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# Social Media Technologies in Distance Learning: New Capabilities for Future Higher Education

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## Abstract
*The complexity of today's global educational system is subject to an evolving process with the final objective to respond to current and future challenges of cultural, political, social and technology changes as well as the emerging demand coming from developing countries and the continuous evolution of the social behaviors in the way individuals collaborate and interact each other. The Distance Learning offers today a real option to the traditional models. Also, it acquires new meanings and higher potential if and when developed over Social Media technologies and Social Network principles, allowing to develop effective and efficient distance learning models which are applicable to diverse educational contexts. In order to develop a modern and agile learning environment, the institution should look at the wide spectrum of Social Media technology options. Starting from their actual information system, the institutions will need to select and add new technology elements and components to develop new capabilities and functionalities as a response to students and docents needs. Incorporating such new technologies within the current learning ecosystem will require a clear understanding of main industry trends in the ICT and, at the same time, a progressive involvement of students and docents in the development of the new learning environment [8].*
*This paper addresses the continuous and rapid evolution and expansion of the boundaries and interdependences of the global education system with the objective to provide useful indications and contribution to the understanding and evaluation of the current and future context as well as perspectives of the education system and how the actual technologies are an essential enabling factor to future state. These challenges can be taken on by developing innovative and dynamic learning models by making use of enabling Social Media technologies [4].*

KEYWORDS: *Social Network, Social Media, Distance Learning, e-Learning.*

## 1. Introducion
The term "digitization" often refers to the conversion of analog processes to digital processes while the term "digitalization" refers to the creation of a Business value from the digital assets. The digitalizing processes will bring a real "disruption" to the traditional educational institutions from both a learning model and organizational perspective:

- We'll assist to the creation of extended and open community in the education, thanks to Social Media technologies.
- New knowledge will be created about the student's learning needs and expectations with the support of Big datasets fed by diverse and new data sources.
- New learning paths will be developed as the distance learning strategies are defined, based on the new information generated (Big Data).
- There will be new roles and skills defined for docents, where the approach will change from a more didactic to a more pedagogical one, with a role of tutor, mentor and coach of students.
- More flexible and sustainable learning models will be developed through the use of enabling technologies.
- The institutions themselves will become more focused on the individual (learner-centric) in order to meet the future learning needs by implementing adaptive learning models.

## 2. When Social Media Meets Distance Learning: Benefits and Few Implementation Cases
In order to develop a modern and agile learning environment, the institutions should look at the wide spectrum of Social Media technology options. Starting from their actual information system, the

institutions will need to select and add new technology elements and components to develop new capabilities and functionalities as a response to students and docents needs. Incorporating such new technologies within the current learning ecosystem will require a clear understanding of main industry trends in the ICT and, at the same time, a progressive involvement of students and docents in the development of the new learning environment [8].

A good example of learning environment fostering the involvement of students is what the Purdue University - Indiana, USA - implemented by using the Mixable platform which uses real-time collaboration tools leveraging Social Collaboration knowledge of students in the context of their classrooms (see www.purdue.edu/mixable). The well-known Google Plus service also was used in the education field. The Kadir Has University - Istanbul – successfully used it for the development and delivery of interactive courses and where, thanks to virtual collaboration capability of Google Plus - a cross-course communication was effectively fostered. [12]. Other good example is what the University of Limerick – Ireland – has made using the Social Network (Facebook) to realize a 6-weeks welcome plan to new students, based on the fact that 73% of Europeans of age between 18 and 24 use the Social Network to interact and communicate and the student's dependency from the Internet is 82% and rapidly increasing [5]. The Università di Genova – Italy – used a Social Network platform to support a language course for a group of Erasmus students to teach Italian language. In this course, in addition to the traditional classroom activities, a Social Network platform (Ning) was used for synchronous (chat) and asynchronous (form, email, blog) communication and content (pictures, documents, video) sharing, fostering then the interaction and practice of the language, verbal and written [3].

If the institutions will not provide such capabilities to students, the students will find them themselves outside the learning environment, reducing the ability of institutions to interact with students in a controlled and regulated way [8].

A group of students of the University of Barcelona Institute for Lifelong Learning – Spain – realized an informal initiative of knowledge sharing using Social Network technology. The mentioned university – which offers professional and post-graduated course in either pure e-learning and blended models – focused on the course of "Community Management and Social Media" where a group of students have autonomously and successfully applied acquired knowledge on Social Media by using most popular Social Network platform – Facebook, Linkedin and Twitter – to create an external collaboration environment where to share experience and learn collaboratively [11].

A final decision on which model to take as a reference will have to be evaluated by taking into account additional elements. In fact, the existing experiences about use of Social Media and Social Network platform to higher education are still far to support any absolute conclusion. However, they indicate that an appropriate use of them – which will require a good strategy and execution - can surely help creating a stimulating environment where students can interact openly and spontaneously and learn better and more.

The "consumerization" of the technology and the penetration of mobile devices in the consumer market have significantly contributed to the creation and diffusion of large-scale Social Media applications and services and the Social presence on the Internet.

The Social technologies are different from other kind of software for their intrinsic ability to create a mass participation facilitating a scalable collaboration. The capability to allow individuals to participate - anytime, anywhere – to a project, content, discussion, sharing of experience is what makes the Social technologies unique. The Social Networks – and more in general the Social Collaboration – count on the capitalization of the mass participation to generate Business value [14].

The strategy should be to understand, list and apply a series of Social Media general principles which make sense for the education initiative, using the terminology and characteristics acquired from the most popular Social Network platforms that are already making use of them and considering such platforms as an instance of the general principals.

What are then the major benefits coming from the integration of the Social Network and Distance Learning?

- The opportunity to leverage the magnitude and widespread diffusion of the phenomenon.
- The opportunity to consolidate information about individuals and their social network and knowledge through unique profiles, avoiding the fragmentation and dispersion of information in different sources and the inability to build relationships on them.
- The ability to share and build knowledge, openly, with students and docents of the single courses.

- The capability of customizing contents, tools and the learning environment to set-up a personal and customized environment for the individual, improving his/her personal experience.
- The ability to make it happen quickly, in real-time potentially.

The "gamification" is a new frontier of the Social Media technologies - and the Social Network which implement it – when applied to on-line education. With the term "gamification" is meant the application of videogames characteristics and design for the development of on-line games to be used in the non-game contexts. It has been used successfully in many web based businesses to increase user engagement and it seems to have high potential when applied to students in the context of on-line education as well. "[...] gamification can have a great emotional and social impact on students, as reward systems and competitive social mechanisms seem to be motivating for them. Reward systems suppose an innovative, fun and encouraging way to represent progress within an online educative experience." [6].

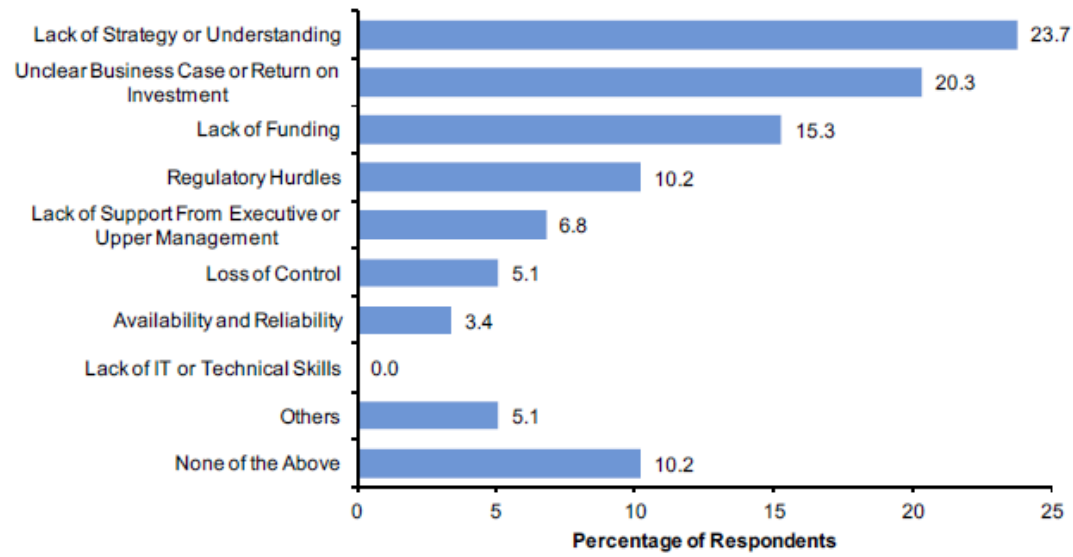
Depending from the final objectives and the community of users being targeted, there are different categories of enabling Social Media technologies or platforms:

- Enterprise collaboration tools, to be used internally the organization or institution to facilitate the collaboration. The limitation is often their ability to build mixed social networks where external contributors can join, interact and collaborate.
- Social Media technologies, to be openly used from the individuals like blogs, wikis, idea generation tools and more. They remain under the control of the organization or institution, ensuring the effective and appropriate use for the original purposes.
- Access to public Social Networks like Facebook, Linkedin, Twitter and others, mainly as a public channel to communicate with stakeholders or institutions which have presence on them. Appropriate policies, terms and conditions may apply.

The strategy will not be to prescribe the use of a particular technology or platform to a specific target of users - like the students – but rather to support docents and administrators to build a Social environment which is compatible with their roles and activities [9].

The technology alone is not sufficient to innovate, rather the human factor is crucial. The path to get there is not easy and the adoption of such technologies is exposed to many resistances. A Gartner research highlights the significant lack of understanding of the opportunities offered by the Social Media and Collaboration tools as well as of the lack of clear strategy around them by the institutions; it confirms the readiness of technology and technical competencies to make it.

Figure 1. Most Significant Barrier or Challenge to Adopting Social Media and Collaborative Tools in Education




Source: Gartner (March 2012)

The institutions will have to understand the returned value from such and that the Social Media shouldn't be seen as the objective but rather as the means to expand the collaboration within the education ecosystem [9].
The advancing of mobile technologies represent an additional engine and opportunity to develop innovative learning models. The "mobile learning" leverages mobile technology for a facilitated "everywhere learning" [10]. The use of mobile devices in the distance learning enables better integration of contents in the context of where they're used and where the student is located. Also, students can efficiently and effectively communicate and interact by sharing experiences and knowledge in a Collaborative Learning environment, anytime, anywhere. Using such technologies, that interaction can be enriched with the power of the Instant Messaging tools – like short messages, pictures and video, micro-blog – and the integration with Social Network platforms that students and docents can use to extend learning opportunities. [7]

## 3. Conclusions and Recommendations

Social Media technologies will be an essential enabling element for the effective and efficient implementation of innovative and sustainable qualitative-alternative learning models which are based on the distance-death principal.
Although some interesting real-case example of implementation of such technologies, substantial use of them are foreseen to happen in the very near future. It will not come by itself but rather will require the institutions to deeply analyze technology trends and lean from other applications around their effective use before making any significant investment on it. In other hand, the institution will have to define a clear vision and strategy around designing and implementing sustainable and innovative alternative – distance learning – models, ensuring proper investment in the enabling technologies will be required for the specific case. As the depicted future scenario as well as the real-cases examples described in the paper demonstrate, considering the mentioned technologies as essential ingredients of a sounding strategy for the future of the education will not be an option.

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