The Use of Social Media Platforms as a Collaborative Supporting Tool: A Preliminary Assessment

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Abstract—Presently, social media platforms hold an excellent reputation as the closest subject and most comfortable interaction zone inside the learner's heart which makes it the most influential learning tool. However, the evaluation of the social media platforms usage based on student's choices primarily as their collaborative learning supporting tool is still in the small-scale study. Meanwhile, majority of the studies reported so far, focusing more on the usage of a particular type popular or famous social media platforms (e.g., Facebook, YouTube, Twitter and so on) as the collaborative supporting tool. This paper attempt to assess the use of overall social media platforms based on student choices, notably for supporting their collaborative learning activities. A questionnaire survey used for data collection from two universities in two countries. Findings showed that both of the universities' students have actively utilised their social media platforms as their collaborative supporting tool with 'four times and more' usage over a week, where it is already part of their daily lives. Another result also revealed the students spent their time using social media platforms at least for an hour' in a week as their collaborative supporting tool. Conclusively, it implies that social media platforms are still relevant enough and play an indispensable part in supporting the learning process mainly, for collaborative activity context.

Keywords—Social media platforms, collaborative learning, collaborative supporting tool, tertiary level student

1 Introduction

The use of social media platforms in the context of education is no longer a new thing. Besides, the use of social media platform becomes the flourish trends which already accepted and deemed as an excellent supporting tool for the virtual learning process. Started as a communication domain, the uses of social media platforms brought brand-new changes the field of education, including the revolution in collaborative learning [19]. According to [18], social media platforms defined as a bunch of digital websites, services and practices that support collaboration, community building,

participation, and sharing. Despite the encouraging advantages, the deliberation with the use of social media platforms is still a dispute, and not designated for learning purposes. Aside from that, social media platforms also stipulated as generating too much stimulation on the socialising perspectives. Therefore, can distract students from completing their coursework, and students who spend more time on social media platforms might have the difficulties of balancing their online activities and their academic preparation [15].

Anyway, this day, the researchers have broadly welcomed the use of social media platforms and presumed as positively assist student education and learning process [1][3][18][29][31]. Besides, various researchers [10][18][27][35] also pointed out that the use of social media platforms also works as an alternative tool to the conventional learning support systems which possess a various role. For example, it helps in enhancing students' learning, collaborative problem-solving, communication and most importantly, it can raise the overall students' academic grades as contrasted to the student who does not get involved in using social media platforms. Consequently, social media platforms remain as the ideal tool to support and assist in collective learning activities amongst students [31] and these interactions strengthen the attainment of desired learning results [36].

However, there has been a little attention in assessing social media platforms used as collaborative learning supporting tool, and most of the past studies tend to concentrate on a particular type of popular or famous social media platforms such as Facebook [11][34], YouTube [28], Twitter [17] and so on. Meanwhile, it is more natural for students to use a collaborative tool that lets them spend more time on it [32] or learn about new technologies that already part of their daily life [23]. Therefore, instead of investigating particular social media platforms, this present paper aims to assess the use of overall social media platforms based on student choices, notably for supporting their collaborative learning activities. What is more, this present study also identifies the highest selected social media platforms used by the student in helping their collaborative work. Following are the objectives of this current study.

1) To identify the most social media platforms used by higher education students as their collaborative learning supporting tool.
2) To assess the extent of social media platforms usage in terms of the frequency of use and length of time spent as a collaborative learning supporting tool among higher education students.

The rest of this paper is organised as follows. Section 2 explains the literature review surrounding social media platforms within the education context, specifically collaborative learning. A detailed methodology presented in Section 3. The finding results described in section 4 and section 5 presents the discussion and conclusion of the study. It ends with part 6 that expresses the limitation of the research, recommendations as well as the directions for future research.

2 What is Collaborative Learning?

[28], stated that collaborative learning is a bunch of students and work together in small groups to bring on each other's strengths and help each other in performing the task. Sometimes collaborative learning also described as a structured organisational whereby a group of students strive on targeted aims through collaborative efforts. In essence, the joint commitment centralising on the same shared goal is the crucial anchor for all joint learning activity [14]. Besides, it demands engagement and participation of all team for a coordinated effort to solve issues or task together [21]. In reality, most of the traditional collaborative learning required physical presence for face-to-face communication. Nevertheless, with the evolving of digital technology like social media platforms brings this traditional collaborative learning to the next level, which interaction can be performed virtually. The following paragraph explains the use of social media platforms for collaborative learning.

2.1 Social media platforms for collaborative learning

The flexible access, literal and synchronous interface, as well as the available capabilities inside social media platforms, have granted them with a profoundly deserved position in the present-day milieu of science and technology [7]. Not only within the science and technology landscape, presently, the applicability of social media platforms also has got its spot and well-accepted in the education system. More importantly, today's social media platforms regarded as the new way of living, communicating, and working, which becomes the dominant influences among the young generation, mostly, the student. Also, they tend to spend more time on this platform in daily life. In simple word, they have developed a virtual experience that functions in parallel to their actual life (reality) [12].

Meanwhile, [20] and [24] defined social media platforms as the interactive channel for both personal and groups that allow the creation, sharing knowledge and exchange of information content. Although in the beginning, social media platform is known as a medium for communication circuit, however, as time goes by, the role of social media platforms also has evolved to advocate more extensive functions like supporting collaborative learning activities. Supported by [13][25] pointed out that social media platforms also used to help students' network, collaborate, and share resources with one another for educational purposes.

Most importantly, social media platforms viewed as to support a spectrum of applications which bestow qualities correlated with pedagogical technologies already in use at tertiary levels like communication, participation, interactivity and collaboration [8]. Besides, students that join social media platforms feel closer to their colleagues as compared to the student who does not use the social media platforms [4][33]. Ideologically, social media platform can become the connector which serves as one way that brings up a group of people into one virtual workplace, which makes it suitable for collaborative learning activities. In line with the discovery by [6] which have discovered that the usage of social media platforms helps to improve the level of engagement, interaction and collaboration within the students and lecturers. Accordingly, it shows there are

opportunities that technologies like social media offer excellent platforms for the context of students' learning [8].

On the other hands, multi-functionality tools such as audio, text, video, images, documents sharing, and other multimedia connection which loaded inside it allow social media platform to offer comprehensive learning support, primarily for collaborative learning [26]. Besides, it incorporated with the ability to provide both asynchronous and synchronous interaction, which makes it incredibly fit with the characteristic of group learning as compared to traditional learning management support which focuses more on delivering learning materials (notes, syllabus, etc.). Nevertheless, social media networks do not intend to substitute the current conventional learning management system but act more as supplements for collaborative learning tools. Indeed, they play a significant role as an indispensable supporting tool for cooperative learning activities which serve as an integral part of student daily lives.

3   Research Methodology

3.1   Overview

A questionnaire survey was used in this present study for data collection. The population of the sample collected from two selected universities (i.e., The University of Manchester and Universiti Teknologi MARA at Melaka branch) in two different countries. Even though the respondents come from two institutions of a different country, it is not a big concern to this present study for the following reasons.

1. Both respondents still embody a similar target group that is tertiary education students.
2. The central aim of this present study is to get diverse report data and not related to the comparison of usage between the two universities or the influences factor of both cultural differences as well as the patterns of education development in each country.

The data collection successfully performed with a total of 80 respondents involved. The respondents from both universities were randomly selected, and the data collection was carried at on different time frame as it included two distinct institutions using the same questionnaire survey. Statistical Package for the Social Sciences (SPSS) software version 23 used to run the analysis of the collected data. The gathered data were analysed entirely using the descriptive statistic for the frequency's outcome.

3.2   Research questions and instruments

There are two parts of the questionnaire instrument in this study. The first part formed to collect data relates to the respondent's general information (e.g., demographic data). In contrast, the second part used to obtain the overall usage and pattern of usage of social media platforms as collaborative learning support tools. The following are the research questions used in this study:

i. What are the types of social media platforms mostly used by higher education students as their collaborative learning supporting tools?
ii. How frequently do both higher education students use social media platforms as their collaborative learning supporting tools?
iii. How long do both higher education students spend time on using social media platforms as their collaborative learning supporting tools?

4 Findings

Table 1. Respondents' demographic information

Variable	Classification	Frequencies	Percentage (%)
Gender	Male	13	16.3
	Female	67	83.8
	18-21 years old	29	36.3
	22-24 years old	43	53.8
Age	25-28 years old	4	5.0
	29-31 years old	2	2.5
	32 years old and above	2	2.5
University	The University of Manchester	37	46.3
	Universiti Teknologi MARA	43	53.8
	Total		100

A total number of 80 questionnaires survey randomly distributed to elected respondents in both universities. Table 1 shows the general information results of respondents (e.g., gender, age and university) from two higher educations.

Table 2. The types of social media platforms mostly used by the students as their collaborative learning support tools.

Type of Social Media Platforms	The University of Manchester	Universiti Teknologi MARA
	Per cent of Cases (%)	*Per cent of Cases (%)*
Facebook	13.51	32.56
Twitter	2.7	6.98
WeChat	86.49	48.84
WhatsApp	24.32	69.77
Others	13.51	11.63
Total	140.54	169.77

Result in Table 2 displays the overall variety amount of social media platforms utilised by students as their collaborative supporting tools of both institutions. As students are permitted to choose more than one choice of social media platforms that they used, the total per cent of cases in both universities may sum up to more than 100 per cent. The result indicates that the majority of the students from the University of Manchester employed WeChat as their first choice for the group work supporting tool.with 86.49percent. On the contrary, WhatsApp emerged as the choice of Universiti Teknologi MARA students as their work support tool with 69.77percent. In the

meantime, Twitter has become the smallest type of social media platform used by students in both universities as their collaborative supporting device.
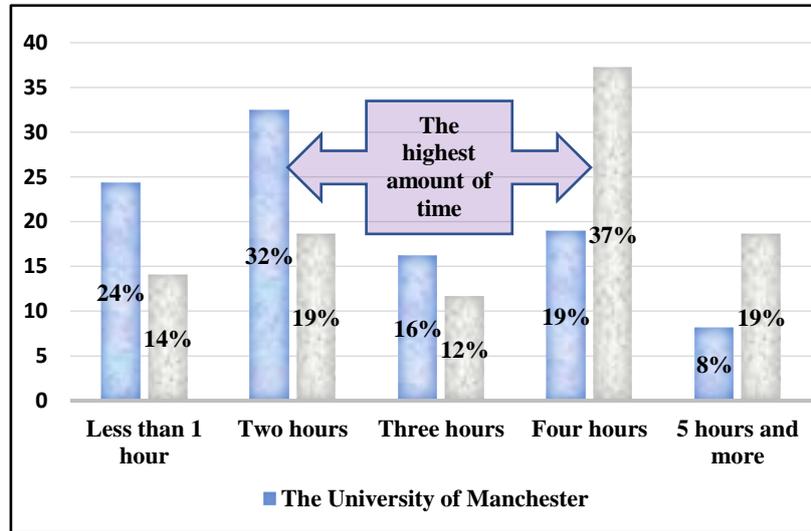
Fig. 1. The frequency of usage of social media platforms as collaborative learning supporting tools at two universities within one week

Figure 1 demonstrates the rate of social media networks usage among the students in two selected universities. The result presents that most of the students in both institutions (UoM and UiTM) employed social media platforms 'four times and more' with the percentage of 38% and 49% each as their collaborative supporting tools in a week. In the meantime, the lowest rate of usage by the students from Universiti Teknologi MARA was 'one time' of usage with a percentage of 2%. In contrast, the smallest amount of usage among the University of Manchester students was equal between 'one time' and 'two times' usage with a percentage of 19% within a week. However, both results on for the lowest percentage of users did not outweigh the overall result considering students from two institutions still utilised social media platforms as their collaborative supporting tools at least 'one time' in a week. Accordingly, this milestone proves that students in these two universities actively used social media platforms as their group work supporting tools.
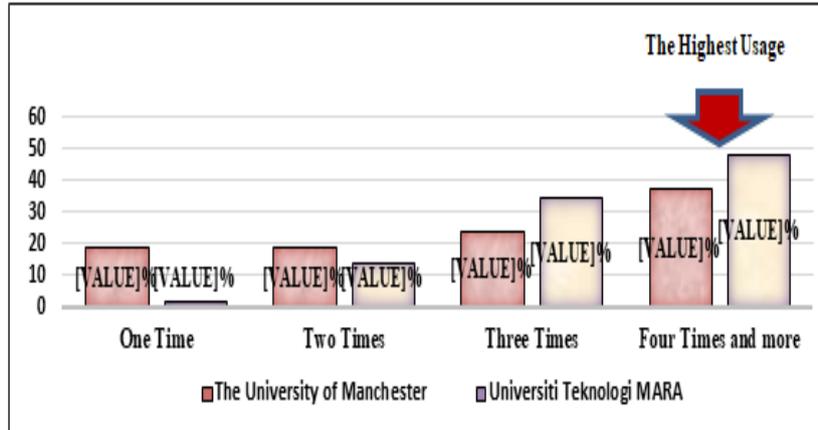
Fig. 2. The amount of time spent using social media platforms as collaborative learning supporting tools at two universities for one week

The length of time spent in Figure 2 shows there are differences on the highest amount of time spent on social media platforms among students in the two universities as a collaborative learning supporting tool throughout one week of use. Universiti Teknologi MARA students spent the longest time in using social media platforms with 4 hours (37%) to support their group work in a week. Meanwhile, the students from the University of Manchester spent 2 hours (32%) in utilising social media platforms to promote their group activities within a week. Nevertheless, these results contrasted to the rate of usage which students of both universities evenly used social media platforms with 'four times and more' as the highest amount of their usage in a week.

Meantime, the lowest amount of time spent by the students in both universities are 'five hours and more' (8%) and 'three hours' (12%), respectively. Despite the presence of the lowest amount of time spent, the students in both universities still employed social media platforms as their group learning supporting tool at least 'less than one hour' in one week. Thus, it suggests that social media platforms are still counted dominantly powerful, which manages to attract student's attention to stay utilising it, primarily as their collaborative learning supporting tool. In briefly, the dynamism of social media platforms equipped with multifunctional appliances able to support collaborative learning activities among students.

5   Discussions and Conclusion

Overall, the utmost of the students of both universities found to be energetically utilised their preferred social media platforms as collaborative supporting devices. Most of the University of Manchester students adopted the WeChat platform as their prime option of group work support tool while Universiti Teknologi MARA student used WhatsApp platform. Prior researchers [5][15][22] also supported that students employed social media platforms transcending of any available education-related

technologies since off they already comfortable as well as experienced with the features offered including with its background settings. Besides, social media platforms also deemed as in line with pedagogical technologies since it provides features use for tertiary levels such as communication, participation, interactivity and collaboration [8]. Additionally, another result also showed that most of the students in both universities actively used social media platforms with 'four times and more' within a week as their collaborative supporting tool. It suggests that social media platforms were positively able to get the student's attention to keep using it. Something that not surprising anymore because social media platforms have formed a virtual experience that goes in parallel to their real-life such as for communication, socialising and working [12].

Moreover, the use of social media platforms as a learning tool also found can increase the student participation and engagement [9][16][18]. A mixed result found on the amount of time spent in using social media platforms between both universities to support their group activities. Students from Universiti Teknologi MARA spent the longest time in utilising social media platforms of 4 hours (37%) in one week while the University of Manchester students spent of 2 hours (32%) in one week. Despite this, overall, students in both universities spent their time using social media platforms as their collaborative learning supporting tool at least 'less than one hour' in a week. Something that can be considered as satisfying, which is better than none of the time spent by the students throughout that week.

A foreseen scenario since social media platforms embedded with relevant features in assisting the collaborative learning activities, as well as the biggest reason to draw student's attention which results in a prolonged time of usage. A point that supported by [6] which also stated that the various features inside social media platforms are capable of improving the amount of interaction, usage, and collaboration. More importantly, it is competent to meet the necessity and preferences of today's students' [26][30]. Something that is agreed by [32] on the positive value brought by social media platforms in supporting the students' learning activities. Indeed, the result of this study reveals that social media platforms play a vital part in helping students to perform their joint learning activities. Overall, the results of the assessment suggest that:

i.   The multidimensional features within social media platforms largely contribute to the active usage and higher engagement among students in employing it as their collaborative learning tool.

ii.   Living as part of daily student life; the usage of social media platforms has positively influenced a more extended period spent by the student in using social media platforms as their collaborative supporting tool.

iii.   These results imply that social media platforms capable of serving as a group work tool to support different sort of student collaborative activities.

Following are the value-added brought by this research paper for future researcher and practitioners. The result from this present paper could drive the forthcoming practitioner for the expansion of the investigation primarily centering on the student choices of social media platforms to assist their group work. And, the study opens up a different perspective for discussion and review opportunities for future researchers in looking at

the level of usage of overall social media platforms, primarily based on student decision to assist their group work.

6   Limitations and Future Suggestions

Same as any other research, the paper also holds limitations as follows. First, this current research investigates only in two selected universities, which the results may not be generalisable and thoroughly comprehensive. Therefore, future research is suggested to carry the study on a larger scale (e.g., more institutions from other countries) to get an added multifariousness proof. Secondly, considering this study only focuses on assessing the frequency of use and length of time spent. Therefore, it is suggested future practitioners and researcher look into a broader prospect like the reason for using social media platforms as a collaborative supporting tool, including its impact on group project performance.

7   References

[1] Ainin, S., Naqshbandi, M. M., Moghavvemi, S., & Jaafar, N. I. (2015). Facebook usage, socialisation and academic performance. Computers and Education, 83: 64–73. https://doi.org/10.1016/j.compedu.2014.12.018

[2] Ajjan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. Internet and Higher Education, 11(2): 71–80. https://doi.org/10.1016/j.iheduc.2008.05.002

[3] Al-Rahmi, W. M., & Zeki, A. M. (2017). A model of using social media for collaborative learning to enhance learners' performance on learning. Journal of King Saud University - Computer and Information Sciences, 29(4): 526–535. https://doi.org/10.1016/j.jksuci.2016.09.002

[4] Annetta, L. A., Minogue, J., Holmes, S. Y., & Cheng, M.-T. (2009). Investigating the impact of video games on high school students' engagement and learning about genetics. Computers & Education, 53(1): 74–85. https://doi.org/10.1016/j.compedu.2008.12.020

[5] Appel, M. (2012). Are heavy users of computer games and social media more computer literate? Computers & Education, 59(4): 1339–1349. https://doi.org/10.1016/j.compedu.2012.06.004

[6] Awodele, O., Idowu, S., Anjorin, O., Adedire, A., & Akpore, V. (2009). University enhancement system using a social networking approach: extending e-learning. Issues in Informing Science and Information Technology, 6(1): 269–283. https://doi.org/10.28945/1058

[7] Benson, V., Saridakis, G., & Tennakoon, H. (2015). Purpose of social networking use and victimisation: Are there any differences between university students and those not in HE? Computers in Human Behavior, 51: 867–872. https://doi.org/10.1016/j.chb.2014.11.034

[8] Carr, D., Crook, C., Noss, R., Carmichael, P., & Selwyn, N. (2008). Education 2.0? Designing the web for teaching and learning: A Commentary by the Technology Enhanced Learning phase of the Teaching and Learning Research Programme. Retrieved from http://www.tlrp.org/tel/files/2008/11/tel_comm_final.pdf

[9] Chen, P. S. D., Lambert, A. D., & Guidry, K. R. (2010). Engaging online learners: The impact of Web-based learning technology on college student engagement. Computers & Education, 54(4): 1222–1232. Retrieved from http://www.sciencedirect.com/science/article/pii/S0360131509003285. https://doi.org/10.1016/j.compedu.2009.11.008

[10] Chen, B., & Bryer, T. (2012). Investigating instructional strategies for using social media in formal and informal learning. The International Review of Research in Open and Distributed Learning, 13(1): 87–104. https://doi.org/10.19173/irrodl.v13i1.1027

[11] Divall, M. V, & Kirwin, J. L. (2012). Using Facebook to Facilitate Course-Related Discussion Between Students and Faculty Members, 76(2): 1–5. https://doi.org/10.5688/ajpe76232

[12] Eteokleous, N., Ktoridou, D., Stavrides, I., & Michaelidis, M. (2012). Facebook-a social networking tool for educational purposes: developing special interest groups. In ICICTE 2012 Proceedings, 363–375.

[13] Evans, B. M., Kairam, S., & Pirolli, P. (2010). Do your friends make you smarter? An analysis of social strategies in online information seeking. Information Processing and Management, 46(6): 679–692. https://doi.org/10.1016/j.ipm.2009.12.001

[14] Häkkinen, P., Arvaja, M., & Mäkitalo, K. (2004). Prerequisites for CSCL: Research Approaches, Methodological Challenges and Pedagogical Development. Learning to Collaborate and Collaborating to Learn, 161–175.

[15] Hurt, N. E., Moss, G. S., Bradley, C. L., Larson, L. R., & Lovelace, M. (2012). The 'Facebook' Effect: College Students' Perceptions of Online Discussions in the Age of Social Networking. International Journal for the Scholarship of Teaching and Learning, 6(2). https://doi.org/10.20429/ijsotl.2012.060210

[16] Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. Computers and Education, 58(1): 162–171. https://doi.org/10.1016/j.compedu.2011.08.004

[17] Junco, R., Elavsky, C. M., & Heiberger, G. (2013). Putting twitter to the test: Assessing outcomes for student collaboration, engagement and success. British Journal of Educational Technology, 44(2): 273–287. https://doi.org/10.1111/j.1467-8535.2012.01284.x

[18] Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on college student engagement and grades. Journal of Computer Assisted Learning, 27(2): 119–132. https://doi.org/10.1111/j.1365-2729.2010.00387.x

[19] Kalasi, M. R. (2014). The Impact of Social Networking on New Age Teaching and Learning: An Overview. Journal of Education & Social Policy, 1(1): 23–28.

[20] Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. Business Horizons, 53(1): 59–68. Retrieved from http://www.sciencedirect.com/science/article/pii/S0007681309001232. https://doi.org/10.1016/j.bushor.2009.09.003

[21] Lehtinen, E., Hakkarainen, K., Lipponen, L., Rahikainen, M., & Muukkonen, H. (1999). Computer supported collaborative learning: A review. The JHGI Giesbers Reports on Education, 10.

[22] Liu, Y. (2010). Social Media Tools as a Learning Resource. Journal of Educational Technology Development and Exchange, 3(1): 101–114.

[23] Mahmood, N. (2016). The role of multimedia components in distance learning environments. In G. Chamblee & L. Langub (Eds.), Proceedings of Society for In-formation Technology & Teacher Education International Conference 2016 Savannah, GA, United States: Association for the Advancement of Computing in Education (AACE), 2174–2178.

[24] Pilli, O. (2014). LMS Vs. SNS: Can Social Networking Sites Act as a Learning Management Systems? Head of Department of Computer and Instructional Technologies. American International Journal of Contemporary Research, 4(5): 90–97.

[25] Ractham, P., Kaewkitipong, L., & Firpo, D. (2012). The Use of Facebook in an Introductory MIS Course: Social Constructivist Learning Environment. Decision Sciences Journal of Innovative Education, 10(2): 165–188. https://doi.org/10.1111/j.1540-4609.2011.00337.x

[26] Ralph, M., & Ralph, L. (2013). Weapons of Mass Instruction: The Creative use of Social Media in Improving Pedagogy. Issues in Informing Science and Information Technology, 10: 449–460. https://doi.org/10.28945/1821

[27] Rinaldo, S. B., Tapp, S., & Laverie, D. A. (2011). Learning by Tweeting: Using Twitter as a Pedagogical Tool. Journal of Marketing Education, 33(2): 193–203. https://doi.org/10.1177/0273475311410852

[28] Roodt, S., & De Villiers, C. (2011). Using YouTube© as an innovative tool for collaborative learning at undergraduate level in tertiary education. In Proceedings of the 2011 International SIGED: IAIM Conference, 1–13.

[29] Sarwar, B., Zulfiqar, S., & Aziz, S. (2018). Usage of Social Media Tools for Collaborative Learning: The Effect on Learning Success with the Moderating Role of Cyberbullying. Journal of Educational Computing Research, 1–34. https://doi.org/10.1177/0735633117748415

[30] Selwyn, N. (2007). Web 2.0 applications as alternative environments for informal learning- a critical review. In Paper for CERI-KERIS International Expert Meeting on ICT and Educational Performance, 16–17.

[31] Tarantino, K., Mcdonough, J., & Hua, M. (2013). Effects of Student Engagement with Social Media on Student Learning: A Review of Literature. The Journal of Technology in Student Affairs, 1(8): 1–13.

[32] Tasir, Z., Al-Dheleai, Y. M. H., & Harun, J. (2011). Students ' Perception towards the Use of Social Networking as an e-learning Platform. Proceedings of the 10th WSEAS International Conference on Education and Educational Technology (EDU '11), 70–75.

[33] Tomai, M., Rosa, V., Ella, M., Acunti, A. D., Benedetti, M., & Francescato, D. (2010). Virtual communities in schools as tools to promote social capital with high schools' students. Computers & Education, 54(1): 265–274. https://doi.org/10.1016/j.compedu.2009.08.009

[34] Wang, Q., Woo, H. L., Quek, C. L., Yang, Y., & Liu, M. (2012). Using the Facebook group as a learning management system: An exploratory study. British Journal of Educational Technology, 43(3): 428–438. https://doi.org/10.1111/j.1467-8535.2011.01195.x

[35] Wheeler, S., Yeomans, P., & Wheeler, D. (2008). The good, the bad and the wiki: Evaluating student-generated content for collaborative learning. British Journal of Educational Technology, 39(6): 987–995. https://doi.org/10.1111/j.1467-8535.2007.00799.x

[36] Yan, A., Wen, S., Vogel, D., & Kwok, R. C. (2010). Can learning be virtually boosted? An investigation of online social networking impacts. Computers & Education, 55(4): 1494–1503. https://doi.org/10.1016/j.compedu.2010.06.015

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