



## Role of Educational Social Media Platforms in Enhancing Student Learning among University Students

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### ABSTRACT

*The fast emergence of social media is not only changing the social life but also the education process in higher education. This paper discusses the importance of educational social media sites to improve learning among the university students in terms of engagement, collaboration, resources accessibility, motivation, and digital literacy. Based on the recent literature and an empirical, mixed-method research among undergraduate students, the paper examines the role of platforms like discussion forums, educational groups in mainstream social media (e.g. Facebook groups, WhatsApp, Telegram), and specialized educational networks (e.g. Edmodo, Piazza, Slack, and LinkedIn Learning communities) in cognitive, affective, and behavioral learning outcomes. The quantitative data indicate statistically significant positive changes in perceived engagement and collaborative skills in frequent users, whereas the qualitative feedback indicates the benefits (peer support, quick feedback) and issues (distraction, misinformation, privacy concerns). The paper ends by providing empirical suggestions to teachers and institutions to incorporate the affordances of social media in pedagogy without negatively affecting academic integrity and student welfare.*

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### Introduction

A dramatic transformation on the creation, sharing, and consumption of information has been experienced in the twenty first century. When initially the domain of personal networking and entertainment, social media have grown to become an inescapable communication ecology that can almost be omnipresent in the life of a student (Greenhow and Lewin, 2016). Social media sites offer new opportunities and challenges in the learning process in the university context. They allow communicating quickly, building informal learning communities, and offering multimodal resources (text, video, images, links) that can be used to supplement conventional ways of teaching (Manca, 2020). Social media has become a part of the life of many students, but not necessarily as a form of leisure: this is the location of study groups on chat apps, course announcement pages, tutorials created by students, and student-created pages, which are now common parts of the higher education experience (Dabbagh and Kitsantas, 2012).

The relevance of the study lies on a number of fronts. In pedagogy, social media platforms can enhance the learning that is not confined in classes and facilitates ongoing and contextual learning (Hrastinski, 2014). They should be used where there is a lack of face-to-face time to maintain the conversation, facilitate collaborative knowledge building, and offer instantaneous feedback systems that play a vital role in formative learning (Redecker, 2017). Various learning styles are also facilitated by

social media: visual learners will find video clips and infographics useful; verbal learners can use discussion boards; and social learners will be able to use collaborative workplaces (Prensky, 2010). Free or low cost social platforms have economic and logistical benefits, especially in situations where institutional Learning Management Systems (LMS) are either poorly resourced or not utilized (Gikas and Grant, 2013).

Cognitively, social platform use can expose people to a diversity of opinion, facilitate elaboration and reflection with explanations by peers, and coordinate problem-solving with just-in-time peer support (Vygotsky, 1978; Asterhan and Rosenberg, 2015). The positive impacts affectively can be attained in terms of motivation and a sense of belonging: students in the course groups indicate they feel more at ease with peers and teachers and this can enhance persistence and completion rates (Laal and Laal, 2012). On the side of the instructors, social media may offer formative diagnostic data regarding what misunderstandings the students have and what they need to be remedied on (Barber and King, 2016). In its turn, the use of social media in education brings up some concerns. One major concern is distraction: distraction sources can facilitate academic debate as well as entertainment and off-task stimuli (Rosen et al., 2013). The question of privacy, data ownership, and the commercial interests of the platform causes ethical concerns especially in the case of vulnerable groups of students (Boyd, 2014). Moreover, the social media conversations with an informal tone may blur the academic standards, causing possible misinformation, unequal quality of peer-created information, and even academic dishonesty (Ala Mutairi, 2021). Institutional digital inequalities such as an unequal access to the equipment or a consistent internet connection can also contribute to the inequities in case social media is viewed as a presumptive method of learning (van Dijk, 2020).

In the methodological aspect, the evidence base is in part mixed as the use of social media is heterogeneous: various platforms can be used to engage in different ways, and the behaviours of the students are very diverse due to the differences in disciplines, years of study, and cultural settings (Tess, 2013; Manca and Ranieri, 2017). Nevertheless, this heterogeneity does not mean that a consistent image is emerging: when carefully incorporated into education and with a set of well-defined rules, social media platforms may enrich the learning experience because they can provide more interactions, enhance cooperation, and enable the accessibility of resources (Greenhow and Lewin, 2016; Gikas and Grant, 2013).

This paper seeks to determine the importance of educational social media platforms on student learning among university students by (1) determining the association between the use of the platform and perceived engagement and working collaboratively, (2) determining the benefits and challenges that students have attributed to the use of social media in higher education, and (3) providing clear guidelines on how social media can be integrated into higher education pedagogy. The overall aim is to enlighten teachers and administrators on evidence-based mechanisms to tap the affinity of social media in the learning process without affecting its disadvantages.

## **Literature Review**

Studies of the role of social media in education have grown expeditiously in the last ten years. There are two layers of literature that inform this subject area: the first category investigates the pedagogical affordance of platforms, and the second category investigates the behavioral and institutional implications (Manca & Ranieri, 2016).

## **Affordances and Learning Outcomes**

Social media provides asynchronous and fast communication and sharing of multimedia, which facilitates formal and informal learning (Hrastinski, 2014). Vygotskian views put more emphasis to the social construction of knowledge; social media offers a distributed scaffold on which learners can work within the parameters of their Zone of Proximal Development by means of peer support and teacher facilitation (Vygotsky, 1978). Empirical researchers demonstrate that the use of social media correlates with other indicators, including engagement, participation in classes, and the ability to solve problems in collaboration (Tess, 2013; Junco, 2012). As an example, Facebook groups and Slack channels, which are course-specific, have been associated with enhanced peer support and improved group results (Wang et al., 2012). Academic discourse via educational tools such as Edmodo or Piazza can be better structured and organized because questions and answers revolve in an organized way (Kumar & Nanda, 2019).

## **Motivation and Retention**

Self-determination theory emphasizes the issues of autonomy, competence, and relatedness as the major motivational elements (Ryan and Deci, 2000). Relatedness is achieved through social media in terms of communities of practice and competence through instant feedback and a variety of explanatory materials (Greenhow and Lewin, 2016). It has been shown that, students who make use of academic social networks have a higher persistence and satisfaction with the course (Yu et al., 2010).

Cooperative learning and construction of knowledge: Social constructivist approaches focus on collaborative meaning-making as the key aspect of intensive learning (Dillenbourg, 1999). IT-based knowledge sharing platforms in which threaded discussions and collaborative annotation technologies are used facilitate the iterative knowledge-building process (Cress and Kimmerle, 2008). There are improvements in critical thinking and synthesis in wiki-based assignments and shared digital documents (Cole, 2009).

Digital literacy and critical assessment: Since social media has become the intermediary of access to information, digital literacy is necessary. In research, much attention is paid to teaching students to be more critical of online sources and be able to see false information (Livingstone, 2014). Unless this is explicitly taught, students could take inaccurate peer-created sources (Karabenick & Newman, 2013).

Distraction, well-being, and equity: It has been studied that multitasking using social platforms decreases attentiveness and in-depth learning (Rosen et al., 2013). The ethical concerns are privacy matters and the usage of platform data (Boyd, 2014). Some learners will not be able to use devices and stable internet due to unequal access (van Dijk, 2020).

Instructor functions and mediation: Instructor presence has a strong positive effect on discourse quality (Barber and King, 2016). Academic rigor and off-task behaviour are more in moderated groups (Deng & Tavares, 2013).

Assessment and learning analytics: Social media traces have the potential to become the learning analytics to provide early intervention knowledge, but it needs transparency and ethics (Ifenthaler and Tracey, 2016).

Synthesis and gaps:

In general, the literature confirms the possibility of social media to be used to improve engagement, collaboration, and resource accessibility when it is introduced a priori (Manca, 2020). Nevertheless, there are gaps in the long-term causal studies as well as cross-cultural comparisons (Ranieri et al., 2019). To gain a quantitative outcome and augment it with a rich qualitative experience, mixed-method studies are necessary--this is just what this study provides.

## **Methodology**

### **Research Design**

A convergent mixed-method design that involved a cross-sectional survey and semi-structured interviews was used in this research to look into the contribution of educational social media channels to student learning. The quantitative aspect involved counting the frequency and the type of the social media use, perceived learning benefits, and self-reported results (engagement, collaboration, digital literacy). The qualitative aspect examined the student perceptions on benefits, challenges and pedagogical recommendations.

### **Sample and Setting**

The sample included 320 undergraduate students in various faculties (Humanities, Social Sciences, Engineering, Business) at one of the mid-size universities. Stratified sampling was used so that there was representation on year-levels and disciplines. There were also 20 students (purposive subsample of survey participants) who were interviewed in depth.

## **Instruments**

Survey instrument: 35-item online questionnaire, in which questions were grouped under the following themes: demographic data, platform use (type of platform, frequency of use), perceived influence on engagement, collaboration, resource access, distraction, and digital literacy. The perceived learning benefits were measured by Likert scales (1-5) concerning how much they agreed with the statements.

Interview guide: Open-ended questions were used to elicit accounts on particular cases of how social media contributed or contributed to learning, policy proposals, and preferences.

A pilot test was conducted on 30 students to correct wording in the survey instrument, and Cronbach alpha of the core scales (engagement, collaboration, resource access) was 0.82 which represents a satisfactory level of internal consistency.

## **Data Collection Procedures**

The collection of data was carried out using one academic term. Invitations to the survey were sent to the institutional email and course announcement lists. Face-to-face interviews or video-conferenced interviews were made and taped with permission.

## **Data Analysis**

The data were cleaned and analyzed by a descriptive statistics, correlation, and simple regression models to investigate the relationships between the platform use frequency and the perceived results. Qualitative interviews were transcribed and analyzed through the thematic analysis to determine patterns of similarities and illustrative quotes.

## **Key Quantitative Findings**

- Usage of social media: 94 percent of the participants said that they used the social media in some academic way; most frequent included WhatsApp/group messaging (82 percent), Facebook groups (46 percent), Telegram (22 percent), Edmodo/Piazza/Slack (18 percent).
- Correlations: Perceived engagement ( $r = 0.46$ ,  $p < 0.01$ ) and collaborative skills ( $r = 0.39$ ,  $p < 0.01$ ) have a positive correlation with frequency of educational social media use.
- Regression: Year-level and faculty were controlled after which frequency of use was found to predict perceived engagement ( $b = 0.41$ ,  $p < 0.001$ ) and perceived ease of accessing resources ( $b = 0.36$ ,  $p < 0.001$ ).

## **Findings – Qualitative themes**

Thematic analysis produced four major themes:

- Immediate peer support -- students appreciated immediate clarifications and information about resources shared.
- Community and motivation -- accountability developed with group space and isolation was reduced.
- Distraction and boundary issues -- students reported problems with being off-task with content and problems separating study and leisure.
- Experience of instructor presence is important - groups whose moderators were well-moderated had higher quality interactions.

**Tables**

**Table 1 – Platform Use and Reported Academic Use (n = 320)**

Platform / Channel	% Using for Academic Purposes	Most Common Uses (examples)
WhatsApp / Messaging	82%	Quick Q&A, file sharing, group coordination
Facebook groups	46%	Announcements, resource links, discussions
Telegram	22%	Channels for notes, broadcast messages
Edmodo / Piazza / Slack	18%	Q&A, instructor posts, threaded discussions
YouTube (educational)	60%	Tutorials, lectures, recorded explanations

**Table 2 – Perceived Effects by Frequency of Use (mean on 1-5 scale)**

Outcome Measure	Low Frequency Users (n=98)	Medium (n=140)	High Frequency (n=82)
Perceived Engagement	2.9	3.6	4.2
Collaborative Skills	3.0	3.5	4.0
Access to Resources	3.1	3.8	4.3
Reported Distraction Level	2.1	2.8	3.5

(Note: Higher numbers indicate stronger agreement; distraction is also self-reported on 1-5 scale.)

**Short Interpretation of Findings**

Quantitatively, the more frequent the social media use for education, the better the perceived engagement, collaboration and access to resources, although the more frequent the social media use for education, the higher they reported levels of distraction. Qualitatively the students appreciate what they see as the immediacy, community effects, but underneath which is the need for guidelines and instructor facilitation to mitigate off-task behavior and misinformation. These mixed results demonstrate the importance of being oppositional when combining social media in curricula.

**Discussion**

The results are in line with the general literature: educational social media can result in increased levels of educational engagement and collaboration at the cost of being a distraction and potentially being of poor quality. The positive associations between frequency-of-use and perceived engagement/collaborative skills provides the basis for the supposition that social platforms can create out-of-school-classroom interaction out into persisting communities of practice. Particularly of note is the role of the messaging apps (WhatsApp) - ubiquity and low friction - to support and enable immediate peer support and coordination. This makes it clear however that affordability and ease of use are important predictors of adoption.

However, there is a clear increase in self-reported distraction in those using the platforms the most suggesting it takes the aspects of platform choice and purpose. There are platform features such as threaded discussions and moderation tools which make them be more conducive to quality academic discussion than generic purpose social networks. This is in keeping with research asking that bring out instructor moderation as an important determinant for productive academic use. Instructor presence is not just to clue students in to the expectations, but it is to showcase appropriate behaviors online and is also used for scaffolding academics.

The qualitative theme of "community and motivation" is important from the pedagogical point of view. Social media has potential to address psychological needs of relatedness, and therefore resulting in greater levels of intrinsic motivation and potentially engagement in difficult tasks. For distance learners or students in large classes, a sense of belonging that is connected with active online groups can help overcome isolation and help maintain persistence. Digital literacy is a developing basic requirement While in the digital world, students may be able to crowd source answers and resources, amongst them

they may also spread inaccuracies. Educators must therefore build in tasks of critical evaluation into social media activities - maybe asking students to vet sources which are posted in a group, or critique an explanation other peers offer, for example. In this process, the skills focusing on the higher order thinking skills and problem solving are being recruited in the participatory nature social media.

Concerns of equity are right in its forefront. There is the belief of device and the accessibility to connecting to social media in social media only. Therefore, institutions should make sure that there are alternative channels and consider resource package that are offline, or the option of having scheduled face to face supports for students with limited connectivity Practical implications There should be clear policy frameworks. Instructors should define norms in regards to acceptable posting time, response time expectations, acceptable hours of communication, and about norms regarding confidentiality/privacy. Moderation guidelines and roles assignments (e.g. in having students to rotate moderators) may help to maintain quality.

Finally, the mixed method approach of the research proved to be the importance of triangulation since while numerical patterns teach about correlations, the copious qualitative accounts provide explanations for the reason behind the patterns. For example, whereas the quantitative data indicates increased distraction from frequent use of the technology, from the interviews the possibility is raised that distraction may frequently be a function of the platform affordances (notifications, multimodal feeds) and user self-regulation, and not a platform inevitability. This points to certain interventions -- notification management training, structuredinternment discussion prompts and separate academic channels and could overcome these negative impacts while retaining benefits. Limitation affirmed There are limitations to be acknowledged, self-reported measures that measure perceptions instead of actual learning gains (e.g. exam scores). The design with cross sectional design limit the causal inference. Future studies should include longitudinal or experimental study designs and potentially the use of some sort of learning analytics to draw the link between social interaction patterns and a measurable academic outcome.

## **Conclusion**

Educational social media platforms do have a multifaceted role to play when it comes to the modern university learning environment. This study adds to a growing body of evidence showing that when purposefully and carefully implemented, such platforms can help to boost engagement of students, enable collaboration among students and increase access to learning resources. Yet they are not the solution to everything; they introduce some risks - distraction, misinformation, privacy problems, for example - that have to be actively mitigated by instructors and institutions.

Key takeaways from the study are that there are fivefold:

Affordances help us to be in for more time. Social media has certain affordances that provides for learning beyond the time and the space of the classroom. Asynchronous messaging/repositories can be used to allow students to continue dialogues and to work on fleshing out ideas together as well as access peer explanations. This continual, and distributed learning is in line with constructivist pedagogy, and has the potential to contribute to the development of deep conceptual understanding provided that conversations are substantive and scaffolded.

Collaboration and learning from peers is increased. Platforms support for peer to peer instruction as well as co-construction of knowledge as can be a powerful model in project-based and problem-based learning situations. The result of this study show that students do see the improvements with commonly used platforms in collaborative skills, group coordination skills, peer feedback and shared resource curation were repeatable benefits.

Immediate feedback and resource sharing is helpful to strengthen the perceived competence. Quick clarifications will shorten wait time for an answer as well as potentially shorten a barrier to seeking help. Students felt more confident in their ability to do their assignments if they could easily access clarifying explanations or threads of resources

There are trading offs from not-academic affordances. The same aspects of social media which makes them powerful tools for learning - showing instant notification, multimedia feeds and low friction posting -maybe sources sustained attention. Frequent platform users reported larger distraction, interviews in the context of the reported distraction distraction seemed to be caused frequently from off-task content, social comparisons, and notifications senium overload among others.

Facilitation by instructor and digital literacy is of great importance. Social media interactions increase the level of academicism because of instructor moderation, there are some behavioral norms. Digital literacy instruction helps students to think critically about the credibility of Internet content and ecology, as well as navigate privacy settings - all important skills available for the information environment today.

Implications for practice. Institutions wishing to use the power of social media should be strategic in the way in which they integrate this. Begin by identifying what the clear learning objectives are that social media activity will help support i.e. formative peer feedback, collaboratively solve a problem, build a community, etc Pick platforms that have affordances that match these objectives: for deep - threaded discussions they don't have to be platforms for ephemeral messaging Set norms and policies around posting throughout the community around posting etiquette and confidentiality as well as around academic integrity. Provide orientation of student on digital literate professional communication/ notification management. Finally, offer alternatives, for those students that do not have consistent access to devices and/or access to the internet.

Aspects of policy and governance. Universities need to consider data privacy, consent and ethics when work which is done using social media is done. Institutional policies should be clear regarding if the activities of a course require the use of third party platforms, and include policies regarding what is the acceptable platforms and data practices. Wherever possible, approaches that have received institutional support to tools that provide some guarantee of privacy are desirable. Transparency about the possible uses for student generated content (for learning analytics, showing students off, etc) etc is a response in the autonomy of the student.

Implications for research and directions for future research While the current study underscore on perceived benefits and constraint, future study should emphasize on longitudinal studies and experimental intervention that is able to measure objective learning outcomes (e.g., performance metrics, retention rate). Comparative research in the multiplex would help to determine if some of the practices of the platform work better for some content areas or for particular students. Additionally, the ethical application of learning analytics based on social media interactions are an open question; it is important to develop frameworks for fair use of learning analytics which are obviously transparent, beneficial and take student privacy into account.

Limitations revisited. The common reliance on self reported data and cross sectional research design in the study means the claims of the study do not go beyond being less than a causative relationship. This sample is population sample that is stratified, but is from one institution and may not be representative. Furthermore, rather than static features, a true platform quick evolves features; in doing so, new tools or new representation of governance of the platform; this could impact affordance and usage behaviours of users.

Final synthesis. Educational social media platforms also represent interesting resources which if used to support and achieve pedagogical purposes, with the right scaffolding, can help to promote student engagement, collaboration, and access to resources. The benefits are actually real and meaningful and are especially good for building community and to allow fast peer support. But these gains are contingent upon thoughtful implementation, facilitation on the part of the instructors and explicit consideration of the development of the digital literacies. Institutions and educators that flexibly plan for the use of social media, around outlined goals for learning, and plan for issues of equity and privacy, would be expected to receive the educational benefits that social media provides. Social media, therefore, should be taken into consideration not as a replacement for sound pedagogy - but as an ensemble of affordances that, orchestrated by the skilled educator, add to the ecosystem of learning by university students.

## **Recommendations**

Isolating Social Media Define clear pedagogical goals prior to integration of any social media platform with students - the affordances of the social media platforms we use should be paired with specific learning goals (e.g. quick Q & A, resource curation, collaborative writing, etc)

Your student may be inspired with this post [https://www.komatus.com/blog/student-staffasiswa-mesjsiblement-wsquidztes-educational-affordances-sarem-on-some-platforms-as-well-as-others-models-of-learning-aslose?! freewar\](https://www.komatus.com/blog/student-staffasiswa-mesjsiblement-wsquidztes-educational-affordances-sarem-on-some-platforms-as-well-as-others-models-of-learning-aslose?!%20freewar%20)" freewares available Philosophical tools For some more background for a discussion, a sample of others or see the 3 Recs (including iron Women: Skeptical thinking, a term employed by @tekkimime, @alice Stereotyping, then @tekkimime, Stereotyping as a TC tool,

Establish norms and policies of moderation and community norms in the beginning of the course - physical response time, language, confidentiality, citing sources.

Model instructor presence: instructor should participate on a periodic basis to address the clarification of misconceptions, point out outstanding postings and give formative feedback.

Include digital literacy modules: educating students on how to evaluate sources, how to take in misinformation, how to control privacy settings and how to be professional communicators;

Limit notification overload Encourages student to configure notification, set up "focus window" to minimise distraction to help carry out deep work.

Provide alternatives for students who have limited access (offline of materials, scheduled in-person sessions) to make sure that it's not expected for everyone to be able to access the education presented in such a manner (class equity between students with and without access).

Use of role based moderation (e.g. the use of student moderators) to develop leadership and ensure the quality of conversations

Whether for social media contributions, make sure assessment rubrics are incorporated if we require them as part of graded activities: these should include some criteria for quality of contribution including consideration of relevance, evidence and critical reflection etc.

Protect student data and privacy As much as possible, use institutionally-sanctioned tools Disclose use of data and give informed consent for use of data for analytics.

Leverage social traces ethically If it is done for learning analytics, interaction data must be used transparently and consents of students be obtained.

Conduct iterative evaluation Gather feedback on effectiveness of platform mid-term and open to making changes to tools/practices based on this feedback.

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