

Social media information and student performance: the mediating role of hedonic value (entertainment)

Robert Kwame Dzogbenuku and Joshua Kofi Doe
Central University, Accra, Ghana, and
George Kofi Amoako
University of Professional Studies, Accra, Ghana

Abstract

Purpose – This study evaluates the mediating role of social media entertainment on social information (content) and social media performance, during the COVID-19 era.

Design/methodology/approach – Primary data were randomly gathered from 373 students from two top universities (public and private) in Ghana, a sub-Saharan African economy. Data analysis was achieved utilizing the partial least square–structural equation model (PLS-SEM).

Findings – Social media (SM) entertainment partly mediates the link between social media content and social media performance of students, suggesting that social media entertainment is almost indispensable in creating social media content to achieve optimum performance among tertiary students.

Research limitations/implications – The use of cross-sectional data alone for this study does not give us the opportunity to observe the social media activities of respondents over a longer period. Future studies could, therefore, include longitudinal data.

Practical implications – The findings in this study suggest that faculties can modify their pedagogical activities to include social media and reflect some entertainment content, since it has an influence on student performance within the social media space.

Social implications – SM has a great influence on students' performance socially and academically; therefore, educational stakeholders like university authorities, faculties, parents and guardians, and the government should consider social media as a tool for attaining educational goals.

Originality/value – The study extends the use of UTAUT2, in understanding students' learning and behavior processes, by linking antecedents of adoption to the post-adoption effect.

Keywords Social media, Student performance, Pedagogical medium

Paper type Research paper

Introduction

The Internet and its increasing use for educational purposes (Jaiyeoba and Iloanya, 2019; Stavroulia *et al.*, 2019) have become a lifestyle issue in the developed and developing world. Its popularity today is credited to the increasing availability of digital mobile devices like phones and tablets that are convenient for surfing the World Wide Web and its ubiquitous character. Interestingly, across the global divide, the youth who are mostly in school acquiring knowledge and vocations depend on online technologies (Watrakul, 2020) to meet digital goals (e-aspirations), particularly for social, entertainment and academic benefit (Al-Qaysi *et al.*, 2020; Spante, 2019; Al-Qaysi and Al-Emran, 2017). Emphasizing the significance of



having an online presence of the university community (Mehta and Aguilera, 2020), researchers have shown how digital ethnography motivates individuals and corporate organizations to leverage daily, if not hourly, on social media to satisfy e-aspirations (Dzogbenuku *et al.*, 2019; Shepherd and Lane, 2019). The leverage of social media for learning realized a crescendo with the advent of COVID-19, due to the compulsory or mandatory pedagogical changes needed to prevent the discontinuation of educational curriculum across the world.

Generally, social media is an online-based application driven by conceptual and high-tech foundations of Web 2.0, which promotes the development and sharing of user-generated content (UGC) frequently (Kaplan and Haenlein, 2009, 2010), thereby adding value to sites. Some researchers perceive Internet-based communication as platforms wielding opportunistic interactivity, discriminatory self-presence in real-time interaction, targeting asynchronous audiences driven by online user-generated marketing content (Lund, 2019; Carr and Hayes, 2015; Rothschild, 2011). Kaplan and Haenlein (2009) categorized social media into blogs and micro-blogs such as Twitter; social networking sites (SNSs) such as Instagram, MySpace and Facebook, including content platforms such as YouTube. Other forms are weblogs, podcasts, pictures, videos, social bookmarking and WhatsApp. From the user and gratification theory (Blumler and Katz, 1974), it is obvious that social media users, often goal-oriented, actively select social media that best fulfills their individual needs such as information, entertainment and socialization among others.

In recent times, researchers on social media (Pahlevan Sharif and Yeoh, 2018; Recalde and Gutiérrez-García, 2017; Yazdanparast *et al.*, 2016), social media brand communities (Jones and Glynn, 2019), acceptance in higher education (Dumpit and Fernandez, 2017), social media for learning and students' satisfaction (Orús *et al.*, 2016), determinants of students' intent and use of social media (Balakrishnan, 2017), among others seek to understand the social media phenomena among consumers such as students across countries. For example, with the advent of the corona virus (COVID-19) in the early part of 2020, the social life of people globally was disrupted, denying them from gathering for any activity including education. As a remedy to augment lost academic time, various social media were adopted compulsorily or voluntarily as pedagogical changes to promote remote teaching (Stenman and Pettersson, 2020). Consequently, while some of the new pedagogical technology users easily navigated their way into the new platforms, majority of the users faced significant problems that stalked the learning process. These further raise questions regarding the role of media in education policies (Liu *et al.*, 2019). For users who were successful however, the success factors are worth investigating for further policy and dynamic adaptation of pedagogical technologies.

Social media (SM) is utilized by students to obtain information for research and academic purposes as well as for entertainment due to their social needs. These include student integration into the university system (Xiao and Wilkins, 2015). However, in the case of tertiary students in sub-Saharan Africa, very few studies have been done, particularly on social media entertainment and information (content) and their effect on the performance of students. Consequently, this research attempts to examine the mediating function of social media entertainment on social media information and how it affected students' performance in sub-Saharan Africa during the COVID-19. The research, therefore, makes some contributions to the existing literature in relation to students' dependence on social media for entertainment and information as well as their subsequent performance post COVID-19.

Theoretical framework

Technology-specific theoretical models recommended for studying the utilization of technology, such as social media, at the personal level, propose that perceptual beliefs, values and the expected benefits to be gained are the determinants of why an individual will use technology. These include the technology acceptance model (TAM) (Davis, 1989;

Venkatesh and Bala, 2008) and the unified theory of acceptance and use of technology (UTAUT) (Venkatesh *et al.*, 2003). The UTAUT model is engaged as the underpinning theory in this research.

The UTAUT (Venkatesh *et al.*, 2003) propose that performance expectancy, effort expectancy, social impact and other enabling conditions will drive behavior intentions to adopt a technology. Venkatesh *et al.* (2012) extend the UTAUT to integrate three more concepts into the proposed UTAUT2: hedonic inspiration, price value and habit.

The major performance expectancy of social media discovered by Whiting and Williams (2013) are social communication, search for information, passing time, entertainment (hedonic value), destressing, communicative efficacy, convenience, expressing opinions, dissemination of information and surveillance/knowledge about others. This implies that content and entertainment are two significant factors in social media usage.

Social media performance

SM performance is the ability to achieve an objective based on using social media tools (Ahmad *et al.*, 2019; Janssen and Van Yperen, 2004). Students' academic performance promotes group discussions, building a strong student-lecturer relationship, interaction with classmates and lecturers, and ultimately, improving academic performance (Al-Rahmi and Othman, 2013). In the context of social media usage, academic performance is driven by coordination, communication, entertainment, collaboration and socialization (Al-Tarawneh, 2014).

The significance of examining academic performance is based on the assertion that social media networks have now become addictive (Pahlevan-Sharif and Yeoh, 2018; Recalde and Gutiérrez-García, 2017) and can, therefore, either hinder or improve a user's (student) wellbeing and performance. Various studies (Al-Rahmi and Othman, 2013; Guo *et al.*, 2018; Al-Tarawneh, 2014) have indicated an improvement in academic performance, which is attributable to social media. Dzogbenuku *et al.* (2019) further argue that students' social media usage is dependent on students' information communication technology (ICT) ability to surf the Internet and use various social media tools.

Technology performance (Ahmad *et al.*, 2018; Paniagua and Sapena, 2014) explains social media adoption and its benefits. Also, several other authors have acknowledged the positive effect of social media adoption on business performance (Paniagua and Sapena, 2014; Rodriguez *et al.*, 2012). Again, Rodriguez *et al.* (2016) have discovered that the utilization of social media positively influences customer-interactions, and hence, sales performance.

The relationship between social media use and the wellbeing of students is worth noting (Pahlevan-Sharif and Yeoh, 2018). Wellbeing defines the happiness and quality of life of a group of people over time, including the type of fulfilment derived from technologies (Falter and Hadwich, 2020; Deci and Ryan, 2008). Peoples' (students) wellbeing in the long-term affects their physical, satisfaction, social and mental (academic) performance (Marks and Shah, 2004). In the services sector of the wider society, customer wellbeing remains essential for service providers; hence, leading researchers like Ostrom *et al.* (2015) have coined the term "transformative service research" (TSR) to emphasize the significance of how some services have and are improving the wellbeing, leading to performance of their users globally.

Social media information (content)

SM information per Chan and Fang's (2007) study describes the types, sources and uses of contents accessed on digital media. Content usage could be for fun, work, fashion, travel, shopping, socialization, education and health, among others. With regard to content, Yazdanparast *et al.* (2016) also established that social media marketing activities (contents) affect attitudes towards brands and propose that marketers provide social media content and create experiences (entertainment) in line with customers' motives for social media usage.

For such social media, information to be of maximum influence and benefit to its users; however, [Aladwani \(2017\)](#) suggests that four types of content quality must be present. These are:

Reflective quality (a belief), which describes a user's beliefs regarding significant ways that social media information meets his or her needs.

Stimulated quality (a feeling), which describes a user's feelings toward the degree of social media content's usefulness in task performance.

Practiced quality (an implied behavior), which describes exceptional social media contents that support users' needs.

Advocated quality (an obvious behavior), which describes open user support for social media content that caters to his or her needs.

These content types are major drivers of individual and group actions ([Jones and Glynn, 2019](#)) and performance ([Guo et al., 2018](#)). [del Rocío Bonilla et al. \(2020\)](#) acknowledged the significance of social media as sources of information and engagement among stakeholders in the university system. In that regard, academic researchers ([Al-Rahmi and Othman, 2013](#); [Mingle and Adams, 2015](#); [Guo et al., 2018](#)) have reported how social media have improved students' academic performance through collaborative study ([Guo et al., 2018](#)).

We, therefore, hypothesize the following:

H1. Social media information (content) positively affects academic performance.

H2. Social media content has a strong positive effect on academic performance.

Social media entertainment

SM usage provides escapism ([Korgaonkar and Wolin, 1999](#)). Contents for entertainment, pleasure and relief of anxiety are described as social media entertainment ([Whiting and Williams, 2013](#)). Over time, social media has gained notoriety for its entertaining content ([Lee and Ma, 2012](#)) and has been reported to elicit positive attitudes towards a product or a brand ([Sheth and Kim, 2017](#)). The frequency of social media interactions has also become a regular indispensable routine ([Sheth and Kim, 2017](#)), such that its perceived utilitarian and perceived hedonic values have been reported to affect higher education service outcomes ([Cao et al., 2019](#)).

Even though [Brooks \(2015\)](#) reports a negative correlation between social media usage and performance, other studies such as [Sledgianowski and Kulviwat \(2009\)](#) and [Dzogbenuku et al. \(2019\)](#) reported a strong effect of social media entertainment content on performance and fulfilment. As a perceived hedonic benefit of social media ([Venkatesh et al., 2012](#)), entertainment has been predicted in the UTAUT to lead to usage. This presupposes that social media entertainment, as suggested by [Yazdanparast et al. \(2016\)](#), can influence performance ([Mingle and Adams, 2015](#); [Guo et al., 2018](#)). Hence, we also contend that if social media information can influence entertainment ([Yazdanparast et al., 2016](#)), while entertainment leads to performance ([Guo et al., 2018](#)), then social media entertainment could mediate information (content) and performance.

We, therefore, hypothesize that:

H3. Social media entertainment positively affects academic performance.

H4. Social media entertainment mediates social media information and academic performance.

Methodology

Context, sampling and collection of data

Survey data were gathered from students of two tertiary institutions in Ghana. With the aid of random sampling techniques, students were engaged between March and April 2020 to

share their opinions on the subject. This target group was considered appropriate to investigate the subject based on the fact that students spend long hours on the Internet (Gikas and Grant, 2013; Fujita *et al.*, 2018). The institutions selected were the largest public and private universities in Ghana respectively. They are both located in Accra with over 46,000 student population. In all, 373 responses out of 400 were obtained and found to be useable for analysis. This represents 93% of response rate. The partial least square–structural equation modeling (PLS-SEM) and SmartPLS Release: 3.2.7 (Ringle *et al.*, 2015) were used to analyze data. Sample size, as well as a researcher’s biases, does not affect the application of this software (Hair *et al.*, 2011).

Measurement

The research instrument comprised two main aspects. The first section which touched on the major constructs of the study was framed on a five-point Likert scale starting from 5 (strongly agree) to 1 (strongly disagree). Each of these constructs was adopted and linked to study social media information (Chan and Fang, 2007); entertainment (Dzogbenuku and Kumi, 2018); and students’ performance (Ahmad *et al.*, 2019; Lee *et al.*, 2002) as shown in Table 1. The second section of the instrument contains respondents’ demographic information, including favorite social media platform, ICT competence and how much time they spend on social media, as indicated in Table 2.

Results of analysis

Following the high response rate (93%) attained in the study, non-response bias was not tested. Common method variance bias was not present in the data because a variance explained of 33.943% (lower than 50%) was attained using the exploratory factor analysis with the extraction of solely a single factor (Podsakoff *et al.*, 2003). Also, normality analysis indicated $0.176 < \alpha < 0.347$; $p < 0.01$ for all items for Kolmogorov–Smirnov test and $0.713 < W < 0.912$; $p < 0.01$ for all items for Shapiro–Wilk test, indicating that the data was highly different from a usual distribution (Hair *et al.*, 2013, p. 71).

Concept	Items	Source
Social media (SM) information	1.1 Dependence on SM for my travel information 1.2 Provision of fashion information 1.3 Provision of sports information 1.4 Dependence on SM for weather outlook 1.5 Dependence on SM for information on health 1.6 Information on SM helps me to shop efficiently	Chan and Fang (2007)
Social media (SM) entertainment	3.1 I normally listen to music on SM 3.2 I have so much fun on SM 3.3 I usually watch movies or sports on SM 3.4 Leisure impacts Internet use	Dzogbenuku and Kumi (2018)
Social media (SM) performance	5.1 SM enables me to achieve certain academic tasks faster 5.2 SM enhances my productivity as a student 5.3 SM helps me to gain more knowledge about my subject area 5.4 Helps in promoting or sharing my ideas with classmates and friends 5.5 It improves my image among my classmates and networks 5.6 It offers fresh opportunities	Ahmad <i>et al.</i> (2019), and Lee <i>et al.</i> (2002)

Table 1.
Scales of variables
in the model

Variable	Frequency	Percent
<i>Sex</i>		
Male	190	50.9
Female	183	49.1
<i>Age</i>		
17–20	42	11.3
21–24	211	56.6
24–27	24	6.4
28–31	17	4.6
32–35	48	12.9
36–39	20	5.4
36–39	3	0.8
40 and above	8	2.1
<i>Program</i>		
The sciences	218	58.4
Business school	114	30.6
Communication studies	28	7.5
Social science	13	3.5
<i>Educational background</i>		
Undergraduate	298	79.9
Postgraduate	75	20.1
<i>ICT knowledge/skill level</i>		
Fair	152	40.8
Above average	41	11
Good	61	16.4
Very good	28	7.5
Excellent	91	24.4
<i>Social media platforms/networks used</i>		
Facebook	53	14.2
Twitter	40	10.7
YouTube	28	7.5
Blog	16	4.3
WhatsApp	236	63.3
<i>Average time spent on social media per day</i>		
Seldom	29	7.8
Less than 60 min	47	12.6
60–120 min	30	8
120–180 min	106	28.4
More than 180 min	161	43.2
<i>Average daily frequency of SM use</i>		
Rarely	37	9.9
1–3 times each day	61	16.4
4–6 times each day	21	5.6
7–9 times each day	222	59.5
More than 10 times a day	32	8.6
<i>Devices frequently used to access SM networks</i>		
Desktop computers	20	5.4
Laptops	223	59.8
Tablets	27	7.2
Mobile phones	103	27.6
Total	373	100

Table 2.
Demographic data
of respondents

All three concepts of the study that is social media information, entertainment and performance were evaluated reflectively. It was exigent to delete some items as they highly cross-loaded into other concepts with the application of the PLS software. Following purification, the study assessed the model's quality criteria: Cronbach's alpha, composite reliability and average variance extracted values all satisfy the minimum values of 0.7, 0.7 and 0.5, respectively as suggested by Hair *et al.* (2016). The results are given in Table 3. Also, all remaining item loadings were statistically significant utilizing bootstrap *t*-values (5,000 sub-samples) (Tortosa *et al.*, 2009). The outcomes show that convergent validity has been effectively attained.

The study utilized both the Fornell and Lacker (1981) and heterotrait-monotrait ratio (HTMT 0.85) (Henseler *et al.*, 2015) for measuring discriminant validity in variance-based SEM. The inter-construct correlations among the three constructs were smaller than the square root of the regular variance extracted values for every factor (Fornell and Lacker, 1981) as presented in Table 4. Again, the HTMT ratio of relationships utilizing a specificity principle of 0.85 (HTMT 0.85) demonstrated that all relations were lower than 0.85 (Henseler *et al.*, 2015) as depicted in Table 4. Therefore, the three-construct model indicates discriminant validity.

Examining the predictive accuracy (R^2) of the structural model, it revealed that social media information explicated about 47% of the discrepancy in social media entertainment. In comparison, both social media information and entertainment explicated about 45% of the discrepancy in social media performance, both of which showed a considerable explanatory power (Cohen, 1988). Q^2 – values of 0.308 and 0.249 were attained for social media entertainment and performance, both of which were more than 0 demonstrating predictive relevance (Chin, 2010). Lastly, the effect sizes (f^2) calculated for the independent variables revealed that social media information had a significant effect size on SM entertainment but a small effect size on academic performance, whereas SM entertainment had a medium effect size on social media performance. The outcomes of predictive accuracy (R^2), predictive relevance (Q^2) test and effect sizes (f^2) are given in Table 5.

Table 3.
Reliability and
convergent validity

Construct	Codes	Loading	Bootstrap <i>t</i> -values	α	CR	AVE
Social media information	INFO1	0.871	49.439	0.767	0.868	0.692
	INFO2	0.950	145.335			
	INFO3	0.644	13.971			
Social media entertainment	ENT1	0.909	100.698	0.775	0.872	0.700
	ENT2	0.944	129.612			
	ENT3	0.620	13.076			
Social media performance	SMP3	0.692	19.422	0.768	0.852	0.593
	SMP4	0.821	41.112			
	SMP5	0.842	57.566			
	SMP6	0.714	22.888			

Note(s): All bootstrap *t*-values are significant at 0.01 degree of significance

Table 4.
Discriminant validity
(square root of AVEs in
italic-diagonal)

Construct	Fornell-Larcker criterion			Heterotrait-monotrait ratio (HTMT)		
	1	2	3	1	2	3
1. SM information	<i>0.832</i>					
2. SM entertainment	0.685	<i>0.837</i>		0.848		
5. SM performance	0.523	0.662	<i>0.770</i>	0.673	0.845	

Hypothesis testing

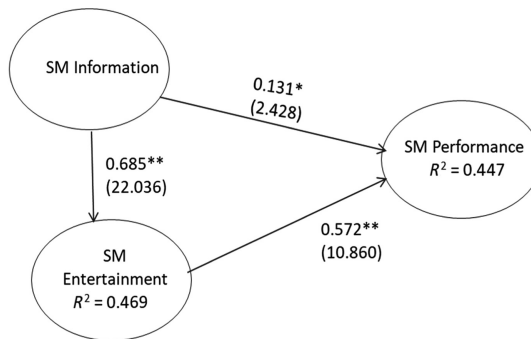
The outcomes of the structural model are shown in Figure 1. All paths are statistically significant; therefore, the first three hypotheses of the study are established in the current context. Particularly, a positive and noteworthy association exists between social media information, entertainment and academic performance. Table 6 summarizes the conclusions drawn from the hypotheses.

Mediation effect of social media entertainment

With regard to testing for mediation in PLS-SEM, Nitzi *et al.* (2016) suggest checking the significance of the indirect impact of the exogenous variable (SM information) on the endogenous variable (SM performance) through social media entertainment. If the indirect effect is significant, there is mediation; otherwise, there is not. From Table 7, social media entertainment partially mediates the connection between social media information and social media performance. The high proportion of mediation (74.9%) suggests that social media entertainment is almost indispensable when building social media content to achieve optimum performance. Consequently, the fourth (H4) hypothesis of this study is affirmed.

Constructs	R^2	Q^2	f^2 (SM entertainment)	f^2 (SM performance)
1. Social media information	–	–	0.883(Large)	0.02(Small)
2. Social media entertainment	0.469	0.308		0.315(Medium)
3. Academic performance	0.447	0.249	–	–

Table 5. Predictive accuracy (R^2), predictive relevance (Q^2) and effect sizes (f^2)



Note(s): ** and * statistically significant at 0.01 and 0.05 level of significance; (t-values in parenthesis)

Figure 1. Structural path results presenting the link between SM information, entertainment and academic performance

Hypothesis	Structural path	Path coefficient	t-value (bootstrap)	Hypothesis results
H1	SM Information → SM performance	0.131*	2.428	Supported
H2	SM Information → SM entertainment	0.685**	22.036	Supported
H3	SM Entertainment → SM performance	0.572**	10.860	Supported

Note(s): **Significant at $p < 0.01$; *significant at $p < 0.05$

Table 6. Structural path outcomes

Hedonic influence on social media performance

Table 7.
Mediation of social
media entertainment

Mediation path	Path coefficient “a”	Path coefficient “b”	Path coefficient “c”	Indirect effect (a*b)	SD (a*b)	t	Mediation type	Proportion of mediation
Info > Ent > SMP	0.685**	0.572**	0.131*	0.391**	0.041	9.526	Partial	0.749
Note(s): **significant at $p < 0.01$; *significant at $p < 0.05$; Info (SM Information), Ent (SM Entertainment), SMP (Social Media Performance)								

Discussion of findings

This paper sought to ascertain the effect of social media content on students' academic performance and wellbeing (operationalized as social media performance) and entertainment, as well as how social media entertainment mediates information (content) and students' performance in sub-Saharan Africa.

The data showed that social media content leads to social media information (content), which then leads to social media performance at a significance level of 0.05. These findings lend support to previous studies (Al-Rahmi and Othman, 2013; Guo *et al.*, 2018; Al-Tarawneh, 2014) that reported that social media leads to academic performance. This also confirms the user gratification theory (Blumler and Katz, 1974) of using an artifact which enables the user to achieve his objectives. Theoretically, the perceived usefulness construct in the TAM (Venkatesh and Bala, 2008) and IMTA (Venkatesh *et al.*, 2002), as well as performance expectancy construct in UTAUT model (Venkatesh *et al.*, 2003) are confirmed in this study. The implication of these findings is that social media content must be relevant to each target group; for instance, in order to engender performance.

The data also revealed that information on social media leads to entertainment at a significance level of 0.01. This finding supports the report of Whiting and Williams (2013) that users choose content that is entertaining to them. The finding also lends credence to Yazdanparast *et al.*'s (2016) proposal for organizations to ensure that they provide content that is entertaining. Theoretically, this finding likewise confirmed the adjustment factors in TAM3 (Venkatesh and Bala, 2008), intrinsic motivation in IMTA (Venkatesh *et al.*, 2002) and hedonic motivation in UTAUT model (Venkatesh *et al.*, 2003). This implies that social media content must be entertaining to each target group. This will also call for some strategic segmentation. We further discovered that social media entertainment leads to academic performance at a significance level of 0.01. This finding supports some previous studies (Mingle and Adams, 2015; Guo *et al.*, 2018) and confirms hedonic motivation in UTAUT (Venkatesh *et al.*, 2003) as relevant in the utilization of technology.

Finally, it has been discovered that social media entertainment mediates between content and performance. The high proportion of mediation (74.9%) suggests that social media entertainment is almost indispensable when building social media content to achieve optimum performance. This is because the direct link between social media content and performance is not as strong as the indirect link, which is routed through social media entertainment.

Theoretical contribution

The use of social media entertainment as a mediator between social media content and academic performance of students is quite unique and interesting since there are few such studies in Ghana and Africa. This contributes to the growing literature on social media studies and youth in Africa. The study confirms performance expectancy and the hedonic motivation of the UTAUT model, in understanding students' learning and behavior process. The study also extends the UTAUT model by linking the antecedents of adoption to performance (post-adoption effect). This is an extension to the UTAUT model. Furthermore, the use of SEM to investigate the connection between social media information, entertainment and performance of students within the Ghanaian context is quite unique.

Managerial implications

The research reveals that students actively utilize social media and, therefore, education stakeholders should use it effectively to achieve educational objectives. The findings of this COVID-19 experience suggest that faculty can effectively modify their pedagogical activities to integrate some entertaining social media content into their teaching materials since these have an influence on students' performance. In the medium to long term, therefore,

educational institutions should explore interactive technologies for teaching and learning purposes. This must have some entertainment content which can enhance a longer attention span of the students who interact with the media. Ultimately, this will improve their overall wellbeing as students and more importantly their academic performance. The dilemma that might arise in the attempt to include content with entertainment value is what content will be appropriate to compliment the educational content?

Policymakers (both government and institutions) should also begin to craft policy guidelines on social media usage as a pedagogical medium for the different levels in the educational sector. We anticipate that the COVID-19 experiences will shift examinations also to online platforms. This also calls for extensive logistical support. Some of such support includes content policy framework, hardware as well as software support for educational institutions. The creation of a “content bank” is also another practical step to enhance the drive towards online teaching and learning. Some of the anticipated challenges in this new pedagogical approach would be the cost of data usage, logistics and connections. To hold students accountable, who pays for student data usage as well as faculty data usage? How will the institution ensure that all students have equal access to smart phones and reliable connection in developing country contexts in the digitally disadvantaged circumstances?

Limitations and recommendations for future study

Data for the study were collected from university students in Ghana only. It will be good to include secondary school level students to understand the social media phenomenon better since they would eventually move to tertiary institutions. The use of cross-sectional data alone for this study does not give us the opportunity to observe the social media activities of respondents over a longer period. Future studies should, therefore, include longitudinal data. It will also be interesting to investigate in future the moderating role of gender and kinds of social media platforms on students’ performance.

Conclusion

This study concludes that social media has a great impact on student performance. Therefore, all educational stakeholders like university authorities, parents and guardians, university teachers, administrators and ministry of education as well as policymakers would need to examine how best they can utilize social media to enhance the achievement of educational goals.

References

- Ahmad, S.Z., Ahmad, N. and Bakar, A.R.A. (2018), “Reflections of entrepreneurs of small and medium-sized enterprises concerning the adoption of social media and its impact on performance outcomes: evidence from the UAE”, *Telematics and Informatics*, Vol. 35 No. 1, pp. 6-17.
- Ahmad, S., Abu Bakar, A. and Ahmad, N. (2019), “Social media adoption and its impact on firm performance: the case of the UAE”, *International Journal of Entrepreneurial Behavior and Research*, Vol. 25 No. 1, pp. 84-111.
- Al-Qaysi, N. and Al-Emran, M. (2017), “Code-switching usage in social media: a case study from Oman”, *International Journal of Information Technology and Language Studies*, Vol. 1 No. 1, pp. 25-38.
- Al-Qaysi, N., Mohamad-Nordin, N. and Al-Emran, M. (2020), “A systematic review of social media acceptance from the perspective of educational and information systems theories and models”, *Journal of Educational Computing Research*, Vol. 57 No. 8, pp. 2085-2109.
- Al-Rahmi, W. and Othman, M. (2013), “The impact of social media use on academic performance among university students: a pilot study”, *Journal of Information Systems Research and Innovation*, Vol. 4 No. 12, pp. 1-10.

- Al-Tarawneh, H.A. (2014), "The influence of social networks on students' performance", *Journal of Emerging Trends in Computing and Information Sciences*, Vol. 5 No. 3, pp. 200-205.
- Aladwani, A.M. (2017), "Compatible quality of social media content: conceptualization, measurement, and affordances", *International Journal of Information Management*, Vol. 37 No. 6, pp. 576-582.
- Balakrishnan, V. (2017), "Key determinants for intention to use social media for learning in higher education institutions", *Universal Access in the Information Society*, Vol. 16 No. 2, pp. 289-301.
- Blumler, J.G. and Katz, E. (1974), *The Uses of Mass Communication*, Sage, Newbury Park, CA.
- Brooks, S. (2015), "Does personal social media usage affect efficiency and well-being?", *Computers in Human Behavior*, Vol. 46, pp. 26-37.
- Cao, J.T., Foster, J., Yaoyuneyong, G. and Krey, N. (2019), "Hedonic and utilitarian value: the role of shared responsibility in higher education services", *Journal of Marketing for Higher Education*, Vol. 29 No. 1, pp. 134-152.
- Carr, C.T.E. and Hayes, R.A. (2015), "Social media: defining, developing, and divining", *Atlantic Journal of Communication*, Vol. 23 No. 1, pp. 46-65.
- Chan, K. and Fang, W. (2007), "Use of the internet and traditional media among young people", *Young Consumers*, Vol. 8 No. 4, pp. 244-256.
- Chin, W.W. (2010), "How to write up and report PLS analyses", in Esposito Vinzi, V., Chin, W.W., Henseler, J. and Wang, H. (Eds), *Handbook of Partial Least Squares: Concepts, Methods and Application*, Springer, pp. 645-689.
- Cohen, J. (1988), *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed., Lawrence Erlbaum Associates, Publishers, Hillsdale, NJ.
- Davis, F. (1989), "Perceived usefulness, perceived ease of use and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-340.
- Deci, E.L. and Ryan, R.M. (2008), "Hedonia, eudaimonia, and well-being: an introduction", *Journal of Happiness Studies*, Vol. 9 No. 1, pp. 1-11.
- del Rocío Bonilla, M., Perea, E., del Olmo, J.L. and Corrons, A. (2020), "Insights into user engagement on social media. Case study of a higher education institution", *Journal of Marketing for Higher Education*, Vol. 30 No. 1, pp. 145-160.
- Dumpit, D.Z. and Fernandez, C.J. (2017), "Analysis of the use of social media in higher education institutions (HEIs) using the technology acceptance model", *International Journal of Educational Technology in Higher Education*, Vol. 14 No. 1, p. 5.
- Dzogbenuku, R.K. and Kumi, D.K. (2018), "Exploring the key drivers of internet behaviour among the youth of emerging markets: the case of Ghana", *Global Knowledge, Memory and Communication*, Vol. 67 Nos 8/9, pp. 486-509, doi: [10.1108/GKMC-01-2018-0005](https://doi.org/10.1108/GKMC-01-2018-0005).
- Dzogbenuku, R.K., Amoako, G.K. and Kumi, D.K. (2019), "Social media and student performance: the moderating role of ICT knowledge", *Journal of Information, Communication and Ethics in Society*, Vol. 18 No. 2, pp. 197-219.
- Falter, M. and Karsten Hadwich, H. (2020), "Customer service well-being: scale development and validation", *The Service Industries Journal*, Vol. 40 Nos 1-2, pp. 181-202.
- Fujita, M., Harrigan, P. and Soutar, G.N. (2018), "Capturing and co-creating student experiences in social media: a social identity theory perspective", *Journal of Marketing Theory and Practice*, Vol. 26 Nos 1/2, pp. 55-71.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Gikas, J. and Grant, M.M. (2013), "Mobile computing devices in higher education: student perspectives on learning with cell phones, smart phones and social media", *The Internet and Higher Education*, Vol. 19, pp. 18-26.

- Guo, R., Shen, Y. and Li, L. (2018), "Using social media to improve student-instructor communication in an online learning environment", *International Journal of Information and Communication Technology Education*, Vol. 14 No. 1, pp. 33-43.
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing theory and Practice*, Vol. 18 No. 2, pp. 139-152, doi: [10.2753/MTP1069-6679190202](https://doi.org/10.2753/MTP1069-6679190202).
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2013), "Partial least squares structural equation modeling: rigorous applications, better results and higher acceptance", *Long Range Planning*, Vol. 46 Nos 1-2, pp. 1-12.
- Hair, J.F. Jr, Sarstedt, M., Matthews, L.M. and Ringle, C.M. (2016), "Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I – method", *European Business Review*, Vol. 28 No. 1, pp. 63-76, doi: [10.1108/EBR-09-2015-0094](https://doi.org/10.1108/EBR-09-2015-0094).
- Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135, doi: [10.1007/s11747-014-0403-8](https://doi.org/10.1007/s11747-014-0403-8).
- Jaiyeoba, O.O. and Iloanya, J. (2019), "E-learning in tertiary institutions in Botswana: apathy to adoption", *International Journal of Information and Learning Technology*, Vol. 36 No. 2, pp. 157-168.
- Janssen, O. and Van Yperen, N.W. (2004), "Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction", *Academy of Management Journal*, Vol. 47 No. 3, pp. 368-384.
- Jones, K. and Glynn, M. (2019), "How children use social media for brand interactions", *Young Consumers*, Vol. 20 No. 2, doi: [10.1108/YC-10-2018-0860](https://doi.org/10.1108/YC-10-2018-0860).
- Kaplan, A.M. and Haenlein, M. (2009), "Consumer use and business potential of virtual worlds: the case of "second life", *The International Journal on Media Management*, Vol. 11 Nos 3-4, pp. 93-101.
- Kaplan, A.M. and Haenlein, M. (2010), "Users of the world, unite! the challenges and opportunities of Social Media", *Business Horizons*, Vol. 53 No. 1, pp. 59-68.
- Korgaonkar, P.K. and Wolin, L.D. (1999), "A multivariate analysis of web usage", *Journal of Advertising Research*, Vol. 39 No. 2, p. 53.
- Lee, C.S. and Ma, L. (2012), "News sharing in social media: the effect of gratifications and prior experience", *Computers in Human Behavior*, Vol. 28 No. 2, pp. 331-339.
- Lee, D.J., Sirgy, M.J., Larsen, V. and Wright, N.D. (2002), "Developing a subjective measure of consumer well-being", *Journal of Macromarketing*, Vol. 22 No. 2, pp. 158-169.
- Liu, S., Cai, L. and Zhao, X. (2019), "The role of mass media in education policies: a Chinese case study", *Journal of Higher Education Policy and Management*, Vol. 41 No. 2, pp. 186-203.
- Lund, B. (2019), "Universities engaging social media users: an investigation of quantitative relationships between universities' Facebook followers/interactions and university attributes", *Journal of Marketing for Higher Education*, Vol. 29 No. 2, pp. 251-267.
- Marks, N. and Shah, H. (2004), "A well-being manifesto for a flourishing society", *Journal of Public Mental Health*, Vol. 3 No. 4, pp. 9-15.
- Mehta, R. and Aguilera, E. (2020), "A critical approach to humanizing pedagogies in online teaching and learning", *International Journal of Information and Learning Technology*, Vol. 37 No. 3, pp. 109-120.
- Mingle, J. and Adams, M. (2015), "Social media network participation and academic performance in senior high schools in Ghana", *Library Philosophy and Practice*, Vol. 1, (e journal), Paper 1286, available at: <http://digitalcommons.unl.edu/libphilprac/1286>.
- Nitzl, C., Roldan, J.L. and Cepeda, G. (2016), "Mediation analysis in partial least squares path modeling: helping researchers discuss more sophisticated models", *Industrial Management and Data Systems*, Vol. 116 No. 9, pp. 1849-1864, doi: [10.1108/IMDS-07-2015-0302](https://doi.org/10.1108/IMDS-07-2015-0302).

- Orús, C., Barlés, M.J., Belanche, D., Casaló, L., Fraj, E. and Gurrea, R. (2016), "The effects of learner-generated videos for YouTube on learning outcomes and satisfaction", *Computers and Education*, Vol. 95, pp. 254-269.
- Ostrom, A.L., Parasuraman, A., Bowen, D.E., Patrício, L. and Voss, C.A. (2015), "Service research priorities in a rapidly changing context", *Journal of Service Research*, Vol. 18 No. 2, pp. 127-159.
- Pahlevan Sharif, S. and Yeoh, K.K. (2018), "Excessive social networking sites use and online compulsive buying in young adults: the mediating role of money attitude", *Young Consumers*, Vol. 19 No. 3, pp. 310-327.
- Paniagua, J. and Sapena, J. (2014), "Business performance and social media: love or hate?", *Business Horizons*, Vol. 57 No. 6, pp. 719-728.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, p. 879.
- Recalde, M. and Gutiérrez-García, E. (2017), "Digital natives: the engagement experience to online protection", *Young Consumers*, Vol. 18 No. 2, pp. 159-179.
- Ringle, C.M., Wende, S. and Becker, J.M. (2015), "SmartPLS 3. Boenningstedt: SmartPLS", available at: <http://www.smartpls.com>.
- Rodriguez, M., Peterson, R.M. and Krishnan, V. (2012), "Social media's influence on business-to-business sales performance", *Journal of Personal Selling and Sales Management*, Vol. 32 No. 3, pp. 365-378.
- Rodriguez, M., Ajjan, H. and Peterson, R.M. (2016), "Social media in large sales forces: an empirical study of the impact of sales process capability and relationship performance", *Journal of Marketing Theory and Practice*, Vol. 24 No. 3, pp. 365-379.
- Rothschild, R.C. (2011), "Social media use in sports and entertainment venues", *International Journal of Event and Festival Management*, Vol. 2 No. 2, pp. 139-150.
- Shepherd, H. and Lane, J. (2019), "In the mix: social integration and social media adoption", *Social Science Research*, Vol. 82, pp. 1-17.
- Sheth, S. and Kim, J. (2017), "Social media marketing: the effect of information sharing, entertainment, emotional connection and peer pressure on the attitude and purchase intentions", *GSTF Journal on Business Review (GBR)*, Vol. 5 No. 1, pp. 62-70.
- Sledgianowski, D. and Kulviwat, S. (2009), "Using social network sites: the effects of playfulness, critical mass and trust in a hedonic context", *Journal of Computer Information Systems*, Vol. 49 No. 4, pp. 74-83.
- Spante, M. (2019), "Digital creativity: learning by story driven digital production", *International Journal of Information and Learning Technology*, Vol. 36 No. 3, pp. 182-191.
- Stavroulia, K.E., Christofi, M., Baka, E., Michael-Grigoriou, D., Magnenat-Thalmann, N. and Lanitis, A. (2019), "Assessing the emotional impact of virtual reality-based teacher training", *International Journal of Information and Learning Technology*, Vol. 36 No. 3, pp. 192-217.
- Stenman, S. and Pettersson, F. (2020), "Remote teaching for equal and inclusive education in rural areas? An analysis of teachers' perspectives on remote teaching", *International Journal of Information and Learning Technology*, Vol. 37 No. 3, pp. 87-98.
- Tortosa, V., Moliner, M.A. and Sánchez, J. (2009), "Internal market orientation and its influence on organisational performance", *European Journal of Marketing*, Vol. 43 Nos 11/12, pp. 1435-1456, doi: [10.1108/03090560910989975](https://doi.org/10.1108/03090560910989975).
- Venkatesh, V. and Bala, H. (2008), "Technology acceptance model 3 and a research agenda on interventions", *Decision Sciences*, Vol. 39 No. 2, pp. 273-315.
- Venkatesh, V., Speier, C. and Morris, M.G. (2002), "User acceptance enablers in individual decision making about technology: toward an integrated model", *Decision Sciences*, Vol. 33 No. 2, pp. 297-316.

- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), "User acceptance of information technology: toward a unified view", *MIS Quarterly*, Vol. 27 No. 3, pp. 425-478.
- Venkatesh, V., Thong, J.Y. and Xu, X. (2012), "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology", *MIS Quarterly*, Vol. 36 No. 1, pp. 157-178.
- Wattjatrakul, B. (2020), "Intention to adopt online learning : the effects of perceived value and moderating roles of personality traits", *International Journal of Information and Learning Technology*, Vol. 37 Nos 1/2, pp. 46-65.
- Whiting, A. and Williams, D. (2013), "Why people use social media: a uses and gratifications approach", *Qualitative Market Research: An International Journal*, Vol. 16 No. 4, pp. 362-369.
- Xiao, J. and Wilkins, S. (2015), "The effects of lecturer commitment on student perceptions of teaching quality and student satisfaction in Chinese higher education", *Journal of Higher Education Policy and Management*, Vol. 37 No. 1, pp. 98-110.
- Yazdanparast, A., Joseph, M. and Muniz, F. (2016), "Consumer based brand equity in the 21st century: an examination of the role of social media marketing", *Young Consumers*, Vol. 17 No. 3, pp. 243-255.

Further reading

- Naqvi, M.H.A., Jiang, Y., Miao, M. and Naqvi, M.H. (2020), "The effect of social influence, trust, and entertainment value on social media use: evidence from Pakistan", *Cogent Business and Management*, Vol. 7, p. 1.
- Shin, W. (2017), "Active mediation of television, internet and mobile advertising", *Young Consumers*, Vol. 18 No. 4, pp. 378-392.

Corresponding author

Joshua Kofi Doe can be contacted at: dlas1274@yahoo.com

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com