

An Investigation into the
Usability of the Stroke Association Website

User Testing

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Executive Summary

This report is an investigation into the Stroke Association website (www.stroke.org.uk). The charity would like to know what people think of the homepage, what message it is delivering to users, whether the purpose of the web-site is clear and what is the user experience of the page. There are also some concerns about the usability of the fundraising events and shopping sections. The best way to establish this information is to perform an evaluation of the website taking these points into account.

The aim of this study is:

- To find out what users think of the homepage, what message is the homepage delivering to users, is the purpose of the web-site clear, what is the UX?
- To identify what the user experience is when purchasing from the online shop and when finding fundraising events that are relevant to the user.

To achieve these goals, participants were recruited to carry out usability testing. The participants answered a background questionnaire to establish their suitability. They were observed doing the tasks and answered a questionnaire after each task was completed. At the end of the session an informal debrief was carried out to find out the participants overall view of the website and the tasks they had carried out.

Both qualitative and quantitative data was collected via observations, questionnaires and discussions. Once the data had been collected it was analysed to establish the usability of the site and answer the questions raised by the goals. The results showed that the overall impression of the homepage is good and its purpose is clear. However, some major usability problems were highlighted during the user testing. These were mostly related to discoverability problems. Finding the link to the shop from the homepage and the information displayed on the fundraising events page were the main usability problems discovered during the research.

Three recommendations for improving the usability of the Stroke Association website have been identified. They are mostly concerned with the display of information and navigation around the site.

Introduction

This study was carried out to determine the usability of the Stroke Association website. The methods used are described and the data findings are reported. The analysis of the data led to identifying the most serious usability issues. These issues are then addressed with three recommendations for changes to the website.

There are different types of usability research as set out by NNg (Rohrer, 2014). In this project the homepage review is an 'Attitudinal' research method, the views of the participants are gathered through a questionnaire. The open questions are qualitative and the questions asked with a Likert scale can be considered as quantitative. The other tasks, relating to the shop and events, can be considered as 'Behavioural,' the data collected is both quantitative and qualitative, provided by observations, questionnaires and informal questions.

This study follows a scripted use of the product as the tasks are predefined and the tasks are not observed in the field. This is a Usability-Lab style method of testing. The lab is both the moderator's and the participants homes. The participants are observed carrying out tasks, one-on-one with the moderator. (Rohrer, 2014)

Method

To carry out the testing a combination of two methods has been followed, the Handbook of Usability Testing (Rubin & Chiswell, 2008) and the UXPin method by Jerry Cao (Cao, 2016).

Goals

The purpose of the testing is to find out the answers to the goals by analysing concrete data. The goals have been established from the client brief. The goals will be used to develop the tests, so that the correct information is collected.

- To find out what users think of the homepage, what message is the homepage delivering to users, is the purpose of the web-site clear, what is the UX?
- To identify what the user experience is when purchasing from the online shop.
To identify what the user experience is when finding events that are relevant to the user.

Communicate Research Questions

A process of 'operationalising the problem' is carried out by examining the goals and making them less vague and more complete. This involves developing a series of questions that will be used to create the tasks. The questions can be found in Appendix 1.

Participants

Nielsen suggests that five users will be able to find 85% of usability problem (Nielsen, 2000). The usability test was run with seven users, they were selected on age and suitability, but also on their availability. An additional participant was selected to perform the pilot. The background data questionnaire results (Appendix 3) show that most of the participants are women in the 40 to 60 age range. A factor in this choice was that more women give to charity than men (CAF, 2017).

The Stroke Association target users are

1. People looking for information about Stroke, either for themselves or for someone close to them who has had a stroke
2. People who want to make a donation to the charity or raise money for the charity through a fundraising event or purchase items through the shop
3. People who would like to volunteer for the charity
4. Health care professionals who are looking for resources for their patients and to develop their skills and understanding of the condition

This is a wide ranging group of people, in 2016 61% of people donated to charity and 89% said that they did something charitable during the year (CAF 2016). The test participants have all given to charity in the last year, although one has not made a donation online in the last two years.

The participants all represent the second type of target user, not Stroke sufferers, carers or healthcare professionals. The tasks are targeted at these users.

Testing Process

The study assessed the overall impression of the home page, using an exploratory technique. The activity task tests looked at the effectiveness of the shop and events pages of the website. As each participant performed more than one scenario, learnability was taken into account. The participants provided information about the satisfaction of the site.

The test moderator sat alongside the participant, observed and made notes. The moderator encouraged but did not lead the participant during the tasks.

The study is a within-subjects design method because all of the participants were testing all three aspects of the website that were being examined in this study. Learnability must be considered when analysing the data. How easy the participant finds the second and third tests may be an indicator of the learnability of the site.

The participant completed the background questionnaire (Appendix 2). The test took no more than 40 minutes. In the first ten minutes the moderator explained the process to the participant. This included information about how the test will be carried out and a brief introduction about the website, see Appendix 4 for the script. The purpose of this introduction is to make the participant feel at ease and not under any pressure. The script has been kept short and written in a relaxed but professional tone. It was read to every participant so that each person received exactly the same information. It also ensures that the moderator didn't forget any information. Before the test started the moderator explained the contents of the consent form (Appendix 5) and the participant was asked to sign it.

The participant was then asked to perform the four tasks. Each task was read out to the participant before it was attempted. It was also printed out so that the user could refer to it if required.

Feedback was gathered with semi-structured questionnaires at the end of each task. (Appendices 5 – 8) The participants were given a paper questionnaire to fill in. Users are more likely to be honest about how they feel about the site if they can write it down, rather than if they have to say it to the researcher. If any particular problems are highlighted the moderator will be able to ask further questions, this is known as 'retrospective probing' (Usability.Gov, n.d.). Only questions that could not be discovered through observation were asked.

A debrief interview was carried out with each participant. This involved an informal discussion and notes were taken to establish how the users felt about their experiences with the Stroke Association website.

Task Selection

Four tasks were selected to determine the usability of the site in relation to the goals that had been set. They are not a set of instructions but are meant to represent the thoughts of someone visiting the site. Often tasks can be informed by analytics for the site, or any other testing documentation from development of the site. This information can be used for setting benchmarks, unfortunately the researcher did not have access to this site information.

The tasks (Fig 1.) chosen for this usability study represent those that are most likely to be performed by visitors to the online shop and the fundraising events pages. Due to the scale of this project the tasks are not very complex and there is no need to develop scenarios.

Task 1

The user is asked to look at the Home Page and answer questions relating to the overall impression of the page. Other questions about the charity and content will also be asked.

Task 2

'You are a practice manager at a doctors' surgery and would like to put pens in the waiting room, to raise awareness of the Stroke Association. Use the website to order 12 pens'

Task 3

'You would like to support the Stroke Association by taking part in the Prudential RideLondon-Surrey 100 cycle. You would like to find out more information about the event.'

Task 4

'You have taken up running and would like to find a running event near your home of Keswick. You need to do some training before the event so it must take place from June 2018 onwards.'

Fig. 1 Tasks

Task 3 was carried out using the Concurrent Think Aloud method. A retrospective think aloud (RTA) was performed after the users finished Task 4. Task 4 was designed to be difficult for the user to complete, it highlights a vulnerability in the website (Rubin & Chiswell, 2008 p. 86). Task 4 was left until the end so that the participant was not too frustrated early in the session.

Task	Description	Successful completion definition	Timing or Benchmark
1	Home Page review	The user answers the questions	N/A
2	Order an item from the shop	The shopping basket contains the specified item and the checkout button is clicked	The task is completed. The user completes the task within three minutes The user takes a maximum of two dead ends
3	Information about RideLondon	The user finds the information about the RideLondon event	The task is completed. The user completes the task within two minutes The user takes a maximum of one dead end
4	Local running event	The user finds a suitable running event closest to Keswick with an appropriate date	The task is completed. The user completes the task within two minutes 30 seconds The user takes a maximum of one dead end

Fig. 2 Task Success Criteria

The benchmark timings were calculated using the timings that were recorded on other websites when the comparative review was carried out. The expert user has more experience of computers than most people, so the times were adjusted down accordingly. The dead end maximum for the events tasks is less than the shopping tasks as the 'happy path' (the most efficient route to complete the task), includes fewer steps. The task success criteria are shown in Fig. 2.

The Testing Environment

Five of the participants came to the moderator's house for the testing and the moderator visited the home of the two other participants. The participants were recorded carrying out the tasks using OBS Studio (Open Broadcaster Software). The format of the testing was a 'sit-by' session rather than observing from a control room. This adds a personal touch and allows questions to be asked and encourages better observation data. The evaluator noted down comments, delays and was able to sense how the participant felt through observing their body language. Asking questions and providing prompts if required, were also an advantage to the sit-by method.

A pilot study was run to test out the equipment, the tasks and the questionnaires. After the pilot study, two of the task were adjusted to make them more difficult. The pilot candidate then reran the tests to prove that the new versions were achievable and appropriate.

Items Prepared in Advance for the Testing

The following artefacts were prepared before the testing took place

- Background questionnaire (Appendix 2)
- Introductory script (Appendix 4)
- Printed out tasks (Fig. 1)
- Consent form (Appendix 5)
- Post-test questionnaires (Appendices 6 – 9)
- Laptop with recording software
- Clip boards, paper and pens for observations

Data Analysis

Background Data

The participants all proved to be suitable for the task and performed mostly as expected. The background data revealed that they all had a similar level of computer literacy, interest in sport and knew how to use online shopping sites. Only one participant had never made an online donation to charity. None had ever visited the Stroke Association website before.

Influencing Factors

The tests held at the participants house were affected by distractions but once they were underway this didn't prove to be too difficult to manage. The testing held at the moderator's house all went very smoothly with only minimal interruptions. One of the recordings failed to record the microphone source for the tasks, this had a small impact on the observation data collected. The sit-by method may have influenced how the tasks were carried out, as the evaluator's presence may have affected the performance of some of the participants. They seemed more cautious and worried about making mistakes. Although it didn't affect the completion of the tasks it may have affected the time the task took. Time taken is a metric that is used as a benchmark for task success or failure, so more time was added to the benchmark to allow for this.

Some participants failed to think aloud and others felt the need to talk through all the tasks. As the think aloud can affect how the users perform tasks it was decided to use the think aloud on the easiest task (Task3). Some usability problems were discovered from the concurrent think aloud but most of the issues were raised during the retrospective think aloud. This may be because the RTA was carried out on the most difficult task. The RTA was the most useful tool for collecting observed data and it did not affect the performance of the task in the way that a concurrent think aloud did.

As the Fundraising Events page had been the subject of the previous task, learnability made Task 4 slightly easier to start with. All the participants commented in the RTA that they knew where to look, because they had just carried out Task 3. None of the participants live in Keswick and had trouble identifying the closest event. Participants had to rely on their geographical mental map of the north of England. All the users wasted time trying to work out the order that the events were displayed in.

Performance Data Analysis

1. Accuracy of tasks

The number of tasks completed and tasks completed within the benchmarks can give an indication of the accuracy of the tasks. Both the number of people and percentages have been reported (Fig. 3), because participant numbers are more meaningful than percentages with a small number of participants.

Tasks performed with assistance involved very gentle prompting. No guidance was given only suggestions such as 'can you see another way to find that information'. In the case of Task 4 two people were prompted but still failed to complete the task.

Metric	Task 2		Task 3		Task 4	
	Number	%	Number	%	Number	%
% of people completing the task, including assistance	7/7	100.00%	7/7	100.00%	4/7	57.14%
% of people who performed the task successfully without assistance	7/7	100.00%	7/7	100.00%	2/7	28.57%
% who performed the task successfully within the benchmark time limit	5/7	71.43%	5/7	71.43%	2/7	28.57%
% who performed the task successfully within the benchmark time limit and the 'wrong turn' limit	4/7	57.14%	5/7	71.43%	2/7	28.57%

Fig. 3 Task Success Rates

2. Task timings

The recordings were reviewed and the time taken for each task was recorded on a spreadsheet in mm:ss format (Appendix 10). As a result of comments from participants it was decided to record the time taken to find the shop from the Homepage and the time taken to find the item (pen) in the shop. The average time taken and the standard deviation were also calculated, Fig. 4. The standard deviation shows that the range of values is quite large. For example, the average time taken to find the shop was 1:04 with a standard deviation of 1:12. It was decided to recalculate the average and standard deviation by removing the fastest and slowest times. This resulted in a lower average time (00:41) and a much smaller standard deviation (00:19). This demonstrated that the range of the times without the outliers was a more accurate measure.

Metric	average	std dev	fastest	slowest	avg minus outliers	std dev minus outliers
Task 2 time to find shop	01:04	01:12	00:09	03:54	00:41	00:19
Task 2 time to find pens	01:55	01:00	00:40	04:01	01:45	00:27
Task 2 total time	02:59	01:10	01:38	05:29	02:46	00:32
Task 3 total time	01:54	01:15	00:53	04:52	01:30	00:18
Task 4 total time	03:19	01:12	01:40	05:14	03:16	00:51
Total time all tasks	02:44	00:41	01:52	04:13	02:36	00:14

Fig. 4 Time Metric Statistics

3. Observations

The recordings of each participant were reviewed to record other metrics as well as timings. The results of the other data are shown in Appendix 11. One of the metrics observed was the number of mouse clicks taken by the participant to complete the task. Fig. 5 shows that the average number of clicks for the harder tasks (2 and 4) are twice the amount of the happy path.

Task	Happy Path	Minimum Clicks	Maximum Clicks	Average Number of Clicks
Task 2	8	11	23	16
Task 3	4	2	6	5
Task 4	5	5	16	10

Fig. 5 Number of Mouse Clicks per Task

Another metric was a count of the number of times the location search was misused. When participants tried to search on event type and name, it returned unexpected results. Results of the other metrics recorded, informed the source of errors and the evaluation of the tasks success or failure.

Preference Data Analysis

The moderator observed that some of the users struggled with the tasks and then gave good marks on the questionnaires. This could be due to wanting to please the moderator, or maybe they mis-remembered the difficulty they encountered or maybe they always give good marks in surveys. It is hard to determine the reasons, which is why Nielsen suggests that ‘It is always a good idea to pay attention to what users do, not what they say’ (Nielsen, 2001). The comments recorded by the moderator (Appendix 12) were mostly negative and reflected the frustrations the participants were having with the system.

1. Limited Choice Questions

The questionnaires contained Likert scale style questions with a scale of 1 to 5, with 5 being positive responses and 1 being negative responses. Fig 6. Shows the average for each task performed. The ratings reduce as the tasks progressed. The full results can be found in Appendix 13.

Task	Questionnaire Average Score on Likert Scale
Task 1 – Home Page	4.32
Task 2 – Shopping	3.14
Task 3 – Event RideLondon	3.05
Task 4 – Event near Keswick	2.29
Overall Average	3.20

Fig. 6 Average Scores for Likert Scale Questions by Task

2. Freeform Questions

The usability problems raised in the questionnaires are collated in the Source of Errors section below.

Task 1 Homepage Questionnaire

Everyone commented that they liked the look of the Homepage and they all predicted that it would be ‘easy to use’. Everyone gave an answer for the ‘Purpose of the Website’, they all fell into three categories, these are displayed in Fig.7.

Purpose of the website	count
Raise money	5
Raise awareness	3
Support sufferers and provide information	5

Fig. 7 Purpose of the Website

Nobody expected to see anything else on the Homepage, apart from someone who hadn’t spotted the search bar. However, all but one user was surprised to see the ‘Free Wills Month’ image so prominently displayed. More information about the impression of the Homepage may have been collected if the users had been allowed to click through to other pages. This was not allowed on Task 1 as it was felt that it would influence the performance of the later tasks.

Task 2 Shop Questionnaire

Nearly all the comments on this page referred to navigation issues. Either not being able to find the shop, the item or the checkout button. Some people were annoyed that they could only order 10 items in one go. The search bar was appreciated by nearly half of the users.

Task 3 Event RideLondon Questionnaire

No specific questions were asked in this questionnaire but there were some responses in the 'other comments' section.

Task 4 Event Keswick Questionnaire

The comments on this questionnaire mostly referred to the confusion regarding the list of events. The ordering wasn't clear and many people didn't notice the date was on the image to the left.

Debrief Questions

The debrief was an informal discussion with the users, to establish how they felt about the website after they had finished the session. Most expressed their frustrations with the tasks, but there was very little new information gleaned from the interviews.

Source of Errors

All the tasks had failures due to the benchmarks. Only two participants managed to complete task 4 within the benchmarks. The source of the errors was analysed from observed data, the reported problems on the questionnaires, the think aloud activities and the debrief informal questions. The most serious errors are shown in Fig. 9 the full results are in Appendix 14. The severity of the problem was recorded using the scale shown in Fig. 8 (Rubin & Chiswell, 2008 p 262):

4	Unusable – the user cannot progress past this point
3	Severe – the system is usable but is very difficult to use
2	Moderate – the system is usable and the user can find a way around the issue
1	Irritant – an intermittent problem that can be circumvented

Fig. 8 Severity Rating

The number of times the problem was reported was multiplied by the severity of the problem to give an index that indicated how much of an impact the issue has on the system. The spreadsheet was then ordered by this factor to give the most severe usability issues. None of the issues were level 4, unusable but six of the 22 reported problems were level three, Fig. 9.

Usability Problems	P1	P2	P3	P4	P5	P6	P7	Total	Error Severity
Didn't understand how the events were ordered	1	1	1	1	1	1	1	7	3
Didn't know how far events were from Keswick	1	1	1	1	1	1	1	6	3
Incorrect use of location search	1	1	1	1	1	1	1	5	3
Didn't see the dates on the images	1	1	1	1	1	1	1	5	3
Difficult to find the item in the shop	1	1	1	1	1	1	1	4	3
Difficult to find the shop	1	1	1	1	1	1	1	4	3

Fig. 9 Usability Problems with a severity rating of 3

The rainbow spreadsheet has been used to illustrate the problems encountered (Appendix 14). However, the method created by Tomer Sharon was not applied in this study, because it was too simplistic (Sharon, 2013) .

Results

The data collected has been analysed to determine what issues there are with the Stroke Association website. Generally, the Homepage was well received and all participants answered the questionnaire about it, positively. The user experience appeared to be good and most people predicted that they thought the

site would be easy to use. However, once they began to try using the website the user experience deteriorated. This was indicated by the task success rate (Fig. 3), which was low for a live website. All three active tasks were slower than predicted and many more dead ends were taken than expected.

Homepage

The goal identified for the homepage of the Stroke Association website was 'To find out what users think of the homepage, what message is the homepage delivering to users, is the purpose of the web-site clear, what is the UX?'

The analysis has shown that the users found the website aesthetically pleasing and not too cluttered. Several commented that they liked the colour scheme and the clear layout. The website conveys to the user that the Stroke Association is involved in providing support and information to stroke sufferers and their supporters. The purpose of the website was clearly identified by the users as equally supporting sufferers, providing information and raising money. Raising awareness was also suggested as another purpose of the website. The users were confident that they understood the purpose of the website.

Shopping

The goal associated with Task 2 is 'To identify what the user experience is when purchasing from the online shop'. The analysis has uncovered some difficulties with the shopping section of the website. Users were unable to find the shop immediately and scrolled up and down looking for it, before trying the menus. One user commented 'I don't know where to go'. The users' mental model was broken in this website, the link to the shop is not prominently displayed on the home page. This was demonstrated by the measurements of the time taken, the average time was 1 minute. Even after removing the outliers the average time was 41 seconds. If the shop is displayed prominently at the top of the page, the time taken to click through should be no more than 10-15 seconds.

Once the shop had been reached the location of the pens proved difficult too. The correct category was only selected by one user. The rest of the participants found the pens through the search facility and only two users didn't take a dead end on this task. This was illustrated with the number of mouse clicks to perform the tasks. The average was twice the number of the 'happy path'.

Other usability issues in the shopping section are highlighted in Appendix 14. There are seven usability problems associated with shopping on this website and two of those have a severity rating of 3. The questionnaires indicated a high level of frustration and the satisfaction level was below average. The user experience of purchasing from the online shop is very poor.

Fundraising Events

The goal associated with Task 3 and 4 is 'To identify what the user experience is when finding fundraising events that are relevant to the user.' Most of the usability issues associated with the Stroke Association website were found in the fundraising events section. Only two of the users managed to complete the second task within the benchmarks. The time taken to complete the tasks was low due to the misunderstanding of the sort order and the location search being misused. Participant 2 commented 'What order are they in?', which was a common problem for all the users. This resulted in many people taking dead ends and the click count average being twice the number of the 'happy path'. The information architecture of this page was very poor, for example users did not understand the different types of run. Identifying the date of the event was also an issue, as the users ignored the images attached to the event and expected to see the date in the written section. The misuse of the location search was due to their mental model of a search bar, the users expected to be able to search on event name. One Of the 22 usability issues, 15 of them were associated with this section of the website. The top four problems are from this area and all have a severity rating of 3. Again, the questionnaires highlighted the frustration felt by the users in this section. The satisfaction rating for task 4 was the lowest. The user experience for the fundraising events section of the website is extremely poor resulting in failures to complete the tasks.

Recommendations

These three recommendations are proposed to improve the usability of the Stroke Association Website.

1. Locating the shop was a major usability problem. To resolve this the shop should be added to the main menu and not hidden in a submenu. An additional link could also be added further down the homepage in a prominent image box link, for when users scroll through the page on their first visit.
2. Identifying the correct event was another key usability problem. To address this, a more advanced search could be added to the fundraising events page. Currently it is only possible to search for events closest to a location. The search would allow the users to filter by items such as:
 - event name
 - type of event
 - level of ability
 - date range
 - distance from an entered location
3. Too little information is displayed on the list of events and the order is not clear. A solution to this problem would be to add extra fields against each event in the list. The events could also be sorted by these fields. Examples could be:
 - a separate field with the date rather than incorporating it with the image
 - a small location map that would link to a larger map
 - if a location is selected, the distance of the event from the location would be displayed

These recommendations will address 15 of the 22 usability issues highlighted by the research carried out in this study.

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Appendices

Appendix 1 – Communicate Research Questions

Appendix 2 – Background Questionnaire

Appendix 3 – Background Questionnaire Results

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Appendix 1 – Communicate Research Questions

Homepage

Goal: To find out what users think of the homepage, what message is the homepage delivering to users, is the purpose of the web-site clear, what is the UX?

What message is the home page delivering to the users?

Is it clear what is available to the user from the home page?

Do users know what information can be reached from the homepage?

What is the overall impression of the website?

What is the overall impression of the Stroke Association?

What is the website for?

How do users feel about the experience of the home page?

Shop

Goal: To identify what the user experience is when purchasing from the online shop.

Do users find it easy to locate the online shop?

How easy is it to purchase items from the online shop?

What paths do users take to complete the purchase?

Do users take the quickest path to complete the purchase?

What impediments do the users encounter when purchasing through the online shop?

How do users feel about the online shop and how long it took them to make the purchase?

Events

Goal: To identify what the user experience is when finding events that are relevant to the user.

Do users find it easy to locate the Events page?

How easy is it to find the closest event to their home?

How easy is it to find the next event taking place?

What paths do users take to find the closest event?

Do users take the quickest path to find the closest event?

What impediments do the users encounter when trying to find the event closest to their home?

How do users feel about the events page and how long it took them to make the purchase?

Appendix 2 – Background Questionnaire

If you make donations to charity which of the following methods have you used in the last two years?

- sending a cheque directly to the charity
- online donation through the charity website
- online through a donation website e.g. Just Giving
- regular payments via a Direct Debit
- none of the above

Have you ever taken part in a fund raising event for a charity e.g. a sponsored walk or cycle? Y / N

If yes, did you sign up online? Y / N

Which of the following activities do you perform on your computer or other devices?

- Admin and emails
 - Work activities
 - Playing games
 - Entertainment e.g. Netflix
 - Online shopping
 - Any other activities (please specify)
-
-

Do you take part in any of the following sporting activities?

- Swimming
- Running
- Cycling
- Team Sports

Have you or anyone close to you ever had a stroke? Y / N

Have you heard of the Stroke Association? Y / N

Have you visited the Stroke Association website? Y / N

What is your age?

- 18 – 29
- 30 – 39
- 40 – 49
- 50 – 59
- 60+
- prefer not to say

What is your gender?

- female
- male
- prefer not to say

Appendix 3 – Background Questionnaire Results

Question	P1	P2	P3	P4	P5	P6	P7	totals
If you make donations to charity which of the following methods have you used in the last two years?								
sending a cheque directly to the charity	1							1
online donation through the charity website	1		1			1		3
online through a donation website e.g. Just Giving	1	1	1	1	1	1		6
regular payments via a Direct Debit	1				1	1		3
none of the above							1	1
Have you ever taken part in a fund raising event for a charity e.g. a sponsored walk or cycle?	1	1	1	1			1	5
If yes, did you sign up online?	1			1				2
Which of the following activities do you perform on your computer or other devices?								
Admin and emails	1	1	1	1	1	1	1	7
Work activities	1	1	1		1		1	5
Playing games				1			1	2
Entertainment e.g. Netflix	1		1	1	1		1	5
Online shopping	1	1	1	1	1	1	1	7
Any other activities (please specify)			1					1
Do you take part in any of the following sporting activities?								
Swimming		1	1	1	1	1	1	6
Running	1	1				1		3
Cycling		1			1	1		3
Team Sports						1		1
Have you or anyone close to you ever had a stroke?								0
Have you heard of the Stroke Association?			1		1	1		3
Have you visited the Stroke Association website?								0
What is your age?								
18-29				1			1	2
30-39								0
40-49		1	1		1			3
50-59	1					1		2
60+								0
prefer not to say								0
What is your gender?								
female	1	1	1	1		1		5
male					1		1	2
prefer not to say								0

Introduction to the session

Thanks for taking part in this research project, it will really help me with my coursework. Have you ever taken part in a usability study or focus groups before? My role is to guide you through some scenarios on the website.

Orientation Script

I would like you to have a look at the Stroke Association website for me. I'm doing a study that investigates how easy this website is to use. I am using my laptop and I'm going to record the screen during the session. I've set up the webcam so that I can record what you are saying and see your reactions. I will also be taking notes. I am going to show you the website home page and ask you some questions. Then I will ask you to carry out three tasks that explore other pages of the website. This session is confidential and the recordings I make will not be shared with anyone else unless you give me permission to do so. The purpose of these tests is to establish how well the website performs, this is not a test of you or your ability to use a computer. Feel free to ask me any questions as we go along, but I may not be able to answer them all. Do you have any questions now?

Please can you sign the consent form and fill out this background questionnaire now. When you have finished the tasks, I will ask you some questions about how the session went.

Script for Task 1

I'm going to give you a couple of minutes to look at the Stroke Association Home Page. Then I will ask you some questions, you can refer to the page for reference, during the questions. Please don't click through to any other pages, but feel free to scroll up and down the page.

Script for Task 2

Now I'd like you to carry out a task. Imagine that 'You are a practice manager at a doctors' surgery and would like to put pens in the waiting room, to raise awareness of the Stroke Association. Use the website to order 12 pens'

Please can you show me how you would do this. I will stop you before the purchase of the items.

Script for Task 3

Now we are going to look at a different part of the website. Imagine that 'You would like to support the Stroke Association by taking part in the Prudential RideLondon-Surrey 100 cycle. You would like to find out more information about the event.'

Please can you find the information about the event. This time I would like you to tell me what you are thinking as you go along and I may ask you some questions to prompt you.

Script for Task 4

This next task is similar to the last one. Imagine that 'You have taken up running and would like to find a running event near your home of Keswick. You need to do some training before the event so it must take place from June 2018 onwards.'

Please can you find the information about the event closest to your home. This time I won't need you to tell me what you thinking as we go along. After the test, I am going to playback the recording for you and I'd like you to tell me what you were thinking at the time.

CONSENT FORM

Title of Study: Evaluation of the Stroke Association Website for Coursework INM315

Please initial box

1.	<p>I confirm that I have had the project explained to me</p> <p>I understand this will involve the following:</p> <ul style="list-style-type: none"> • be interviewed by the researcher • allow the interview to be video/audio recorded • complete questionnaires asking me about my experience • use a computer to access the internet 	
2.	<p>This information will be held and processed for the following purpose(s): For producing the coursework report</p> <p>I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party. No identifiable personal data will be published. The identifiable data will not be shared with any other organisation.</p> <p>I consent to the recordings being shown to other researchers and interested professionals.</p>	
3.	<p>I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.</p>	
4.	<p>I agree to City, University of London recording and processing this information about me. I understand that this information will be used only for the purpose(s) set out in this statement and my consent is conditional on City complying with its duties and obligations under the Data Protection Act 1998.</p>	
5.	<p>I agree to the use of anonymised quotes in publication.</p>	
6.	<p>I agree to take part in the above study.</p>	

Name of Participant_____
Signature_____
Date_____
Participant email address_____
Name of Researcher_____
Signature_____
Date

Appendix 6 – Task 1, Home Page Questionnaire

What is your first impression of the Home Page?

What do you think is the main purpose of this website?

Who do you think this website is aimed at?

What do you think the Stroke Association does?

Is there anything that you expected to see that isn't displayed?

Is there anything on the Home Page that you didn't expect to see there?

Please rate the following statements

I understand the purpose of this website

Strongly Disagree 1 2 3 4 5 Strongly Agree

I could find information about what the Stoke Association does from this website

Strongly Disagree 1 2 3 4 5 Strongly Agree

I like the layout of this website

Strongly Disagree 1 2 3 4 5 Strongly Agree

I think this website will be easy to use

Strongly Disagree 1 2 3 4 5 Strongly Agree

Do you have any other comments about the Home Page?

Appendix 7 – Task 2, Online Shop Questionnaire

‘You are a practice manager at a doctors’ surgery and would like to put pens in the waiting rooms, to raise awareness of the Stroke Association. Use the website to order 12 pens.’

Please rate the following statements

It was easy to find the pens in the shop

Strongly Disagree 1 2 3 4 5 Strongly Agree

I found the checkout process easy

Strongly Disagree 1 2 3 4 5 Strongly Agree

The instructions on the website were clear and easy to follow

Strongly Disagree 1 2 3 4 5 Strongly Agree

I would use this website to order products in the future

Strongly Disagree 1 2 3 4 5 Strongly Agree

I found the shopping experience satisfying

Strongly Disagree 1 2 3 4 5 Strongly Agree

What did you like about the shop?

What didn’t you like about the shop?

Any other comments

Appendix 8 – Task 3, RideLondon Event Questionnaire

'You would like to support the Stroke Association by taking part in the Prudential RideLondon-Surrey 100 cycle. You would like to find out more information about the event.'

Please rate the following statements

It was easy to find the information about the cycle event on the website

Strongly Disagree 1 2 3 4 5 Strongly Agree

The instructions on the website helped me find the information I needed

Strongly Disagree 1 2 3 4 5 Strongly Agree

I found searching for the event on the website satisfying

Strongly Disagree 1 2 3 4 5 Strongly Agree

Any other comments

Appendix 9 – Task 4, Running Event Near Home Questionnaire

'You have taken up running and would like to find a running event near your home of Keswick. You need to do some training before the event so it must take place from June 2018 onwards'

Please rate the following statements

It was easy to find the closest running event on the website

Strongly Disagree 1 2 3 4 5 Strongly Agree

The instructions on the website helped me find the information I needed

Strongly Disagree 1 2 3 4 5 Strongly Agree

I would use this website to look for running events in the future

Strongly Disagree 1 2 3 4 5 Strongly Agree

I found searching for events on the website satisfying

Strongly Disagree 1 2 3 4 5 Strongly Agree

What did you like about the events pages of the website?

What didn't you like about the events pages of the website?

Any other comments

Appendix 10 – Task Timings

The times are shown in mm:ss format

Metric	P1	P2	P3	P4	P5	P6	P7	avg	std dev	min time	max time	avg minus outliers	std dev minus outliers
Task 2 - Shop													
Start time	00:13	00:08	07:04	00:25	00:31	00:19	00:29						
Time at shop page	01:01	00:21	07:13	01:12	00:58	01:30	04:23						
Time to find shop	00:48	00:13	00:09	00:47	00:27	01:11	03:54	01:04	01:12	00:09	03:54	00:41	00:19
Time at pens page	02:48	00:48	08:52	02:02	01:43	01:53	04:30						
Time to pens	02:35	00:40	01:48	01:37	01:12	01:34	04:01	01:55	01:00	00:40	04:01	01:45	00:27
End time	03:55	01:46	10:01	02:31	03:06	02:50	05:58						
Time taken	03:42	01:38	02:57	02:06	02:35	02:31	05:29	02:59	01:10	01:38	05:29	02:46	00:32
Task 3 - RideLondon													
Start time	00:31	00:06	00:33	00:40	00:15	00:21	00:35						
End time	02:05	02:10	01:50	02:10	05:07	01:30	01:28						
Time taken	01:34	02:04	01:17	01:30	04:52	01:09	00:53	01:54	01:15	00:53	04:52	01:30	00:18
Task 4 - Keswick run													
Start time	00:26	00:14	00:35	00:33	00:39	00:13	00:38						
End time	02:06	03:50	04:49	02:33	05:53	04:12	03:09						
Time taken	01:40	03:36	04:14	02:00	05:14	03:59	02:31	03:19	01:12	01:40	05:14	03:16	00:51
Total Average	02:18	02:26	02:49	01:52	04:13	02:33	02:57	02:44	00:41	01:52	04:13	02:36	00:14

Appendix 11 – Observation Results

Metric	P1	P2	P3	P4	P5	P6	P7	totals	avg
Task 2 - Shop									
Passed task with benchmarks	0	1	0	1	1	1	0	4	1
Task not completed	0	0	0	0	0	0	0	0	0
Task completed without prompts	0	1	0	1	1	0	0	3	0
Task completed with prompts	1	0	1	0	0	1	1	4	1
Number of Prompts Given	2	0	1	0	0	1	2	6	1
Clicks to complete	14	11	23	16	18	13	18	113	16
Number of wrong turns	4	0	4	1	0	1	4	14	2
Count of negative comments	4	1	0	2	0	5	2	14	2
Count of negative body language	1	0	1	1	0	1	3	7	1
Task 3 - RideLondon									
Passed task with benchmarks	1	0	1	1	0	1	1	5	1
Task not completed	0	0	0	0	0	0	0	0	0
Task completed without prompts	0	0	1	1	0	1	1	4	1
Task completed with prompts	1	1	0	0	1	0	0	3	0
Number of Prompts Given	1	1	0	0	2	0	0	4	1
Clicks to complete	5	6	4	5	6	5	2	33	5
Number of wrong turns	0	0	0	0	0	0	0	0	0
Incorrect use of location search	1	1	1	1	0	0	0	4	1
Count of negative comments	3	2	1	1	2	0	0	9	1
Count of negative body language	1	0	0	0	0	0	0	1	0
Task 4 - Keswick run									
Passed task with benchmarks	1	1	0	1	0	1	0	4	1
Task not completed	0	0	1	0	1	0	1	3	0
Task completed without prompts	1	0	0	1	0	0	0	2	0
Task completed with prompts	0	1	0	0	0	1	0	2	0
Number of Prompts Given	0	1	2	0	1	2	1	7	1
Clicks to complete	5	9	11	7	16	15	7	70	10
Number of wrong turns	0	1	4	1	2	1	1	10	1
Incorrect use of location search	0	0	0	0	1	0	0	1	0
Count of negative comments	2	5	1	1	2	1	1	13	2
Count of negative body language	0	0	1	0	0	0	0	1	0

Appendix 12 – Participants Comments by Task

Task	Participant	Comment	Where the comment occurred
2	P1	That's quite a tricky one actually	Couldn't find the shop link
2	P1	Is that all there is in the shop	Looking in one category
2	P1	It's deliberately set up to be impossible to find	Looking for pens in the shop
2	P1	That's a bit weird	Click through to the pen from the search
2	P1	I don't know why I didn't think of searching though. I'm not very good at these things	After seeing the search bar
2	P1	For goodness sake	Not being able to select more than 10 pens
2	P2	Bit awkward	Not being able to select more than 10 pens
2	P4	I don't know where to go	Couldn't find the shop link
2	P6	Not immediately obvious is it?	Couldn't find the shop link
2	P6	Can you actually do it from this website?	Looking for pens in the shop
3	P1	That just says running	On fundraising page, events link
3	P1	Has it searched?	Incorrect location search
3	P1	That wasn't very clear	Didn't see the filter menu with cycling on it
3	P2	It doesn't appear that the search is working	Incorrect location search
3	P3	I don't know the postcode for surrey	Incorrect location search
3	P4	Is there a search bar?	Looking for the event
3	P4	I didn't put in enough words	Incorrect location search
3	P4	I still didn't put in enough words	Incorrect location search
3	P4	Where's the search bar?	Trying to search the events
3	P4	Oh there's this thing	Spotting the filter menu after some time
3	P5	Oh my goodness there's 9 pages of them	Events page
3	P5	Perhaps it wants capital letters	Using the post code in location search
3	P5	Does it even exist?	Trying to find the event
3	P5	Ah there it is, sorry it did take me a long time	Finding the event
4	P1	I can't see the date	Events page
4	P1	How are they ordered?	Events page
4	P2	The magnifying glass isn't working	Searching on events page
4	P2	None seem close	Events page
4	P2	What order are they in?	Events page
4	P2	Where are the instructions?	Events page
4	P3	It's really annoying not all show the dates	Didn't see the dates on the images
4	P3	This is suddenly difficult	Trying to find the event
4	P3	What are they? What is resolution run?	Different types of runs
4	P3	I expect things to be easy	Trying to find the event
4	P3	Not immediately obvious how they are ordered	Events page
4	P3	That's not helpful is it?	After completing the task
4	P4	I don't know the distance to Keswick	Events page
4	P4	It didn't tell me they were sorted by location	Events page
4	P5	I don't want to sign up, I just want information	On fundraising page, events link
4	P5	Is it sorted by popularity	Events page
4	P5	I thought run would show all runs	Using the filter on events page
4	P6	A map might be useful	Trying to find the event

Appendix 13 – Task Questionnaires Results

	P1	P2	P3	P4	P5	P6	P7	totals	average	max score	min score
Task 1 - Home Page											
I understand the purpose of website	5	5	5	4	4	4	5	32	4.57		
Could find info about Stroke Assoc	5	5	5	3	4	4	5	31	4.43		
I like layout	4	4	4	4	4	4	4	28	4.00		
I think it will be easy to use	5	4	5	4	4	4	4	30	4.29		
Totals	19	18	19	15	16	16	18	121			
Average	5	5	5	4	4	4	5		4.32	5	3
Task 2 - Shopping											
It was easy to find pens in shop	1	5	3	2	4	3	1	19	2.71		
The checkout process easy	4	4	5	4	4	4	4	29	4.14		
Instructions on the website were clear and easy to follow	1	3	5	3	4	3	2	21	3.00		
I would use this website for shopping in the future	2	4	4	2	5	4	2	23	3.29		
The shopping experience satisfying	2	4	4	1	3	3	1	18	2.57		
Totals	10	20	21	12	20	17	10	110			
Average	2	4	4	2	4	3	2		3.14	5	1
Task 3 - Event Ride London											
It was easy to find the cycle event informatiion	1	3	5	4	2	4	5	24	3.43		
Instructions on the website helped me find the information	1	3	5	2	2	4	2	19	2.71		
Searching for the event was satisfying	1	3	4	3	1	4	5	21	3.00		
Totals	3	9	14	9	5	12	12	64			
Average	1	3	5	3	2	4	4		3.05	5	1
Task 4 - Event near Keswick											
It was easy to find the running event	4	1	1	3	2	2	4	17	2.43		
Instructions on the website helped me	4	1	3	2	1	2	4	17	2.43		
I would use this website to find events in the future	3	1	4	2	1	4	3	18	2.57		
Searching for the event was satisfying	3	1	1	1	1	2	3	12	1.71		
Totals	14	4	9	8	5	10	14	64			
Average	4	1	2	2	1	3	4		2.29	4	1

Appendix 14 – Usability Problems

Type	Usability Problems	P1	P2	P3	P4	P5	P6	P7	Totals	Error Severity	severity *total
Events	Didn't understand how the events were ordered	■	■	■	■	■	■	■	7	3	21
Events	Didn't know how far events were from Keswick	■	■	■	■	■		■	6	3	18
Events	Incorrect use of location search	■	■	■	■	■			5	3	15
Events	Didn't see the dates on the images	■	■	■		■	■		5	3	15
Shopping	Difficult to find the shop	■			■		■	■	4	3	12
Shopping	Difficult to find the item in the shop	■		■	■	■			4	3	12
Shopping	Not obvious where to go after items added to basket		■	■		■	■	■	5	2	10
Shopping	Frustration only order 10 items at a time	■	■	■			■	■	5	2	10
Events	Couldn't search on the name of the event	■	■		■	■			4	2	8
Events	Requested a map	■	■				■		3	2	6
Events	Didn't understand the different types of run			■		■	■		3	2	6
Events	Didn't see the menu filter by type of event	■		■	■				3	2	6
Events	Couldn't select events by other filters		■	■			■		3	2	6
Shopping	Shop enquiries mistaken for product information	■	■	■				■	4	1	4
Events	Couldn't search on more advanced fields		■	■					2	2	4
Events	No feed back that the search had been actioned	■	■						2	2	4
Events	Too many events displayed			■			■		2	1	2
Events	Search icon doesn't action the search		■			■			2	1	2
Events	Events link implied running only events	■				■			2	1	2
Events	No instructions on the Fundraising Events page		■						1	2	2
Shopping	Add to basket not obvious							■	1	2	2
Shopping	Had to scroll at the checkout					■			1	1	1