número especial, volume 4, ano 4 (2016) ISNN 2317-8876, Rio de Janeiro - Brasil

Virtual Space for Scientific Knowledge

Cristina Portugal¹, Natalia Brunnet²

Rua Marquês de São Vicente, 225 - Gávea, Rio de Janeiro - RJ, 22430-060

¹crisportugal@gmail.com, ²nataliabrunnet@gmail.com

Keywords: Design, Technology, Interdisciplinary

1 Context

This paper discusses a research project called "Design and contemporaneous digital technologies in learning" which was sponsored by the Brazilian Funding Agency for Research (CNPq). This project comes from the knowledge generated by the research started during the postdoctoral research of the professor Cristina Portugal. It is also an unfolding of the research regarding the involvement of a new language, new projectual elements and new relationships between teachers and students by means of different possibilities brought by contemporaneous digital technologies.

Today, a large amount and diversity of platforms/sites is available, storing and sharing scientific publications. However, there is still a lack of researches setting guidelines for creating a network of connections between authors and fields, enabling dialogical processes between specialists from several knowledge areas, aware that the characteristics brought by contemporaneous digital technologies create a new way of conceiving and producing design. This study aims to create solutions to reduce this problem and to provide interdisciplinary theoretical knowledge that support discussions about the inter-relationship between the study methodology, scientific methodology and projectual methodology of design considering "interdisciplinarity, as an inherent and essential condition for the practice of design" (Bomfim, 1997).

2 Method

Firstly, it was made an analysis on similar websites. The research about similar sites and technology was split into three categories: platforms or sites storing and sharing scientific publications; platforms or sites optimizing the data visualization; applications with functionalities similar to the ones of this research. For each one of them, several examples where collected. However, for this paper a few ones, more accordingly with the research project proposal, were selected.

Then, the efforts switched to the first prototype. For delimitating the research project, in order to begin the creation of the platform's prototype, three fields were selected: Design, Interdisciplinarity and Society. Initially, each one of them was subdivided into three areas as follows: the field of Design into Theory of Design, Digital Design, and Graphic Design; the field of Interdisciplinarity into Technology, Education and Philosophy and the field of Society into Culture, Sustainability and Inclusion/Citizenship. One of the criteria established for creating a first prototype was that an author in the field of design must be associated with an interdisciplinary field and with an application to society. And, as an example for each one of the areas, an author nationally and internationally recognized by its competence was selected.

3 Results

The outcome expected is to provide an environment in the form of a digital platform for researchers, academics, professionals and students. It will allow the creation of a network connection between authors and areas of the pilot University and it will enable dialogic processes between experts from various fields of knowledge.

Among the results expected for this research are the intentions of fulfilling/reaching the following research objectives: Investigating the several relationships of design regarding contemporaneous digital technologies and the interaction of its *praxis* with Education and with the society where it is inserted. By achieving this objective, it is expected to promote the exercise of reflection, debate and criticism, propitiating to the users a broad view of the inter-relationship between the teaching, scientific and conceptual methodologies of design. Preparing one interactive hypermedia system available online, gathering the main reflections developed during the research, providing their results for the academy as well as for society. Allowing the free access of teachers and students to the interactive hypermedia platform to contribute to researches, disciplines, courses and classes, among other activities.

The outcome expected is to provide an environment in the form of a digital platform for researchers, academics, professionals and students. The platform will allow the creation of a network connection between authors and areas of the pilot University and it will enable dialogic processes between experts from various fields of knowledge.

4 Conclusions

This study searches solutions by means of an environment that is easy to use and intuitive, since it considers that there are no platforms aimed at the field of design that can support the complexity involving the area as well as the several interdisciplinary connections contemplating social changes inherent to the contemporary world. For Portugal (2013), generally, there is also no adequate integration of the fields which are essential for this work. As an example, hypertext technologies, multimedia, social networks and tools for cooperative work demand a new design and a new way of relationship that privileges the acquisition of competencies and abilities for searching and selecting information and for building the knowledge on the available digital environments that are being used by teachers and students.

The idea of providing a platform emerged, therefore, from the need of creating an academic interactive space to visualize and make tangible interdisciplinary studies directed at deepening reflections, discussions and practices of conceptual and projectual activities of design. As mentioned before, it aims at the concepts and characteristics of interactivity, connectivity, navigability, technological development and innovation in the field of design as well as in related fields.

5 References

- BOMFIM, Gustavo Amarante. Fundamentos de uma Teoria Transdisciplinar do Design: morfologia dos objetos de uso e sistemas de comunicação. Estudos em Design, v. 5, n. 2, p. 27-41, 1997.
- 2. BONSIEPE, Gui. Design, cultura e sociedade. São Paulo: Edgard Blucher, 2011.
- 3. _____. **Design do material ao digital.** Florianópolis: FIESC/IEL, 1997.
- FONTOURA, Antônio Martiniano. EdaDe: a educação de crianças e jovens através do design. 337 f. 2002. Tese de Doutorado. Tese (Doutorado em Engenharia de Produção e Sistemas)-Universidade Federal de Santa Catarina, Florianópolis.
- 5. JAPIASSU, Hilton. Interdisciplinaridade e patologia do saber. Imago Editora, 1976.
- 6. ICSID 2005 GENERAL ASSEMBLY. Disponível em: http://www.icsid.org/media/releases/ articles228.htm. Acesso em 05 mai. 2016.
- MANZINI, E. El diseño como herramienta para la sostenabilidad medioambiental y social. in: Macdonald, s. (org.) Design issues in Europe today. Barcelona: BEDA, 2004.
- MORAES, Maria Candida. O paradigma educacional emergente. Campinas: Papirus, 1997.
- 9. PORTUGAL, Cristina. Design, educação e tecnologia. Rio de Janeiro: Rio Books, 2013.
- Design, educação e tecnologia (online). Rio de Janeiro: Rio Books, 2013. Disponível em: www.design-educacao-tecnologia.com. Acesso 27 abr. 2015.
- <u>Hypermedia E-book as a Pedagogical Tool in a Graduation Course.</u> International journal of modern education and computer science (IJMECS): 2014 v. 6, p. 8-14.

- 12. PORTUGAL, Cristina, BRUNNET, Natália. Design and the creation of an Interactive Academic Space. In: **Proceedings of the Conference on Electronic Visualisation and the Arts**. EVA LONDON. British Computer Society, 2016.
- 13. SIMMEL, Georg. A Metrópole e a Vida Mental in **O Fenômeno Urbano.** (org. Velho, G.). Rio de Janeiro: Guanabara, 1987.
- 14. SILVA, Marcos. Aula Interativa: A Educação Presencial e a Distância em Sintonia com a Era Digital e com a Cidadania. Disponível em: http://www.saladeaula interativa.pro.br/texto_0008.htm. Acesso em: 28 ago. 2012.

6 Acknowledgment

CNPq for financial aid.