School of Computing

MSc Project Specification

Student Type:  Cohort:      

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| **Project Title:** | | | | | |
| A study of usability issues when implementing responsive web design. | | | | | |
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| **Research Question:** | | | | | |
| Is the Responsive Web Design approach effective in creating a website that is search engine optimised and fully accessible whilst being able to cater for various desktop and mobile playout devices?   * Is there a need for responsive web technologies? * What are the pros-and-cons of current responsive web technologies? * Is it possible to measure user experience? (Robert Brooke) | | | | | |
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| **Outline (Overview):** | | | | | |
| The use of mobile devices and smart phones has greatly increased by almost 50% in the last 5 years. Now the number of people using mobile devices is higher than the number of people using desktop alternatives as described on smart insights.com. Of these mobile users, 80% use a smartphone to search the internet, and 47% prefer to use tablets. These figures show how important mobile technologies, and websites are now in our society. Businesses should be very aware of this when setting up new websites, or updating old ones. It is because of this huge rise that it is both necessary and important to see how responsive web technologies affect the usability of the websites for the user- whether it is in a positive or in a negative way. The results of this research could be used to guide businesses and other web developers in the right direction when deciding which approach to take in developing new websites, to the benefit of both themselves and more importantly the customer.  The website will be designed for the use of a guiding unit. This will ensure that there us a captive audience when it comes to evaluating the website. i.e. those evaluating the website will have an interest in it's contents which should lead to more accurate feedback when it is time for the evaluation stage.  The methodology will be split into 3 sections and should be as follows:   * **Answer the three sub-questions with a systematic literature review of each** * **Answer the Primary Research question using the results of the literature review as well as:**   **Creating a responsive website**  **Using a variation of SUS questionnaire to measure usability**  **Testing the website on variety of devices**  **Analysing results and drawing relevant conclusions from them.**   * **Writing up the results of the primary research** | | | | | |
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| **Objectives (*The Project will)*:** | | | | | |
| 1. **Carry out background research and include a literature review comparing different frameworks for responsive web design.** 2. **Design a responsive website in line with requirements laid out by the 1st Milngavie Guides organisation.** 3. **Develop website to fit these requirements and include responsive capabilities.** 4. **Evaluate website via anonymous questionnaires with different groups for each of the 3 different platforms.** 5. **Analyse results obtained by comparing results for each platform from questionnaires.** | | | | | |
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| **Relationship to Course (and Stream):** | | | | | |
| Linked to web development module taken in trimester 2. | | | | | |
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| **Resources (including Reading List):** | | | | | |
| * **1. Bosomworth, D. (2015) Mobile Marketing Statistics 2015 [Online]. Available at:** [**http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/**](http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/) **[Accessed: 4 May 2015].**   **2. Dainow, B. (2014) Responsive design vs. mobile websites: And the winner is...[Online]. Available at: http://www.imediaconnection.com/content/36697.asp#multiview [Accessed: 4 May 2015].**  **3. Marcotte, E. (2010) Responsive Web Design [Online]. Available at:** [**http://alistapart.com/article/responsive-web-design**](http://alistapart.com/article/responsive-web-design) **[Accessed: 5 May 2015].**  **4. Schade, A. (2014) Responsive Web Design (RWD) and User Experience [Online]. Available at:** [**http://www.nngroup.com/articles/responsive-web-design-definition/**](http://www.nngroup.com/articles/responsive-web-design-definition/) **[Accessed 5 May 2015].**  **5. http://www.w3schools.com/bootstrap/**  **Reading List:**  **-Baturay, M. H., & Birtane, M. (2013). Responsive web design: A new type of design for web-based instructional content. *Procedia-Social and Behavioral Sciences*, 106, p. 2275-2279.**  **-Caglar, E., & Mentes, S. A. (2012). The usability of university websites–a study on European University of Lefke. *International Journal of Business Information Systems*, 11(1), p. 22-40.**  **-Frain, B. (2012) *Responsive web design with HTML5 and CSS3*. Birmingham: Packt Publishing Ltd.**  **-Mohorovicic, S. (2013) Implementing responsive web design for enhanced web presence. *Information & Communication Technology Electronics & Microelectronics (MIPRO), 2013 36th International Convention on*(p. 1206-1210). IEEE.**  **-Yoon, S. J., & Kim, J. H. (2000). An empirical validation of a loyalty model based on expectation disconfirmation. *Journal of Consumer Marketing*, 17(2), p. 120-136.**  **-**Fielding, J., 2014a. Testing a Responsive Site, in: Beginning Responsive Web Design with HTML5 and CSS3. Apress, pp. 35–57.  -Fielding, J., 2014b. Beginning Responsive Web Design with HTML5 and CSS3. Apress.  -Lestari, D.M., Hardianto, D., Hidayanto, A.N., 2014. Analysis of user experience quality on responsive web design from its informative perspective. *Interntional Journal of Software Engineering and its Applications. Science and Engineering Research Support Society* 8, pp 53–62.  -Reitsamer, B.F., Kaschig, A., Heinz, T.D., Stokburger-Sauer, N.E., 2014. The Effects of Website Quality Perception on Users’ Responses–A Multidisciplinary Approach.  **-**Groth, A. and Haslwanter, D. (2015). Perceived Usability, Attractiveness and Intuitiveness of Responsive Mobile Tourism Websites: A User Experience Study. *Information and Communication Technologies in Tourism 2015.* | | | | | |
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| **Marking Scheme:** | | | | | |
| **Introduction** 5%  **Review of Literature 15%**  **Methodology 15%**  **Development 25%**  **Evaluation, Analysis & Outcomes** **20%**  **Conclusion 10%**  **Critical Evaluation 10%** | | | | | |
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| **Date (specification submitted):** | | **2/7/15** | | | |
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| **If a member of staff has agreed to supervise your project, please indicate their name below. We will also need an email from this person to confirm their agreement:** | | | | | |
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| Supervisor: | **Graeme McRobbie** | | | | |