Editorial

Advances in Research in Social Networking for Open and Distributed Learning

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The evolution of social networks has had a tremendous impact on the domain of open and distributed learning in the last decade. Different perspectives of the phenomenon include studies on specification of characteristics related to advanced learners' profiling, development of active learning contexts with technology-enabled social interactions, integration of mobile applications, and the thorough analysis of relevant strategies. The pervasive character of social networks has also had a critical impact on the time perceptions of learning. Additionally, new strategies for student-centric and community-centric learning in higher education set very important milestones for the introduction of advanced social learning methodologies and practices. But nowadays, previous developments in this domain are challenged by a tremendous shift in the agenda and the purpose of social networking research in open and distributed learning (ODL).

In this regard, this special issue was conceived to span pedagogical, theoretical, practical, and technical issues in social networking research for ODL. The authors of this special issue present several approaches, tools, and applications related to the adoption of social networks in ODL. This special issue features 14 papers that each underwent at least two rounds of review.

In the first article entitled *Why Do Academics Use Academic Social Networking Sites?*, the authors, Hagit Meishar-Tal and Efrat Pieterse, investigate the nature of the use and the perceived utility of the academic social networking sites. The study employs the Uses and Gratifications theory to analyze the

use of academic social networking sites. A questionnaire was sent to all faculty members at three academic institutions. In the following article, titled *Enriching Higher Education with Social Media: Development and Evaluation of a Social Media Toolkit*, Yasemin Gülbahar, Christian Rapp, Selcan Kilis, and Anna Sitnikova provide an analysis of social media usage of students and instructors for teaching, learning, and research purposes across four countries (Russia, Turkey, Germany, and Switzerland). The main findings showed that many higher education instructors actively use social media for private purposes.

Another key issue in the agenda of social networking research in ODL is related to the use of social networks for the development of online learning communities. In the third article, titled *Social Networks and the Building of Learning Communities: An Experimental Study of a Social MOOC*, Mariana de Lima and Marta Zorrilla present a very interesting study aimed at analyzing students' behaviour in relation to their degree of commitment, participation, and contribution in a MOOC based on a social networking approach. Their findings are very interesting and promote the significant role of social networking capabilities for community building and constructive activities.

Social networking research for ODL should also take into critical consideration personal characteristics. In the article titled *Use of Social Media in Uncovering Information Services for People with Disabilities in China, by* Wenke Wang, Yen-Chun Jim Wu, Chih-Hung Yuan, Hongxia Xiong, and Wan-Ju Liu, the authors present a study that employed crowdsourcing through social media to investigate the information needs of people who are disabled.

The use of social networking platforms for learning purposes is also a great research area with many interesting variables incorporated. In the fifth paper, *Using Social Learning Networks (SLNs) in Higher Education: Edmodo Through the Lenses of Academics*, Gürhan Durak elaborates on the views of academics who use Edmodo, one of the leading social learning networks. In the study carried out using mixed methods, the qualitative and quantitative data were collected with an online questionnaire. The findings obtained were interpreted within the framework of cooperative learning using the Diffusion of Innovations and Uses and Gratifications theories and the related themes were formed.

Maria Macià and Iolanda García in their paper titled, *Properties of Teacher Networks in Twitter: Are They Related to Community-Based Peer Production?, present* a study related to the integration of social networks and teachers to community engagement. Teachers participate in social networking sites to share knowledge and collaborate with other teachers to create education-related content. In this study, the authors selected several communities to better understand the networks that participants establish in Twitter and the role that the social network plays in their activity within the community, especially related to peer production. Their contribution also indicates that the degree of connectivity is important for sustaining peer production and strong leadership can play a crucial role in establishing long-term commitment to a collective task.

Another critical theme in the relevant research agenda is the integration of various social networking tools for learning in a holistic approach or system that serves as the main interface for learners and academics with related services and perceived value. In this context, the contribution of the seventh paper, titled *The Effects of Integrating Social Learning Environment with Online Learning* is significant. Miroslava Raspopovic, Svetlana Cvetanovic, Ivana Medan, and Danijela Ljubojevic present the learning and teaching styles using the Social Learning Environment (SLE), which is based on the computer-supported collaborative learning approach. Their analysis points out the advantages and disadvantages of using SLE in online learning and provides recommendations for future improvements.

The annotation and automatic enrichment of content with metadata also plays a critical role in the exploitation of social networks in ODL. Andrés García-Floriano, Ángel Ferreira-Santiago, Cornelio Yáñez-Márquez, Oscar Camacho-Nieto, Mario Aldape-Pérez, and Yenny Villuendas-Rey, in the following article, *Social Web Content Enhancement in a Distance Learning Environment: Intelligent Metadata Generation for Resources*, discuss the integration of social networking with ODL learning environments by enabling the exchange of resources between learners. Authors propose a novel metadata generation system aimed at automatically tagging distance learning resources. This system is based on a recently created intelligent pattern classifier; specifically, it trains on a corpus of example documents and then predicts the topic of a new document based on its text content.

In the ninth paper of this special issue, *Instance-Based Ontology Matching for Open and Distance Learning Materials*, the authors, Sergio Cerón-Figueroa, Itzamá López-Yáñez, Yenny Villuendas-Rey, Oscar Camacho-Nieto, Mario Aldape-Pérez, and Cornelio Yáñez-Márquez, describe an original associative model of pattern classification and its alignment of different ontologies containing Learning Objects (LOs), which are in turn related to ODL educative content.

The integration of social networking and mobile systems is another cluster of excellent research. Wadee S. Alhalabi and Mobeen Alhalabi in *Color Coded Cards for Student Behavior Management in Higher Education Environments,* discuss the colour-coded cards system as a social networking intervention with interesting findings. Although educational practitioners have adopted social media into their online or mobile communities, little attention has been paid to investigate the social media messages related to online or mobile learning. Chien-wen Shen, Chin-Jin Kuo, and Pham Thi Minh Ly, in the 11th paper entitled *Analysis of Social Media Influencers and Trends on Online and Mobile Learning,* try to identify social media influencers and trends by mining Twitter posts related to online learning and mobile learning. They identified the influencers on Twitter using three different measures: the number of tweets posted by each user, the number of mentions by other users for each user, and the number of retweets for each user. The results of this study can provide educational practitioners different ways of understanding and explaining public opinions toward online learning and mobile learning.

Another significant theme in the relevant research agenda for the integration of social networking in

ODL is related to the effective promotion of MOOCs with advanced social networking capabilities. Higinio Mora, Antonio Ferrández, David Gil, and Jesús Peral, in *A Computational Method for Enabling Teaching-Learning Process in Huge Online Courses and Communities*, propose a computational method for enabling the educational process in huge online learning communities with significant outcomes related to the effective management of the forums, increased effectiveness of the teachers' explanations and better value perceptions by students.

Adolfo Ruiz-Calleja, Juan Ignacio Asensio-Pérez, Guillermo Vega-Gorgojo, Eduardo Gómez-Sánchez, Miguel Luis Bote-Lorenzo, and Carlos Alario-Hoyos, in the next paper entitled *Enriching the Web of Data with Educational Information Using We-Share,* present We-Share, a social annotation application that enables educators to publish and retrieve information about educational ICT tools. The results suggest that experiential annotations published by educators using We-Share improve the satisfaction and confidence of other educators when discovering and selecting ICT tools.

The integration of social networking in ODL entails also the development of institutional policies that foster the use of social networking in higher education. In this direction, Marcelo Careaga Butter, Eduardo Meyer Aguilera, Maria Graciela Badilla Quintana, Laura Jiménez Pérez, and Eileen Sepúlveda Valenzuela, in the last paper of this special issue, titled, *Quality Assurance for Postgraduate Programs: Design of a Model Applied on a University in Chile*, present a model to improve the process of self-regulation.

We are happy to have prepared this special issue. It was an intellectual endeavor that delivers to IRRODL's esteemed community a very interesting collection of articles related to the application of social networks research in ODL. In most of the research articles contained here, several issues for future research have been highlighted. Our personal perception is that the exploitation of social networks in ODL will continue to move toward a new level of maturity. The basic enablers of this new journey will be five emerging technologies namely, Mobile Learning Analytics, Cloud Learning Services, Visual Learning Integration, Cognitive, and Immersive Computing.