


# A Contextualization of the Technology Acceptance Model to Social Media Adoption Among University Students in Cameroon

Josue Kuika Watat, HISP Centre and Department of Informatics, University of Oslo, Norway\*

 <https://orcid.org/0000-0003-4673-3800>

Dario Bonaretti, Nova Southeastern University, USA

## ABSTRACT

The outbreak of the world wide web and of Web 2.0 technologies, coupled with various increased forms of social interaction on globalized digital networks, has not spared higher education in Sub-Saharan Africa. Through social media, students can share points of view and ideas on common themes, unite around communities they have created sharing the same interests and the same ideology. The purpose of this study is to investigate the impact of social media on student performance using an extended technology acceptance model (TAM). The data collected from 460 students and analyzed using SmartPLS software and structural equation modeling revealed that (1) perceived satisfaction, attitude, intention to use have a significant influence on academic performance and that (2) agreeableness and openness significantly contribute to perceived ease of use and perceived usefulness. This research adds to the existing literature by modeling and evaluating a social media and personality traits-based model, thus offering a holistic approach to understanding social media use in higher education.

## KEYWORDS

Academic Performance, Big Five, Higher Education, Social Media, Sub-Saharan Africa, Technology Acceptance Model

## INTRODUCTION

Social media is a part of everyday life for students. Some have grown up with them, and it seems natural to find Facebook, Twitter, Instagram, and more in their digital toolbox. Social media apps are important tools in education because they improve access to educational resource content and learning opportunities for students (Ali et al., 2016). For instance, they are used as virtual classes to replace traditional classroom (Harris & Rea, 2009). They are commonly observed in the context of language learning as well as in youth communication and entertainment platforms (Al-Rahmi et al., 2018). This is also the case when it comes to promoting the imagination and communication skills

DOI: 10.4018/IJTHL.297619

\*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

of students (Ahmed et al., 2018). Tur et al. (2017) research on the use of Twitter in higher education in USA and Spain studied educational benefit of using Twitter. In Spain, for example, Twitter is acclaimed for searching and sharing information (Tur et al., 2017). Conversely, US users, stressed its importance as a platform for collaboration.

Social media is increasingly impacting the achievements of African students as well. They helped fulfill young people's need to get together and share information on topics related to their courses or teachers (Balakrishnan, 2016; Kuika Watat et al., 2020). Various studies in literature have revealed the importance of social media in sharing knowledge in education (Dumpit & Fernandez, 2017). However, few studies have looked at the key determinants of web 2.0 technologies usage within students in Cameroon. Existing theories to explain IT adoption have not been assessed yet in emerging economies in Sub-Saharan Africa which have recently joined the train of digitalization. Our study focuses on the fundamental elements and behavior that influence the use of social media by Higher Education students in Cameroon, Sub-Saharan Africa.

Numerous researches have highlighted the extension of theories or research models. Theories that focus on their own environments while highlighting appropriate predictors and tools are seen as relevant in the understanding of phenomena and the significant extension of other theories (Mengesha & Garfield, 2019; Venkatesh et al., 2012). This is not the case for generic theories where an emphasis is placed on the general aspect, without considering the specificities of the study environment and the predictors related thereto. The study environment and the changes around it can lead to several important variations in theories. The authors often observe originally theorized relationships that become imperceptible, changes in the meaning of relationships, the mutations between relationships that engender new relationships, leading to the failure of theories and results (Mengesha & Garfield, 2019). Thus, to better explain and study an environment to understand various phenomena, it is important to conduct studies by adapting the theories to the context to improve the explanatory power of the study. To reach our research objective, this study answers the following research question: *what are the factors related to the use of social media that influence academic performance among Higher Education students in Cameroon?*

To answer this question, this study contextualizes the extended version of the TAM model (Venkatesh & Davis, 2000; Venkatesh et al., 2003) to Social Media use in Sub-Saharan African universities. The authors add three constructs (Agreeableness, Openness and Academic Performance) to carry out this study on the contextualization of the TAM model. This therefore includes psychological and environmental factors that affect the academic performance of scholars. The authors test the proposed research model using the Partial Least Squares-Structural Equation Modelling (PLS-SEM) methods. The results obtained were exhibited following the presentation of the foundations and theoretical background of our study. The authors dedicate the next section to the presentation of our research methodology. The sub sections discuss the results after analysis. Finally, the discussions implications, limitations and perspectives for future research will be presented. The last part will be entirely devoted to the conclusion and upcoming prospects.

## **THEORETICAL BACKGROUND**

### **Social Media Use in the Global South**

The mushrooming of social media and the ubiquity of mobile telephony have been a major technological revolution affecting Africa in the first decade of the new millennium. (Asongu, Le Roux, et al., 2018). A major driver of such revolution is technological development and a wider access to the internet. Given the global membership around Social media, major sectors of activity are represented in Africa (Kuika Watat & Jonathan, 2020a). Multinationals, major brands, financial institutions, public administrations, and opinion leaders are positioning themselves today to get closer to their public and indirectly to the rest of the world. On the other hand, Social Media in Africa have

seen the emergence of a category of young internet users engaged in participation in world public life (Comunello & Anzera, 2012; Kuika Watat & Jonathan, 2020b). The Arab Spring between 2011 and 2013 or the presidential elections in several African countries since 2010 are heavily influenced by social media (Farhan & Varghese, 2018). Despite the inequalities between African countries, internet users in Africa are growing seven times as fast than the global growth. Between 2000 and 2012, there was a growth of 3.6% for about 167 million Internet users among over 54 African countries. In 2017, Internet users were nearly 281 million, with an average access rate of just 23% (Afrique, 2017; InternetWorldStats, 2018).

Following the results in the first quarter of 2018, 100 million Internet users became social media users (We Are Social 2018). This adds up to 3.3 billion social media users around the world (Meeker and Wu 2018; We Are Social 2018). GSMA (2018) stated that 61% of the world's population will be connected to the Internet by 2025. African netizens should represent 495 million (Evans, 2018). This is a growth of about 130% compared to the figures recorded so far. Although this growth is significant, it remains relatively low given the rapid population growth in Africa. In 2018, the best growth rates of internet penetration among continent were observed in Africa. This rate exceeded by 20% the penetration rate registered in 2017 (Watat & Madina, 2019; We Are Social, 2018). African countries with the highest Internet penetration rate are Seychelles (57.90%), Morocco (57.60%) and South Africa (52%). However, Nigeria remains the country with the largest number of Internet users in Africa. It has more than 90 million internet users with an average penetration rate of 46% (Afrique, 2017). The african continent is growing at an average rate of over 4% GDP. Nonetheless, disparities between countries remain colossal and range from 1 to 50 (Afrique, 2017; Asongu & Odhiambo, 2018). The last places are occupied by Somalia Eritrea and Burundi where internet access is possible by less than 0,2% of the population (Afrique, 2017; Asongu & Odhiambo, 2018). Although there is a clear increase in the Internet penetration rate in Africa, it is important to highlight the high rate of disparities between countries that vary depending on where you are, between 1 and 50% (Asongu, Le Roux, et al., 2018).

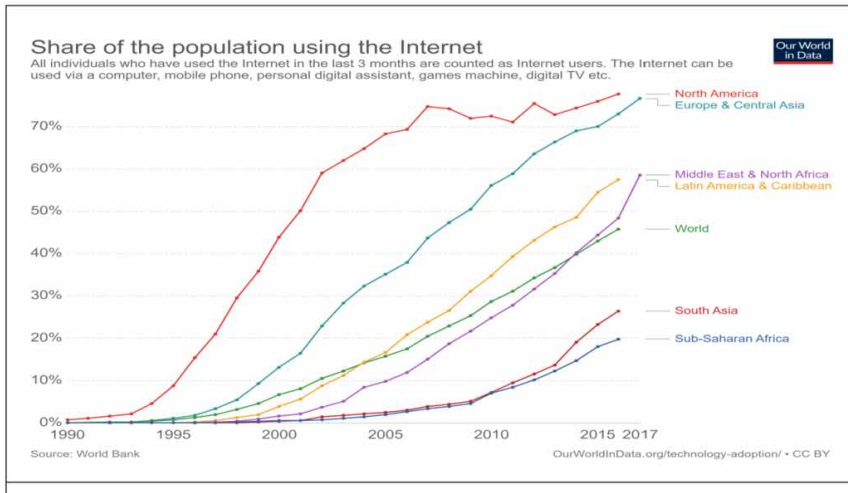
Similarly to other regions where ubiquitous connectivity arrived earlier, Africans quickly became heavy users of social media (Evans, 2019). The abundant use of mobile internet coupled with social media is for Africans the main vector of information retrieval. With 75,44% of users across Africa, Facebook is the most popular social media accessible via smartphone (Asongu, Nwachukwu, et al., 2018; InternetWorldStats, 2018). Followed by Youtube with 12,4% and Pinterest with 6,14% (stats, 2019). Overall, in Cameroon in March 2017, there were 2.5 million Facebook users among the 25 million citizens and the majority of them are between 18 and 34 years old compared to the global trend (Mediametrie, 2016). There were 79% of women between 18-34, compared to 75% of men in the same interval (Mediametrie, 2016). This seems similar in the US, where Facebook and YouTube largely dominate the technological landscape. Most of their users are aged between 18 to 24 years old (Freelon et al., 2016). Thus, technology adoption follows similar patterns in spite of the cultural differences between US and some African countries. In this context, and in view of growth forecasts, the African continent will attract more and more interest from major tech groups, with a market of the most important by 2030. According to the report Generation 2030 / Africa of UNICEF, "Four out of ten people in the world will be African by the end of the century" (You et al., 2014).

## RESEARCH MODEL

### The Big Five Model

The Big Five Personality traits provides information on the differences between perceptions and attitudes. Individuals are seen to have different personalities which thus shape their beliefs and behaviors. This personality divergence helps explain why individuals can react in different ways to situations, how they adopt different behaviors depending on the environment they find themselves in and how they perceive other individuals who are in the same situation as them. This model is in the

Figure 1. Global trend of the population using internet



dimension of the theoretical representations that polish the skeleton of human personality. It underlies authenticity in behavior and thinking of individuals. Any individual regardless of their cultural background, gender or age can be profiled according to personality traits. The five main dimensions are therefore an arrangement of a multitude of independent but closely related characteristics.

The Big Five model has been illustrated over the years in the understanding between temperament and the multiple academic attitudes among individuals (Komarraju et al., 2011). Fruyt et al. (2004) implies that agreeableness(A) refers to the interpersonal orientation of an individual in terms of individual's thoughts, feelings, and attitudes. People with high score of agreeableness are in good mood, friendly, compassionate (R. Barrick & Mount, 1991). Individuals raised in the trait of agreeableness are simpler, modest and can trust (Fruyt et al., 2004). In addition, students with a high score in agility are found to be altruistic. They are very sociable and always want to help others without complacency. They have a high level of self-control and tolerance (Hagan et al., 2017). Agreeable individuals consider social media as useful to the attainment of their work (Devaraj et al., 2008). Social media is an added value for people of good taste in mastering their lessons (Roccas et al., 2002). From a relationship point of view, this further strengthens their relationship with others. A positive correlation was found between A and Perceived Ease of Use (PEOU) (Özbek et al., 2014). Agreeableness is positively associated with perceived Usefulness(PU) and regulates the link between PU and intention to use (IU) (Devaraj et al., 2008). Openness to experience(O) is commonly linked with traits such as "being imaginative, and artistically sensitive"(P.792) (Roccas et al., 2002). They particularly appreciate art and aesthetics. They like to diversify their actions and have intellectual curiosity (Hagan et al., 2017). They want all the time to be informed about everything in order to increase their knowledge (Svendsen et al., 2013). They have ability to tolerate uncertainty. They refute the idea of being conventional in their ways of thinking and seeing things, their beliefs and their values(Barnett et al., 2015). Students open to new adventures would be tempted to embrace the use of social media in their learning process, to appreciate and enjoy their various features (Wolfradt & Doll, 2001).

## Technology Acceptance Model (TAM)

The TAM model is considered as one of the most popular models in the information systems literature. It draws on Theory of Reasoned Action (TRA) to predict the acceptance of a technology by an end user (Venkatesh & Davis, 2000). It was designed to understand why workers did not use IT tools

available for them. Its founders felt that fundamental elements to increase IT use was to first increase the acceptance of it by testing users for their intention to use them. Early research by TAM revealed that only about three parameters are essential to allow IT acceptance (Venkatesh & Davis, 2000). The original TAM assesses the impact of four internal constructs (Perceived Ease of Use, Perceived Usefulness, Intention to Use, Attitude) on the current use of IT. PEOU refers to “the degree to which an individual feels that manipulating a particular system would require no specific effort” (P.985) (F. D. Davis et al., 1989). PU or “the degree to which an individual is confident that his performance will improve if he uses a particular system (P. 985) (F. D. Davis et al., 1989)”. PEOU and PU are constructs of crucial importance for acceptance behavior of any technology. Attitude (ATT) is the “user’s evaluation of the desirability of individuals using of social Media” (P. 78) Schneberger et al. (2008), and (IU) as “the strength of one’s willingness to use a system” (P. 16) (Ching, 2018). Furthermore, the TAM implies that the behavioral intention of using a technology precedes its use. Such intention is explained by Attitude (ATT) and Perceived Usefulness (PU).

Perceived Satisfaction refers to “the acquisition of all the advantages a learner aims to receive from learning, as per his behavioral beliefs and attitudes” (P. 412) (Al-Azawei & Lundqvist, 2015). On the basis of this definition, perceived satisfaction is a key factor resulting from the achievement of a learning task, for which the expected results are satisfactory (Wu et al., 2010). In view of the exponential growth of numbers and types of social media, the thorny issue of finding ways and means to satisfy user experiences becomes a critical issue. When users perceive social media positively, they are pleased with their experience (Evanschitzky et al., 2004). User’s fulfilment and aims to use technology were affected by simultaneous consideration of perceptions of type and quality of information shared and the status of the technology (Wixom & Todd, 2005). Academic Performance(AP) refers to the level of satisfaction of the educational objectives of a student, teacher or institution in the short, medium or long term(Paul et al., 2012). The usability of various web2.0 applications is able to have an effect on student outcomes (Harrath & Alobaidy, 2016). Some significant correlation was discovered between time spent on social media and academic performance(AP) (Paul et al., 2012). They discovered that social media strongly influences the attention span of students, in particular, the higher the attention time, the lower the time spent on social media.

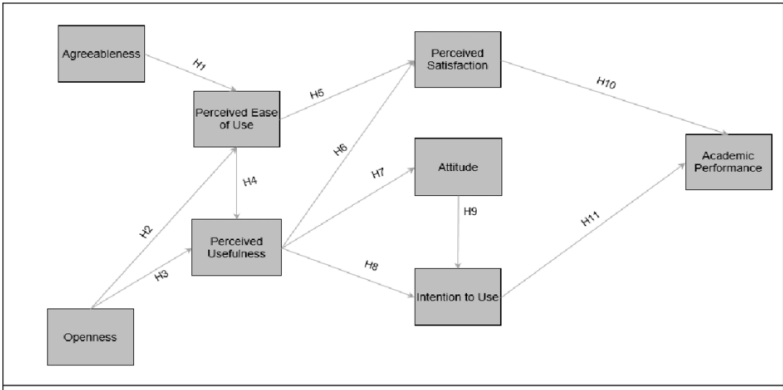
## HYPOTHESES DEVELOPMENT

The theoretical model that the authors propose (Figure 2) was designed according to the existing literature on social media, internet and education, an extended version of TAM incorporating a new concept, namely: perceived satisfaction (PS), academic performance (AP) as well as some constructs from the big five model: Agreeableness (A) and Openness to new experience (O).

Thus, the authors propose and assess the following hypotheses:

- H1: There is a positive effect of agreeableness on perceived ease of use.
- H2: Ease of use is positively influenced by openness to new experiences.
- H3: Perceived Usefulness of a technology is positively related to being open to new experiences.
- H4: Perceived Usefulness of a technology is positively impacted by the perceived ease of use of that technology.
- H5: Satisfaction with the use of a technology is positively related to the degree of perceived ease of use of that technology.
- H6: Perceived Satisfaction associated with social media use is positively impacted by one’s perception of its perceived usefulness.
- H7: Attitude towards social media use is positively impacted by perceived usefulness.
- H8: The Intention to use social media is positively impacted by the perceived usefulness.
- H9: Intention to use social media is positively impacted by attitude.
- H10: Academic performance is positively impacted by perceived satisfaction with social media use.
- H11: Academic performance is positively impacted by intention to use social media.

Figure 2. Research model



## METHODOLOGY

To test the correlation between the constructs, the authors conducted an empirical study that led to the development of a questionnaire. From this questionnaire follows a data collection survey described as follow:

### Instrument Development

The research model has 8 constructs: Agreeableness, Openness, Perceived Ease of Use, Perceived Usefulness, Perceived Satisfaction, Attitude, Intention to Social Media Use, Academic Performance. Each measurement element is evaluated according to a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The dependent variable of this study is academic performance. Academic performance measures the ability of a student to perform well, get a good average in their studies while using social media (Giunchiglia et al., 2017).

### Research Design and Data Collection

The authors opted for a quantitative study through the design and distribution of a questionnaire. It is consistent with the objectives, which is to investigate behaviors of students regarding the use of social media. Indicators from previous work have been adapted to better correspond to our study. Thus, the indicators from the TAM and Big Five models have been adapted and extended to the context of social media in Cameroon, Sub-Saharan Africa. Following the results of previous studies, academic performance was evaluated as formative constructs. The other constructs were evaluated as reflective constructs. Data was collected following a survey conducted in July 2018. Before the mass distribution of the survey, a pilot study was conducted to ensure the ostensible validity of the measurement elements. This pilot study was conducted with 27 students to ensure they clearly understand the questions and how to respond. The survey was produced on electronic version to maximize the number of respondents and study participants. The questionnaire, which was sent using various digital communication channels (WhatsApp, Facebook, Twitter, Instagram, Snapchat, LinkedIn) asked the students to complete and share it with other students in various university cities in Cameroon. The final survey was distributed to a sample of 460 students from higher education institutions in Cameroon.

Table 1 below contains all the descriptive characteristics of the respondents to the study. As shown in the table, most respondents are under 35 years old and more than 53% of them are postgraduate students. Many of them are from private universities and over 69% of them have at least 9 years of experience using social media. WhatsApp is the most used social media followed by Twitter and then

Facebook. Surprisingly, LinkedIn is on the list of the least used social media, although it is useful for professional and academic reasons.

**Table 1. Profile of respondents**

Measure	Items	Frequency	%
Age	15-17	4	0,88
	18-25	333	72,39
	26-35	116	25,21
	36-45	7	1,52
	46-60	0	0,00
Gender	Male	215	46,74
	Female	245	53,26
Degree	Undergraduate	195	42,39
	Postgraduate	250	54,34
	PhD	15	3,26
Type Of University	Private University	249	54,13
	Public University	211	45,87
Year of Using Social Media	Between 1-3	38	8,26
	Between 4-6	138	30
	Between 7-9	144	31,3
	Between 9-10	57	12,40
	more than 10	83	18,04
Most frequently Use Social Media	WhatsApp	237	51,52
	Facebook	42	9,13
	Twitter	112	24,35
	Instagram	12	2,61
	Wikipedia	16	3,48
	YouTube	28	6,09
	Pinterest	3	0,65
	Snapchat	5	1,07
	LinkedIn	5	1,07

## Findings

Structural Equation Modeling (SEM) was applied in this study. This method is appropriate when it comes to evaluating path and factor analysis, precisely when one wants to highlight the reliability and the validity of a quantitative study according to several aspects of measurement and appreciation (Henseler et al., 2014). Our research therefore uses the Partial Least Square (PLS) method to test the validity and reliability of our hypotheses (Castillo & Haddud, 2018a). The authors use the PLS method to test the causal model because it is widely employed in quantitative studies and it incorporates

several latent variables. PLS approach has the advantage of simultaneously evaluating the coefficients of the structural route and the different factors of the measurement model (Hair et al., 2013). The size of the study sample is an important and determining factor in the SEM and PLS method has the ability to analyze small samples. It is also suitable for exploratory studies (Chin, 1998) such as this study because it facilitates confirmation or reversal of the research model and related theories (W. W. Chin, 2010).

This study makes use of SmartPLS resampling method to carry out significance tests. The estimate of Bootstrap results in the basis of confidence intervals that facilitate the estimation of factor stability (F. Hair et al., 2014). Referring to the two-level analytical approach, the authors studied the measurement model and then examined the structural model.

## **Measurement Model**

To evaluate whether the measurement elements demonstrate good construct validity and reliability, the authors proceeded to factor analysis & reliability (Table 2), and Validity (Table 3). The following sections are dedicated to factor analysis & reliability, followed by validity.

## **Factor Analysis & Reliability**

The reliability of the assessment elements of an investigation is the stability of the measuring instruments that it uses (Henseler et al., 2014). Each construct of the research questionnaire contains a variety of elements to assess internal consistency. The following table therefore provides sufficient evidence that the items of measurement for all items exceed the minimum acceptable value of 0.50 (Brown, 2006; Joseph F. Hair et al., 1995). Then, it is also observed that each item of it related construct had a highest loading, more than any other construct. To measure the reliability of our model, our study tested the internal coherence between items and constructs that was measured here by the Cronbach alpha. The authors noticed that the Cronbach alpha coefficient for each construct is greater than the minimum acceptable value of 0.6 (Hundleby, 1968). It is the same for the Rho\_A which are well above the normal value of 0.6. The same is true for Composite Reliability that exceeds the threshold of 0.6. as well as the average variance explained that is well above the value 0.5, which is the recommended value (Fornell & Larcker, 1981).

## **Validity**

To assess convergent validity of the constructs in our scale, the authors verified that the Average Variance Explained for each construct is above 0.5 (Fornell & Larcker, 1981). The results, as reported in Table 3, provide sufficient evidence of the consistency of our measure.

Fornell-Lacker criterion was also used to test for discriminant validity. To claim discriminant validity, the square root of the AVE have to exceed the correlation between the latent constructs (W. Chin, 2010; Hamid et al., 2017). In Table 3, that means all the values on the diagonal should exceed the correlation values below.

## **Structural Model**

The structural model has been evaluated through SmartPLS (Version 3.2.7) to verify the paths coefficients, the degree of significance as well as the associated t-values. The Bootstrapping technique was used here to highlight the explanatory power of our structural model as well as the degree of significance of each of its constructs. The authors also determine the coefficients of the causal relationship between the parameters through the significance of the path coefficients and the R<sup>2</sup> variance of the dependent parameter (Alammari & Chandran, 2016). Not surprisingly, the results obtained support all our suggested hypotheses. The research model explains at 55% of the variance in academic performance through social media usage in higher education. Perceived Satisfaction has a markedly positive influence on academic performance ( $\beta = 0.037$ ,  $t = 12.455$ ,  $p < 0.001$ ) like



**Table 2. Confirmatory factor analysis and reliability**

Codes	Items	Factor analysis	Cronbach Alpha	Rho_A	Composite Reliability	AVE
	<b>Agreeableness</b> Adapted from (Murugesan & Jayavelu, 2017)					
A2	I see myself as someone who likes to cooperate with others on social media	<b>0.823</b>	0.648	0.667	0.808	0.585
A3	I see myself as someone who has a forgiving nature when I interact on social media	<b>0.708</b>				
A4	I see myself as someone who generally trusts on social media	<b>0.760</b>				
	<b>Academic Performance</b> , Adapted from (Akokuwebe & A, 2015)					
AP1	I am convinced that the use of social media brings me academic skills	<b>0.882</b>	0.898	0.903	0.929	0.766
AP2	I feel competent in learning my lessons using social media	<b>0.911</b>				
AP3	I learned how to do my homework effectively using social media	<b>0.822</b>				
AP4	Through social media, I achieved better academic performance	<b>0.883</b>				
	<b>Attitude</b> , Adapted from (Venkatesh et al., 2003)					
ATT1	Using social media is a good idea	<b>0.853</b>	0.768	0.831	0.863	0.679
ATT2	I support the use of social media in my study environment	<b>0.898</b>				
ATT3	The use of social media is nice	<b>0.710</b>				
	<b>Intention to Use</b> , Adapted from (Rupak et al., 2014)					
IU1	I intend to use social media as much as possible	<b>0.871</b>	0.850	0.851	0.909	0.769
IU2	I intend to use social media in my various academic works	<b>0.891</b>				
IU3	I plan to use social media because I see the benefits	<b>0.868</b>				
	<b>Openness</b> , Adapted from (Seidman, 2018)					
O1	I see myself as someone who is original, comes up with new ideas when I interact on social media	<b>0.744</b>	0.794	0.799	0.864	0.614
O2	I see myself as someone who is curious about many different things when I'm on social media	<b>0.777</b>				
O3	I see myself as someone who has an active imagination	<b>0.781</b>				
O4	I see myself as someone who likes to think, to play with ideas	<b>0.830</b>				
	<b>Perceived Ease of Use</b> , Adapted from (Venkatesh & Davis, 2000)					

*continued on next page*

Table 2. Continued

Codes	Items	Factor analysis	Cronbach Alpha	Rho_A	Composite Reliability	AVE
PEOU1	Using social media makes learning my lessons easier	<b>0.884</b>	0.877	0.878	0.924	0.803
PEOU2	Social media interaction makes it easier to assimilate my courses	<b>0.907</b>				
PEOU3	The use of social media makes it easy to learn my courses	<b>0.897</b>				
	<b>Perceived Satisfaction,</b> Adapted from (Al-Azawei & Lundqvist, 2015)					
PS1	I am happy to use social media as a learning aid.	<b>0.882</b>	0.838	0.853	0.892	0.673
PS2	I am happy to use the features of social media.	<b>0.794</b>				
PS3	I am satisfied with social media learning content.	<b>0.838</b>				
PS4	The satisfaction of working together through social media can help me better understand my lessons.	<b>0.763</b>				
	<b>Perceived Usefulness,</b> Adapted from (Venkatesh & Davis, 2000)					
PU1	The use of social media improves my productivity in studies.	<b>0.836</b>	0.882	0.883	0.914	0.679
PU2	The use of social media is useful for my studies.	<b>0.827</b>				
PU3	I find that using social media in my study environment is helpful	<b>0.814</b>				
PU4	The use of social media allows me to gain time in the assimilation of my courses.	<b>0.803</b>				
PU5	Using social media improves my work efficiency.	<b>0.839</b>				

intention to use social media, which has a positive influence on academic performance ( $\beta = 0.040$ ,  $t = 9.024$ ,  $p < 0.001$ ), supporting H10 and H11 respectively.

As shown in the table 4, the results obtained demonstrate a significant relationship for all assumptions at  $P < 0.001$ . It follows that agreeableness, which is characterized by kindness, sympathy and cooperation, does have a positive influence on Perceived Ease of Use. In other words, nice and warm students are those who easily perceive the use of social media in their university courses. Furthermore, Openness to new experience has a strong influence both on Perceived Ease of Use and Perceived Usefulness. This means that curious, imaginative students who enjoy learning new concepts and information find it useful and easy to use social media in their courses. These results therefore corroborate several studies such as Özbek et al. (2014) on the consequences of personality traits on smartphone users, which revealed that users with a high degree of pleasantness had an ease of using the technological tool. . In addition, it was also observed that perceived satisfaction and intention to use social media have a good influence on academic performance. This is reflected in the fact that students have good academic results when they have had an intention to use social media and they are satisfied with it as demonstrated by the work of Al-Rahmi et al. (2018).

## DISCUSSIONS

The efficient transmission of knowledge through emerging technologies is a real challenge in sub-Saharan Africa. To solve this challenge, social media have emerged as a popular instrument to facilitate knowledge communication to young people. Young African students are continually looking for easy,

Table 3. Discriminant validity

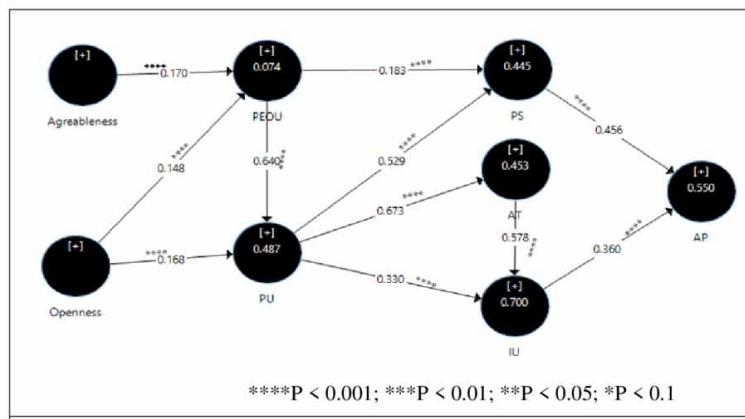
	AP	AT	Agreeableness	IU	Openness	PEOU	PS	PU
AP	<b>0.875</b>							
AT	0.612	<b>0.824</b>						
Agreeableness	0.294	0.256	<b>0.765</b>					
IU	0.655	0.800	0.213	<b>0.877</b>				
Openness	0.255	0.312	0.453	0.322	<b>0.784</b>			
PEOU	0.659	0.438	0.237	0.510	0.225	<b>0.896</b>		
PS	0.689	0.670	0.320	0.646	0.408	0.542	<b>0.821</b>	
PU	0.749	0.673	0.290	0.719	0.313	0.678	0.654	<b>0.824</b>

Table 4. Hypothesis testing

Hypothesis	Path	Original Sample	Sample Mean	STDEV	T Statistics	P Values	Conclusion
H1	A-> PEOU	0.170	0.177	0.049	3.474	0.001****	Supported
H2	O -> PEOU	0.148	0.149	0.051	2.882	0.004****	Supported
H3	O-> PU	0.168	0.171	0.039	4.311	0.000****	Supported
H4	PEOU -> PU	0.640	0.639	0.030	21.561	0.000****	Supported
H5	PEOU -> PS	0.183	0.182	0.051	3.564	0.000****	Supported
H6	PU -> PS	0.529	0.531	0.046	11.492	0.000****	Supported
H7	PU -> AT	0.673	0.674	0.028	23.815	0.000****	Supported
H8	PU -> IU	0.330	0.328	0.040	8.355	0.000****	Supported
H9	AT -> IU	0.578	0.580	0.035	16.371	0.000****	Supported
H10	PS -> AP	0.456	0.456	0.037	12.455	0.000****	Supported
H11	IU -> AP	0.360	0.360	0.040	9.024	0.000****	Supported

\*\*\*\*P < 0.001; \*\*\*P < 0.01; \*\*P < 0.05; \*P < 0.1

Figure 3. Structural model



fun, and engaging learning methods. This is because online entertainment technologies are emerging. Being a new technological tool, they are consequently used mostly by young people. In fact, a limited number of works have explored the issues of the influence of social media on academic performance in Cameroon. This in turn motivates the present work to investigate to what extent social media could impact academic performance. Following discussions in the presentation of the research model, academic performance is important for African students wishing to use social media. Indeed, this study has appropriately taken into account the success model factors of TAM and Big Five in its research model. The main results obtained corroborate the predictive validity of the proposed model. Intention to use social media in higher education is observed as one of the strongest predictors of academic performance. In other words, students with a good academic performance through social media are more likely to develop intentional characters of use of web 2.0 technologies since they find an interest. Social media is one of the technologies of a high mobility that allows students to access educational content anytime and anywhere. This is part of the digitalization of educational content and teaching where student no longer needs to be in class to take the course. Information are relocated to channels of communications they use the most, thus facilitating access. These results are affirmed in the work of Lin (2018) and (Castillo & Haddud, 2018b).

## **IMPLICATIONS**

This study makes two main contributions in IS domain. First, it contributes to the extant literature on Social Media adoption and usage in universities (Chugh & Ruhi, 2017; C. Davis et al., 2012). In the field of education, previous studies have highlighted some principles of using social media in higher education (Skiera et al., 2015). Although various researches have formulated recommendations for optimizing the use of social media in the academia, their impact on developing countries remains an untapped field. So far there is not enough study that looks at the influence of social media in the behavior of African students and their transformations on school and academic life. Given the rapid penetration of the Internet in developing countries, and the proliferation of technologies in education, this study is therefore part of the logic of investigating the influence of social media in the education of African developing countries. For this reason, the authors rely on a contextualization of the technology acceptance model (TAM) adapted to the influence of social media on the academic performance of students in Africa by incorporating behavioral study constructs of personality traits. The results have demonstrated a better understanding of the adoption of web 2.0 technologies in education in Africa. Thereby, the authors thus contribute to the previously unknown field of placing a special emphasis on the potential of the various features of social media as factors driving the academic performance of African students. As the driving forces behind a successful technological education in Africa are equally ambiguous, this discovery is also part of contributions to further studies on the importance of social media for African college students.

Second, our contribution in the field of information systems is from a managerial point of view. Today's social media is becoming an essential engine for students knocking on doors at universities and colleges. The study done by TopUniversities.com revealed that out of more than 4,500 prospecting students in 33 universities in Africa, Europe, America and Asia, social media has been an effective way to acquire the right information about student life and other provisions related to admission. They become an essential vector for the completion of official information on school websites. The choice of a potential school or university is dependent on the use of a Web 2.0 technology platform by these future academics. It has been found in the work of Bélanger et al. (2014) and Peruta and Shields (2018) that many young people are gradually abandoning the traditional means of university research to lean towards the massive use of social media, where their choices are directly influenced by the content published by their peers considered more authentic. In view of this trend, universities and colleges around the world have realized that they rely on the use of social media to promote their educational offers. Through the User Generated Content created by students and university staff, they have the opportunity to encourage the values they promote as well as all the communities represented in their different campuses. Universities in Sub-Saharan Africa should therefore rely on these new communication and promotion tools to better sell their offers to their target students. This study will therefore allow faculty and university staff to have a clear knowledge of

the various possibilities they may have by using web 2.0 technologies for promotion and marketing. It allows universities to have knowledge about student behavior when they use social media as well as the consequences of social media on their academic background. It is also a way of orienting the use of social media to fields that do not interfere with student academic achievement and is rather a precious tool of academic excellence.

## LIMITATIONS AND FUTURE RESEARCH ORIENTATIONS

Although this study responds to some questions about the role of social media on academic performance in Cameroon and its impact on student behavior and attitudes, a number of limitations are still noted to be taken into account in the next studies. For example, consideration of all other types of personality traits such as Extraversion, and Neuroticism are not considered in this study. Thus, it would be wise to conduct investigations by incorporating these constructs for better visibility. In addition, this study does not consider demographic factors such as age, sex, educational level, and even geographic area. Indeed, although the phenomenon of social media addiction is more focused on young people, an investigation should also be done on people who have not discovered social media in their youth. Africa remains a young continent. 4 Africans out of 10 are under 15 years old. But according to a study published by INED this summer, the continent will face a rapid aging of the population in the coming years. Testing the moderating effects of such factors would be an important input for future studies. This study is based solely on the collection of data through a questionnaire. However, it is necessary to conduct a qualitative analysis of the behavior and content published by students on social media. This may require new techniques and analytical approaches in the process of collecting and processing data through social media. Future work could highlight these methods to provide an overview of social media in the academy in Africa. In addition, the present work contextualizes the TAM model following several social media without assessing the impact of the nature of these social media on the current study model. Suggestions made by Lin (2018) could also help to increase future studies on the topic by conducting investigations on the various factors of interaction from one social media to another.

## CONCLUSION

This study extends the TAM model that allows us to confirm or disprove the adoption of social media in higher education within African college. It emphasized the link that can exist between social media and academic performance by implementing constructs that have been grafted and tested to the TAM model. Moreover, the study wanted to take into consideration various personality traits that shape the human dimension and that can influence the experience in study. To evaluate our research model, the authors use data collected from students at many universities. Results revealed that most of the relations in the TAM model designed for embracement of web 2.0 applications in higher education are significant at the degree of 0.001. The results above confirm the position of the TAM model as a theoretically rock-hard and robust model. Moreover, most of the suggested hypotheses corroborate the results obtained, thus reflecting the aspirations as gathered during data collection. The authors also discovered that the relationship between PEOU and ATT is not significant. This means that students have a negative, non-significant effect on attitude within social media in their learning environment. In addition, our results demonstrate that they present a non-significant but positive effect of Agreeableness on Perceived Usefulness. All this thus confirm the existence of some dissimilarities in attitudes and characteristics regarding the adoption social media in African college. Theoretical implications have also been discussed in the previous sections. The last section focuses on the limitations of the study as well as directions for conducting further future studies.

## ACKNOWLEDGMENT

The publisher has waived the Open Access Processing fee for this article.

## REFERENCES

- Afrique, J. (2017). Accès à internet: le continent africain entre progrès et inégalités. *Jeune Afrique Economie & Finance*. Retrieved from <https://www.jeuneafrique.com/398696/economie/acces-a-internet-continent-africain-entre-progres-inegalites/>
- Ahmed, Y. A., Ahmad, M. N., Ahmad, N., & Zakaria, N. H. (2018). Social media for knowledge-sharing: A systematic literature review. *Telematics and Informatics*, 37, 72–112. doi:10.1016/j.tele.2018.01.015
- Akokuwebe, M., & A, S. (2015). *Impact of Social Media on Academic Performance of Student in Osun State University, Nigeria*. Academic Press.
- Al-Azawei, A., & Lundqvist, K. (2015). Learner Differences in Perceived Satisfaction of an Online Learning: An Extension to the Technology Acceptance Model in an Arabic Sample. *Electronic Journal of e-Learning*, 13(5), 408-426.
- Al-Rahmi, W. M., Alias, N., Othman, M. S., Marin, V. I., & Tur, G. (2018). A model of factors affecting learning performance through the use of social media in Malaysian higher education. *Computers & Education*, 121, 59–72. doi:10.1016/j.compedu.2018.02.010
- Alammari, A., & Chandran, D. (2016). *Knowledge Sharing Adoption in Saudi Universities' E-learning Communities*. Paper presented at the 22nd Americas Conference on Information Systems (AMCIS). <https://aisel.aisnet.org/amcis2016/ICTs/Presentations/3>
- Ali, M., Yaacob, R., & Endut, M. (2016). Understanding the academic use of social media: Integration of personality with TAM. *Journal of Theoretical and Applied Information Technology*, 90(1), 1.
- Asongu, S. A., Le Roux, S., & Biekpe, N. (2018). Enhancing ICT for environmental sustainability in sub-Saharan Africa. *Technological Forecasting and Social Change*, 127, 209–216. doi:10.1016/j.techfore.2017.09.022
- Asongu, S. A., Nwachukwu, J. C., & Aziz, A. (2018). Determinants of Mobile Phone Penetration: Panel Threshold Evidence from Sub-Saharan Africa. *Journal of Global Information Technology Management*, 21(2), 81–110. doi:10.1080/1097198X.2018.1462069
- Asongu, S. A., & Odhiambo, N. M. (2018). Governance and social media in African countries: An empirical investigation. *Telecommunications Policy*, 43(5), 411–425. doi:10.1016/j.telpol.2018.10.004
- Balakrishnan, V. (2016). Key determinants for intention to use social media for learning in higher education institutions. *Universal Access in the Information Society*, 16(2), 289–301. doi:10.1007/s10209-016-0457-0
- Barnett, T. W., Pearson, A., Pearson, R., & Kellermanns, F. (2015). Five-factor model personality traits as predictors of perceived and actual usage of technology. *European Journal of Information Systems*, 24(4), 374–390. doi:10.1057/ejis.2014.10
- Barrick, R., & Mount, M. K. (1991). The Big Five Personality Dimensions and Job Performance: A Meta-Analysis. *Personnel Psychology*, 44(1), 1–26. doi:10.1111/j.1744-6570.1991.tb00688.x
- Bélanger, C. H., Bali, S., & Longden, B. (2014). How Canadian universities use social media to brand themselves. *Tertiary Education and Management*, 20(1), 14–29. doi:10.1080/13583883.2013.852237
- Brown, T. A. (2006). *Confirmatory Factor Analysis for Applied Research*. Guilford Publications.
- Castillo, G., & Haddud, A. (2018a). Social Media Usage in Higher Education in Online Business Programs. In A. Khare & D. Hurst (Eds.), *On the Line: Business Education in the Digital Age* (pp. 203–218). Springer International Publishing. doi:10.1007/978-3-319-62776-2\_16
- Castillo, G., & Haddud, A. (2018b). *Social Media Usage in Higher Education in Online Business Programs*. Academic Press.
- Chin, W. (2010). *Handbook of Partial Least Squares*. Academic Press.
- Chin, W. W. (1998). Commentary: Issues and Opinion on Structural Equation Modeling. *Management Information Systems Quarterly*, 22(1), 1–14.

- Chin, W. W. (2010). How to write up and report PLS analyses. *Handbook of Partial Least Squares Concepts, Methods and Applications*, 655-690.
- Ching, J. (2018). *Understanding user's perceived playfulness toward mobile information and entertainment services in New Zealand* (Master's thesis). Auckland University of Technology. doi:10.1007/s10639-017-9621-2
- Chugh, R., & Ruhi, U. (2017). Social media in higher education: A literature review of Facebook. *Education and Information Technologies*, 23(2), 605–616. Advance online publication. doi:10.1007/s10639-017-9621-2
- Comunello, F., & Anzera, G. (2012). Will the revolution be tweeted? A conceptual framework for understanding the social media and the Arab Spring. *Islam & Christian-Muslim Relations*, 23(4), 453–470. doi:10.1080/09596410.2012.712435
- Davis, C., Regina, D., Cecilia, R., & Manuel, S. (2012). *Social Media in Higher Education: A Literature Review and Research Directions*. The Center for the Study of Higher Education at the University of Arizona and Claremont Graduate University.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982–1003. doi:10.1287/mnsc.35.8.982
- Devaraj, S., Easley, R. F., & Crant, J. M. (2008). Research Note---How Does Personality Matter? Relating the Five-Factor Model to Technology Acceptance and Use. *Information Systems Research*, 19(1), 93–105. doi:10.1287/isre.1070.0153
- Dumpit, D. Z., & 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*, 14(1), 5. doi:10.1186/s41239-017-0045-2
- Evans, O. (2018). Connecting the poor: The internet, mobile phones and financial inclusion in Africa. *Digital Policy. Regulation & Governance*, 20(6), 568–581. doi:10.1108/DPRG-04-2018-0018
- Evans, O. (2019). Digital politics: Internet and democracy in Africa. *Journal of Economic Studies (Glasgow, Scotland)*, 46(1), 169–191. doi:10.1108/JES-08-2017-0234
- Evanschitzky, H., Iyer, G. R., Hesse, J., & Ahlert, D. (2004). E-satisfaction. *Journal of Retailing*, 80(3), 239–247. doi:10.1016/j.jretai.2004.08.002
- Farhan, A. A. N., & Varghese, P. (2018). Facebook Utilization and Arab Spring Movement: A Study among Yemeni Youth. *International Journal of Social Sciences and Management*, 5(1), 5–9. doi:10.3126/ijssm.v5i1.18971
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *JMR, Journal of Marketing Research*, 18(3), 382–388. doi:10.1177/002224378101800313
- Freelon, D., McIlwain, C., & Clark, M. (2016). Quantifying the power and consequences of social media protest. *New Media & Society*, 20(3), 990–1011. doi:10.1177/1461444816676646
- Fruyt, F. D., McCrae, R. R., Szirmák, Z., & Nagy, J. (2004). The Five-Factor Personality Inventory as a Measure of the Five-Factor Model: Belgian, American, and Hungarian Comparisons with the NEO-PI-R. *Assessment*, 11(3), 207–215. doi:10.1177/1073191104265800 PMID:15358876
- Giunchiglia, F., Zeni, M., Gobbi, E., Bignotti, E., & Bison, I. (2017). Mobile Social Media and Academic Performance. *Computers in Human Behavior*, 82, 177–185. doi:10.1016/j.chb.2017.12.041
- GSMA. (2018). *The Mobile Economy 2018*. Retrieved from <https://www.gsma.com/asia-pacific/resources/the-mobile-economy-report-2018/>
- Hagan, C., Carpenter, J., Ungar, L., & Preotiuc-Pietro, D. (2017). Personality Profiles of Users Sharing Animal-related Content on Social Media. *Anthrozoos*, 30(4), 671–680. doi:10.1080/08927936.2017.1370235
- Hair, J., Hult, T., Ringle, C., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling*. Academic Press.

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2013). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications.

Hamid, M. R. A., Sami, W., & Sidek, M. H. M. (2017). Discriminant Validity Assessment: Use of Fornell & Larcker criterion versus HTMT Criterion. *Journal of Physics: Conference Series*, 890(1), 012163. doi:10.1088/1742-6596/890/1/012163

Harrath, Y., & Alobaidy, H. (2016). Impact of Social Networking Sites on Student Academic Performance: The Case of University of Bahrain. *Journal of Cases on Information Technology*, 18(2), 35–50. doi:10.4018/JCIT.2016040103

Harris, A., & Rea, A. (2009). Web 2.0 and virtual world technologies: A growing impact on IS education. *Journal of Information Systems Education*, 20(2), 3.

Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J. Jr, Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common Beliefs and Reality About PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, 17(2), 182–209. doi:10.1177/1094428114526928

Hundleby, J. D. (1968). Reviews: Nunnally, Jum. *Psychometric Theory*. New York: McGraw-Hill, 1967. 640+xiii pp. \$12.95. *American Educational Research Journal*, 5(3), 431–433. doi:10.3102/00028312005003431

InternetWorldStats. (2018). *Internet Users in the world by regions*. Retrieved from <https://www.internetworldstats.com/stats.htm>

Joseph, F., Hair, J., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis* (4th ed.). Prentice-Hall, Inc.

Komarraju, M., Karau, S. J., Schmeck, R. R., & Avdic, A. (2011). The Big Five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, 51(4), 472–477. doi:10.1016/j.paid.2011.04.019

Kuika Watat, J., & Jonathan, G. M. (2020a). *Breaking the Digital Divide in Rural Africa*. Paper presented at the Americas Conference on Information Systems, Virtual conference. [https://aisel.aisnet.org/amcis2020/global\\_dev/global\\_dev/2](https://aisel.aisnet.org/amcis2020/global_dev/global_dev/2)

Kuika Watat, J., & Jonathan, G. M. (2020b). *The influence of Privacy Concerns on Intention to Use Social Media*. Paper presented at the Americas Conference on Information Systems, Virtual conference. [https://aisel.aisnet.org/amcis2020/global\\_dev/global\\_dev/6](https://aisel.aisnet.org/amcis2020/global_dev/global_dev/6)

Kuika Watat, J., Jonathan, G. M., Ntsafack Dongmo, F. W., & Zine El Abidine, N. E. H. (2020). *Social Media Impact on Academic Performance: Lessons Learned from Cameroon*. Paper presented at the European, Mediterranean, and Middle Eastern Conference on Information Systems. EMCIS 2020. doi:10.1007/978-3-030-63396-7\_25

Lin, F.-L. (2018). *Exploring the Social Influence Mechanism of Applying Social Network Technology in a Classroom*. Academic Press.

Mediametrie. (2016). *L'audience de la TV, de la Radio et les usages Internet Au Cameroun –1er semestre 2017*. Retrieved from <https://www.mediametrie.fr/television/communiques/l-audience-de-la-television-de-la-radio-et-l-usage-des-reseaux-sociaux-au-cameroun.php?id=1694>

Mengesha, G. H., & Garfield, M. J. (2019). A contextualized IT adoption and use model for telemedicine in Ethiopia. *Information Technology for Development*, 25(2), 184–203. doi:10.1080/02681102.2018.1461057

Murugesan, R., & Jayavelu, R. (2017). The Influence of Big Five Personality Traits and Self-efficacy on Entrepreneurial Intention: The Role of Gender. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 3(1), 41–61. doi:10.1177/2393957516684569

Özbek, V., Almiaçık, Ü., Koc, F., Akkılıç, M. E., & Kaş, E. (2014). The Impact of Personality on Technology Acceptance: A Study on Smart Phone Users. *Procedia: Social and Behavioral Sciences*, 150, 541–551. doi:10.1016/j.sbspro.2014.09.073

Paul, J. A., Baker, H. M., & Cochran, J. D. (2012). Effect of online social networking on student academic performance. *Computers in Human Behavior*, 28(6), 2117–2127. doi:10.1016/j.chb.2012.06.016



- Peruta, A., & Shields, A. B. (2018). Marketing your university on social media: A content analysis of Facebook post types and formats. *Journal of Marketing for Higher Education*, 28(2), 175–191. doi:10.1080/08841241.2018.1442896
- Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The Big Five Personality Factors and Personal Values. *Personality and Social Psychology Bulletin*, 28(6), 789–801. doi:10.1177/0146167202289008
- Rupak, R., Greg, R., Jei, Y., & Ben, J. (2014). Technology acceptance model (TAM) and social media usage: An empirical study on Facebook. *Journal of Enterprise Information Management*, 27(1), 6–30. doi:10.1108/JEIM-04-2012-0011
- Schneberger, S., Amoroso, D. L., & Durfee, A. (2008). Factors That Influence the Performance of Computer-Based Assessments: An Extension of the Technology Acceptance Model. *Journal of Computer Information Systems*, 48(2), 74–90. doi:10.1080/08874417.2008.11646011
- Seidman, G. (2018). The Big 5 and relationship maintenance on Facebook. *Journal of Social and Personal Relationships*. Advance online publication. doi:10.1177/0265407518772089
- Skiera, B., Spann, M., & Hinz, O. (2015). *Social Media and Academic Performance: Does Facebook Activity Relate to Good Grades?* (Vol. 67). Academic Press.
- Stats, G. (2019). *Social Media Stats in Africa - February 2019*. Retrieved from <https://gs.statcounter.com/social-media-stats/all/africa>
- Svensden, G. B., Johnsen, J.-A. K., Almås-Sørensen, L., & Vittersø, J. (2013). Personality and technology acceptance: The influence of personality factors on the core constructs of the Technology Acceptance Model. *Behaviour & Information Technology*, 32(4), 323–334. doi:10.1080/0144929X.2011.553740
- Tur, G., Marín, V. I., & Carpenter, J. (2017). Using Twitter in higher education in Spain and the USA. *Comunicar: Media Education Research Journal*, 25(51), 19–27. doi:10.3916/C51-2017-02
- Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186–204. doi:10.1287/mnsc.46.2.186.11926
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *Management Information Systems Quarterly*, 36(1), 157–178. doi:10.2307/41410412
- Venkatesh, V. G., Morris, M. B., Davis, G., & Davis, F. (2003). User Acceptance of Information Technology: Toward a Unified View. *Management Information Systems Quarterly*, 27(3), 425–478. doi:10.2307/30036540
- Watat, J. K., & Madina, M. (2019). *Towards an Integrated Theoretical Model for Assessing Mobile Banking Acceptance Among Consumers in Low Income African Economies*. Paper presented at the European, Mediterranean, and Middle Eastern Conference on Information Systems. EMCIS 2019. doi:10.1007/978-3-030-44322-1\_13
- We Are Social, H. (2018). *Global Digital Statshot Essential Insights into Internet, social media, mobile, and E-commerce use around the world* Retrieved from <https://korikis.com/wp-content/uploads/2018/04/social-media-status-2018.pdf>
- Wixom, B. H., & Todd, P. A. (2005). A Theoretical Integration of User Satisfaction and Technology Acceptance. *Information Systems Research*, 16(1), 85–102. doi:10.1287/isre.1050.0042
- Wolfradt, U., & Doll, J. (2001). Motives of Adolescents to Use the Internet as a Function of Personality Traits, Personal and Social Factors. *Journal of Educational Computing Research*, 24(1), 13–27. doi:10.2190/ANPM-LN97-AUT2-D2EJ
- Wu, J.-H., Tennyson, R. D., & Hsia, T.-L. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers & Education*, 55(1), 155–164. doi:10.1016/j.compedu.2009.12.012
- You, D., Hug, L., & Anthony, D. (2014). *Generation 2030/Africa*. ERIC.

*Josue K. Watat is a digital transformation consultant & researcher. He worked for the German Cooperation where he led several missions and reforms in the field of digital governance in rural municipalities. He led the technical processes of the "Citizen Space" project which is a municipal application that decentralizes access to local public services to communities far from the municipality. His research has been published in business journals press such as The Wall Street Journal, in collaboration with Huawei. He is the author and co-author of several scientific publications in the top conferences such as the International Conference on Information Systems (ICIS), the premier IS Conference in the world, the Americas Conference on Information Systems (AMCIS), and the European, Mediterranean, and Middle Eastern Conference on Information Systems (EMCIS). His work mainly focuses on digital transformation in the global south and its implications. Mr. Josue strongly believes in the power of science to reach the Sustainable Development Goals (SDGs) in Africa, reduce poverty, and increase prosperity.*

*Dario Bonaretti is an Assistant Professor and Nova Southeastern University. His research focuses on IT use for emergency and disaster management.*