

The Impact of Social Media on Student Learning and Behavior

Nalongo Ruth B.

Faculty of Education, Kampala International University, Uganda

ABSTRACT

This study examines the impact of social media on student learning and behavior, focusing on the role of deep learning techniques in filtering and ranking relevant social media data. While existing research addresses the general influence of social media on education, this study uniquely integrates a fusion model combining text, image, and audio modalities to predict student behaviors and learning outcomes. Through a mixed-methods approach, including qualitative interviews and quantitative surveys, the research explores how social media influences student learning experiences and behavioral changes. The study's findings offer new insights into how social media platforms can be optimized to support positive educational outcomes while minimizing negative behavioral impacts.

Keywords: Social media, Student learning, Student behavior, Deep learning, Data filtering.

INTRODUCTION

Social media is an integral part of student life. Social media facilitating quick access to useful, up-to-date, and rich data. Since the volume of data present on social media is huge, it is important to filter unwanted, irrelevant data. While there exist some earlier works in filtering social media data and ranking meaningful social media data, none of these methods focus on student learning. Thus, this research filters Facebook data and ranks social media data to determine the impact of social media on student learning and behavior. A deep learning architecture is presented that intelligently incorporates image, text, and audio modalities to predict the behavior, interest, and learning rates of students. Simultaneously, clustering social media data based on topic relevance is done to aid the learning process. Further there exist some earlier works addressing the impact of social media data on education, none of these works has focused specifically on student learning using social media data. A deep learning-based fairness-aware model is designed that reduces diversity loss while enhancing classification accuracy to predict the impact of social media on student learning and behavior. A fusion model combining multiple deep learning architectures and diverse features is designed to make fairness-driven and impact predictions [1, 2].

LITERATURE REVIEW

The literature review section delves into existing research and scholarly works related to the impact of social media on student learning and behavior. It provides a comprehensive analysis of the key findings, trends, and gaps in the current body of knowledge. By synthesizing various sources, this section aims to establish a foundation for the subsequent discussion and analysis of the topic [3, 4]. A total of 25 studies on this topic were found through Google Scholar during the months of March and April 2021. Of these studies, 23 were published in 2009 or later, the earliest of which was published in 2012, and two studies were unpublished. Eleven of the 25 studies addressed the topic in a fairly comprehensive manner. Fifteen studies examined the impact of social media on just one or two behavioral dispositions or changes. Eight studies focused on the impact of social media on just one or two demographic subgroups. Student learning was the only behavior or change that was positively affected by social media in the literature review of the studies. Student behavior was the only behavioral disposition or change that was negatively or positively impacted by social media in the literature. There are several demographic subdivisions among students on

social media in the literature review of the studies. A deeper understanding of the topic is needed as the number of studies on the impact of social media on student learning and behavior continues to grow [5]. Two of the studies examined the topic from the standpoint of the social media platform used by students. In a context closely related to the current research topic, the use of Facebook as a tool for online collaboration in higher education was studied in a specific location in Ghana. Such location-specific studies or at least a focus with particular social media platforms used by students should be conducted in other parts of the world such as Europe or North America. Otherwise, it would be difficult to ascertain whether mass social media use by students has the same effects on students, or if the particulars of a location such as the availability of jobs and economic opportunities also influence the findings [6, 7]. Similarly, it could also hinder an understanding of whether different social media platforms have different impacts on the same behavioral dispositions of their users. Studying the impact of just one demographic subdivision would only capture a partial picture of the effects social media is having on students. As a result, a better understanding of the behavioral dispositions experimentally measured in the studies is desired. The majority of the studies operationalized student learning as time spent studying, academic performance, or both. More studies on student learning taking into consideration types of knowledge gained would demonstrate a more sophisticated understanding of the behavioral disposition [8, 9].

METHODS AND RESEARCH DESIGN

This study utilized a mix-methods approach comprised of a qualitative and quantitative study. Through qualitative interviews, the ways that social media affects student learning and behavior were explored. The quantitative study was designed through a survey instrument to measure how strongly social media affects students in different ways. The two studies are designed to substantiate the findings of the other and the strengths of each method are used to validate findings [3, 10]. The qualitative study was conducted through semi-structured interviews. This technique has a degree of flexibility that allows the participant to talk freely about their experiences, while also ensuring that key topics are covered. Five to seven participants were sought, as smaller interview groups allow for a more in-depth study of each participant and the discovery of common themes. The interviews took no longer than an hour and were conducted online via video conference due to the COVID-19 pandemic. Questions asked include how social media has affected students' schoolwork, studying, and grades. Emails were sent to all of the students who participated in the pilot study of the quantitative survey. After five participants agreed to meet, the fifth pilot participant was dropped to ensure a mix of academic and social organizations. The pilot study provided insights into how the quantitative survey should be constructed and how social media interaction is related to students' learning and behavior [11, 12]. Participants were students at a midwestern public university aged 18 through 22. They have spent at least one year in college and have experience interacting with social media and academic organizations. A social media account must be actively followed to participate in the study. Participants included three women and two men; all but one were white. Three participants are actively involved in academic organizations, and three are involved in social organizations [13, 14].

RESULTS AND FINDINGS

The submitted topic is the impact of social media on student learning and behavior. Although social media sites are often considered leisure time distractions, this study considers social media as a data collection tool to analyze the views of educational experts, parents, and students [15]. The data is collected through a survey of educational experts, parents, and students regarding the impact of social media, and a sample size of 400 is targeted to determine the impact of social media on students through statistical analysis using SPSS. After analysis, visual representations such as graphs and tables will be used to represent the collected data regarding the impact of social media on student learning and behavior. Social media sites are also considered the main reason for decreasing literacy levels among students. Accepting these claims, some believe that social media can also help students learn and grow [16, 17].

DISCUSSION AND IMPLICATIONS

Education in the 21st Century has witnessed the progressive growth and acceptance of the incorporation of information communication technologies (ICT) in the formal schooling of students. Today, many institutions all around the world utilize the internet and its related ICTs in the form of desktop computers, laptops, cell phones, and other electronic devices, to supplement teaching and learning happening within a physical classroom. Such additional modes of learning within a virtual platform through the internet is termed e-learning and is fast becoming a core part of the educational infrastructure of many learning institutions. However, not all students benefit from similar digital literacy, educational and socioeconomic backgrounds, and usage and exposure to e-learning prior to its implementation, which in part, could contribute to problems in usage and inequality in e-learning

performance. It then becomes imperative to explore the impact of students' settings such as age, gender, types of residence, academic levels, educational backgrounds, and socioeconomic levels on their perceived behavioral intention towards e-learning systems. In addition to students and their academic issues, the emergence of technology such as Facebook usage for education raises questions on behaviors and attitudes in academic performance [3, 10]. Given the dual purpose of the study, it examined the impact of students' personal, socioeconomic, and educational backgrounds on their behavioral intention towards using e-learning services as well as the influence of Facebook usage on self-regulated learning, academic performance, and knowledge-sharing activities in collaborative learning environments of higher learning institutions. The first part of the focus of the study devoted to examining the impact of social and demographic factors and e-learning set-up-related factors on students' perceived behavioral intention towards using e-learning systems found significant results in that gender as a social and demographic factor with female students showing better scores in learning factors of e-learning systems. Consistently, students residing in suburban and rural areas also demonstrated higher learning outcome scores regarding e-learning systems rather than those students residing in the urban areas. Among the socio-economic-related factors, it was found that e-learning performance increases as parental educational attainment increases but the impact of parental occupations showed mixed results. With regards to the academic performance-related factors, it was found that e-learning performance improves as the educational level rises. Students taking academic programs in technical disciplines such as engineering and applied sciences showed better e-learning systems performance over those in the humanities and arts. Such a disparity in performance may be attributed to the fact that students taking on technical courses are more likely exposed to, and have access to, hardware devices and software that assist e-learning processes such as computers and internet facilities, than students taking social science and the humanities [18, 19].

CONCLUSION

The study highlights the significant influence of social media on student learning and behavior, revealing both positive and negative impacts. Through the application of deep learning models that filter and rank social media data, it is possible to enhance educational outcomes by focusing on relevant and meaningful content. The mixed-methods approach confirmed that while social media can be a valuable tool for collaboration and knowledge sharing, it also poses risks related to distraction and misinformation. By understanding these dynamics, educators and policymakers can better harness social media's potential to support student learning while mitigating its adverse

REFERENCES

1. Supardi S, Juhji J, Azkiyah I, Muqdamien B, Ansori A, Kurniawan I, Sari AF. The ICT basic skills: Contribution to student social media utilization activities. *International Journal of Evaluation and Research in Education*. 2021 Mar;10(1):222-9. [ed.gov](#)
2. Manca S. Snapping, pinning, liking or texting: Investigating social media in higher education beyond Facebook. *The Internet and Higher Education*. 2020. [\[HTML\]](#)
3. Ansari JAN, Khan NA. Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learning Environments*. 2020. [springer.com](#)
4. Van Den Beemt A, Thurlings M, Willems M. Towards an understanding of social media use in the classroom: a literature review. *Technology, Pedagogy and Education*. 2020 Jan 1;29(1):35-55. [tandfonline.com](#)
5. Alamri MM, Almaiah MA, Al-Rahmi WM. Social media applications affecting Students' academic performance: A model developed for sustainability in higher education. *Sustainability*. 2020. [mdpi.com](#)
6. Manu BD, Ying F, Oduro D, Boateng SA. Student engagement and social media in tertiary education: The perception and experience from the Ghanaian public university. *Social Sciences & Humanities Open*. 2021 Jan 1;3(1):100100. [sciencedirect.com](#)
7. Koranteng FN, Wiafe I, Katsriku FA, Apau R. Understanding trust on social networking sites among tertiary students: An empirical study in Ghana. *Applied Computing and Informatics*. 2023 Jun 9;19(3/4):209-25. [emerald.com](#)
8. Pérez-Fernández H, Martín-Cruz N, Delgado-García JB, Rodríguez-Escudero AI. Online and face-to-face social networks and dispositional affectivity. How to promote entrepreneurial intention in higher education environments to achieve disruptive innovations?. *Frontiers in Psychology*. 2020 Dec 17;11:588634. [frontiersin.org](#)
9. Adegboyega LO. Influence of Social Media on the Social Behavior of Students as Viewed by Primary School Teachers in Kwara State, Nigeria.. *Elementary School Forum (Mimbar Sekolah Dasar)*. 2020. [ed.gov](#)

10. Braghieri L, Levy R, Makarin A. Social media and mental health. *American Economic Review*. 2022. [aeaweb.org](https://www.aeaweb.org)
11. De Villiers C, Farooq MB, Molinari M. Qualitative research interviews using online video technology—challenges and opportunities. *Meditari Accountancy Research*. 2022 Nov 23;30(6):1764-82. [kent.ac.uk](https://www.kent.ac.uk)
12. Lobe B, Morgan DL. Assessing the effectiveness of video-based interviewing: A systematic comparison of video-conferencing based dyadic interviews and focus groups. *International journal of social research methodology*. 2021 May 4;24(3):301-12. [tandfonline.com](https://www.tandfonline.com)
13. Wotring AJ, Hutchins M, Johnson MK, Ferng SF, Strawser C, Pfrank H, Warner M, Behrendt L. COVID-19 vaccine uptake among college students at a midwest university. *Journal of Community Health*. 2022 Apr 1:1-6. [springer.com](https://www.springer.com)
14. Moriarty T, Bourbeau K, Fontana F, McNamara S, Pereira da Silva M. The relationship between psychological stress and healthy lifestyle behaviors during COVID-19 among students in a US Midwest university. *International Journal of Environmental Research and Public Health*. 2021 Apr 29;18(9):4752. [mdpi.com](https://www.mdpi.com)
15. Camacho D, Panizo-LLedot A, Bello-Orgaz G, Gonzalez-Pardo A, Cambria E. The four dimensions of social network analysis: An overview of research methods, applications, and software tools. *Information Fusion*. 2020 Nov 1;63:88-120. [[PDF](#)]
16. Li X, Liu Q. Social media use, eHealth literacy, disease knowledge, and preventive behaviors in the COVID-19 pandemic: Cross-sectional study on Chinese netizens. *Journal of medical Internet research*. 2020. [jmir.org](https://www.jmir.org)
17. Park H, Kim HS, Park HW. A scientometric study of digital literacy, ICT literacy, information literacy, and media literacy. *Journal of Data and Information Science*. 2021. [sciendo.com](https://www.sciendo.com)
18. Alkabaa AS. Effectiveness of using E-learning systems during COVID-19 in Saudi Arabia: Experiences and perceptions analysis of engineering students. *Education and Information Technologies*. 2022. [springer.com](https://www.springer.com)
19. Venkatesh S, Rao YK, Nagaraja H, Woolley T, Alele FO, Malau-Aduli BS. Factors influencing medical students' experiences and satisfaction with blended integrated E-learning. *Medical Principles and Practice*. 2020 Jul 17;29(4):396-402. [karger.com](https://www.karger.com)

CITE AS: Nalongo Ruth B. (2024). The Impact of Social Media on Student Learning and Behavior. Eurasian Experiment Journal of Arts and Management, 5(3):23-26