



Context in IIR

A preliminary study on the mapping of context

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Published in:
Information: interaction and impact

Publication date:
2017

Citation for published version (APA):
Henriksen, D., Mikkelsen, T., & Borlund, P. (2017). Context in IIR: A preliminary study on the mapping of context. In *Information: interaction and impact* (pp. 41-43). Robert Gordon University.

Context in IIR: a preliminary study on the mapping of context

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Submission type
Full Paper
Conference themes
Information behaviour

Introduction - In interactive information retrieval (IIR), the users' search and relevance assessment processes are assumed to be affected by contextual factors. Nevertheless, it remains unclear what these factors constitutes (e.g., 1; 2). This makes numerous of scholars call for a clarification of the context concept (e.g., 1-4). Kelly (4, p. 1729) points out that "...the conceptualization of context is sidestepped because it is easier to just simply call everything that is not understood, or has not been identified as a potential variable, as context". The present paper has several objectives, which are: to address the need for a discussion and clarification of the concept of context in IIR; to take the context discussion a step further; and by doing so to contribute to our understanding of the concept by providing a platform (context model) for further analysis.

We wish to examine the concept of context and its definition(s) in relation to IIR. To direct our study, we aim at answering the following research questions:

1. How is the concept of context defined in the IIR literature?
2. Is there consensus in the use of the concept of context among the analysed IIR literature?

Review - The concept of context is often used in IIR & information seeking (IS), but rarely defined by the researchers (e.g., 1; 4-6). The lacking definition of context is a problem because context is often used as an explanatory factor in IIR & IS, instead of being the object of the study (4). The

researchers who have attempted to define and delimit context often realize that it is a difficult challenge, and therefore the concept of context has been perceived as 'unmanageable' (7); an 'ill-defined concept' (6), an 'unruly beast' (1); and 'a loose concept' (8). Dervin (1, p. 14) states that the reason for these conclusions could be that context has the potential to be everything. Ingwersen and Belkin (9, p. 50) define context as the "...time, place, history of interaction, task in hand, and a range of other factors that are not given explicitly but are implicit in the interaction and ambient environment". According to Ingwersen and Belkin (9), these factors are interdependent and they constitute context. There are several researchers who regard context as consisting of various interrelated elements (e.g., 4; 6; 7), and this relationship between the elements, makes it difficult to delimit the concept of context. Saracevic (2, p. 18) lists a number of elements he perceives as context, namely 'a situation', 'task', 'problem-at-hand', 'the social horizon', 'human motivations', 'intentions'. Saracevic further states five basic assumptions about user context based on IIR (2, p. 1). The first assumption is 'one cannot not have a context in information interaction', because there is no such thing as context free interaction. The second assumption reads 'every interaction has a content and relationship aspect', hence the relationship aspect constitutes the context. The third assumption concerns how 'context is asymmetric', in the sense that the system context deals with understanding and the user context refers to situations. The fourth assumption is that 'context is multi-layered', which means it covers more than the system and user aspects. Saracevic regards the user and system context to be closest to the study objects. Nonetheless, there also exists a context which is broader than the user context. This is the social context, but Saracevic does not describe the social context any further. In the last and fifth assumption, Saracevic concludes that it is important to consider context when investigating information interaction, because context influences interaction (7, p. 1).

Sample of analysis and limitations - The approach taken is a preliminary literature study of IIR papers. For this we needed a delimited, manageable, and focused sample of IIR literature. As a result, we chose the workshop proceedings that consists of 16 papers (10), which are ideal for our purpose, because the IRiX workshop this year "...more closely attempted to investigate the core issues of context" (11, p. 32). We acknowledge the sample size, and do not expect the sample to cover all aspects of context. We also acknowledge, it is a relatively old sample, but clearly, a sample dedicated to the concept of context compared to general IIR literature. Further, there may be some problems with choosing workshop papers as analytical study entities owing to the often restricted length, which limits the degree of details of the research reported.

Results and Conclusions - We started out with the objective to look into how context is defined and whether consensus exists. 15 elements of context were identified, with the frequency of appearance indicated in brackets: person [12]; document [7]; task [7]; environment [4], interaction [4]; search [4]; time [4]; domain [3]; situation [3]; system [3], email [2]; browsing [1]; culture [1]; organization [1]; and topic [1]. Our conclusion is that context is conveniently defined according to the focus of a given study, sometimes only partially and other times not at all, hence, indirectly referring to context as being everything. However, some contextual elements reappear among the analysed papers, e.g., the person context is highly acknowledged. There also exist a general understanding of context as a frame or setting for IIR, which influences on retrieval performance and satisfaction.

Our study confirms the need for further clarification of what constitutes context in IIR. Our model (Figure 1) contributes with an overview of IIR context elements, which can be viewed as a context map and used for the next step of analysis using a larger, representative, and updated sample. It is important, the future analysis 'zoom in' because context consists of many sub-contexts, which are the variables affecting IIR. Here we are in line with Kelly (4), who points out that to be able to

reach a consensus understanding of context; context must be described as exact as research variables.

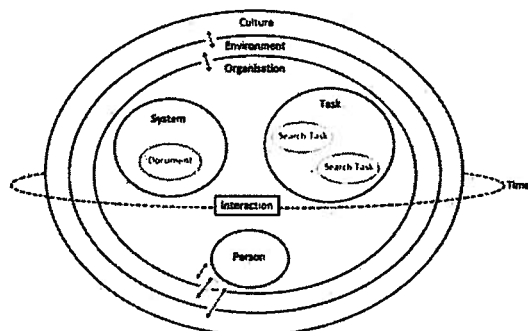
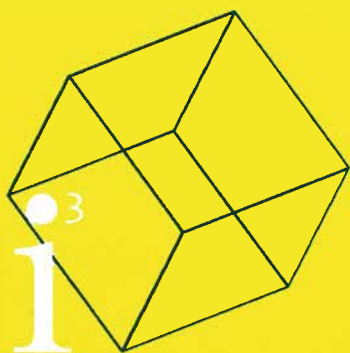


Figure 1: IIR context model.

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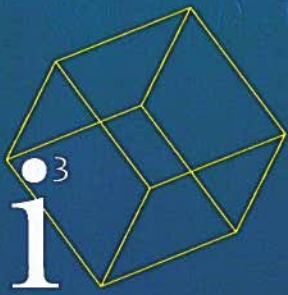
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Conference Abstracts

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