Investigation into the Usability of "*Enquiry*"

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Abstract:

This report evaluates the usability of the Undergraduate Research Journal: *Enquiry*, as part of a project to redesign the journal. The report starts by revisiting the main principles of usability and its importance, followed by an outline of methods for usability evaluation. With this established, we then assess the case study using the heuristic evaluation method proposed by Nielsen (1995). The report concludes with a summary of problems established in the evaluation, and a set of recommendations for improvements. Charlie Tapster studies Digital Media Production, specializing in web and print design..

Introduction

Enquiry is the Undergraduate Research Journal for Sheffield Hallam University and provides an archive of research studies carried out by students, organised into periodic volumes. The site currently uses the OJS[1] content management system, operated by university staff and an editorial team made up of volunteer students. The journal is a resource for current Hallam students, while also acting as an alternative platform for publication of student work. It is also an example of online presence and activity, which is vital for attracting prospective applicants to Sheffield Hallam University. As the website will be well used, and also representative of the university, it is important that it is visually up to date and functional, as outlined by Levinson and Schlatter (2013).

Usability

Usability can be seen as effectiveness of communication, meaning it is often a priority to be clear. All aspects must be considered in order to achieve the best outcome. This includes many of the *meta-principles* (Levinson and Schlatter, 2013), such as consistency, type, layout, colour and imagery. In terms of web usability, as with any form of communication, there are approaches that are well received and some that are not. To ensure the desired outcome is achieved, a web based interaction must provide its purpose without hindering the user's natural instincts. Nielsen (2000) outlines a number of common mistakes, although since the publication of his seminal work some of these problems became less common, and new problems appeared. Nevertheless, Nielsen's general principles, methods and usability guidelines still apply today.

There are two major areas of focus in the development process: visual design and functionality. A well-designed product requires good functionality, but it should also be designed in a visually appropriate manner, lending itself to ease of use (Levinson and Schlatter, 2013).

In the process of designing for usability, there are several key steps guiding the development (Brinck et al 2002). The requirements of the website must be listed, with the priorities made clear, including a thorough assessment of the target audience and target platforms. With the requirements in place, a concept and prototype is created and agreed upon internally.

[1] Open Journal Systems, open source software by the Public Knowledge Project.

In order to assess and improve usability, there are a variety of evaluation methods, including interviews, observations and surveys. The method itself will usually follow a specified approach. *Usability inspection* is carried out by an expert, assessing the product against a set of principles or guidelines. Another common approach is a *group walkthrough*, in which a group of participants follows typical scenarios identifying problems along the way. *User testing* involves the use of potential end users testing the system while accompanied by an observer. (Brinck et al., 2002, p406)

Quesenbery's (2014) 5Es model provides a useful framework for evaluating a design in terms of user experience, along the following dimensions:

- Effective: This refers to how effective a website is at delivering content in its entirety and whether all goals are met.

- Efficient: How fast can the aims of the website be met? This includes both content and the site's overall aim.

- Engaging: The website must provide an inviting interface which both attracts users' attention and provides a congenial experience.

- Error Tolerant: The website must avoid errors where possible, but if they do occur there must be countermeasures in place to resolve them.

- Easy to Learn: In order to ensure the website is understood, there should be support in place for new users which does not interfere with regular users. New functions should be accompanied by easily accessible documentation where necessary too.
  (Quesenbery, 2014)

Quesenbery's criteria closely relate to the ten heuristics proposed by Nielsen (1995), emphasising the importance of error tolerance and user engagement. In this case study, I will be focusing legibility and cognition, using Nielsen's ten Heuristics (1995) as my chosen guidelines. Each of the ten heuristics relates to a general principle, which can usually be applied to any form of usability in some manner:

1: Visibility of system status. A user must always know where they are on a website. This is an important aspect since, unlike other forms of media; websites are generally not made to be a linear experience. Without signifiers like titles and *current* navigation states, the user can easily become lost.

2: Match between system and the real world. Creating familiarity can be a challenge; it is important that all language is understandable. To ensure this, all written content must be available in the target markets' spoken language, as well as presented in a logical order. Acronyms, slang and specific terms should only be used if it is certain the target market is pre-informed.

3: User control and freedom. If a user accidentally visits a page they did not intend to, there must be a familiar or obvious link back where possible. Even though the browser is likely to provide this functionality in the form of a back button, the use of a home link should be in place too. In today's environment, the logo or site title will almost always take a user back to the home page when clicked. This trend has become so common, that failing to employ it will in fact result in bad usability.

4: Consistency and standards. Throughout a website all the links, buttons and page titles must use words that correspond to each other. For example: A hyperlink to the "About" page must use the word "About", this also applies to the button or link in the navigation, but most importantly the page heading and title must use the same word. This not only enforces consistency, but also compliments the other heuristics. A website should also try to follow current conventions, such as the example mentioned in the third heuristic: the use of the site logo as a homepage link. From a technical standpoint, consistency also includes the coding of the site, ensuring it abides by guidelines such as the popular W3schools.com(2014) *Web Standards*.

5: Error prevention. Many of today's websites could include modern web techniques such as animations, transitions or plugins, however when opened in legacy or alternative browsers, errors could occur. To combat this testing should always carried out on all the potential platforms, while also keeping the target market in mind. The same principle applies to device compatibility, ensuring a site can run on the wide range of screen sizes available today is essential in order to avoid errors. A website which avoids errors will not only increase its usability, but also its productivity.

6: Recognition rather than recall. My interpretation of this heuristic for today's web, would be to consider the placement of key items such as the navigation, but also to ensure elements such as tooltips are made use of where necessary. A navigation bar's position and styling is a key part of a website's aesthetic, however from a usability point of view, it is a good idea to try and keep the navigation available to the user at all times. This may not always be desired, but as this heuristic suggests, a user should not have to remember the other pages available (or scroll to the top to find them for that matter).

7: Flexibility and efficiency of use. As mentioned by Instone (1997) the use of bookmarks should always be supported where possible. Bookmarks provide regular users with a custom link to any page and by not supporting this feature, the sites usability will degrade. Supporting the use of cookies is also a useful shortcut, but when doing this, it is common courtesy to ask the user beforehand[2].

8: Aesthetic and minimalist design. Each page of a website should be assessed with this point in mind; all information on display should be relevant, in a logical place and there should not be distractions. An aesthetically pleasing website is something almost all designers build towards, however in terms of usability this heuristic refers more to the requirement of clear and logical layout[3]. Nielsen (1995) argued that "every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility", so the minimalist approach often helps to avoid confusion as to where the main content is.

[2] Help.opera.com (2014) provides some good infomation supporting this, including an explaination of cookies and their purpose.
[3] More about this concept can be found in *Visual Usability* (Levinson and Schlatter, 2013)

9: Help users recognize, diagnose, and recover from errors. When errors are inevitable, there should be measures in place attempting to account for them. As an example, a standard response for missing content on a website is the infamous 404 page. Displaying a message in this situation will help the user to understand the error, but also gives the designer an opportunity to lead the user back to a familiar location. In modern form design it is common to see required fields, however if a user attempts to submit a form without completing a required field, highlighting this will help the user to rectify the error without further help. Improving this further, the highlighting can take place in real time, potentially avoiding the failed submission entirely.

10: Help and documentation. A system without any need for documentation is preferred, but in some cases it can be unavoidable. In web design this information should be placed where needed, but also discreet enough to not distract a user who does not need it. Highlighting help text in an alternative colour will help users recognise it. A common and useful resource for any website is the widely recognised FAQ, failing this a simple support contact form can be used as a last case of action. Developing a website with key guidelines in mind can be useful to keep on track. Rules such as Nielsen's Heuristics (1995), Quesenbery's 5E's (2014) and Levinson and Schlatter's Meta-Principles (2013) are all good examples of these guidelines, generally covering the same points, encouraging a functional, aesthetically pleasing and error tolerant website.

Method: Heuristic Evaluation

I have chosen to use the heuristic evaluation method, combining the elements of usability testing and group walkthrough. Heuristic evaluation is a set of principles developed by Nielsen to assess the usability of computer software, and it "involves having a small set of evaluators examine the interface and judge its compliance with recognized usability principles (the "heuristics")" (Nielsen, 1995). The key advantages of heuristic evaluation include its economic efficiency, its adaptability to any part of the development process and its potential for quality feedback. I chose this method because it provides a reliable and comprehensive set of data which can be collected and analyzed with ease (Usability.gov, 2014).

However, when applying these rules specifically to web design, it is worth remembering that they were intended to be universal to all types of usability. This, combined with the fact they were written in 1995 means that the concepts need refinement and interpretation in order to apply them to

modern web design. So in addition to Nielsen's general principles, my research builds on Instone's (1997) interpretation of the heuristics, as well as Danino's (2001) description of the heuristic evaluation process. My main steps were as follows:

1. Select suitable evaluators with some specialist expertise (a group of first-year digital media production students who are studying usability as part of their course)
2. Provide evaluators with typical scenarios (Reader and Writer roles)
3. Run the scenarios
4. Administer the survey based on five-point Likert scale
5. Collect and analyse the responses

A key part of any evaluation is the choice of participants. Nielsen (1995) provides a concise guide to the number of participants needed. This information would be particularly useful in an industry environment, as the amount of participants in the study would affect the total cost of the project. Nielsen's advised number of evaluators is around 5, however as my test took place in a classroom environment I had all the students present take part in the session. The participants of my study were first year Digital Media Production students. As a result, I had a set number of participants who were able to act as both experts and end users. The students were taking the survey as part of a module on their curriculum, Digital Media Analysis, in which they study the heuristic evaluation method themselves. This is a classroom environment, meaning that the students had not participated by choice. This presents a potential ethical problem, which is counterbalanced by the learning benefits for the participants. Since the participants are novice designers, this activity enabled them to experience first-hand a live heuristic evaluation process, which they could reflect on, critique, modify and apply later in their own project work.

Each evaluator was instructed to first browse the website freely, then on their second pass apply and answer the evaluation criteria, prepared in a survey format. In order to effectively test the website's usability I set up two scenarios, simulating the intended usage (Readers and Writer). The scenarios guides each participant through a variety of content, including intentional errors and multiple routes to the same location; for example finding an article via manual navigation and doing the same via the search functions.

The survey listed each of the ten heuristics, referencing Instone's (1997) specifically. Each heuristics contained a set of questions to be answered on a five point scale, as well as a text box where the participants can briefly comment on each answer[4]. While carrying out the surveys, I attended the class and answered any questions. The survey took place in two classes, resulting in a sufficiently large set of data. When considering the format for my survey, I drew upon Johnston (2008). In the scale system two things must be considered: whether the scale should include an odd or even numbers and the amount of choices available. My investigations and discussion about the topic, have led me to the use of the 5 point scale (see for example Manfreda et al., 2002). The five point scale is widely used and provides participants with the ability to make strong or weak choices, while also leaving them the option to stay neutral. It is natural for people to refrain from choosing a strong opinion unless it is completely necessary, so for this reason they are more likely to choose the weaker opinions. When analysing data from this scale it is often useful to join the results of the two positive and two negative options, giving a condensed set of results[5].

Analysis

In order to plan my analysis, I consulted Brinck et al., (2002, p439). The main aim of analysis is to identify problems encountered, then to make note of them. While doing this, I will list the issues in order of their importance, based on the votes and comments they accumulated. From this list of issues, I can determine which of the problems are most important and, based on my usability research, I can put together a set of recommendations. However if there are issues with no clear solution they will still be noted for future reference regardless.

[4] A copy of my original survey document can be found in the appendices under *Original Survey*.

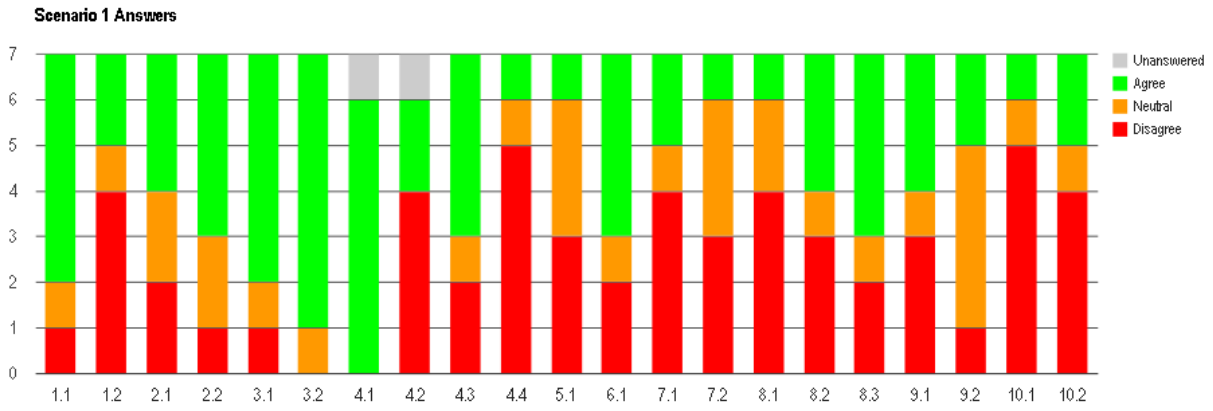
[5] For my analysis of the other scale options, see *Survey Scale analysis* in the appendices.

Discussion of findings

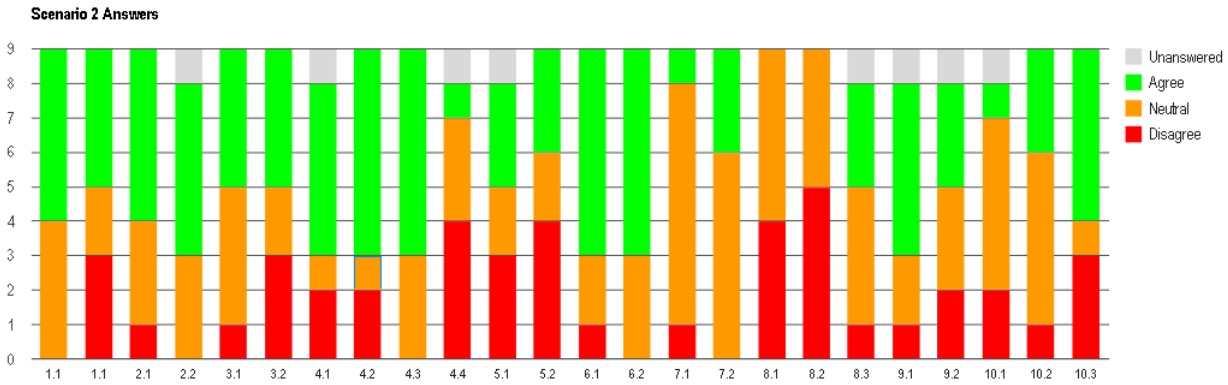
In order to analyse my results I collected all the survey answers together; then grouped the negative and positive answers to provide me with a set of data. This data can be seen in the graphs below, with the vertical scale representing the number of participants and the horizontal numbers referencing the specific question numbers. (The questions can be found in the appendices.) As the purpose of my analysis is to generate a set of recommendations for the *Enquiry's* improvement I will be disregarding data from the questions that received only neutral or positive results. By looking at the charts, we can see that this identifies the following results:

Scenario 1, questions **3.2** and **4.1**.

Scenario 2, questions **1.1**, **2.2**, **4.3**, **6.2** and **7.2**.



Graph 1: Writer Scenario



Graph 2: Reader Scenario

Scenario 1

Referring to question one, the navigation was present but the overall response was that it should be made clearer. The second part of this question received a lot of negative response, this was because the archive link did not lead directly to the content the user wanted, but also did not provide any information for the user to know where to go next.

The second questions had less of a negative response, the justifications indicated that the site did avoid confusion generally; however again, it could be made clearer with better use of terminology. One user pointed out that some terms such as HTML and Abstract may be unfamiliar to some users.

Question three, relating to the freedom of navigation, got a predominantly positive response, with only one participant pointing out that the site takes *the long way,* implying that there should be quicker routes to specific content.

With the fourth question there was agreement that the site was consistent in its language, but the remaining 3 parts of question 4 revealed there were key problems with the site's design consistency, familiarity and its expected performance. There were comments stating that some links did not match the page titles, the websites design was generally disliked, with note that the article page loses the in-house style altogether.

The fifth question, relating to error handling received a mixed response, but in general the site did handle the errors well, however it could be made clearer and more appropriate.

Again, question six also received mixed results, regarding the ease of navigation, but generally there were no immediate problems.

Although question seven did receive a negative response, this is because the participants did not make use of bookmarking during the scenario. However it is clear to an expert that static links will all provide effective bookmarking.

Question eight did receive an overall half-and-half response, noting that there was little unnecessary information or distractions; with little relevant linkage aside from the navigation itself.

Question nine again refers to error handling, however the questions relate to more specific functions. The errors were all handled either by the site or the browser and options were sometimes unclear.

The tenth question received a high negative response, as it refers to help and documentation, which as pointed out was non-existent. One participant notes that it was also hard for someone to understand the sites functions without being familiar.

Scenario 2

The first question revealed that the site was readable but could be improved by a larger font size and by generally making the site clearer.

Question two gained an overall positive response; the language was understood and familiar to the participants. However some specific terms such as 'abstract' could be defined.

Question three had a small amount of negative response, with participants noting that the site was functional but not particularly pleasing to use. A good point was made regarding the use of a logo as a homepage link, which I had previously talked about in this report. A more serious error was noted that a participant had problems with using the abstract and bio statement submission form, which will need further investigation.

Question four received a mostly positive response with the exception of the last part (4.4) which received a negative response. This question was relating to the design conventions, overall describing the site as consistent but poorly designed.

Question five received mixed results and comments; the error handling was present but could be improved. Some problems faced could also be avoided altogether.

Question six received a positive response, with only some comments mentioning that the

instructions could be improved in places.

The seventh question also received a predominantly positive response from participants, however as the scenario did not prompt bookmarking and required expert level users, it proved to be an ineffective question. Regardless, no problems were noted.

Question eight actually gained a fairly positive response, with the graph showing that participants disagreed with the statement that the site displayed unnecessary information. The format of the question led me to believe otherwise and this will be considered in the future. Overall the site did not bring on unnecessary confusion.

The response from question nine revealed that the error handling and help following errors was present, but simple. More intuitive error handling would improve this area.

Question ten received mixed results but there was agreement that the site had help where necessary but no extra support would be provided in advance.

Recommendations

According to the surveyed participants, the following changes would be beneficial for user experience:

Visual Design

- Increase the font size throughout and consider using a clearer font, such as Open Sans[6]
- Standardise link colours throughout the site.
- Use a logo or title to the top left of the site header and make this a link to the site homepage.
- Improve the consistency and clarity of page layout, colours and article format
- Update the overall colours, fonts and layout, to meet the expectations of the new generation of users, using contemporary websites and online journals for visual reference
- Use more images

[6] *See: http://www.google.com/fonts/specimen/Open+Sans*

Functionality

- Enable the content search function
- Provide direct access to the latest volume and the archive via the sidebar.
- Create *quick access* links to the most regularly visited content[7]
- Make each navigation link and page title match throughout the site.
- Test that links lead to correct destinations.
- Refine all terminology and define keywords such as "abstract" and "HTML" with tooltips. This could also be explained in a help page / popup.
- Provide relevant links to similar / recommended content where appropriate.

Error Handling

- Create a 404 page with homepage / backlink and an explanation of the error.
- Create a FAQ or Help page with documentation of specific terms and functions.
- Provide a clear error format, use a highlighted box or specific contrasting font colour throughout.
- Provide guidance text where necessary in the submission forms and use specific and descriptive error captions. Keeping these errors in the same formatting as the errors found in other places on the site.

Further Testing

- Identify and test problems with editing the bio statements in the user profile area.
- Test the functionality of submitting and editing the abstract of an article.
- Test and fix the functionality of the bulleted list feature in text formatting forms.
- Test and review the use of bookmarking with users already familiar with the site.

Conclusion

In this report I covered usability in general and usability evaluation methods, focusing on Nielsen's Ten Heuristics (1995). Usability is not only an important aspect of web design but of every development process intended for eventual use by another individual. The ten heuristics were created to provide guidelines for usability in a digital interface and can be applied to a variety of platforms; in this case study I created my own interpretations of them for the purpose

[7] *Make use of google analytics to determine popular content.*

of modern web design to clarify their meaning.

Looking back at the evaluation survey I carried out there is a number of things that could be changed in order to improve the results. While analysing the data I found that some questions were worded in such a way that prompted inverse answers to the other results, making the responses appear negative in the results graph. In the future this is something I will consider, to keep the results in order I will make sure they all prompt either negative or positive answers in the same direction. For the analysis, it was easiest to evaluate the questions grouped by the heuristic they were based on; this helped me to identify the key areas that needed attention while also having access to the specific problems mentioned in the justification responses found in the survey results.

In terms of my own understanding, I gained valuable knowledge on the subject of usability which can be applied to my work with websites in the future. The insight I have had into the complexity of user interaction certainly gives me the motivation to consider this aspect more carefully in the development process. I feel that the information I have collected in this report will become a key resource and I plan to publish some on my own website, not only for my own reference, but hopefully for others too.

Although this study has provided some insight into the potential problems requiring resolution on *enquiry*, the recommendations will not provide solutions, but instead just areas of focus. Referring back to the main purpose of this report, the recommendations generated will certainly support the re-design of *Enquiry*, with a focus on increased usability and furthermore leading to better productivity and traffic to the site itself.

POSTSCRIPTUM from the editors: The present study refers to the previous design of Enquiry, which used the default OJS template. Based on this research, we have commissioned a partial redesign of the journal, and are looking to introduce further improvements.

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Appendices

Survey Scale Analysis

Scale	Analysis
2	This would restrict the participant to a Yes/No answer and should only be used when asking direct questions such as if an image appears or not.
3	Often used in surveys, this scale provides the participant with the option of a "Neutral" stance. Some argue that this is useless data, however it can be pointed out that if the neutral choice is selected then the question may have let the participant to not have an opinion. This data then be interpreted based on the question, giving it the same value as a positive or negative vote.
4	With four options the participant is again restricted to either a positive or negative view. However with a scale larger than two options the participant can now vote to either a strong or weak opinion. This information could be useful to identify problems that require more immediate attention over less noticeable problems. Denying the neutral option is also said to decrease the participants' attention to the survey.
5	The five point scale is widely used and provides participants with the ability to make strong or weak choices, while also leaving them the option to stay neutral. It is natural for people to refrain from choosing the strong opinion choices unless it is completely necessary, so for this reason they are more likely to choose the weaker opinions. When analysing data from this scale is often useful to join the results of the two positive and two negative options, giving a condensed set of results.
7	Similar to the five point scale, seven allows the participant to further define the strength of their opinion. The extra two points would create a set of results that show major problems.

	which could be useful if there are many and priorities are needed.
10	In some cases, a ten point scale could be used. Often this triggers the actions to rate the opinion in an out-of-ten system, similar to review websites. (Such as imdb). However giving this amount of scale can make some questions hard to answer as there is *too much* choice.

Original Survey

Enquiry - Heuristic Evaluation

Charlie Tapster

Evaluation of: research.shu.ac.uk/aces/enquiry

Please read both scenarios carefully and attempt each once before beginning the survey.

Scenario 1: Reader

The user must be able to easily access content, weather they visit the site looking for something specific, or just to browse.

- Open *'research.shu.ac.uk/aces/enquiry'* in a web browser of your choice.
- Find the article '*Smart UI: My Commentary*' by Stephen Lofthouse using the search page.
- Return to the home page.
- Find and read '*Automated Glass Fracture Analysis Using Vision and Labview 8.2*' by Peter Andrew Bennett via the '*Archives*' link.
- Return to the home page.
- Find and read the Editorial for '*Vol 1 (2008)*'.
- Visit the *'Editorial Team'* page via *'About'*.
- Visit the *'Current'* page.
- Return to the home page.
- Open *'http://research.shu.ac.uk/aces/enquiry/x'* in the browser.
- Return to the home page.

Questions

1. Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

During the scenario do you feel that...

…the site provided clear and appropriate indicators to your current location? [1-5 radio boxes]
...the site provided clear and appropriate options to where you can go next? [1-5 radio boxes]
[Justification Comments]

2. Match between system and the real world

The system should use appropriate words, phrases and concepts, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.
During the scenario do you feel that…

...the language used throughout the site avoids unnecessary confusion? [1-5 radio boxes]
...the names of the pages had obvious or familiar destinations?

[1-5 radio boxes]
[Justification Comments]

3. User control and freedom

Users often choose functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

How well does the site provide a user with the freedom to navigate? (consider all pages / destinations)

[1-5 radio boxes]

Do you feel that at any point you were restricted in your browsing experience? (technical, navigational or otherwise)

[1-5 radio boxes]
[Justification Comments]

4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

How well does the site perform in terms of its language consistency? [1-5 radio boxes]
During the scenario, do you feel that all links and titles led to their expected pages?

[1-5 radio boxes]

How well does the site perform in terms of its design consistency? [1-5 radio boxes]
Do you feel that the design conventions used are familiar in comparison with other websites? [1-5 radio boxes]
[Justification Comments]

5. Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

How well does the website perform when faced with errors? [1-5 radio boxes][Junts]

6. Recognition rather than recall

Make objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

During the scenario, how would you rate the ease of navigation between pages? [1-5 radio boxes]
[Justification Comments]

7. Flexibility and efficiency of use

Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

While browsing the website, do you feel that bookmarking can be used effectively? [1-5 radio boxes]
While using the search form, how well does it perform when combined with bookmarking results? [1-5 radio boxes]
[Justification Comments]

8. Aesthetic and minimalist design

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.
Throughout the scenario, do you feel that there was any unnecessary information displayed? [1-5 radio boxes]

While completing the objectives in the scenario, where you at any point distracted by other

information that was off-
task? [1-5 radio boxes]
Did you find relevant links between content aside from the main navigation? [1-5 radio boxes]
[Justification Comments]

9. Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

When faced with errors, how well does the site provide you with options for your next action? [1-5 radio boxes]
When using the search page, to what extent does the site provide you with options after a failed search?

[1-5 radio boxes]
[Justification Comments]

10. Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

To what extent does the site provide you with help and support with general usage? [1-5 radio boxes]

How well is help and support integrated with the sites design? [1-5 radio boxes]
[Justification Comments]

Scenario 2: Writer

The aim of the writer is to use the websites interface to publish and edit their content.

Note: *When carrying out this scenario, please only register once and do not proceed with the submission of any content.*

- Open *'research.shu.ac.uk/aces/enquiry'* in a web browser of your choice.
- Use the *'register'* link to create an account, however first try without entering an email address.
- Click the '*Log Out'* link.
- Return to the home page.
- Log into your account but type the wrong password before using the correct one.
- On the *'Edit Profile'* page, make a list of colours in the '*Bio Statement'* area using bullet points or numbers.
- Tick the *'Author'* and *'Reviewer'* boxes, then click save.
- Click *'Reviewer'* then return to the *'User Home'.*
- Click *'Author'* and follow the prompts to submit work.
- Use placeholder text when following the 5 steps and bypass the upload screen.

- At step 5 click *'Cancel'* then delete your unfinished submission.
- Return to the home page.

Questions

1. Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

During the scenario do you feel that...

…the site provided clear and appropriate indicators to your current location? [1-5 radio boxes]
...the site provided clear and appropriate options to where you can go next? [1-5 radio boxes]
[Justification Comments]

2. Match between system and the real world

The system should use appropriate words, phrases and concepts, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

During the scenario do you feel that…

...the language used throughout the site avoids unnecessary confusion?

[1-5 radio boxes]

...the names of the pages had obvious or familiar destinations? [1-5 radio boxes]
[Justification Comments]

3. User control and freedom

Users often choose functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

How well does the site provide a user with the freedom to navigate? (consider all pages / destinations and options)

[1-5 radio boxes]

Do you feel that at any point you were restricted in your browsing experience? (technical, navigational or otherwise)

[1-5 radio boxes]
[Justification Comments]

4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

How well does the site perform in terms of its language consistency? [1-5 radio boxes]

During the scenario, do you feel that all links and titles led to their expected pages? [1-5 radio boxes]

How well does the site perform in terms of its design consistency? [1-5 radio boxes]

Do you feel that the design conventions used are familiar in comparison with other websites? [1-5 radio boxes]

[Justification Comments]

5. Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

How well does the website perform when faced with errors? [1-5 radio boxes]

Are there adequate measures in place to allow the user to rectify problems they might occur while filling out the various forms?

[1-5 radio boxes]

[Justification Comments]

6. Recognition rather than recall

Make objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

During the scenario, how would you rate the ease of navigation between pages? [1-5 radio boxes]
While completing forms, are the instructions clear and informative?
[Justification Comments]

7. Flexibility and efficiency of use

Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

While browsing the website, do you feel that bookmarking can be used effectively? [1-5 radio boxes]
To what level are shortcuts available for expert users in the submission and log in processes? [1-5 radio boxes]
[Justification Comments]

8. Aesthetic and minimalist design

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Throughout the scenario, do you feel that there was any unnecessary information displayed? [1-5 radio boxes]
While completing the objectives in the scenario, where you at any point distracted by other information that was off-task?

[1-5 radio boxes]

Did you find relevant links in the scenario that helped you, aside from the main navigation? [1-5 radio boxes]
[Justification Comments]

9. Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

When faced with errors, how well does the site provide you with options for your next action? [1-5 radio boxes]

When using the forms, to what extent does the site provide you with options after an error?

[1-5 radio boxes]

[Justification Comments]

10. Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

To what extent does the site provide you with help and support with general usage?

[1-5 radio boxes]

How well is help and support integrated with the sites design?

[1-5 radio boxes]

To what extent do you think that the site provides support for problems such as a forgotten password or missing form details?

[1-5 radio boxes]

[Justification Comments]