



Scale Validity and Reliability of Social Media and Entrepreneurial Skill Development among Tertiary Institution Students in Nigeria

Yusuf Suleiman^{1*}, Bolaji Hameed¹, Ganiyu Mutiu Adeku³,
Mustapha Adam Ishola², Rasheed Jimoh³

¹Faculty of Education,
Al-Hikmah University, Ilorin, Kwara State, NIGERIA

²Al-Hikmah University, Ilorin, Kwara State, NIGERIA

³Department of Mass Communication, Faculty of Arts and Humanities,
Al-Hikmah University, Ilorin, Kwara State, NIGERIA

*Corresponding Author

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Abstract: Social media has gained broader acceptability and usability and is fast becoming perhaps the most important communication tool in 21st Century. The acceptability of the social media has gained tremendous popularity among students especially at higher institution. Drawing from the foregoing point, the main purpose of the study thus is to examine the validity and reliability of both survey and interview on social media adoption and entrepreneurial skills development among tertiary institution students in Nigeria focusing on the pilot study report. For the purpose of the pilot study, 100 students were selected from Al-Hikmah University and Kwara State University in Kwara State because of their serious commitment to entrepreneurial skills development for the quantitative aspect, while two artisans each from the universities were used for data collection in qualitative approach. Two instruments were used to collect data. First, an instrument titled “Social Media and Entrepreneurship Questionnaire (SMEQ)” was designed to get comprehensive information from the students. Second, an interview protocol tagged “Interview Protocol on Social Media Adoption and Entrepreneurship (IPMSAE)” was designed to elicit relevant information from the artisans. Both Statistical Package and Social Sciences (SPSS) and PLS-SEM Software were used to assess the psychometric properties of the adapted instruments. Also, thematic type of analysis was used to assess the credibility or otherwise of the interview protocol. Specifically, findings from quantitative approach reveal that Cronbach’s Alpha of the instrument loaded between 0.821 and 0.942 (Social Media Adoption: 0.885; Social Media and Addictive Behavior: 0.821; Entrepreneurial Skills: 0.942 and Self-Reliance: 0.914). Also, the use of PLS-SEM shows that composite reliability, cross loadings, average variance extracted (AVE) and discriminant validity loaded within the minimum benchmarks, indicating adequate validity and reliability of the instrument. Furthermore, findings from qualitative after transcription of the interviews indicate the trustworthiness and credibility of the protocol. Based on the findings of the study from the two approaches, it can be advanced that the findings of the study helped to establish adequate validity and reliability of the instruments used via quantitative and qualitative methods.

Keywords: Social Media, Entrepreneurial Skills, Validity and Reliability, Tertiary Institutions, Nigeria

1. Introduction

Universally, social media is trending as a conventional activity and has become a major method of passing message and interacting especially for youths who form approximately 50% of the world population on Facebook and other sites. Social media has moved from being just communicating to a form of mass media. In fact, it has been predicted that social media will be a resilient force in influencing public opinion especially in the issue of education, religions, social causes, sexuality and politics (Aba & Makinde, 2020; Adetimirin & Ayoola, 2020; Isah & Ogundele, 2020; Ogbonnaya, 2019). Social media is also seen as an expression of the intricacies between the media and society. Undisputedly, social media has gained eclectic acceptability and usability and is fast becoming perhaps the most important communication tool among students especially at higher institution. Social media is seen as having bridged the gap in communication that existed within the context of social media like Twitter, Facebook, Instagram and WhatsApp. In fact, Facebook is gaining more and more patronage considering overwhelming acceptability of the site by the people. For instance, statistics revealed that with almost 2.5 billion monthly active users as of the fourth quarter of 2019, Facebook was rated as the biggest social media worldwide (Statistics, 2020).

In Africa, statistics show that Facebook subscribers have increased tremendously in 2019. Also, report presents the distribution of Facebook users in Nigeria as of December 2019, broken down by age group. As of the measured period, 25 to 34 year olds accounted for 34.2 percent of Facebook users in Nigeria, whereas just 2.7 percent of users were aged between 55 and 64 years old (Statistics, 2020). Studies indicate that 41% Nigerian internet users, mostly students, make use of WhatsApp messenger. In the same vein, 25% Nigerians prefer Instagram and YouTube for their social activities. Also, a lot of companies in Nigeria use the social network to promote their services (Legit, 2019). These sites are systematic way of communicating directly with other people in school and social events. It has been predicted that social media has the abilities of influencing decision-making in a very short time notwithstanding of the distance (Azeta, Ativie, Misra, Azeta, Chidozie & Amosu, 2020; Rahman, Handayani, Othman, Al-Rahmi, Kasim & Sutikno, 2020).

Entrepreneurship education has vast potential to build skills and competencies in entrepreneurs who through poverty, marginalization or other significant barrier would not otherwise be able to expand and develop their entrepreneurial skill set. Entrepreneurship and entrepreneurs have become increasingly important worldwide, considering the positive impact on employment, productivity, innovation and economic growth by analysts, economic theoreticians and researchers (Ahmad & Hoffmann, 2008). Entrepreneurship is a self-directed activity that needs the focus of the owners to spontaneously grow the business and compete for the trend of today's generation, either in industrial or technological change. Entrepreneurship requires passion of individuals who identify and grab opportunities in business by using sophisticated technology to drive it (Echezona, 2012). An entrepreneur must have a passion for doing business for calibrating his business potential and enjoying business life. Entrepreneurship is very important for the process of value creation, employment and general economic growth (Blenker, 2014). Every entrepreneur looks forward to giving jobs to the people that surround him; entrepreneurship alleviates the lives of many. An entrepreneur must have an entrepreneurial mind to find opportunities even in a difficult situation with a heart to see that his/her business can do good to the common people, and a gut game to believe that his business will work (Morato, 2016). More reason why it is advisable not to venture into any business world without basic knowledge and skills required. This is because without entrepreneurial skills, one may not be able to establish and manage small business enterprises on their own.

Developing entrepreneurial skills by the students necessitate the exploration of entrepreneurial activities to equip them with the knowledge and skills needed in the business world to be successful (Secundo, Del Vecchio, Schiuma & Passiante, 2017). The need for entrepreneurial skills for students is domesticated in the National Policy on Education, which mandate tertiary institutions to speed up skills for students. Today, entrepreneurship course is offered as a compulsory general course for students in both private and public institutions in Nigeria (Olayinka & Eze, 2020). Entrepreneurial skills are relevant skills and competencies that will enable an individual seek and run an enterprise successfully. It consists of effective utilization of ideas, information and facts that help a learner develop competencies or being productive employee of an organization (Olibie & Obidike, 2008). It is pertinent to say unequivocally that entrepreneurial activities require a far-reaching array of skills. Some of the skills are not only well known and well accepted in the literature but also generally acknowledged by practitioners as essential entrepreneurial skills. Some of the skills according to Lyons (2002) are technical skills, management skills, entrepreneurial skills, and personal maturity skills. These technical skills are necessary for students to be successful in their line of business. In view of the foregoing, the focus of the present study thus is to assess the validity and reliability of the instruments developed to investigate the relationship between social media adoption and entrepreneurial skill development among tertiary institution students in Nigeria via quantitative and qualitative approach.

2. Literature Review

2.1 Social Media Adoption

Various studies have been conducted to assess the influence of social media in the society (Ochonogor & Mutula, 2020; Orji, Kusi-Sarpong & Gupta, 2020). For instance, Orji, Kusi-Sarpong and Gupta (2020), Haridakis and Hanson (2009) investigated one of the social media sites, youtube. The site was used to predict the relationship between social interaction and co-viewing blending mass communication. Finding revealed that the viewers of the YouTube medium perceived it as sharing certain features with television but in accumulation it has some social media possessions. In the same vein, Ochonogor and Mutula (2020) confirmed the influence of social media adoption on students in higher institutions and found that its importance cannot be underestimated. The study conducted by Selwyn (2009b) concluded that the use of Facebook has gained tremendous popularity among female students in universities, while the study investigated by Ophus and Abbitt (2009) established that 85 per cent of male and female students were using Facebook to converse with other students in the university. Also, it has been established that successful entrepreneurs have competences in managing operations, beyond the basic production of products or services (Brush et al., 2001; Morris, et. al 2018; Saxenian, 2002; Smith & Munro, 2002). These include using technology in managing supply chains (Arend & Wisner, 2005; Gonzalez-Padron, Hult and Calantone, 2008; Handfield, Petersen, Cousins & Lawson, 2009), and being knowledgeable about new technologies (Shane, 2000; Sukanya, 2008). Technical skills are further broken down in the Lichtenstein and Lyons instrument into: operational (the skills necessary to produce the product or service), supplies/raw materials (the skills to obtain them, as necessary) office or production Space (the skills to match needs and availability), equipment/plant/technology (the skills to identify and obtain them). On social media addictive behavior, there is no agreement on the use of language to label problematic internet use because it has variously been termed as internet necessity, internet use disorder, internet addiction, ad obsessive internet use among others (Kuss, Griffiths, Karila & Billieux, 2014). However, there are concrete debates as to whether challenges with specific internet applications or problematic behavior via use of wifi (e.g., whatsapp addiction) should be categorized as addictive behaviors in their own right or incorporated within the canopy term of 'internet addiction (Hsu & Wang, 2018; Rahman, Handayani, Al-Rahmi, Kasim & Sutikno, 2020).

2.2 Entrepreneurial Skills and Intention

A business incubator study conducted by Schaltegger and Wagner (2011) demonstrated that the more successful entrepreneurs had technical skills beyond just producing the product or service. This is consistent with the findings of writers like Morris, Schindehutte and LaForge (2018) who categorize entrepreneurs by basic entrepreneurial patterns. On one end of the continuum they identify artisan or craftsman entrepreneurs. These are persons who create a new venture in order to exploit their technical or job experience. They have strong technical expertise but often lack other essential skills like management experience and communication ability. On the other end of the continuum are opportunistic entrepreneurs. These are individuals who have supplemented their technical ability with additional skills such as use of technology, communication, legal, economic or strategic knowledge. Carsrud, Brännback, Elfving and Brandt (2017) found that opportunistic entrepreneurs, by virtue of their breadth of education (relative to artisan entrepreneurs), exhibit higher social awareness and involvement and are oriented toward the future. These characteristics increase the likelihood that the opportunistic entrepreneur will bring the entity through difficult developmental stages to ultimate success. The management skills include planning and organizing (Oakey, 2003; Smith & Munro, 2002; Smith, Schallenkamp & Eichholz, 2007), identifying customers and distribution channels (Morris et al., 2002), sourcing and managing financial resources (Burns, 2008; Timmons & Spinelli, 2009), managing or minimising risks (Burns, 2008; Timmons and Spinelli, 2009), and the ability to set in place appropriate structures and control systems (Smith et al., 2007). They also include higher-order skills such as learning and problem-solving, the ability to build core capabilities and competences (Brush, Greene, Hart & Haller, 2001; Haberberg & Rieple, 2007), and the ability to deal with people effectively (Baron & Markman, 2000). Furthermore, entrepreneurial skills encompass one if not all of the following: management (planning, organizing, supervising, directing, and networking), marketing/sales (identifying customers, distribution channels, and supply chain), financial (managing financial resources, accounting, budgeting), legal (organization form, risk management, privacy and security), administrative (people relations, advisory board relations), and higher-order (learning, problem-solving).

Moreover, research shows that entrepreneur's job is complex and multidimensional. It requires a range of skill to perform the duties and activities associated with it. Regardless of the level of management, managers must possess and seek to further develop many critical skills (Pfeffer, 2005). A skill is an ability or proficiency in performing a particular task. Management skills are neither learned nor developed. The same appears to be true of higher-order learning and problem-solving skills. These skills appear to correlate with business success but are, nevertheless, under-utilized. Moreover, entrepreneurial skills are needed to develop innovative products and services in order to generate solutions to emerging needs in the marketplace (Loyd, 2002). include the working up of a concept into a business plan (Clark, 2008; Chen, Yao & Kotha, 2009), opportunity recognition (Baron & Ensley, 2006; Galloway, Anderson, Brown & Wilson, 2005; Seet & Seet, 2006) and environmental scanning (Corbett, 2005), the ability to access external expertise (Brush et al., 2001; Morkel & Posner, 2002; Gumbus & Lussier, 2006; Smith et al., 2007;) and recognize when advice needs to be sought (Zott & Huy, 2007). Entrepreneurial skills include the ability to develop a concept and a business

plan; environmental scanning; opportunity recognition; and advisory board and networking. Using environmental scanning to identify opportunities for viable business concepts is nearly a definition of entrepreneurship for some. Recognizing market opportunities is a key, a defining skill for the entrepreneur. Being able to articulate orally and in verbal/visual presentation form is a useful skill for the entrepreneur. It is also believed that the ability to balance activity as a sole proprietor with utilization of an advisory board and networking opportunities is another critical entrepreneurial skill. On personal maturity skills, these kinds of skills include self-awareness, the ability to reflect on what has happened, recognize and improve on weaknesses (Kutzhanova, Lyons & Lichtenstein, 2009; Collins, Smith & Hannon, 2006; Richardson & Hynes, 2008). They also include taking personal responsibility for resolving problems (Smith et al., 2007) and dealing with them as they arise without being derailed. This is similar to emotional intelligence – the capacity to understand and explain one’s and others’ emotional reactions and use emotions to enhance thought (Mayer and Caruso, 2002; Mayer, Caruso & Salovey, 2016). The personal maturity group also includes creativity, the ability to produce a solution by generating new ideas (Galloway et al., 2005; Shane, 2000; Smith et al., 2007): in recognition of problems, deficiencies, and gaps in knowledge for which there is no existing solution (Charter & Tischner, 2017). Personal maturity skills within the instrument are: self-awareness; accountability; emotional coping; and creativity. These critical skills for the entrepreneur have not received nearly enough attention but may include the “make-or-break” skills for individual entrepreneurial opportunities. These skills are only recently beginning to receive adequate attention in the entrepreneurial research, and are rarely included in entrepreneurial training programs. Taken together, individuals having a strong grip of a specific entrepreneurial skill will more probably feel that they can start their own business, instead of working for some other organization. Other than this, it can also be argued that a strong grip on entrepreneurial skills would also be associated to a higher attitude towards entrepreneurship.

In Nigerian context, research has been domesticated on entrepreneurship (Adeoye, 2015; Adebayo & Kolawole, 2013; Akhemonkhan et al., 2013; Evans-Obinna, 2016). For instance, Akhemonkhan et al (2013) examined the factors affecting students’ entrepreneurial intention in business in Nigeria. Findings revealed that entrepreneurship is an effective tool for poverty reduction. Evans-Obinna (2016) examined the relationship between entrepreneurship and business intention and found that entrepreneurship is an important factor for predicting business intention. That inadequate funding and inadequate facilities are responsible for students’ inability to start business. The study conducted by Adeoye (2015) recommends that Nigerian government should invest heavily on entrepreneurship so as to reduce unemployment in the country. Adebayo and Kolawole (2013) found that entrepreneurship enhanced economic growth of a country by generating employment. The study recommends that Nigerian government need to be more proactive in the area of unemployment in Nigeria.

2.3 Human Capital Theory, Risk Taking Theory (RTT) and Technology Acceptance Model (TAM)

Literature to date indicates that human capital theory is based on the premise that education is a significant weapon for human capital development. It stimulates labour productivity (Gillies, 2017). In the same vein, the proponents of human capital theory are of the view that huge spending on nation’s staffs is necessary for achieving national development because spending is a productive investment in typical physical assets (Hayek, Thomas, Novicevic & Montalvo, 2016; Slaghter, Pelinescu, 2015). For example, human capital development through quality education propels the economic progression and sustainable expansion in developed countries, which include Singapore, Taiwan and Hong Kong. Studies show that entrepreneurship training is an important factor for creating innovative ideas. Research also established a nexus between the entrepreneurial and knowledge-based economies that devotes enormously in technology (Nemeth, 2017; Taylor & Rosinger, 2015). Similarly, risk taking theory (RTT) is another theory that postulates that entrepreneurship is a worthwhile activity that involves risk. The theory was propounded by John Stuart Mill and Richard Cantillon. The theory is based on the premise that entrepreneurship inspires individuals to take intended risk for which future stream of profits are certain, and people taking big risk have to deal with a great responsibility (Ferris & Javakhadze & Rajkovic, 2019; Isaak, 2017; Li & Ahlstrom, 2018). The synopsis of risk theory is that entrepreneurship improves the ability and abilities of individuals to start risks for which economic paybacks are certain. Furthermore, the theory of Technology Acceptance Model (TAM), which was initiated by Fred Davis in 1986, was developed together with Richard Bagozzi, is said to be an extension of Aizen and Fishbein’s work of Theory of Reasoned Action (TRA). This theory on TAM has undergone several revisions and authentication over time. Basically, the underlying assumption of the theory is based on the fact that certain factors determine technology acceptance, information technology usage and behavior. It provides a parsimonious theoretical illuminating model. The Technology Acceptance Model presented the concepts of Perceived Ease of Use and Perceived Usefulness which are the essential determinants of technology acceptance and user behavior. (Aslan & Zhu, 2016).

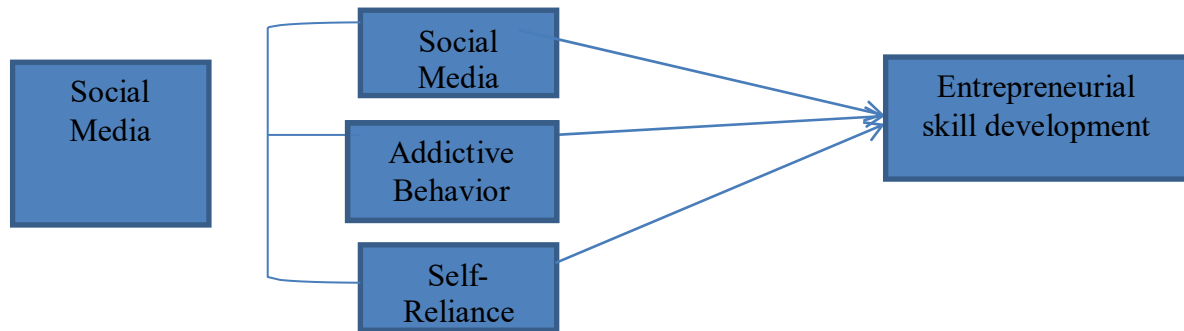


Fig. 1 - Proposed conceptual framework of the study

3. Methodology

3.1 Research Design

Based on the assumptions of deductive and interpretive paradigms, this study adopts mixed method approach (quantitative and qualitative) in assessing the social media adoption and entrepreneurship skill development. The deductive inquiry is commonly employed by the positivists to conduct a test based on evidences and theories aimed at drawing inferences for the generalization of a research. The interpretive is hinged on the fact that human life can be premeditated through interview, focus group discussion, observation, case studies and others (Neuman, 2011; Sekaran & Bougie, 2010). In fact, interpretivists elieve that social reality is socially created and subjective, with both participants and the researcher relating to know the phenomenon from the perspective of the individual Based on the foregoing given description. This study is therefore based on evidence, theories and social life that can be examined using quantitative and qualitative approach (Silverman, 2016). Therefore, the main aim of this study is to ensure validity and reliability of both survey and interview protocol designed to assess the impact of social media adoption on entrepreneurship skill development among tertiary institution students in Nigeria. Validity and reliability of scale has several advantages as suggested by scholars in the field of social science research. First, it is usually carried out to examine the validity and reliability of the adopted instrument of the research study. Secondly, it is conducted to make sure that the wording of the instrument is good. Thirdly, it is usually conducted to check whether the arithmetical analysis processes will be appropriate for the main study or not. Fourthly, pilot study is conducted to ensure that the instructions contained in the instrument are logical. Finally, pilot test is usually conducted to assist the researcher in establishing relationship with the respondents before coming for the main data (Creswell, 2015; Peterson & Kim, 2013; Silverman, 2016; Wikiversity, 2015).

3.1.1 Quantitative Approach

For the purpose of pilot study via quantitative approach, stratified and simple random sampling techniques were employed to select students from private and public universities in Kwara State who have started entrepreneurship programme in their respective institutions and have been engaging in displaying their products via social media. The selected universities include Al-Hikmah University and Kwara State University. Specifically, 40 students were selected from Al-Hikmah University while 60 students were picked from Kwara State University in view of their students' population and progress they have made in terms entrepreneurship development. An instrument tagged "Social Media Adoption and Entrepreneurship Questionnaire (SMAEQ)" was adapted from the study conducted by Waleed and Mohammed (2018) to collect relevant data using four point likert scale (Strongly Disagree: 1point, Disagree: 2 points, Agree: 3 points and Strongly Agree: 4 points). In order to ensure both face and content validity of the instrument, it was given to experts in the field of social media and entrepreneurship for their observations concerning the wordings and measurement of the concepts in the instrument as suggested by Sekaran and Bougie (2010). The selected experts are well grounded in social media and entrepreneurship. After that, all observations noted by the experts were painstakingly effected to ensure that the instrument measure what it supposed to measure. That is why Creswell (2009) explains validity of the instrument as the degree to which an instrument is measuring what it should be measuring, while the reliability of the instrument entails the degree to which an instrument measures the instrument's capacity to depict steady and error free outcomes. A total number of 120 questionnaires were administered to the students selected from the two universities. The reason for increasing questionnaires to 120 is to cater for missing or loss of questionnaires by the respondents or researchers during the distribution to the respondents. The returned questionnaires were analyzed with the use of Statistical Package for Social Sciences (SPSS) and PLS (Partial Least Square) software with a view to ascertain the psychometric properties of the data collected.

3.1.2 Qualitative Approach

One lecturer and one artisan each were selected from the two universities. The lecturer and the artisan were responsible for the teaching of GNS (General Studies) course and practical aspect of entrepreneurial skills development in the universities. Interview protocol entitled “Interview Protocol on Social Media Adoption and Entrepreneurship (IPMSAE) was designed to elicit comprehensive information on how social media adoption enhances students’ entrepreneurial skill development in Nigerian Institutions. Some of the items contained in the questionnaire were taken and inserted into interview protocol so as to erase the idea of biasness in the study. Before the use of the protocol for the interview, several processes were followed to ensure the validity of the protocol. The processes include trustworthiness of the protocol as well as ethical consideration. First, in order to ensure trustworthiness of the protocol, it was given to experts in the field of entrepreneurship for their input so as to ensure both face and content validity of the protocol. The experts selected are well groomed in their area of expertise. Secondly, in total compliance with ethics in research, verbal consent was obtained from the selected from both the lecturers and artisans. Thirdly, the selected interviewees were informed of the study’s purposes, approaches and confidentiality. In line with the view of Creswell (2015), ethical consideration in qualitative research ensures that there is no confrontational or argumentative result from the study. Ethical consideration in this section covers the areas of ethics and the sponsor, treatment of participants, integrity and truth in carrying out the research. Materials used to conduct the interview include digital tape-recorder, laptop, biro, pencil, jotter and other materials that are needed for the conduct of the interview (Neuman, 2011; Saunders, 2012; Silverman, 2016).

4. Results

4.1 Quantitative Approach

4.1.1 Response Rate and Missing Value Analysis

A total of 120 questionnaires were distributed to the selected students in the two universities. The returned questionnaires yielded 97 questionnaires were returned. This shows a response rate of 88%, which is in sync with Pallant’s (2010) denotation of response rate. Out of 97 questionnaires returned, only one was not useful because the respondent did not properly complete some sections of the questionnaire, and the remaining 96 questionnaires were used for further screening. Thus, 83% is accounted for a valid response rate, which is in tandem with the position of Sekaran and Bougie (2010), who recommends that 30% response rate is acceptable for quantitative study using survey method. The table shows the response rate analysis of the study.

Table 1 - Response Rate of the Administered Questionnaire

| Response | Frequency/Rate |
|---|----------------|
| 1. No of distributed questionnaires | 120 |
| 2. Returned questionnaires | 97 |
| 3. Returned and usable questionnaires | 96 |
| 4. Returned and excluded questionnaires | 1 |
| 5. Questionnaires not returned | 23 |
| 6. Response rate | 88% |
| 7. Valid response rate | 83% |

After determining the response rate of the study, the usable questionnaires into SPSS to perform data screening with particular reference to missing value analysis. In the SPSS data set, 3 data points were randomly missed out of the total number of 10,236 data points. Precisely, no missing value was found for social media and adoption (SA) and Social media addictive behavior (SB) while one and two missing values were found for social media entrepreneurial skills (SE) and social media and self-reliance (SS) respectively. The foregoing is in consonance with the view of Pallant (2010) who opined that there is no acceptability of missing value percentage in a data set. The table below indicate the missing value of the data collected.

Table 2 - Total and Percentage of Missing Values

| Latent Variables | Number of Missing Values |
|-------------------------------|-----------------------------|
| Social Media Adoption | 0 |
| Addictive Behavior | 0 |
| Entrepreneurial Skills | 1 |
| Self-Reliance | 2 |
| Total Number of Missing Value | 3 out of 10,236 data points |

4.1.2 Assessing the Reliability of the Instrument with the SPSS

Reliability of the instrument entails the degree or extent to which items contained in a scale provide measurement consistently for a phenomenon it has been designed to assess (Sekaran & Bougie, 2010). In this study, we used Cronbach’s Alpha as one of the methods that can be used to establish internal consistency at sub-scale and scale level. The output of the SPSS indicates that Social Media Adoption loaded at 0,885; Social Media and Addictive Behavior loaded at 0.821; Social Media and Entrepreneurial skills is 0.942, and Social Media and Self-Reliance loaded at 0.914. The results displayed in the table below demonstrate a strong evidence of internal consistency of the instrument.

Table 3 - Cronbach’s Alpha on Social Media Adoption

| SN | Social Media Adoption | Cronbach’s Alpha | Source |
|----|--|------------------|----------------------------|
| 1 | Social media is mostly employed for communication and social relationship among undergraduates nowadays. | 0.885 | Waleed and Mohammed (2018) |
| 2 | Every undergraduate subscribed to at least, one social media network for socialization. | | |
| 3 | I employ the use of social media to contact and make new friends. | | |
| 4 | It is always interesting to share information through the social media to friends. | | |
| 5 | I feel more contented when chatting with friends through the social media platform. | | |
| 6 | I can use any form of social media platform for different activities. | | |
| 7 | The adoption of social media to carry out any specific task is always encouraging. | | |

Table 4 - Cronbach’s Alpha on Addictive behavior

| SN | Addictive Behaviour towards Social Media | Cronbach’s Alpha | Source |
|----|--|------------------|----------------------------|
| 1 | Being on social media throughout the day is always exciting for me. | 0.821 | Waleed and Mohammed (2018) |
| 2 | I can access information on the social media for few hours daily. | | |
| 3 | The attitude of chatting on social media forum for a longer period of time is not a good behavior. | | |
| 4 | Social media adoption should be limited to leisure hours. | | |
| 5 | It’s somewhat difficult to do away with social media in this 21 st century. | | |

Table 5 - Cronbach’s Alpha on Entrepreneurial Skills

| S/N | Entrepreneurial Skills | Cronbach’s Alpha | Source |
|-----|---|------------------|----------------------------|
| 1 | I’d rather be my own boss than seeking for a white collar job. | 0.942 | Waleed and Mohammed (2018) |
| 2 | I can make big money only if I create my own business through social media. | | |
| 3 | I’d rather create an online business venture than be the employee of an existing one. | | |
| 4 | I will work together with good partners to start a new business in the future via social media network. | | |
| 5 | If I start my own online business, the chances of success would be very high. | | |
| 6 | I have enough knowledge and skills to use social media applications for online business. | | |
| 7 | I have acquired adequate knowledge to develop entrepreneurial skills for business management. | | |

Table 6 - Cronbach's Alpha on Self-Reliance

| S/N | Self-Reliance | Cronbach's Alpha | Source |
|-----|---|------------------|----------------------------|
| 1 | The social media adoption increases my understanding of the attitudes of entrepreneurs (i.e., how they view entrepreneurship and why they act). | 0.914 | Waleed and Mohammed (2018) |
| 2 | The social media adoption increases my understanding of the importance of entrepreneurship to both the individuals and society | | |
| 3 | The social media adoption increases my understanding of the personal characteristics of entrepreneurs (e.g., risk-taking, innovation, etc.) | | |
| 4 | The social media adoption encourages me that entrepreneurship is achievable. | | |
| 5 | The social media adoption increases my understanding of the motives of engaging in entrepreneurial activities (e.g., money, self-achievement, social status, etc.). | | |
| 6 | The social media adoption increases my understanding of financial preparation for entrepreneurial ventures | | |

Table 7 - Overall Reliability Statistics of the Instrument

| Number of Items | Cronbach's Alpha |
|-----------------|------------------|
| 28 | 0.984 |

4.1.3 Assessing the Reliability of the Instrument with PLS-SEM

In order to further ensure the reliability of the instrument, the data collected was subjected to further test with the use of sophisticated software called "PLS-SEM (Partial Least Square-Structural Equation Modeling)". Specifically, the measurement model assessment was performed with a particular reference to composite reliability, average variance extracted, crossloadings, outer loadings and discriminant validity (Hair, Hult, Ringle & Sarstedt, 2012).

4.1.4 Composite Reliability and Average Variance Extracted

To ensure good reliability of the individual items contained in the model, we scrutinized the loadings of the construct's measure as advocated by Hair et al. (2012). In tandem with the benchmark (minimum of .40) for item retaining in social science research, all the items in the measurement model loaded within the minimum benchmark of .40. Precisely, all the items in the model loaded between 0.441 (minimum) and 0.967 (maximum) as contained in Table 9. Research has shown that the coefficients of Cronbach's Alpha (e.g. Cronbach's alpha is commonly attained under the belief of parallelity) and composite reliability are regarded as the most foreseeable methods of determining the internal consistency reliability of the adapted or adopted scale in social research (Peterson & Kim, 2013). Thus, the current study used composite reliability to ensure that all the items contained in the scale are reliable. We have cogent reason for choosing composite reliability instead of Cronbach's Alpha. It is assumed that Cronbach's Alpha miscalculates the true reliability of the scale and that the underestimation is well predicted when the relationship is lower (Hair et al., 2012; Henseler, Ringle & Sinkovics, 2009). The table below indicates the composite reliability of model.

Table 8 - Reliability of the Constructs

| Construct | Composite Reliability | Average Variance Extracted (AVE) |
|-----------|-----------------------|----------------------------------|
| SA | 0.787 | 0.696 |
| SB | 0.747 | 0.742 |
| SE | 0.773 | 0.718 |
| SS | 0.813 | 0.529 |

Table 9 - Cross loadings

| Variable | SA | SB | SE | SS |
|----------|-------|-------|-------|-------|
| SA1 | 0.967 | 0.409 | 0.552 | 0.552 |
| SA5 | 0.620 | 0.140 | 0.211 | 0.144 |
| SB1 | 0.317 | 0.799 | 0.501 | 0.381 |
| SB2 | 0.326 | 0.798 | 0.422 | 0.380 |
| SB5 | 0.052 | 0.493 | 0.255 | 0.102 |
| SE2 | 0.231 | 0.279 | 0.661 | 0.588 |
| SE3 | 0.432 | 0.459 | 0.864 | 0.501 |
| SE4 | 0.470 | 0.314 | 0.714 | 0.579 |
| SE5 | 0.218 | 0.643 | 0.441 | 0.344 |
| SS1 | 0.405 | 0.319 | 0.428 | 0.789 |
| SS3 | 0.494 | 0.344 | 0.699 | 0.732 |
| SS4 | 0.226 | 0.252 | 0.442 | 0.561 |
| SS5 | 0.239 | 0.112 | 0.403 | 0.671 |
| SS6 | 0.252 | 0.562 | 0.441 | 0.647 |

4.1.5 Discriminant Validity of the Constructs

Researchers have described convergent validity as a sub-type of construct validity. It is usually a test that intends to measure a specific construct. It takes into consideration two main things that are supposed to be quantifying the same construct and show that they are truly connected (Hair et al., 2012). Nevertheless, this study measured convergent validity in tandem with Fornell and Larcker’s (1981) system for spotting the average variance extracted of the study construct. As postulated by Fornell and Larcker (1981), the AVE that is above 0.5 is described as an indication acceptable convergent validity. As exhibited in Table 8, the AVEs of social media adoption and social media addictive behavior loaded at 0.696 and 0.742, while that of social media and entrepreneurship skill and social media and self-reliance loaded at 0.718 and 0.529 respectively, demonstrating that the variance in the signs were explicated by the common factor. Additionally, discriminant validity, which is commonly known as divergent validity, can be expounded as the measures that are not supposed to be connected are truly unconnected (Chin, 2010). Chin (2010) posits that a value that is less than 0.75 specifies that discriminant validity occurs between the two scales. The Table below displays the discriminant validity of the constructs (SA: 0.812; SB: 0.711; SE: 0.687; SS: 0.684), demonstrating a successful scrutiny of discriminant validity in this study. Table 3 shows the discriminant validity based on the constructs.

Table 11 - Fornell-Lacker Criterion for Discriminant Validity of the Constructs

| Construct | SA | SB | SE | SS |
|-----------|-------|--------|-------|-------|
| SA | 0.812 | | | |
| SB | 0.389 | 0.711 | | |
| SE | 0.531 | 0.575 | 0.687 | |
| SS | 0.512 | 0.4646 | 0.730 | 0.684 |

*Note: All the items in yellow color indicate adequate discriminant validity

4.2 Qualitative Approach

This section is focused on the analysis of the findings, in view of the interview conducted with the lecturers and artisans concerning the social media adoption and entrepreneurship skills development among students in tertiary institutions in Nigeria. The rationale behind the use of interview in this study is to ensure the credibility of the interview protocol that was designed to elicit necessary information about the study. Specifically, the analysis in this section provides answers to the articulated questions in the protocol, which were discovered through the interviews.

4.2.1 Data Transcription and Codification

The interviews conducted with the lecturers and artisans were transcribed so as to ensure proper capturing of the interviews that were granted. The materials used for the transcription of the interview include digital headphone, laptop, biro, jotter and pencil. The transcription produced 5 data pages. Also, the minimum time spent on the interview was 25 minutes while the maximum lasted for 30 minutes. After transcription, the data were coded based on the four concepts of the study. The four concepts include social media adoption (SA), social media and addictive behavior (SB), social media and entrepreneurship (SE), and Social media and self-reliance (SS). The tables below indicate the code assigned to participants and the synopsis of their views.

Table 12 - Code Assigned to Participants

| S/N | Participant | Code Assigned |
|-----|-----------------------------------|---------------|
| 1 | Lecturer (Al-Hikmah University) | AL |
| 2 | Artisan (Al-Hikmah University) | AA |
| 3 | Lecturer (Kwara State University) | KL |
| 4 | Artisan (Kwara State University) | KA |

Table 13 - Synopsis of Participants' Views on Social Media Adoption and Entrepreneurial Skills

Theme One: *Social Media Adoption*

- Sub-theme: 1. Whatsapp
2. Facebook
3. Instagram

Theme Two: *Social Media and Addictive Behavior*

- Sub-theme: 1. Budget Formulation Strategy
2. Recruitment Strateg

Theme Three: *Social Media and Entrepreneurship Skills*

- Sub-theme: 1. Learning various entrepreneurial skills
2. Using of technology for entrepreneurial skills

Theme Four: *Social Media and Self-Reliance*

- Sub-theme: 1. Displaying of products on social media
2. Wooing people to buy products via social media
-

Furthermore, in order to ensure the credibility of the interview protocol used for interviewing the participants, the transcribed and codification data as displayed in Tables 12 and 13 were printed and given back to the participants for them to check their views concerning the social media adoption and entrepreneurial skill development among tertiary institution students in Nigeria. Also, the transcribed data were given to experts in qualitative research to check the coding and synopsis of the findings whether they are in consonance with the participants' views or not. This is in line with the suggestion of Creswell (2015) and Sekaran and Bougie (2010) who opined that credibility of the protocol is necessary in qualitative research so as to ensure trustworthiness of the protocol to be used for data collection via interview or focus group discussion (FGD).

5. Conclusion

The objective of this study was to assess the psychometric properties of the instrument titled "Social Media Adoption and Entrepreneurship Questionnaire (SMAEQ)" and interview protocol tagged "Interview Protocol on Social Media Adoption and Entrepreneurship (IPMASE)" with a view to ensure validity and reliability of the instruments that were adapted from the previous studies. Based on the findings concerning the use of SPSS to assess the questionnaire, it can be said that the four constructs that are contained in the questionnaire had good reliability. Specifically, social media adoption (SA) loaded at 0.885, addictive behavior (SB) had 0.821, entrepreneurship skills (SE) had 0.942, self-reliance had loading of 0.914 and, when all the constructs are put together, it had loading of 0.984. Similarly, findings concerning use of PLS-SEM software show that the four constructs in the questionnaire are reliable based on the certain parameters that were used to ascertain that. The parameters used to confirm the reliability of the questionnaire include achieving adequate composite reliability of the four constructs (SA: 0.787; SB: 0.747; SE: 0.718 and SS: 0.529), adequate average variance extracted (SA: 0.696; SB: 0.742; SE: 0.773 and SS: 0.813), individual item reliability loaded within the minimum threshold of .40 (minimum loading: 0.441 and maximum loading: 0.967) as displayed in Table 9 and adequate discriminant validity as contained in Table 11. Furthermore, concerning the credibility of the interview protocol, evidence from interview conducted indicates that trustworthiness and credibility of the protocol were achieved via the processes involved, which include transcription and codification of the data as well as the synopsis of the findings that were later confirmed by the participants. Taken together, it can be said that a pilot assessment was successfully achieved to decide the validity and reliability of the two instruments that were used for data collection in this study because the instruments helped to produce results about the elements of social media adoption and entrepreneurial skills development among tertiary institution students in Nigerian context. Therefore, this

study has removed the doubts about the validity and reliability of the instruments, meaning that they can be used to conduct the actual research. Lastly, it has also provided an insight on the prospects of the impact assessment, which will enable scholars to envisage prospective issues and take curative actions while conducting the actual investigation.

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