# Introduction to the Special Issue on Learning and the Social Web

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Abstract-While we have been successful at broadcasting learning material on the Web, we are still falling short of capturing online social interactions. Online learning and teaching are not as engaging as they could be. While the emergence of the Web 2.0-or the Social Web-has proven socialization on the Web can go much beyond the early posting boards that are still in use within most learning management systems, we still know little about what sustains social interaction on the Web. Online educators lack the know-how and the tools to realize the full potential of the Web as learning platform. This special issue contributes to these questions from several directions. Some papers present systems to help instructors create and finding learning ressources collaboratively. Others address innovative pedagogical principles related to games and personal learning environments.

*Index Terms*— e-learning, Web 2.0, Learning Objects, Social Networks

## I. INTRODUCTION

There is no agreement on what exactly constitutes the Social Web and the Web 2.0 [1]. However, they comprise above all a set of technologies allowing social interaction on the Web, these interactions themselves, as well as a vision of the future of the Web.

Most universities today use online course-management systems. Unfortunately, these systems were designed and developed mostly for information delivery [2]—in a frame of mind that some might describe as Web 1.0. They allow instructors to efficiently post slides, lectures notes, and problem sets on the Web as static content. Social networking features are generally minimal But even in this respect, collaborative edition, filtering and aggregation of this content is often either impossible or inconvenient.

When email, posting boards and wikis are sometimes popular, they mostly support conventional teaching styles. While Web 2.0 services stimulate active participation from the students and instructors [3], we feel that they may be poorly utilized.

For students and instructors alike, the Social Web should be an engaging medium [4]:

- Users construct their experience instead of absorbing content passively. Students can select the material they prefer, instructors can combine various documents instead of falling back on standard textbooks.
- Content can be continually refreshed by students and instructors. Online content does not need to be deliver as a product to consumers (the students).

- The Social Web supports collaborative work, thus allowing the students to improve his ability to work in teams.
- Social interactions should contribute to improve persistence and motivation.

Yet, while an overwhelming majority of the younger students (over 80%) use social network sites (e.g., Facebook, Bebo, MySpace), their use in formal learning is minimal [5]. This dichotomy between the informal and formal use of the Social Web in formal higher education is at the core of this special issue.

# II. CONTENT OF THE SPECIAL ISSUE

We called for papers on methodologies to create and sustain online communities around learning objectives, software to assist online educators and learners and theoretical and empirical surveys of existing and emerging platforms. We accepted papers covering almost this entire range of topics.

Two papers address the problem of collaboration or cooperation in Learning Object repositories. Learning Objects have been presented as a key ingredient to improve the distribution electronic learning material [6]. By decomposing content into smaller annoted objects, researchers hope to facilitate reuse. In "A 2-tiers p2p Architecture to Navigate the Learning Objects Sea", Andrea Clematis, Paola Forcheri and Alfonso Quarati present an architecture to facilitate the navigation of learning objects by leveraging the user comments shared by the users. In "Connexions: a Social and Successful Anomaly among Learning Object Repositories", Ochoa presents a statistical survey of how contributors behave within some of the major Learning Object repositories (Connexions, Ariadne and Merlot). He confirms that the repository with the most advanced collaborative features (Connexions) seem to outgrow exponential its competitors.

Electronic gaming has become a social activity. For example, Massively multiplayer online role-playing game (MMORPG) such as World of Warcraft involve millions of players worldwide. In "The Function of Intrinsic and Extrinsic Motivation in Educational Virtual Games and Simulations", Konetes reviews the application of games simulations in education. He distinguishes between environments which motivate students, and others which require preexisting intrinsic motivation. This paper was accepted in the Rising Scholar track. In "New Technology Supporting Informal Learning", Downes presents a drastically different approach to teaching online. He describes his experiments with the University of Manitoba's Connectivism course. It is an extremely distributed courses based on 170 separate weblogs, offered to 2,200 students worldwide.

## III. REVIEWERS

We are grateful to the reviewers who made this special issue possible. In particular, we want to acknowledge the contributions of Peter Dolog from Aalborg University (Denmark), Stephen Downes from NRC (Canada), Sébastien George from the INSA de Lyon (France), Monique Grandbastien from the Université Henri Poincaré (France), Ido Guy from IBM Haifa Research Laboratory (Israel), Ralf Krestel from Leibniz Universität Hannover (Germany), Olga Mariño from UQAM (Canada), Alexandre Passant from the Digital Enterprise Research Institute (Ireland), Delia Codruta Rogozan from UQAM (Canada), Mohammad Issack Santally from the University of Mauritius (Mauritius) and Guy Tremblay from UQAM (Canada).

## IV. CONCLUSION

The content of this special issue suggests that there is ample room for future work on Learning and the Social Web. There are strong indications that social interactions can be better supported online. However, we have not yet reached definitive conclusions as to what constitute the best models. What complicates matters is that the online landscape is constantly changing.

#### ACKNOWLEDGMENT

We thank Sabah Mohammed—the editor-in-chief of the Journal of Emerging Technologies in Web Intelligence for his support during the preparation of the special issue.

#### REFERENCES

- B. Alexander, "Web 2.0: A new wave of innovation for teaching and learning," *Learning*, vol. 41, no. 2, pp. 32–44, 2006.
- [2] E. Maloney, "What Web 2.0 can teach us about learning," *Chronicle of Higher Education*, vol. 53, no. 18, p. 1, 2007.
- [3] C. Ullrich, K. Borau, H. Luo, X. Tan, L. Shen, and R. Shen, "Why web 2.0 is good for learning and for research: principles and prototypes," in WWW '08, 2008, pp. 705– 714.
- [4] R. Mason and F. Rennie, "Using Web 2.0 for learning in the community," *The Internet and Higher Education*, vol. 10, no. 3, pp. 196 – 203, 2007.
- [5] C. Jones and R. Ramanau, "Collaboration and the net generation: the changing characteristics of first year university students," in *CSCL'09*, 2009, pp. 237–241.
- [6] D. Wiley et al., The instructional use of learning objects. Agency for Instructional Technology. Association for Educational Communications & Technology, 2002.



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