POLITECNICO DI MILANO

Corso di Laurea Magistrale in Computer Science and Engineering
Dipartimento di Elettronica e Informazione

Usability Study Report

The Big Family

Hypermedia Applications 2018 Project

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Abstract:
This document is a report for the usability of "The Big Family" site hosted on https://polimi-hyp-2018-team-10483610.herokuapp.com developed for Hypermedia Application course project. The method used in the report is the user testing method.

20/06/2018
Academic Year 2017-2018

Contents

Chapter 1

Design and execution of the study

1.A   Evaluation method adopted

For the evaluation of the usability of "The Big Family" site is used the user testing method. With this approach usability properties are retrieved analyzing the interaction between some representatives of real users and the system. The goal is to find difficulties that the user can encounter and to obtain a feedback on the effectiveness and efficiency of the product. The test is performed as the developers of the site want to gather data in order to improve their product.

1.B   Task scenarios defined for the test

During the execution of the test five tasks to complete are requested to the users:

- Task 1: You stumbled upon the website of "The Big Family", understand what is the scope of this association.

- Task 2: You are helping a friend looking for services for disabled people near Certaldo. Identify the ones offered by the association.

- Task 3: You want to write an email to have some more information about the association. Find the address.

- Task 4: You need to contact someone working in the Pet Therapy service. Find a telephone number to call.

- Task 5: You want to visit the association's site nearest to your house. Find where it is.

1.C   Partecipants for the test

For this test the partecipants are 5 users and 1 moderators.
The users are found in the acquaintances of the developers, and are recruited trying to best match the possible target audience for the system, this was done considering that the site is about an association that holds some children care center on the territory.
The user profiles found in the audience of the association are:

- Young adult

- Adult parent of a child

The user goal is to:

- Find information about the association, since one of their relatives is a children with disability and the association could be useful for him/her

The moderator is one the developers of the site, alternately, depending on the disponibility of them.

1.D   Usability variables to be measured

For each user and task, the moderators gather quantitative and qualitative indicators.
Quantitative indicators:

- Efficiency (time used for every task)

- Effectiveness (task completion (with or without assistance))

- Number of errors

- Task success rate

Qualitative data:

- What is liked/disliked

- Disorientation (information not found)

- Frustration

1.E   How the test was performed

For the execution of the test a typical context of use of the site is simulated (i.e on the dining room table or in the living room) and every user is requested to work with a laptop to perform the tasks predefined by the moderator. If the user does not know English, the moderators will help him with the translation.

Before starting the test, its steps and its purpose are explained, the user is set at his ease and is told that he can leave whenever he wants. The sheet with the tasks is given to the user that can start to read and to ask what he doesn't understand of it or whatever comes to his mind. At this point the actual test can start. Since every profile of the audience can be in a situation where he needs to perform any possible action on the site (maybe for his children or one of his relatives), all predefined tasks are requested to every user. As long as the user performs the various tasks the moderator is present to gather the data needed and to observe any obstacle for the users to reach their goals.

After the test a simple questionnaire is delivered to the user to understand his opinion about the usability of the system.

1.F   Subject of the test

In the next page is presented an illustration of the site (the final product) to better understand some of the actions which the user can and will perform.

The Big Family

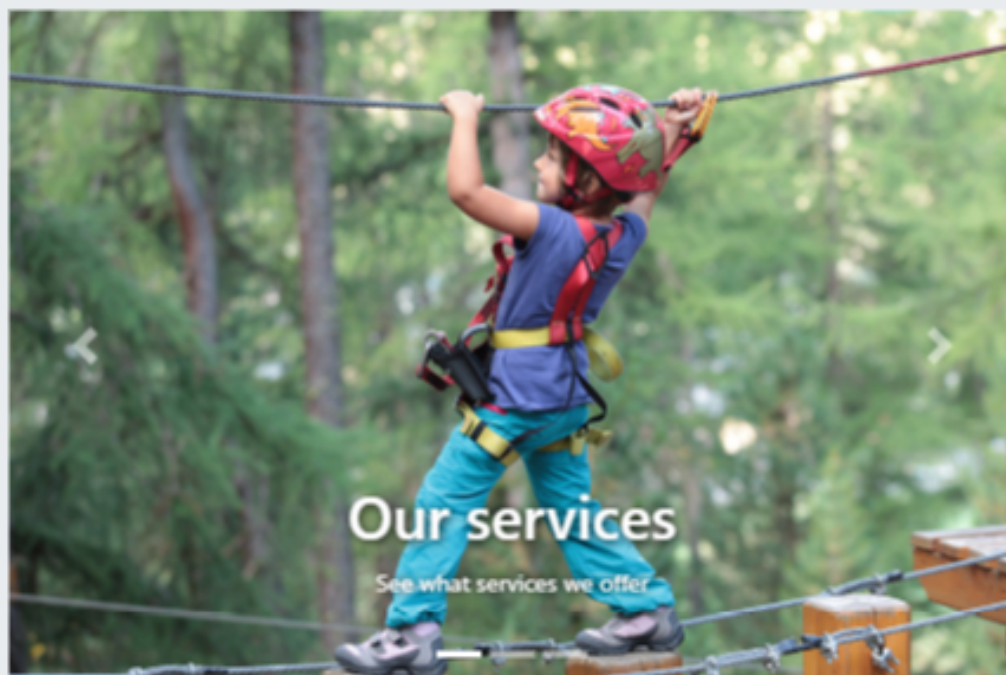Growing up together

HELP US

Our services

See what services we offer

About Us

Whether you're a parent, carer, sibling or family member of children with a disability, "The Big Family" can assist you with the most of available services and supports.
Our strength lies in our in-depth knowledge of service systems and our active members of families of children with any type of disability.

See more...

Services we offer

Our activities range over every aspect and need of a disabled child, from Speech to Art therapy, giving the possibility to be assisted when in need, explore and try many aspects of life in a safe environment and, last but absolutely not least, make a lot of new friends.

See more...

Contact us

We are here to answer every question you need to ask about our services and locations. If you want, you can also directly contact the operators responsable for services; you can find the contacts in their personal page on the website.

See more...

Chapter 2

Results

2.A   Test Rules

For execution of the test some rules about the task performance are used. Starting from the scoring method considered for the task success, the one used is the following:

- Complete success (without assistance) = 1

- Partial success, or if assistance given = 0.5

- Gives up or wrong answer = 0

For the determination of unsuccessful tasks, a task is considered unsuccessful if one of the following condition is matched:

- The user give up on trying to complete the task.

- Three wrong paths, or three attempts from the start, but the user is free to persevere, even though the task is considered unsuccessful.

- The cut-off time (threshold) is elapsed (for this test 4 minutes are chosen as cut-off time).

At last, action is considered an error if:

- The user enter incorrect data into a form field.

- The user makes the wrong choice in a menu or drop-down list.

- The user takes an incorrect sequence of actions.

- The user fails to take a key action.

2.B   Documentation of the test

All the data retrieved by the moderators and compiled by the users during the tests are presented below.

As reminder these ones are the tasks asked to the users:

- Task 1: You stumbled upon the website of "The Big Family", understand what is the scope of this association.

- Task 2: You are helping a friend looking for services for disabled people near Certaldo. Identify the ones offered by the association.

- Task 3: You want to write an email to have some more information about the association. Find the address.

- Task 4: You need to contact someone working in the Pet Therapy service. Find a telephone number to call.

- Task 5: You want to visit the association's site nearest to your house. Find where it is.

2.B.1   Task record sheet

In the next page the data retrived by moderators during the test are presented, collected in the task record sheet. For every user and every task, the moderators observed:

- Task time

- Task completion

- Number of errors

- Possible observation on the the behaviour of the user or comments

	Partecipants →	Young Adult (F) 20Y	Adult with children (F) 48Y	Adult with children (M) 47Y	Young Adult (M) 24Y	Young Adult (M) 23Y
Task ↓		1	2	3	4	5
1	Task Time: Min & Sec	0 min 38 sec	0 min 20 sec	2 min 21 sec	0 min 20 sec	0 min 15 sec
	Task completed: Yes, No or Assist	Yes	Yes	No	Yes	Yes
	Number of errors	1	0	3	0	0
	Comments on observated behaviour	Clicked on "Services" instead of "Who We Are"		Didn't found link to "Who We Are" in the homepage		
2	Task Time: Min & Sec	0 min 18 sec	0 min 22 sec	0 min 12 sec	0 min 30 sec	0 min 22 sec
	Task completed: Yes, No or Assist	Yes	Yes	Yes	Yes	Yes
	Number of errors	0	0	0	0	0
	Comments on observated behaviour					
3	Task Time: Min & Sec	0 min 9 sec	0 min 48 sec	0 min 16 sec	0 min 30 sec	0 min 34 sec
	Task completed: Yes, No or Assist	Yes	Yes	Yes	Yes	Yes
	Number of errors	0	2	0	1	1
	Comments on observated behaviour		Wants "Contacts" more highlighted			Wants "Contacts" more highlighted
4	Task Time: Min & Sec	0 min 15 sec	0 min 18 sec	0 min 11 sec	0 min 24 sec	0 min 19 sec
	Task completed: Yes, No or Assist	Yes	Yes	Yes	Yes	Yes
	Number of errors	0	0	0	0	0
	Comments on observated behaviour					Wants Links more highlighted
5	Task Time: Min & Sec	0 min 21 sec	2 min 11 sec	0 min 13 sec	0 min 15 sec	1 min 02 sec
	Task completed: Yes, No or Assist	Yes	No	Yes	Yes	Yes
	Number of errors	0	4	0	0	1
	Comments on observated behaviour		Wants "Locations" more highlighted			Found the solution using the map, instead of reading locations

2.B.2   Post test questionnaires

These questionnaires are provided to the users after the execution of the test, in order to retrieve the overall feelings perceived by them regarding the tasks (like difficulty, disorientation...). The questionnaires are filled in by each one of the five people involved in the testing and are listed in the same order as in the task record sheet. The questionnaire used is the DEEP (Design oriented evaluation of perceived web usability), that is composed of questions about content, structure and navigation of the site.

DEEP: DEsign-oriented Evaluation of Perceived Web Usability

Name: Adult with children (F) 48Y   Date: 16/05/2018

Perceived Content

The wording of the text was clear

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [ ] Agree   [■] Strongly Agree   [ ] Not Applicable

The content (including text, pictures, audios, and videos etc.) was easy to understand

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [■] Agree   [ ] Strongly Agree   [ ] Not Applicable

The text was useful

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [■] Agree   [ ] Strongly Agree   [ ] Not Applicable

The text was relevant

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [ ] Agree   [■] Strongly Agree   [ ] Not Applicable

Perceived Structure and Information Architecture

I could quickly get to know the structure of the website by skimming its homepage

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [■] Agree   [ ] Strongly Agree   [ ] Not Applicable

The organization of the website was clear

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [■] Agree   [ ] Strongly Agree   [ ] Not Applicable

Under each section of the website, the web pages were well organized

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [■] Agree   [ ] Strongly Agree   [ ] Not Applicable

Perceived Navigation

It was easy to find the information I needed on the website

[ ] Strongly Disagree   [ ] Disagree   [■] Neutral   [ ] Agree   [ ] Strongly Agree   [ ] Not Applicable

This website helped me find what I was looking for

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [ ] Agree   [■] Strongly Agree   [ ] Not Applicable

I got what I expected when I clicked on things on this website

[ ] Strongly Disagree   [ ] Disagree   [ ] Neutral   [■] Agree   [ ] Strongly Agree   [ ] Not Applicable

DEEP: DEsign-oriented Evaluation of Perceived Web Usability

Name: __Adult with children (M) 47Y__   Date: __16/05/2018__

Perceived Content

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Neutral | [●]
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DEEP: DEsign-oriented Evaluation of Perceived Web Usability

Name: Young adult (M) 24Y   Date: 10/05/2018

Perceived Content

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The content (including text, pictures, audios, and videos etc.) was easy to understand

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Name: __Young adult (M) 23Y__   Date: ___10/05/2018___

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2.C   Aggregate data

Once all the testing is finished and the information is retrieved by the moderators, all the data need to be put together in order to recapture useful information for the improvement of the site.

2.C.1   Quantitative data

Average time

- Task 1: You stumbled upon the website of "The Big Family", understand what is the scope of this association.
  Average time: **0 min 47 sec**

- Task 2: You are helping a friend looking for services for disabled people near Certaldo. Identify the ones offered by the association.
  Average time: **0 min 21 sec**

- Task 3: You want to write an email to have some more information about the association. Find the address.
  Average time: **0 min 27 sec**

- Task 4: You need to contact someone working in the Pet Therapy service. Find a telephone number to call.
  Average time: **0 min 17 sec**

- Task 5: You want to visit the association's site nearest to your house. Find where it is.
  Average time: **0 min 48 sec**

- Average time considering all tasks: **0 min 32 sec**

Total number of error

- Task 1: **4**

- Task 2: **0**

- Task 3: **3**

- Task 4: **0**

- Task 5: **5**

- Total: **12**

Task success rate

- Task 1: (4*1/5*100) = **80%**

- Task 2: (5*1/5*100) = **100%**

- Task 3: (5*1/5*100) = **100%**

- Task 4: (5*1/5*100) = **100%**

- Task 5: (4*1/5*100) = **80%**

- General task success rate: (23*1/25*100) = **92%**

2.C.2   Qualitative data

Regarding qualitative data the information is retrieved from comments and observed behaviour of the user and using the answers to the questionnaires.

Data retrieved from observation

From the observation made by the moderators, tasks 2 and 4 didn't gave particular problems to the users, except for an advice to make Links motr highlighted, but it's an advice that could be extended to all site because the whole site is built with the same style.
Task 1, 3 and 5 gave more problems to the users:

- Task 1: Gave problems in understanding what "Who We Are" stands for, and it was confused with "Services".

- Task 3: Gave problems in finding "Contact Us" landmark to go to the page requested by the task, and users wanted to have it more noticeable in the home page.

- Task 5: Gave some problems in finding "Locations" landmark and in one case the user chose contacts page in order to know the locations, before using the correct link.

Data retrieved from the questionnaires

Having all questionnaires filled up is possible to compute a questionnaire that contains the average answer given by the users (if the average answer is between two boxes, the pessimistic one is chosen).

DEEP: DEsign-oriented Evaluation of Perceived Web Usability

Average answers

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The overall satisfaction of the users towards the site structure, information architecture, content and navigatation is good. The only thing to note is the ease with which the users find the information needed, that doesn't have a good evaluation.

Chapter 3

Discussion of results

This chapter is the recap of the results of the testing and a list of recommended interventions to the site, for its improvement.

3.A   Problem report

3.A.1   Quantitative data

Concerning quantitative data retrieved from the test. The site appear intuitive and user friendly since all tasks are performed in less than one minute, compared to the 4 minutes of the cut-off time (never reached).
The test registered 12 error from the users, all contained in the execution of three tasks (first, third and fifth). 4 errors in the the first task mean that "Who We Are" page title is not effectively understandable and doesn't explain well the content of the page. 3 errors in the third task are related to the difficulty in finding the "Contact Us" landmark since it's in the footer at the end of the page. 5 errors in the last task could be defined by the fact that "Contact Us" page contains a map, so user that already had done the task about contacts of the association, could be led to use that page instead of "Locations".
The task success rate is high even in the tasks that gave more problems (minimum task success rate is 80%), it means that the site is simple and well structured, event tough some initial disorientation or misunderstandings by the users can occur.

3.A.2   Qualitative data

Using the qualitative data obtained by the comments, observations and questionnaires other results can be computed.

From the comments of the users and moderator's observations during the execution of the test, the main problem that came up is with the tracing of the right link for the completion of the task. From the questionnaires emerged the same problem as in the comments and observations, but some users evaluated coldly also the relevance and utility of the text and the capacity of the site to help the users to find what they were looking for.

3.B   Final recommendations

The final recommendations of these report will be divided in three categories:

- Priority 1: Mandatory and urgent interventions

- Priority 2: Needed interventions but not urgent

- Priority 3: Hopeful interventions

3.B.1   Priority 1

With higher priority is recommended to change the position of the "Contact Us" landmark to a place in the site that is immediately visible for the users. Another urgent intervention to do is to change the name of the page "Who We Are" in something like "What Is The Association" or "History And Values" to highlight the fact that the page describes the history and the scope of the association.

3.B.2   Priority 2

With priority 2 it is recommended to move the map that is located in "Contact Us" into "Locations" and to add a link from the page of contacts to the map.

3.B.3   Priority 3

With the less important priority, the intervention recommended is to change the style, the color or thedecoration of the links, in order to make them more visible.