design.org/literature/book/the-glossary-of-human-computer-interaction/affordances>. [Accessed 2 March 2021].
- [8] M. Greshko, "Human memory: How we make, remember, and forget memories," National Geographic, 4 March 2019. [Online]. Available: <https://www.nationalgeographic.com/science/article/human-memory>. [Accessed 16 March 2021].
- [9] K. Cherry, "Sensory Memory Types and Experiments," Verywell Mind, 1 August 2020. [Online]. Available: <https://www.verywellmind.com/what-is-sensory-memory-2795352#:~:text=Sensory%20memory%20is%20a%20very,for%20a%20very%20brief%20period..> [Accessed 16 March 2021].

[1 B. Kirwan, A Guide To Task Analysis: The Task Analysis Working Group, Bpca
0] Raton, Florida, United States: CRC Press - Taylor & Francis Group, 1992.

[1 Usability.Gov, "Task Analysis," Usability.Gov, 2021. [Online]. Available:

1] <https://www.usability.gov/how-to-and-tools/methods/task-analysis.html>.
[Accessed 5 March 2021].

[1 M. Oaksford and N. Chater, "Précis of Bayesian Rationality: The Probabilistic

2] Approach to Human Reasoning," *Behavioural and Brain Sciences*, vol. 32, no. 1,
pp. 69-84, 2009.

Appendix

Task Analysis (Appendix A)

The tasks would usually be learned during the student induction week, which is in September. Students are run through how to navigate around Moodle, access different modules and making a submission as well as reviewing feedback and viewing their final scores and grades for each submission. Some programmes of study may do a recording of how to use Moodle so students can access this anytime. If the students are in second or third year, they would be familiar with how the system works, however, they may require a reminder session of which they will have a quick demonstration of how the system is used.

The student users would have to submit mostly in January and April, depending on the number of upcoming assignments. Students are the most frequent users to submit assignments on Moodle.

The student would be able to submit 1 document per submission. Typically, once the final submission has been completed, they would not be able to re-submit again. However, most modules offer a draft submission, which occasionally allows students to make multiple submissions. Draft submissions allow students to see their similarity report to other student submissions within the University and see whether they have plagiarised at all by highlighting text which has been either been copied or look similar to other online or referenced sources.

The student data would be collected upon the login page. The system would have access to their name, e-mail address and course name so it can determine which modules the student should have access to.

There are deadlines for students to submit the assessments. Some users may be rushing the process of submitting the assignment if they are close to the deadline. It can take about 3 minutes to submit an assignment on turnitin. There is an order of submitting an assignment, see below.

Feedback of the developers paper prototype

Student 1 (Appendix B)

Below is a review of students 1802187 paper prototype.

The platform topic is students uploading assignments onto Moodle. A walkthrough has been conducted and the following points were raised.

A title describing the paper prototype should be considered so the user is aware of what is being designed. When the user enters the homepage, an extra click has been introduced which isn't required. Users main use of Moodle is to view their active modules and adding another click is not visually pleasing and goes against human reasoning.

The module page is very easy to understand and is structured in a way the user will be able to relate to and memorise. Sectioning information per lecture promotes

usability and understanding the information. The structure of separating information into lectures is very easy to understand.

The turn it in process has been made to be consistent with other assignment upload applications and the return to module is user friendly as it easily directs the user back to the module homepage from the turn it in page.

Another plus to the prototype is the message displayed once an assignment is submitted on Moodle. This immediately informs the user their assignment has been submitted along with email confirmation.

To conclude there are similarities with the set up which is currently available within Moodle and the turn it in process. Minor adjustments have been made to improve the useability and allow the process to be simple to understand without requiring instructions which give affordance to the process.

Student 2 (Appendix C)

My 2012800 review was of 1802187 paper prototype and took place on 11 March 2021.

Positive Feedback

The prototype outlined several ideas to re-organise and declutter content on the Moodle landing and TurnItIn pages. This included categorising lecture content, providing enlarged "Return To Modules" (back) buttons, aligning content to a more vertical outline facilitating better screen layout and improved scrolling. These suggestions are all valid and would improve system navigation and usability.

The removal of non-essential text, changes to text emphasis and colours to assist users with colour impairment. These would prove helpful to the visual representation of the system to the user.

Introduction of "are you sure?" logout screen before killing user session. This would be a "nice to have" to prevent user inadvertently logging out.

Constructive Feedback

The paper prototype was difficult to follow. A walkthrough was required to understand what the paper prototype purpose was. Ewan agreed with this point and acknowledged that the prototype could have been drawn better to improve communication.

Further emphasis could be given to the prototype's affordance through use of scroll bars, and button shadows to indicate they can be pressed.

One final thought that occurred to me, in terms of Human Memory, Moodle does tend to move/mix up the modules each time the landing page opens (I find this quite frustrating). Ensuring that these remain statically placed, for every page load, would improve navigation and memory of their location.

Student 1 (Appendix D)

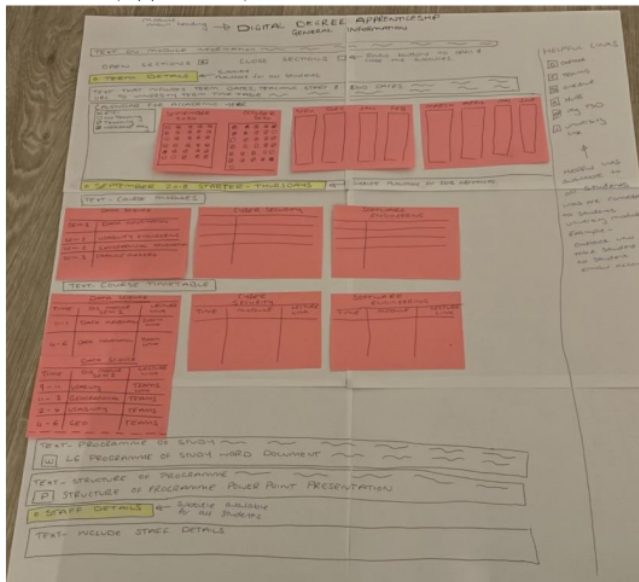


Figure 25: Paper Prototype

The comments shown here is for the paper prototype demonstrated by student 1809781.

Positive Feedback

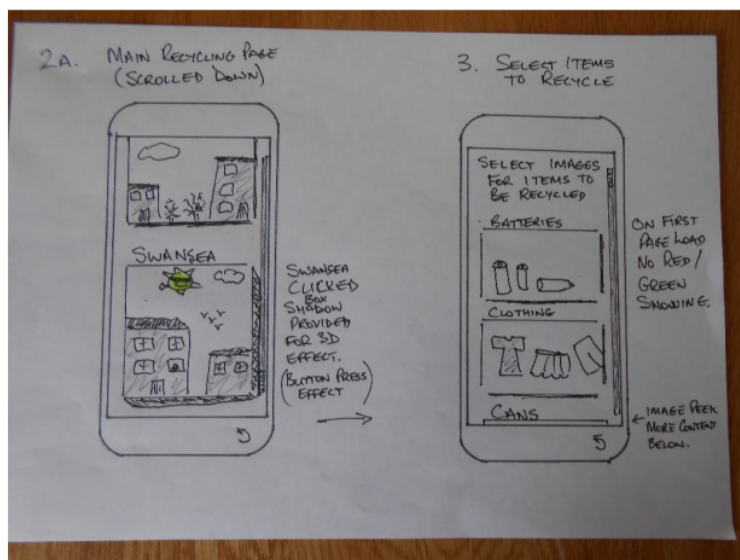
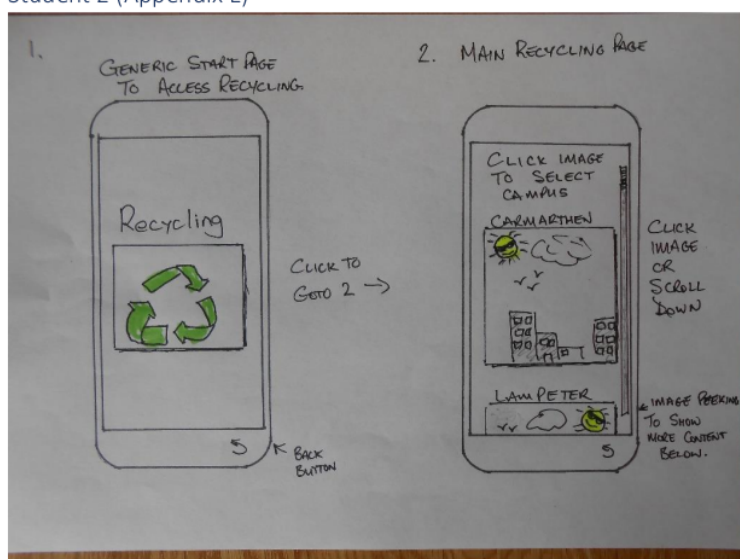
The positive comments are that the radio buttons for the opening and closing of the sections were useful. The different symbols representing the workload and teaching on the calendar assist with defining what is happening each day of the academic year. The individual sections for the induction videos, programme of study handbook and timetables are good as they can make everything stand out in their own area. The online links for the classes on the timetable are useful and it would save the student from searching through the pages on Moodle and locating the link.

Constructive Feedback

The constructive comments about this paper prototype would be that the calendar could have an area where the 3 most upcoming events would appear, so students would know what assignments they need to submit. There could also be a short paragraph explaining what the purpose of the page is so students would gather an understanding about the information they are about to view. There could also be some information about each of the different subject areas, such as if a student were doing data and information systems and they were not aware of what cyber security is then they would benefit that a small paragraph is made available explaining what it actually is. There could be a few visual available such as the logo either for the digital apprenticeships or for the School of Applied Computing (SOAC). There were links on the right-hand side of the screen for Teams, Hwb, MyTSD – maybe they could benefit from having a visual as students may be more familiar

with their logo rather than text saying what link they would be going to if they clicked on it. Some of the sections do look similar to the existing Moodle site. To finish, an assessment schedule would be useful for students so then they would not have to navigate through every module page to locate their deadlines, all assessment dates could be in one place. It could either be in a document or spreadsheet format.

Student 2 (Appendix E)



3A. ITEM(S) SELECTED (CLOTHING)

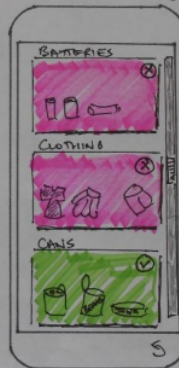


FIRST IMAGE
SELECTED
TURNS GREEN WITH TICK
ALL OTHERS GO
RED (NOT
SELECTED) WITH 'X'

GREEN (ON) ✓
RED (OFF) X
TRAFFIC LIGHTS
GO/STOP

THE TICK ✓ AND
CROSS X TO AID
COLOUR IMPAIRED
USERS.

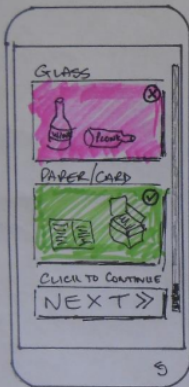
3B. ITEM(S) Deselected (CLOTHING) AND SELECTED (CANS)



TO Deselect
PRESS AGAIN.
GOES RED
OR SELECT
ANOTHER
ITEM. GOES
GREEN

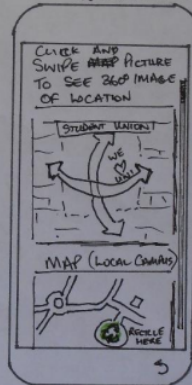
SCROLL FOR
OTHER
ITEMS

3C. SELECTION(S) COMPLETED.



CLICK
NEXT

4. GETTING TO RECYCLING LOCATION INFORMATION SHOWING WHERE/HOW TO GET THERE



CLICKING &
IMAGE
MAKES IT
FULL SCREEN
USE BACK
S TO GET
BACK TO
THIS SCREEN
360° IMAGE
SEE 4C
LOCAL CAMERAS
SEE 4B

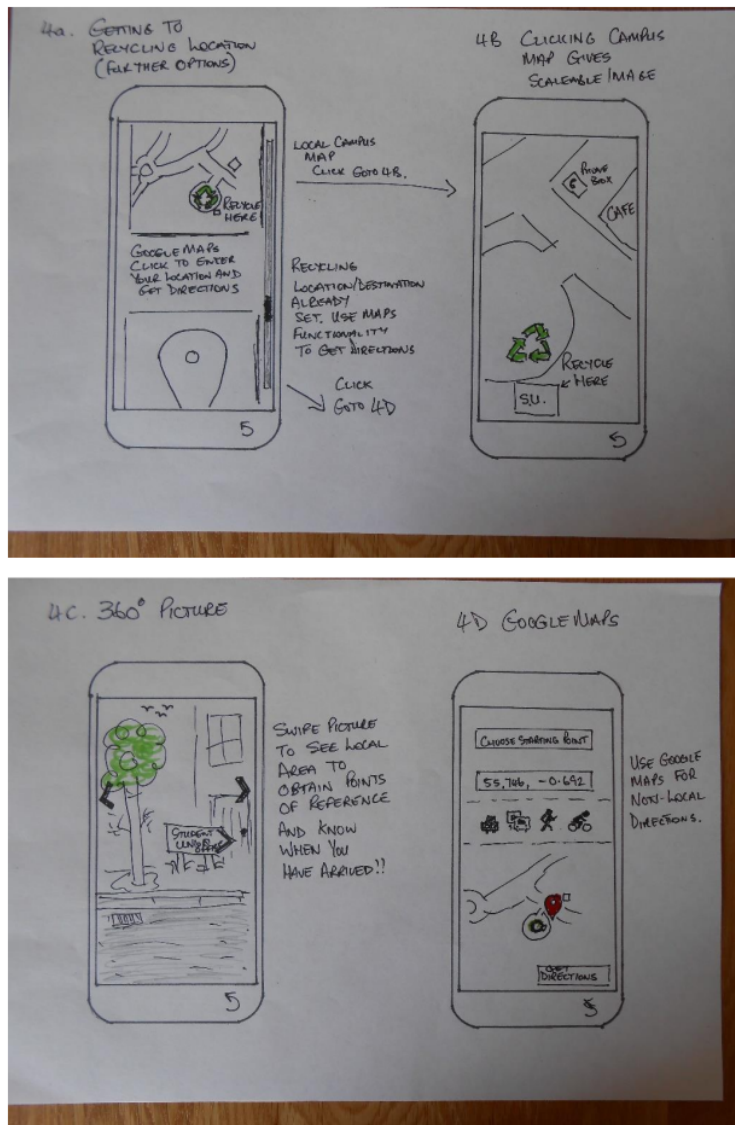


Figure 26: Paper Prototype

Below is the feedback for student 2012800 for their paper prototype.

Positive Feedback

The visuals stand out on the prototype, such as the images of the different campuses, the items that can be recycled such as clothing and electrical and the 360-degree image of location which will enable to give the relevant points of reference. The traffic light system is of good use as it gives an indication of what page has been selected. A green colour would be shown for the chosen section and all the other sections would be in red as these parts have not been chosen. It had been recognised that people who have colour impairments may not be able to see

the red and green colours, so ticks / crosses have been implemented onto the design to aid users who have those disabilities. A tick would represent that the section had been selected with crosses on all the other parts which have not been chosen. The back button on the phone had been clearly labelled, making navigating easier as the user would not be required to locate the back button on the browser. Google Maps is a good idea, making scalable images of what the location looks like and it gives the directions to the campus specified.

Constructive Feedback

The constructive comments for this prototype would be that possibly have a list of directions or landmarks on the website for those who either do not have access to Google Maps or do not feel comfortable having their location services on to give them directions to the specified campus. Also, a search bar or list of items of what can or cannot be recycled could be implemented so that students would know what they can take to the campus recycling points.

Ewan Richards FINAL Submission

GRADEMARK REPORT

FINAL GRADE

77 / 100

GENERAL COMMENTS

Instructor

Introduction:

Interesting discussion with many well referenced points made about the chosen resource. Good analysis of Turnitin, I may be biased but I think there are further issues with the lecturer view!

Task Analysis:

This should have been focused on user tasks rather than the current web resource. However credit given for the effective investigation of user tasks and use of a well designed user survey. A good level of detail, appropriate for a task where one step wrong can mean a late mark.

Paper Prototype:

A very good paper prototype, with effective improvements to the interaction and good use of the format. Good application of this technique to redesign the interface.

Human Factors:

Good research, discussion and use of examples is demonstrated here. This discussion was included throughout the assignment.

Review of another paper prototype:

Excellent application of theory to give helpful comments and constructive feedback here. Specific and useful advice given.

Software prototype: Excellent use of Adobe XD to create an attractive prototype. Good brief explanation.

Evaluation:

A bullet point evaluation of techniques used with an example given.

Overall effective application and analysis of usability techniques with the two prototypes especially good. Main improvement would be to give more focus by writing more concisely and in the Task Analysis to stick to user tasks. Well done!

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

PAGE 19

PAGE 20

PAGE 21

PAGE 22

PAGE 23

PAGE 24

PAGE 25

PAGE 26

PAGE 27

PAGE 28

PAGE 29

PAGE 30

PAGE 31

PAGE 32

PAGE 33

PAGE 34

PAGE 35

PAGE 36

PAGE 37
