

History of Science and Technology, ICT and Cultural Mediation: Fundamental or Applied Research in Digital Humanities?

Sylvain Laubé

Université de Brest, Centre F. Viète (EA 1161), Institut des Sciences de l'Homme et de la Société (ISHS)

Email : sylvain.laube@univ-brest.fr

*“The **digital humanities** is an area of research, teaching, and creation concerned with the intersection of computing and the disciplines of the humanities.”*¹ In the area of research in history of science and technology (HST), we assist to the development of a technological and complex digital system that changes drastically the methods and the tools in the everyday life of the scholars and labs. Open access to large digital libraries, social and collaborative networks, numberization of data, 3D modelization of artifacts constitutes a very short and non-exhaustive list. Concerning the diffusion of the research results in HST and the cultural mediation in science and technology, the same statement could be established with open editions, e-books, e-learning based on digital resources in HST², mobile applications on tablets for museum and education, etc. Thus, a digital literacy development is required :

*“Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process.”*³

Through examples and topics extracted of the research projects in the Centre F. Viète, the following questions will be discussed :

1. Semantic web⁴ and epistemology of HST

Based on the research program ‘Semantic HPHST : *Semantic approach to history and philosophy of science and technology*’⁵: **How digital humanities change methods and epistemology of HST? How to define the “gender” of the digital document in HST?**

¹ http://en.wikipedia.org/wiki/Digital_Humanities

² O. Bruneau, P. Grapí, P. Heering, S. Laubé, M.R. Massa-Estève, T. de Vittori (eds.), *Innovative Methods for Science Education: History of science, ICT and Inquiry Based Science Teaching*. Berlin: Frank & Timme (2012)

³ Martin, A. (2006). "DigEuLit: Concepts and Tools for Digital Literacy Development" e:LIT 2006 Special Issue5(4)

⁴ "The Semantic Web provides a common framework that allows data to be shared and reused across application, enterprise, and community boundaries." "[W3C Semantic Web Activity](#)". [World Wide Web Consortium](#) (W3C). November 7, 2011. Retrieved November 26, 2011.

⁵ directed by Olivier Bruneau (Archives Poincaré/Université de Lorraine), Muriel Guedj (LIRDEF/Université de Montpellier) & Sylvain Laubé (Centre F. Viète/Université de Brest)

2. E-learning and cultural mediation

Based on the research program UEB C@mpus “Risks and hazards for the maritime societies & MOOC”⁶ : **How the digital humanities could change the methods to teach and to construct new knowledge ?**

3. Student Literacy in digital humanities

Based on the Master “History of science and technology, ICT and cultural mediation” proposed in the University of Brest⁷: **How to develop Student Literacy in digital humanities about HST and cultural mediation?**

From those examples, I will conclude the communication by a discussion about “fundamental” and “applied” research in digital humanities.

⁶ http://en.wikipedia.org/wiki/Massive_open_online_course, with the financial support the UEB (Université Européenne de Bretagne)

⁷ http://formations.univ-brest.fr/fiche/FR_RNE_0290346U_PROG20383/FR_RNE_0290346U_PROG27272/presentation