

THE ROLE OF SOCIAL MEDIA IN EDUCATION: DESIGNING A NOVEL DIGITAL LEARNING ENVIRONMENT

Zotos C., Armakolas S.

Abstract

Social media have become an integral part of our lives, offering a wide range of services and aiming to satisfy, in a variety of ways, our need for communication. As a matter of fact (and judging solely by their very definition), these platforms might as well have a place in the educational process. Their use inside the classroom should be focused on sharing knowledge among students, engaging and motivating them to work into a more pleasant environment than the one currently in place, which tends to focus more on traditional but outdated ways of education. Bringing students and teachers together under a common goal strengthens the bond between them, while at the same time helps making what we could call "the digital leap". This last aspect is very important, because the amount of knowledge and information has skyrocketed in our era, while the ways of accessing it have become rather complex. To achieve this, certain features of the social media need to be adapted with educational purposes in mind, instead of the technocratic ideals that these platforms are designed to promote. This study aims to examine whether social media have a place in the educational process and to pinpoint several negative consequences that their excessive use could cause. Additionally, the various security issues that usually affect these platforms are brought up and a ruleset is suggested, which could secure the integrity of students' personal data. Finally, an attempt is made to suggest a model digital learning environment which could take advantage of certain features that the current generation of social media has to offer, while also aiming to maintain a healthy social environment among its members.

Key words: *Social Media, Education, Communication, Activities, Dangers, Prototype*

1 INTRODUCTION

Social media, having successfully found their way in almost every domain of human activity, could as well prove themselves extremely useful in the educational process. This study aims to provide an in-depth analysis on how specific social media characteristics fit into the educational aspect. After an initial reference to their general role in our everyday lives, an attempt is made to categorize their potential functions in education. Subsequently, there is an overall evaluation of their positive impact and negative aspects. Furthermore, a potential integration process in the educational system is explored, while also suggesting several necessary guidelines regarding their proper use. Finally, an attempt is made to describe the creation of an appropriate for interactive learning educational platform that is based on common social media characteristics.

2 SOCIAL MEDIA

Social media are defined as a group of internet applications based on Web 2.0 that allow sharing of content created by their own users (Kaplan, et al., 2010). In just a few years, social media technological breakthroughs multiplied on a massive scale, revolutionizing the ways we communicate and interact with others. (Weisgerber, et al., 2011)

Social media provide users with the ability to participate in online conversations, to create and share authentic content and to form online communities. These services can be categorized into:

- **Blogs:** Online publications and articles (WordPress, Blogger etc).
- **Wikis:** Online databases developed collaboratively by users and constantly updated (Wikipedia).
- **Social Network Aggregation Platforms:** Web content collecting, sharing, rating and discussion (Reddit).
- **Social Networks:** Personalized profiles, publications, connecting with other users (Facebook, LinkedIn, etc).
- **Status Update Services (Microblogging):** Short-length updates, usually in real time (Twitter).
- **Virtual World Content:** User action within a virtual environment (Second Life).
- **Multimedia Content Sharing Platforms:** Music, video and image uploading (YouTube, Instagram etc).

Platforms from different categories overlap with each other in many aspects. For example, both Twitter and Facebook provide multimedia content sharing services, which makes them members of that category as well (Dewing, 2010).

2.1 CHARACTERISTICS

Social media consist of a very unique way of communicating with other people, which significantly varies from traditional forms of interpersonal communication. Some basic characteristics of this kind of communication are the permanence of information, search and replay functions and transferability through smartphones. On the other hand, it is characterized by opaqueness since it constitutes an impersonal way of interacting with others, which raises questions whether it is acceptable or safe (Dewing, 2010). It is therefore expected that social media affect our lives both positively and negatively in multiple ways and for various reasons.

2.2 ADVANTAGES AND DRAWBACKS

It is a matter of fact that more and more people aim to improve their lives by using social media and the benefits they offer (Baruah, 2012). Some of these are:

- **Exchanging Ideas:** Overcoming social, financial and territorial limits.
- **Communication Tools:** Dominant form of communication.
- **Bridging the Communication Gap:** Distances have been “eliminated”.

- **Source of Information:** Unlimited information, without costs.
- **Information Speed:** Instant reaction to events.

There are, however, various instances where social media negatively affect our lives (Baruah, 2012). These are some of the drawbacks:

- **Privacy Breaches:** It is very easy for third parties to access our personal information.
- **Decline of Family Ties:** Interpersonal relationships are often lost inside social media's virtual reality.
- **Addiction:** Excessive social media use creates dependence and addiction.

3 SOCIAL MEDIA AND EDUCATION

By studying international bibliography, we deduce that the use of social media in the educational process is mainly limited to university level. However, there is notable progress in primary and secondary education.

Walker and Další found that their students' participation in the various social media platforms led to better performance in class. Of course, this requires that such communities are structured with a focus on students and their education (Walker, et al., 2013).

Likewise, Harmon, Alpert and Histen found that the use of Facebook for educational purposes (e.g. for resolving questions) improved students' grades (Harmon, et al., 2014).

At the same time, Kelm examined the use of social media in the context of social constructivism. Both social media and social constructivism are built under the same principles of co-operation and common ownership. This could contribute in creating a student-focused educational model in contrast with the current teacher-focused one (Kelm, 2011).

Social media can be used in creating original and innovative activities. In his article, Schirr mentions ways that students can devise and design new group activities using social media (Schirr, 2013). The results of this research are in accordance with an earlier study by O'Keefe & Hamer on online group collaboration platforms in the domain of innovation. (O'Keefe, et al., 2010)

The aspect of collaboration is emphasized even more in Hwang's & Brummans' publication. Their study showed that students had a very favorable view of a school project concerning the creation of a Wiki website (Hwang, et al., 2011). This aspect of co-operation between students should be a key element in the educational process, without entirely forsaking traditional teaching approaches.

3.1 THE STATE OF GREEK EDUCATION

Relevant studies have shown that YouTube and certain blog-focused platforms (Blogger, Wordpress) are mostly used in Greek primary education for uploading and viewing educational content. Therefore, social media are mostly treated as educational content viewing tools and less as means of co-operation, exchanging views and communication in the educational community.

Meanwhile, in secondary education, according to certain small scale surveys (Dragogiannis, et al., 2013), students use Facebook's "wall" feature in order to get notified about lessons. Discussion between students and teachers takes place through comments on Facebook posts, in order to solve questions, practical problems and to complete projects.

Finally, in tertiary education, where social media use is certainly more widespread, we should point out certain findings from a research of the Hellenic Open University (Tigas, 2016), an institution where the educational process is mainly carried out through online platforms. This research indicates that students who use social media consider those beneficial tools and are eager to incorporate them in the educational processes they participate through "digital learning communities". Their tendency to overlook any possibilities of privacy violation should also be noted.

3.2 POSITIVE IMPACT

The use of social media within the school environment can improve teaching and is proven to offer important benefits which, according to an earlier study (Foroughi, 2011), are:

- **Learning benefits:** Establishment of a collaborative learning environment, development of individual skills, problem solving, quick responses from teachers, overcoming territorial boundaries, promotion of students' work, integration of multimedia applications and empowerment of students and teachers' relationships.
- **Social benefits for students:** Greater interest and participation, development of community relations, co-operative spirit and skills that promote self-confidence and control.
- **Wider scale benefits:** Promotion of the school, establishment of partnerships with other institutions, creating events along with organizations of global importance and development of communities of practice.

3.3 NEGATIVE EFFECTS

Excessive and careless use of social media can however hurt students' school performance. A study carried out by Mihaly K. in 2015 indicated that too much time spent on social media disoriented students from their academic obligations (Mihaly, 2015), while a study by Skiera et.al. in 2015 showed that students' popularity in Facebook seemed to affect their school performance (Skiera, et al., 2015).

Various privacy and security issues constitute the greatest drawback so far and raise questions whether the attempt to integrate social media in education is mature. The use of social media exposes users to risks that may violate their privacy. Under the pretext that privacy is already being violated in many different ways, personal data can be carelessly exposed and significant risks are thus created (Dey, et al., 2012). After all, platforms like Facebook have been accused by international organizations of violating users' privacy. (Dhingra, 2008)

Moreover, social media can be potentially used to conduct attacks through false profiles, viruses or other malicious software and to track users' locations. (Mackay, 1991)

Special attention is therefore needed on security and privacy issues when using social media for educative purposes.

4 EDUCATIONAL MEDIUM PROTOTYPE

Having studied the potential uses of social media in the educational process, let us examine the requirements of such an interactive learning environment that utilizes the tools in question. Learners in a digital class should have the capability not to simply view slides during lessons, but to also communicate through portable devices (smartphone, tablet etc.) with other users both inside the classroom and outside of it (e.g. on Facebook) in order to work together regarding matters related to their lessons. The student should be able to ask, evaluate and answer questions online by making proper use of the software. At the same time, the teacher should, among other things, be in control of the examination procedure, the evaluation and the display of statistical visualizations.

A possible list of requirements for tutors and learners could include the following:

On the teacher's part (Tutor)

- Creation of a virtual classroom, ability to upload presentation files
- Setting up conversations via social networks, putting together quizzes and questionnaires
- File sharing with students through social media
- Having access to grade and performance graphs

On the student's part (Learner)

- Linking Facebook and Twitter profiles to the class page
- Exhibition of accomplishments on social networks
- Participation in chat rooms with other students
- Use of applications in and out of classroom

5 CONCLUSION

Social media are certainly here to stay. They evolve and adapt rapidly, ushering innovative ideas which could find a place in the educational process. Although the attempt to integrate these platforms in the educational system entails several obstacles (mainly privacy and security violations), we believe it can ultimately prove beneficial to students.

Therefore, it is important to integrate social media in education not with technocratic perceptions but in accordance with scientific educational guidelines, in an attempt to improve traditional teaching methods and to encourage students' participation in the classroom.

Helping students and teachers work together, while having learning as a common goal, is certainly a major challenge and even a small digital step can make a difference in the vast and complex world of knowledge we live today.

References

1. **Baruah, Trisha Dowerah. 2012.** Effectiveness of Social Media as a tool of communication and its potential for technology enabled connections: A micro-level study. *International Journal of Scientific and Research Publications*, 2(5), 1-10. 2012.
2. **Dewing, Michael. 2010.** *Social Media: An Introduction*. s.l. : Library of the Canadian Parliament, 2010. 2010-03-E.
3. **Dey, R., et al. 2012.** Estimating age privacy leakage in online social networks. In *INFOCOM, 2012 Proceedings IEEE (pp. 2836-2840)*. IEEE. March 2012.
4. **Dhingra, A. 2008.** Where you did sleep last night? . . . thank you, i already know! *iSChannel*. 2008.
5. **Dragogiannis, K., Lalas, Ch. and Papadopoulou, p. 2013.** Incorporating social networks into the educational process. Case Study: Facebook Groups in Secondary Education. *5th Conference on Informatics in Education*. 2013.
6. **Foroughi, A. 2011.** A Research Framework for Evaluating the Effectiveness of Implementations of Social Media in Higher Education. *Online Journal for Workforce Education and Development*. 2011, Sv. V, 1.
7. **Harmon, O., Alpert, W. and Histen, J. 2014.** Online Discussion and Learning Outcomes. *International Advances in Economic Research*. February 2014, Vol. 20, 1, pp. 33–44.
8. **Hwang, J. M. a Brummans, B. H.J.M. 2011.** *Learning About Media Effects by Building a Wiki Community: Students' Experiences and Satisfaction*. místo neznámé: Emerald Group Publishing Limited, 2011. stránky 39 - 59. Sv. 3. ISBN: 978-0-85724-781-0.
9. **Kaplan, A. M. and Haenlein, M. 2010.** Users of the world, unite! The challenges and opportunities of Social Media. *Elsevier*. Business horizons, 2010, 53, pp. 59-68.
10. **Kelm, O. R. 2011.** Social Media: It's What Students Do. [Online] 18. October 2011. <https://doi.org/10.1177/1080569911423960>.
11. **Kolliopoulou, K. 2015.** Exploitation of Social Media in Primary Education. *8 International Conference in Open & Distance Learning*. November 2015.
12. **Mackay, W. E. 1991.** Triggers and barriers to customizing software. *CHI '91 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. May 2, 1991, pp. 153-160.
13. **Mihaly, K. 2015.** Do More Friends Mean Better Grades? Student Popularity and Academic Achievement. *RAND Labor and Population*. [Online] 9. March 2015. http://www.rand.org/pubs/working_papers/WR678.
14. **O'Keefe, R. D. and Hamer, L. O. 2010.** Market-Based Curriculum Revision: A Suggested Process for Curriculum Maintenance. *Journal for Advancement of Marketing Education*. Summer 2010, Vol. 18, p. 10.
15. **Schirr, G. R. 2013.** Community-sourcing a new marketing course: Collaboration in social media. 2013.
16. **Skiera, B., Hinz, O. and Spann, M. 2015.** Social media and academic performance: Does the intensity of facebook activity relate to good grades? *Marketing Education Review*. 2015, Vol. 23, 3, pp. 225-240.
17. **Tigas, I. 2016.** Social Media Networks as Communication Tools in Distance Learning: The Perspective of the Students of the Hellenic Open University (HOU). *OPEN EDUCATION*. 2016, Sv. 12, 1, stránky 106-119.

18. **Walker, K., a další. 2013.** Scholarly networking among business students: Structured discussion board activity and academic outcomes. *Journal of Education for Business*. 06. Jun 2013, Sv. 88, 5, stránky 249-252.
19. **Weisgerber, C. and Butler, S. 2011.** Editor's introduction: Special issue on communication pedagogy in the age of social media. *Electronic Journal of Communication*. Weisgerber & Butler, November 25, 2011, Vol. 20, 1-2.

Contacts

Mr. Zotos Christos
Computer Engineer (MSc) – University of Patras
ICT Teacher - School of Pedagogical & Technological Education (ASPETE)
Address: Kavafi 120, 26335, Patras (Greece)
Tel.: +30 6971655276
e-mail: zotoschris@gmail.com