

# Collaborative and Cooperative Learning through Social Media



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*Social media has influenced all fields including education. Literally, internet is replacing the traditional library as it a vital source of information. Employers also seek graduates with IT skills and are able to work with social media and internet in general and especially in management discipline. With learners' perceptions, the aim hereto is to investigate and provide a critical review of the social media usage for collaborative and cooperative learning among graduates with focus on management students. Adopting mixed methods, combination of theoretical and empirical findings the data collection is through interviews of students.*

**Keywords:** Attribute; Management Education; Graduate; Learning; Pedagogy; Student

## 1. Introduction

Changes in technology have led to modifications in generally accepted educational perspective. According to Seattler (2004, p. 4), "the historical function of educational technology is a process rather than a product". Early part of the twentieth century, blackboard as a tool encouraged group work and individual consultations with the students (Adelsberger, Kinshuk, Pawlowski, & Sampson, 2008). During the twentieth century, as Adelsberger et al. (2008) state, the emergence of media-richness was through mass media. At that time, the addition was the quality of being composed of relatively large particles in the microcomputers. Since the late 1970s, the issue of technology's influence on students' learning and academic achievement is in discussion and debate (Edens, 2008). So from early 1980's there has been an expansion of Internet based tools and methods to support the educational system on and off campus (Williams, Paprock, & Covington, 1999). As information and communication technology (ICT) has progressed, it is playing greater role in educational process as well (Keller & Cernerud, 2002) and a number of studies acknowledge computer-supported collaborative learning (CSCL) as a vital part of effective learning where the students can reach out even through social media (Weinberger & Fischer, 2006). In the twenty-first century, the significant and distinctive attribute of education is the Internet-based computing, which offers diverse technical capabilities, such as *online learning*. However, ICT deployment in institution of higher education is not a new phenomenon but *elearning* is of recent times through digital media, to support learning process (Keller & Cernerud, 2002).

The terms 'computer-based' refers to the online education support (Williams et al., 1999), using e.g. bulletin board systems, e-mail systems, and computer/Internet-mediated prearranged meetings to consult and exchange information, VLEs and other technologies. According to many authors, the young generation are frequently using social media technologies for communication and collaboration (Smith, Sachs, Carss, & Chant, 1988). For learners, primary issue in a modern online learning platform is to gain meaningful and perceptible knowledge (Chen & Chen, 2008). Distance and distributed education has come into existence in the academia, initially by using TV and radio, and completing by synchronous and asynchronous communications and online degree programs (Miller & Lu, 2003). Knowledge as recent educational development, as Rogers, Berg, Boettecher, Howard, Justice, & Schenk, (2009) argues, is pertinent to learners of the 21st century.

Emergence of elearning or online technology has provided learners with a new approach. They have access to diversity of resources and make use of online knowledge-based platforms, which no longer makes physical presence in particular places necessary (Chen & Chen, 2008). Though online technology opens up new ways to interact through systems, which will definitely be of support to academics and probably enhance learning one of the issues, is the task of convincing both the academics and student community to adopt new ways of interaction. Yet the use of technology to support education learning does exist in academic system (Caraher and Braselman, 2010). However, there are few studies to reflect how social media, which is also the by-product of internet and information technology, is in position and use in higher education. With learners' perceptions, the aim hereto is to investigate and provide a critical review of the social media usage for collaborative and cooperative learning among graduates with focus on management students. Adopting mixed methods, combination of theoretical and empirical findings the data collection is through interviews of students pursuing management programmes.

Thus, the core aim of this paper is to review critically the usage of social media by management students. In doing so, the paper also delves on how students use social media, as well as explore social media utility and limitations from learning perception; especially the reflection is on how the use of social media in management education can enhance and promote collaborative and cooperative learning. The research question exploration and is by combining the theoretical and empirical findings to make the conclusion. This question guide the empirical data collection and interviews. On the other hand, by focusing on exploring the answer of the research problem, more related questions might arise. This is a qualitative research study adopting case based approach (Saunders, Lewis, & Thornhill, (2007). A selection of 10 candidates who have undertaken management program during 2014-2017 is the sample. A semi-structured interviews (Appendix) based on random selection of five students who completed their study abroad programme with a framework was used to guide data analysis

based on the work of Crabtree and Miller (1999). In addition, initially there was a coding template construction from a preliminary scan of the transcripts (Denzin, 2001). Combining the literature reviewed and relevant themes identification, data from all sources and interviews, thematic analysis approach was undertaken. Thus, this study documents and analyses narrative of five students who undertook and completed their Master's program in management

### Background

Accordingly, in order to fulfil the purpose of this study, we did interviews to reflect the user perspective, which is significant for this study. Largely, in this study, the focus is on students' point of view, as the key users of social media utilization for developing educational learning. In fact, the media students primarily use may be similar; however, the ways of utilization may differ person to person. Social media supports users to access valuable information and knowledge through various sources. Social media has broken many barriers and created new grounds for interaction, but there may be confusion as to what exactly social media as a term includes and the underlying difference from other similar and related concepts (Kaplan & Haenlein, 2010). Here social media refers to a utility tool to support, develop and assimilate online technologies and educational learning. Some of the technologies famous as social media are Wikipedia, YouTube, Facebook, and some virtual environments (Kaplan and Haenlein, 2010). In simple words, technology used by learners on their belief that it aids their learning process is thought-out as social media. According to Caraher and Braselman (2010), education includes necessarily collaboration and social media is a tool for many learners to collaborate and interact for real-time dialogue in knowledge or data sharing.

## 2. Literature Review

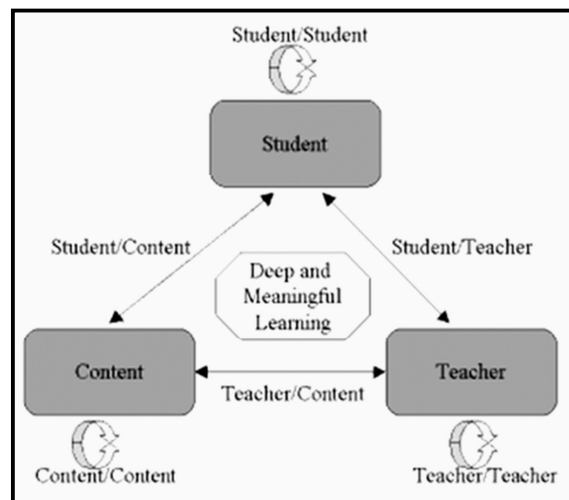
Online interaction is a significant way of communication in virtual environments (Smith & Curtin, 1998). In academia, as Bereiter (1990) suggests, there should be a variety of available resources to help learners in bootstrapping their way to higher-level cognitive structures. Information and communication technology (ICT), used in educational system, is needed to be flexible to provide adaptability to a particular online learning situation. "*Technology enables students to reach new levels of connectedness to their professors, peers and others during a time that is incredibly demanding of our time and energy*" (Caraher & Braselman, 2010, p. 22). There are different factors, affecting media and services performance in educational learning and user satisfaction. These factors are student, teacher, course, technology, system design, and environment (Suna, Tsai, Fingerc, Chend, & Yeha, 2008).

### Social Media use for Educational Learning

Caraher and Braselman (2010) show "*64% of students use social media to 'connect with classmates' to study or work on class assignments at least several times per month. 41% use social media to 'study or work on class assignments' at least several times per month. 27% use Social Media to 'connect with faculty to study or work' on class assignments, at least several times per month*" (Caraher & Braselman, 2010, p. 13). According to Hrastinski, Keller, & Carlsson, (2010, p. 659), "*Synchronous media were argued to be more useful to support tasks and exchanges such as planning work.*" The important and related web-based concepts frequently considered and used as social media are Web 2.0, synchronous and asynchronous media alike as e-mail and IM. Web 2.0 is a web-based platform whereby through participation, collaboration and cooperation there is a continuous content modification by users including applications.

At this time, applications belonging to the era of Web 1.0, like personal web pages, encyclopaedia and content publishing is switching to eforums, blogs and wikis in Web 2.0. *User Generated Content* (UGC) is applications enabling learners to make use of social media, which is by referring to various publicly available forms of media content end-users (Kaplan & Haenlein, 2010). Keller and Cernerud (2002) state some of digital social media and elearning system: web pages, online video conference, as well as text, graphics etc. Additionally, there are technologies, like social software and web 2.0, blogs, wiki, virtual world, voice and video technology, online meeting, games, mobile learning, learning objects open source and open standard, web-based supports for literatures, which are used by students to support their studies and educational learning.

Alexander (2001) argues that all education initiatives aim at supporting students to learn regardless of the media used. There are different ways that media technology significantly supports two-way educational interactions and communications (Bates, 1995). These social interactions, supported by new technologies as the main key, have consequently led to increased learners' interest in *collaborative* and *cooperative learning* (Underwood, & Underwood, 1999). Since educational system has become more learner-based, instructors rather focus on educational learning than covering the content (Mason & Reni, 2008). By using social media, learners' enablement enhances to communicate with others engaged in educational learning. Moore (1989) described three central types of interactions in educational learning: learner-content, learner-instructor, and learner-learner interactions, which are the core of this study. Compared to Moore's model, Anderson and Garrison (1998) have come up with a new model to cover other possible interactions besides those that Moore already introduced. Garrison and Anderson (2003) offer a new idea, beyond one-way interaction between students, contents and teachers, showed in Figure 1.

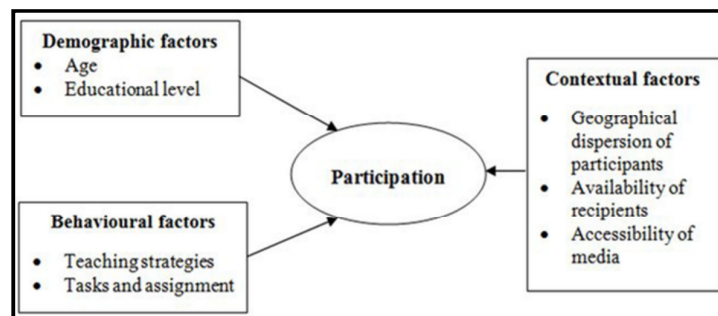


**Figure 1** Interaction Modes  
Source: Anderson & Garrison (1998)

This model adds interaction perspectives for teacher-teacher, teacher-content, content-content to the existing Moore's model. Afterwards, Dron (2007) has introduced four groups/sets for further significant interactions, which include student-set, teacher-set, content-set and the group-set itself.

### Dynamics Prompting Social Media Usage

When a learner aims to understand or explain an issue, it is important to consider the required interactions, besides the influencing factors. Some of the factors that may affect learners' online participation and, consequently, their educational learning is in Figure 2. The three types are demographical, contextual and behavioural factors encompass different micro-level factors. The focus here is on the factors, affecting "how" students use online technologies.



**Figure 2** Online Student Participation Factors  
Source: Adopted Hrastinski (2007)

The first category, *Contextual factors*, which according to Massey and Montoya-Weiss (2006) affect the perceived usefulness of social media. This includes the three imperative issues namely: geographical dispersion, recipients and accessibility. Many studies also reflect that learners agree that there are important issues that affect use of social media and thereby participation in online learning. Accessing different recourses and people at a distance, motivates students to use social media. Further one of the important is the availability of the recipients' since there non-availability may lead to choice of another medium (Hrastinski, 2007). Some studies show that existing technical problems or lack of support influence specific medium utility and user satisfactions. When there are technical problems, which limits the accessibility of a medium, it is less likely that students adopt using of that medium for their educational interactions.

In the *demographic factors*, three factors are in reference relevant to this study 'age', 'educational level', 'learning style'. 'Age' is a complex issue, discussed in many scientific articles and there is a perception that it affects participation (Keller & Hrastinski, 2006) meaning digital age learners who are of course belong more to younger generation, will desire to participate in online learning by using social media. In contrast, other findings in an opposing direction illustrate that the social media utilization is more in relation to the educational learning system, especially in the university level (Gerhard & Mayr, 2002). Regarding the 'educational level', Gerhard and Mayr (2002) note that as the level of education raises students' demands for education correspondingly increase. However, as they discuss, fulfilment of all demands for specialized education is possible, given that not many learners are able to attend campus courses.

In *behavioural factor*, the key factors are ‘teaching strategies’ and ‘tasks’. However, the most crucial to successful online education are teaching strategies, planning and teaching/learning context (Alexander, 2001). ‘Teaching strategies’ is an e-learning activity, considered as a key issue in fulfilling education purposes. Moore (1989) states that instructors’ roles are significant in order to motivate, support, and enhance learners’ interest in participation. In accordance to this, Hrastinski (2007) argues the importance of teachers’ roles to inspire students for online participation, especially in web-based educations. This means that teaching strategies play an essential role in stimulating students to use such media.

On the other hand, as Dron (2007) discuss, too much instructional control may lead to unsuitable method, which makes students bored, unmotivated or confused. ‘Tasks’ and teaching/learning context is an issue that affects successful learning processes. Instructors play important roles in shaping students’ educational interactions, especially their communications with peers. The tasks, formulated by instructors, are significant to motivate students to collaborate with other students. Consequently, tasks or teaching contexts influence students’ participation in cooperative and collaborative learning and using social media to work efficiently in a group.

### **Social Media support to Educational Learning**

ICT development enables globalization, which calls for lifelong learning in organizations and societies (Baporikar ... Bouwen and Taillieu, 2004). Online learning is on significant rise in academics due to economies of learning as it saves time and travel costs (Mitchell & Honore, 2008). Key features identified in online learning include dialogue, involvement, support and control (DISC) Stephenson (2001).

‘Dialogue’ is associated with different media communication, in different forms, among students as well as students and instructors. By developing the information system concepts, dialogue-based collaboration has been changed and getting better over time (Bouwen & Taillieu, 2004). Dialogue may include either real two-way communication or internal didactic conversation. “*When using a computer connected to the Internet with appropriate software (physical tool), it is possible to communicate with others by using language (psychological tool)*” (Hrastinski, 2007, p. 23). VLE, real-time/synchronous or asynchronous communication, forums for group discussion or debate, e-mail, bulletin boards, and texting, are some of the dialogue’s examples (Hrastinski, 2009; Stephenson, 2001). As Selwyn and Robson (1998) state, e-mail is a hybrid of oral and written communication to simplify acquiring and exchanging information. The study findings by Margaryan and Littlejohn (2008) indicate e-mail to be main online medium in use for interaction among learners and failiators. However, “*Students use their own tools (mobile phones, instant messaging) to contact peers and discuss relevant issues or collaborate whenever they need to*” (Margaryan & Littlejohn, 2008, p. 5). Computer-based media is thus important for communications in distance learning and design of computer dialogues in online education (Dillenbourg, 1999).

‘Involvement’ regards activities like student direction and collaboration in structured tasks, flow and motivation, and active engagement with material (Stephenson, 2001).

‘Support’ refers to the essential feature related to feedback on performance, peer support, support service and software tools (Stephenson, 2001). Online technical support is also important for learners’ interactions in online learning. Some strategies for online learning support include offering additional materials like reference links, study links, assignment options or even posting representative of past student work (Miller and Lu, 2003). Supportive ways for sustenance of educational learning through support tool implementation is possible by using online technology, e.g., VLEs and e-mail.

‘Control’ is about learners’ authoritative power over important learning performance and the way to exercise that authority (Stephenson, 2001). Dron (2007, p. 61) points out the fact “*being a learner implies a lack of knowledge and consequently requires control to be delegated to one who possesses that knowledge and is willing to communicate it, whether directly or mediated through a book, web page or computer program*”. Further, controls can cover responses to exercises, purposes, learning outcomes, overall direction and assessment of performance for the spent time on the course (Stephenson, 2001). Another issue pinpointed here is the ability of social media to enhance educational learning by supporting students’ cooperation and collaboration, explained in the next subsection.

## **3. Results and Discussion**

The researcher who explained the purpose of the study and sought their permission to conduct interviews contacted the participants. All agreed to participate in the study and the researcher’s prior acquaintance with most of them facilitated the process. To ensure confidentiality of participants, no names or organizational references are used. The interviews are conducted in English but help sought from translator on need basis due to ease of communicating certain terms/concepts in English. On average, interviews lasted for 60-90 minutes and followed an interview guide purposely developed to solicit responses pertaining to their usage of social media for learning and education and their perceptions of the challenges facing in use of social media. The questions formulation base is on the literature reviewed and the stated goal of the study. Open-ended questions are there to allow maximum flow of information.

### **Rationale for Use of Social Media**

Students of management programmes like anywhere undertook studies because of the belief that it would provide opportunities for growth, development and enhance their professional career. Ambitions get the trigger by awareness that managers require higher degree especially at Masters-level to get promotion and have career progression. Given below in Table 1 are some of the salient responses under two broad categories: career aspirations and self-growth and knowledge and skill acquisition.

Table 1 Salient Responses

Category	Respondent	Response
Profession targets and individual growth	1	<i>When I first started using social media it was because I was thinking of getting to know the classmates and that is essential for peer learning and interaction.</i>
	2	<i>It is a nice opportunity to grow in our profession and to have a good position/designation in the industry.</i>
	3	<i>In business and corporate sector, majority of managers are not using social media, so ability to use it effectively to enhance skills is management, is valued by organizations..</i>
	4	<i>A manager who had done his MBA outside presented some lectures. His lectures reflected confidence, language perfection and matured approach as compared with us who did not integrate social media during studies. That also encourages us to adopt social media becoming more matured, confident and professional.</i>
Knowledge and Skill Acquisition	1	<i>Social media usage gives more opportunities to bring up-to-date our knowledge. In work life due to job requirements though the skills are there, the theoretical/academic/knowledge part is missing. To update knowledge, social media platforms gives good chance as one is totally free to interact and there is a relief that one can do from anywhere at any time which lessens the stress from the work and other responsibilities too.</i>
	2	<i>I started using email first, because first I like to keep in touch with people and colleagues. I wanted to improve myself, change as I had faced many times challenges in many things including customer care and client servicing. I could not understand how to engage in and do client service due to lack of data, information and understanding including how to access even the available knowledge base.</i>
	3	<i>I have started using social media to advance and expand my knowledge, for the simple reason that after the contact hours and completing modules my thinking was constricted and not holistic. Now, due to social media interaction, which facilitates peer learning I am able to think and understand in a holistic and evidence, based manner. Apart from that I also get to know differing perspectives..</i>
	4	<i>I feel the necessity of more information, facts and knowledge and this is also required to access efficiently the internet so that I can develop research competences and abilities to analyze the robust data about any topic and upcoming developments in management.</i>
	5	<i>I am expected to know how to comment on, and do further inquiries. Especially on problematic issue in my work place or functional area or when unexpected occurs in my organization, I now go back just to see where things went wrong or missed out so that one can take corrective actions and even do collaborative discussion with peers from different organizations.</i>

Source: Self Developed

In addition to the above, others mentioned during the discussion and interviewing process include

- Knowledge and skill acquisition through interaction for improving professional development
- Understanding differing and new interests during the use of social media as it offers many new activities and interests. Some mentioned they also had the chance to forms forums of likeminded professions, start blog writing etc.,
- Establishing global relationships, friendships, and increase, their network as the use of social media gives the opportunity to overcome physical boundaries.
- Using social media in their study them not only independent as it tested abilities to adapt to diverse situations, deal and solve problems but also explore the courses and self in terms of ideas and perspectives leading to better self- discovery and understanding.
- Appreciate different cross cultural and contextual perspectives, an opportunity to observe new ways of thinking, of life and the world with incredible new outlooks, networks and associations.

#### 4. Effect of using Social Media

##### Positive Aspects of using Social Media

*"A recent technology that has made it possible to communicate over a distance easier, quicker and cheaper is the Internet or often by exchanging text, is Internet and Computer-Mediated Communication (CMC)."* (Hrastinski, 2009, p. 80; Hrastinski 2007, p. 22). CMC is an Internet-based way of communication over distance, which fulfils different educational purposes and has various definitions that may refer to synchronous or asynchronous interactions. CMC is virtual reference to email, chat, computer conferencing, or accessing information through online databases as CMC applications (Curtis & Lawson, 2001). As Piccoli, Ahmad, & Ives, (2001) mention, using online learning encompass advantages such as convenience and flexibility over traditional education. As Suna et. al (2008) discuss, e-learning is a web/Internet-based system, delivers education to learners and support them to access knowledge and information, regardless of where they are. In accordance, as Mitchell and Honore (2008) state, online learning comprises knowledge transferred through interactions over the Internet directly to the learner, beyond the classroom. In online learning, as there is less limitation and separation between learners and instructional system, interactions are easier and the learning process is more efficient (Moore, 1989). Social software, used in online learning, supports pedagogical communications. These tools help gaining new knowledge by accessing online resources, besides having the opportunity of interacting with instructors or students anytime, anywhere. As Hrastinski (2007) argues, the

advantage of “anytime, anywhere” feature is that students with restrictions from family or work may still participate in online education, since social media enable them to access information and interact with others online. Online collaboration and communication give learners possibility of working with new people with different backgrounds to exchange and gain new knowledge (Curtis & Lawson, 2001).

Further, interactions by using media that include video, audio, and document sharing or real time text interaction, refer to synchronous interactions and students show there is a need to use this (Curtis & Lawson, 2001). By using synchronous communicating devices, learners get quick and straight replies with no time delays. Hrastinski discusses online video-based resources, like YouTube, that support students to learn new knowledge out of classrooms. In addition, using discussion boards makes the advantage that learners can go back into the records of discussion to make more use of it (Curtis & Lawson, 2001). Social Media thus provides many advantages for collaborative learning like assisting each other; exchange of resources; clarification of complex knowledge; sharing existing knowledge; reflections and feedback. Furthermore, advocating increased effort and perseverance among peers, engaging in group-skills, monitoring each other’s efforts and contributions are significant media utilities in online learning (Curtis & Lawson, 2001).

### **Negative Aspects of using Social Media**

Any new mode of interaction will have some negative aspects and some of the negative aspects in social media usage include the difference between online interaction and face-to-face interaction that is the lack of the non-verbal cues, which does reduce the extent of the communication (Curtis, and Lawson 2001). Another issue is of likely misinterpretation due to limited ability of non-verbal communication to exchange feeling like deficiency in voice and tone transmission, gestures, eye contacts, etc. (Markus, 1994). Other disadvantages include the costly high failure rate, limited use of social media mainly restricted to formal learning environments, technical problems like peers availability or the medium accessibility as and when one wants (Arbaugh and Duray, 2002; Margaryan and Littlejohn, 2008 and Keller & Hrastinski, 2006). Further, lack of established grounded theoretical framework for using technology in terms of pedagogy is another negative aspect of (Bates, 1995).

Curtis and Lawson argue that the capacity of the communication links limits different forms of asynchronous interaction and only text interaction is accessible and reliable without difficulty. They also discuss that collaboration, as a learning activity, requires considerable time. Although online collaboration has advantages, it is time –consuming as one has to rely on other communicators who may have different priorities (Curtis & Lawson, 2001). Furthermore, online asynchronous conversations occur with substantial delays in receiving a reply. In asynchronous communication for collaborative learning, the time delay is a negative issue since there is not an agreed or expected work schedule (Curtis & Lawson, 2001). In concurrence, perception is that communications through social media is not useful, and learners rather have a tendency to interact with others face-to-face (Massey & Montoya- Weiss, 2006).

### **Reasons Students are using Social Media**

As per the discussion above in the theoretical framework section, all students believe in accessibility and anywhere and anytime approach. Management students prefer to access content, teacher, and student, from anywhere at any time. Further, many students are in agreement that using such media makes interactions more convenient, faster and cheaper (Moore, 1989). One third of the students believe that social media is a good way of communication; due to costs being mostly free of charge and other half think that saving time is a significant issue. Some of them do feel however, their interactions are more efficient, though not so effective sometimes. Flexibility and independency are also two important matters. Students could have their own schedule and still keep in contact with others. They can be independent by using online recourses and available online information. Additionally, many learners can access one document simultaneously, without wasting time and waiting for library resource or availability. Many students mention the convenience that they can send useful information to each other at the time they want, without waiting for meeting the person. This is in agreement with Margaryan and Littlejohn (2008), web-based media, environments, and services make learners able to form online collaboration and share knowledge with others in a faster, cheaper and more comfortable way.

## **5. Solutions and Recommendations**

For ensuring the benefits of social media for educational purpose there is a greater need for proper training in use of social media. Further, though they use social media it is more for easier communication and not really for collaborative or cooperative learning. Hence, there is a need for faculty intervention with clear guidelines on use of social media for collaborative, cooperative and peer learning. Sometimes even, university websites are another puzzle for students and there needs to be clear manual, which can help the students to use and understand how to access materials easily; specifically as it is the main online method to access course contents, guidelines and other related information.

Another commonly observed facet is though students use e-mail is an important tool for communication, they lack on effective email use and email etiquettes for which they need to be training and even mentored. Last but the most important, due to behavioral factors and in accordance to the theoretical explanations, students’ use of social media for educational purposes is always in relation to the teaching strategies. The main guide to students’ involvement in online collaboration, cooperation and educational learning is instructors’ strategies and the teaching contexts or given tasks. Hence, it is equally pertinent that faculty also uses social media to impact positively the teaching-learning process.

## 6. Future Research Directions

A number of areas for future studies within this field remain for exploration. Further development on the similar and different contexts would be interesting area to focus on. For further developed understanding, it is worthwhile to undertake studies by taking into the pedagogical aspects of teaching and learning through social media. Developing frameworks to use social media for learning discipline based would also be another interesting area for further research. After all the requirements of learning differ as per the discipline, so models or criteria in this area would be of use for both teachers and learners. Policy studies on integrating use of social media for teaching learning at institutional levels need to be undertaken so that there is consistency and better understanding regarding the positive impact of technology embedment in higher education.

## 7. Conclusion

Thus, an education, braced by social media is a complementary method and to make it viable and sustainable there is greater need to persuade institutions, faculty and students to use social media frequently for their interactions as this study illustrates that almost all students use it but not for education purpose. As more than three fourth use social media for interaction purpose only and merely a quarter of students use such technology often to support their educational learning, it is worth pursuing and motivating students especially management graduates to adopt usage of social media in their learning process. This will benefit more the institutional as well as the industry since the graduates will develop better skills and competencies apart from graduate attributes and the institution will have better brand building due to cooperative and collaborative learning strategies, which are built-in while using social media and technology.

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## 9. Appendix

### Introduction

Social media is any online or web-based technology, based on interaction and communication between people. It supports transformation of knowledge or information to develop educational and collaborative learning. Some social media technologies are online document, seminar and lecture; E-book and online journal; Internet-based communication and instant messaging (IM), such as e-mail, MSN messenger, and so on; Online forum, discussion board, Facebook and other online communities.

### Interview Questions

Interviewee's Information

1. How old are you?
2. What is your program and in which academic level?



3. How often do you use the Internet-based technologies (such as Ping-Pong, university email, the student portal, Facebook, YouTube, IM, etc...)?
4. How much do you think this technology usage supports your education?

Interviewee's information according to the model: (regarding student-student, student-teacher & student-content)

1. Which social media do you frequently use to enhance your educational learning (for instance to access to the material or the required information regarding courses)?
2. What technologies do you normally use to enhance your collaborative learning (For instance to do the group assignments or projects more efficient and effective)?
3. How (in what way) do you use the most frequent social media you use?
4. What is your primary motivation or purpose to use this technology?
5. What advantages do you gain by using these social media technologies?
6. Have you experienced any limitations of these social media technology (Are there certain things that you would like to do but cannot)?
7. What are the negative aspects for academic learning of using the social media that you use?

### Key Terms and Definitions

**Asynchronous Learning:** Learning where learners are not in the same geographical area but still can indirectly interact with each other at different times.

**Challenges:** Something that by its nature or character serves as a call to make special effort, a demand to explain, justify, or difficulty in an undertaking that is stimulating to one engaged in it.

**Competence:** Refers to the capacity of individuals/employees to act in a wide variety of situations. It is their education, skills, experience, energy and their attitudes.

**Computer-Mediated:** An Internet-based way of communication over distance, which has made it possible to interact over distance in an easier, faster and cheaper way.

**Computer-Supported Collaborative Learning:** A technique to support collaborative learning by using technologies such as computers and the Internet, which is in use in psychology, computer science, and educational research.

**Collaborative Learning:** An approach to support organizational and educational activities, in which participants split the work and each gets the responsibility of a sub-task, solve sub-tasks individually and then assemble the partial results into the final output and when the group succeeds, it means that all partners succeed.

**E Learning:** Using technology over the Internet to mediate and transfer online information to enable learner gain new knowledge also referred as Online Learning.

**Information and Communication Technologies:** The study of the technology used to handle information and aid communication. A number of web/Internet-based applications for social interactions, which allows information creation and exchange through dialogues.

**Instant Messaging:** A form of synchronous communication between two or more individuals, which is in order to interact directly, in real time and in a text-based communication over a network, such as the Internet.

**Social Media:** A number of web/Internet-based applications for social interactions, which allows information creation and exchange through dialogues.

**Synchronous Learning User Generated Content (UGC):** Learning where learners are not in the same geographical area but should be online at the same time to communicate **with each other**.

**User Generated Content:** An application refers to various kinds of media content that are publicly available and produced by end-users to make social media use possible.

**Virtual Learning Environment (VLE):** An educational platform designed to deliver and support teaching and learning by using online technology with special visualization.