

Information Overload, Information Architecture and Digital Literacy

by Tibor Koltay

EDITOR'S SUMMARY

Efforts to address the chronic challenge of information overload in the digital world have focused on content filtering facilitated by information architecture (IA). Information professionals traditionally served as gatekeepers using formal information organization structures, systems and tools. The exploding quantity of contributed content on social media has magnified information overload and left content control and management largely up to users, who need to be educated in digital literacy (DLi) in order to assume this role. Thus, DLi's interface with IO is relatively clear. DLi also has a twofold role in the related field of IA. By default, information architects should be digitally literate themselves. Secondly, the users of information have to be aware of the importance of structures and architecture. This awareness can be achieved by educating them to IA as part of DLi education. The proper balance between formal and informal approaches to organizing information in the Web 2.0 environment is not yet clear.

KEYWORDS

information literacy
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In a recent paper published in the *Bulletin of the American Society for Information Science and Technology*, Nathaniel Davis examines the economic and social impact of information overload (IO) [1]. Davis states that IO is mainly a social condition, propagated by people and points out that it can be regarded in part as a consequence of the lack of filters or failure to apply them appropriately.

We have to add to his arguments that the concept of IO is not new nor is there a single generally accepted definition of the term. Nonetheless, we can define it as an impediment to efficiently using information due to the amount of relevant and potentially useful information available [2].

All these characteristic features give us foundation to draw the following conclusions:

- Literacies have their place in treating IO;
- IO can be of particular interest to information architecture (IA);
- The extensive use of Web 2.0 is also responsible for IO.

The above-mentioned filtering can and has to be learned through literacies. The close relationship between IA and literacies can be seen, if we accept that labeling and folksonomies are an important component of IA by their virtue in enabling both personal information management and community use [3, 4]. The fact that most web users express themselves in mediated spaces offered by Web 2.0 tools instead of communicating face-to-face, causes overabundance of information.

What Do Literacies Have to Do with Information Overload?

To answer this question, it is useful to offer a short review of literacies. We have to recognize many literacies, because they depend on the varying social contexts and the varying social conditions of reading and writing. Consequently, they change in time, according to purposes and circumstances

and to the people and tools involved. [5] Among the influencing factors we obviously find Web 2.0.

The best known type of literacy, *information literacy* (IL), pre-dates the appearance of Web 2.0. It is not necessary to repeat its definition, but we can point out that it refers to the process of recognizing information need, finding, evaluating and using information to acquire or extend knowledge [6]. IL education emphasizes, among other factors, critical thinking and the necessity to recognize message quality. IL has strong positions among literacies despite some (well-founded) skepticism, highlighting that this concept – and especially the lack of information literacy – has always seemed to be of more importance to academic librarians than to any other players of the information and education arena. [2]

Digital literacy (DLi), which links together other relevant literacies, including information literacy and the use of information and communication technologies, may be more promising in this regard. It includes publishing and communicating in contrast to the more traditional definitions of IL [7].

Digital literacy's interface with IO is relatively clear. With the apparent loss of gatekeepers, like reviewers, editors, librarians and others, readers themselves have to become the gatekeepers [8]. This change causes IO and requires the application of DLi.

What Do Literacies Have to Do with Information Architecture?

Gatekeeping, however, is not entirely lost. While amateur content is highly popular on Web 2.0, professional content remains important and the two are still different. Information architecture applied to “traditional,” professional subjects requires the presence of digital literacy because it emphasizes consciousness and critical approaches toward information.

DLi's role in IA is twofold. By default, information architects should be digitally literate themselves. Secondly, the users of information have to be aware of the importance of structures and architecture. This awareness can be achieved by educating them to IA as part of DLi education.

When thinking about folksonomies and similar user-generated knowledge organization, we can see that professional goals would most probably require not only the use of these unsophisticated tools, but also

classification and subject indexing that employ classification schemes, top-down hierarchical taxonomies, thesauri and other formal structures. At least, the latter would have to be taken into consideration to a greater extent. Folksonomies can be successful if the goals of a given website or information system and the goals and motivations of users are similar [9]. The question is, however, whether a system's users themselves are qualified to achieve that goal. It is true that users are able to contribute their knowledge to a given folksonomy, and with these contributions they can represent the collective knowledge of the users [4]. This result may happen in a number of cases. We have to be aware, nonetheless, that the usefulness of user-contributed content can be overemphasized due to the “trendy” nature of such interactions. This trendiness is also the source of the uncritical approach characterizing the Web 2.0 environment, which raises a number of complex questions [10].

Both IA and DLi have an interface to media ecology, which provides a flexible and human-centered perceptual framework for understanding and designing emerging new media, regardless of the spaces where they occur. There are different levels of media ecology ranging from the small, like a graphical user interface, to the large, like the “information age” [11]. The IA and DLi interfaces pertain to an intermediate level, as they do not reach the magnitude of the information society as a whole, even though they are close to it.

When interpreting McLuhan's well-known aphorism “the medium is the message,” we can state that a medium shapes content in ways that are advantageous to the biases of that medium, as all media have biases. These biases influence not only the content but also the experience of the user. Reacting to the biases also requires the use of a reflective language and refined perceptions in design, as the reactions to these biases are usually unconscious. Even though Web 2.0 is not one single medium, it shows common biases that characterize it as a whole. In our opinion the biases of the Web 2.0 environment are inherent to a lesser degree [11]. They are produced artificially by reinforcing the constructed nature of media since media are both constructed by and construct reality [12].

The Web 2.0 environment is also characterized by rapidly changing

contexts due to the simplicity and ease of use of tools that can be applied by users to do most of the organizing and structuring for themselves [13]. This self-sufficiency obviously raises the question whether expert structuring through the application of IA is needed.

Although related to each other, it would be difficult to establish a whole-to-part relationship between DLI and IA, and it would cause controversies. It would be false to say that DLI is part of IA, but the reverse argument, that IA is part of DLI, would not be correct either. What is certain is that the role of IA in DLI has not been acknowledged by literacy specialists. We can also

state that the requirement that digitally literate persons be critical toward information leads to an awareness of information quality, which is one of the critical aspects of IA [14].

There seems to be both a need for a deeper understanding of the nature of human information behavior and for promoting DLI, which can be an important tool to avoid IO. IA that contributes to the appropriate structuring of the information space can play a substantial role in preventing IO, be it real or perceived. This circle closes with the need for IA professionals to be equipped with DLI skills. ■

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