



Towards Perfection Step by Step – User Experience Design and Evaluation in the Context of Digital Libraries

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Approach: Review on digital library research reports

the semantic turn

Handwritten notes:
 - Ollissa tyyppiä kaupallista, matkailun, koulutuksen
 - vertailla: heuristinen arvostus vs. kääntäminen
 - serbi tulokset; saumattomasti
 - myös menetelmä kehitettävä käyttäjätarpeiden mukaan

Handwritten notes:
 - nieltävämälli
 - mitä käyttäjät tavoittavat digikirjastoista
 - yleinen malli: ikkuna-google
 - uudet mallit: heuristinen arvostus
 - "Google" Do? Users' Mental Models
 Digital Library Search Engine

User Interface Design Challenges for Digital Libraries
 Margaret G. Saddy
 Department of Computer Science
 University of Toronto
 Dr. Lekanifiso C. Reddy
 Department of Computer Science
 School of Science & Technology

Handwritten note: method

A user-centered and evidence-based approach for digital library projects
 Mary M. Tenneyville
 James, Colorado USA and

Measuring the usability of academic digital libraries
 Development and validation

A User-Centric Evaluation of the European Digital Library
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Handwritten note on green sticky:
 challenges & usability issues = users perception

Abstract. Usability of digital libraries is an essential factor for the user attraction. Europeana, a digital library which is built around the idea to provide a single access point to the European cultural heritage, is paying special attention to the user needs and behaviour. This paper presents user-related outcomes addressing the dynamics of user perception from a study which involved focusing on the beginning of the study, some groups were formed in four European countries. While Europeana was in the beginning of the study, some groups were formed in four European countries. While Europeana was in the beginning of the study, some groups were formed in four European countries. While Europeana was in the beginning of the study, some groups were formed in four European countries.

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 memory institutions across Europe. The website states that it is "a place for inspiration and ideas. Search through the cultural collections of Europe, connect to other user pathways and share your discoveries" [12]. Currently it contains objects from all countries in the EU on different languages among to include 10 million objects by the end of 2010 – these are links to books, photographs, maps, movies, audio files which present common European heritage [13]. Personal research is the dominant reason given for visiting Europeana: almost three-quarters visit for personal research and less than 20% visit for the next most popular reason – work-related research [15].
 In its development Europeana pays special attention to user needs. As research indicates, user needs should not be studied in isolation. Chowdhury [6] stipulates, user needs and context-based digital library design have been a major research in the recent years. From this point of view, Europeana provides a research in a major real-life project the user-centric design process. This paper presents some of the outcomes of a study that was conducted in 2009-January 2010 focusing on the usability of Europeana from a user-centric view. A special emphasis in the study has been given to a list of issues including:

- (1) ease of use and intuitiveness of the Europeana prototype for the first time;
- (2) identification of "future" user needs as the young generation of users;
- (3) styles of use of the prototype for knowledge discovery;
- (4) expectations, including how users see trustworthiness of the digital library;
- (5) similarities and differences in the groups from different countries (Italy, the Netherlands, Spain, etc.);
- (6) summarising feedback in order to assist in the development of the digital library.

This paper looks in depth into the usability issues of Europeana, addressing the issue of what aspects of digital library design are most popular amongst users. The users opinion is gathered from four countries (Belgium, Italy, the Netherlands, Spain). This paper also touches on the issue of how to further versions of the digital library.

Emerging themes

- Constantly changing user needs
- Useful information about non-users
- Local viewpoints
- User involvement in design
- Evaluation methods and criteria
- New viewpoints

Constantly changing user needs

- User experience should be the focus when a digital library is developed. (Ji, 2009)
- Digital library designers should not copy solutions (such as Google-like search) preferred by users but use them as inspiration to their own design. (Khoo and Hall, 2012; Case: IPL)
- Design principle: Design aims for possible futures, not for the present or the past. (Krippendorff, 2006)

Useful information about non-users

- In order to prevent users abandoning the service, developers should pay attention to users' habits and the appeal of the interface, and study motivations for using the service. (Agosti, 2010; Case: TEL)
- Users may perceive the service positively at the beginning, but their experiences may discourage using the service further. (Dobрева and Chowdhury, 2010; Case: Europeana)

Local viewpoints

- Resource-based requirements dictate the usability design and evaluation. (Phiri, 2012; Case: Bonolo)
 - Identification of local digital library users and their needs helps in specifying design challenges for the library. (Sastry et al., 2011)
- Design principle: Know your users. (E.g. Krippendorff, 2006)

User involvement in design

- Involvement of users in the design process provides better information on users' preferences. (Birrell et al., 2010; Case: Europeana)
- Participatory design approach and iterative improvement of design concepts and activities provide good results. (Somerville and Brar, 2009; Case: Cal Poly systems)

Evaluation methods and criteria 1/2

- Logs alone cannot provide sufficient data of users and their preferences. Combination of methods provide better insight into users' needs. (Agosti et al., 2009; Case: TEL)
- Usability goes together with usefulness, and thus the criteria and metrics should include both aspects. (Buchanan and Salako, 2009; Case: health service portal)

Evaluation methods and criteria 2/2

- Development of a universal measurement instrument for assessing the usability of digital libraries. (Joo and Lee, 2011)
 - General user preferences and appreciations based on comparison of digital library user interfaces. (Miller et al., 2012)
 - The heterogeneity of definitions and lack of methodological consistency make it difficult to compare the quality of digital libraries and construct common criteria and measures. (Heradio et al., 2012)
- Attitude on the field: making is more important than measuring.

New viewpoints

- The scope and purpose of new discovery service tools may not be in keeping with users' actual needs and contexts of use. Well-tried design or evaluation techniques can be applied independent of the type of service. (Fagan et al., 2012; Case: EBSCO)
 - The mental model of the evaluator affects the final result. Users could also be involved in the evaluation process. (Khoo et al., 2012)
 - For measuring impact: the Impact-ED framework. (Kostkova and Madle, 2013; Case: medical digital library)
- Effective user experience design and evaluation is a long process.



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Case: Finna

- Public interface of the Finnish Digital Library
- Shared online service of Finnish libraries, archives, and museums
- Status: test version published in December 2012
- Use: the National View for every citizen, tailored organization views for specific user groups

→ www.finna.fi

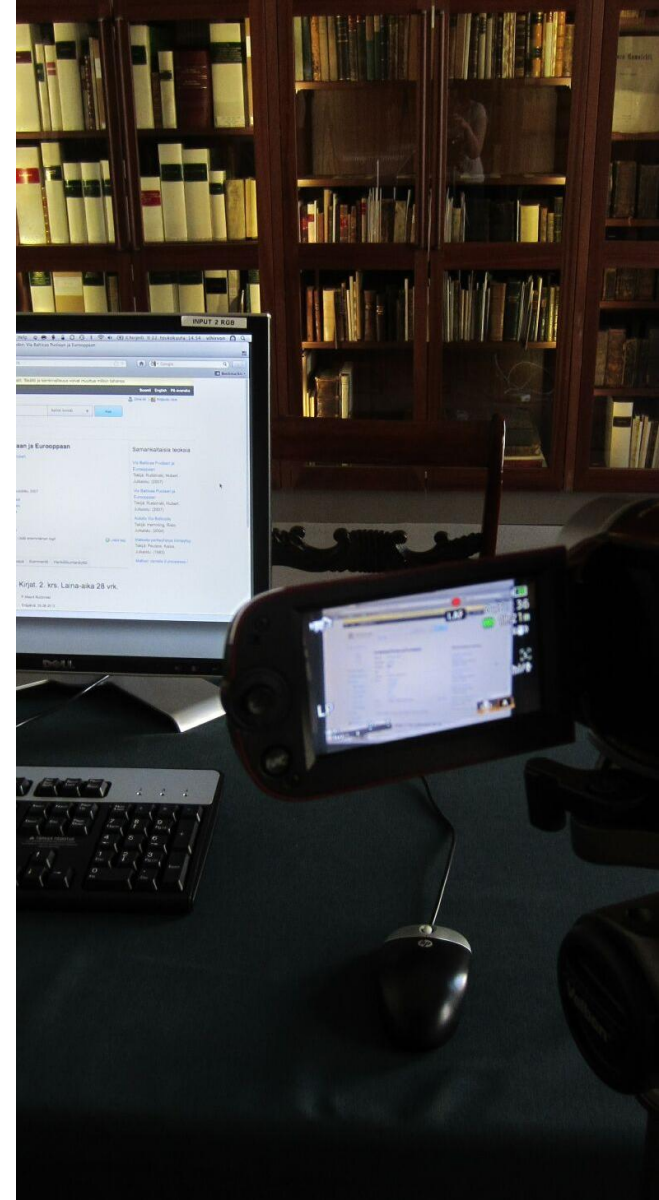
Finna's usability activities 1/3

- Constantly changing user needs
 - Status: Service concept systematically re-designed and re-evaluated
 - Plan: Studies about actual use
- Useful information about non-users
 - Status: Need for interface appeal acknowledged
- Local viewpoints
 - Status: Local users' preferences studied



Finna's usability activities 2/3

- User involvement in design
 - Option: Partners involving users in design activities
- Evaluation methods and criteria
 - Status: Dynamic inclusion of methods and criteria
 - Status: The Usability Plan as a framework for evolving activities
 - Status: Collaboration with external user experience design and evaluation experts



Finna's usability activities 3/3

- New viewpoints
 - Status: Discussion about discovery tools followed
 - Option: Users involved in evaluation tasks
 - Option: The Impact-ED framework considered for Finna's impact evaluation



Discussion





FINNA



THE NATIONAL
LIBRARY
OF FINLAND
