

Résumé de la contribution 209

ID: 209 / SSRE_S13A_06: 3

SSRE 2022

Communication orale

Ancrage disciplinaire: 14 Sciences de l'information et de la communication

Fils rouges SIEF: Numérique

Langue: Anglais

Domaine spécifique: Education et citoyenneté, Education tout au long de la vie, Enseignement supérieur

Mots-clés: Information Literacy, online search behavior, data ecology, data visualization, machine learning

Understanding Information Literacy with Search Stories

Luca Botturi¹, Tiffany Fioroni¹, Chiara Beretta¹, Loredana Addimando¹, Martin Hermida³, Azza Bouleimen², Felipe Cardoso², Luca Luceri², Silvia Giordano²

¹SUPSI-DFA, Switzerland; ²SUPSI-DTI, Switzerland; ³PHSZ, Switzerland

The amount of available information today is overwhelming: assessing the quality of information has become a pressing issue, as the pandemic and related infodemic have illustrated. Searching and evaluating information is a core life activity, fundamental for a democratic society (White, 2016). Information literacy (IL) has been named one of the critical skills of our century (Ananiadou & Claro, 2009), key to pursue effective life-long learning (Kurbanoglu, 2012), and central for today's education.

Research so far has been based on the (self-)assessment of IL skills, on measuring IL self-efficacy and on capturing online search behaviours with monitoring tools (URL timestamping or eye-tracking), mostly using academic or job tasks as a benchmark.

To support effective IL education, we need to understand how online information search actually happens in everyday life. While IL models seem to converge on the key steps in searching information (e.g., SCONUL, 2011), we still know very little about how young people actually search information online. This happens today mostly on personal devices, and in relation to small tasks: searching is a rather ubiquitous and capillary activity. Moreover, search engines have grown complex and opaque, implementing questionable AI algorithms and user profiling.

In this paper, we present the collection of search stories as an innovative method to investigate IL practices, designed within the LOIS FNS project to preserve the ecology of data collection during information search tasks in a complex and diversified environment (Botturi et al., 2021).

LOIS participants (age 16-20) were asked to install an extension in their browser at home, and then to solve 4 search tasks. Their navigation actions were recorded and time-coded, then compiled in stories, enriched with both manual and automatic metadata, visualized into plots, and analyzed statistically, as well as with Machine Learning algorithms to extract relevant features. Correlations with user personal and psychometric profiles were also tested.

The presentation will bring examples from a study on fake news (150 stories), and from the LOIS main data collection (608 stories). While IL can be conceptualized as a consistent construct, our results indicate that its actual practices and success are much more nuanced, depending on searcher, task and situation. Search stories reveal online information search more as a subtle art than an exact science, guided by principles more than rules. Such insights might support the development of a more responsive and flexible IL teaching approach.

Bibliographie

Botturi, L., Hermida, M., Cardoso, F., Galloni, M., Luceri, L. & Giordano, S. (2021). Search stories. Towards an ecological approach to explore online search behaviour. Paper presented at ECER 2021 (online).

Ananiadou, K., and Claro, M. (2009). 21st Century Skills and Competences for New Millennium Learners in OECD Countries. OECD Education Working Papers, 41, OECD Publishing. DOI: 10.1787/218525261154

Kurbanoglu, S. (2012). An analysis of the concept of information literacy. Proceedings of the International Conference of the Media and Information Literacy for Knowledge Society (June 24-28), 1-42.

SCONUL (1999). Information Skills in Higher Education: A SCONUL Position Paper. London: Society of College, National and University Libraries.

White, R. W. (2016). Interactions with Search Systems. Cambridge University Press.