

PERCEIVED INFLUENCES OF VIRTUAL COMMUNICATION ON INTERPERSONAL RELATIONSHIP OF UNDERGRADUATES IN OGUN-STATE, NIGERIA

LASODE, Abolanle Olukemi

Department of Home Science & Management, Federal University of Agriculture,
Abeokuta 110124, Nigeria.
abolanlelasode@yahoo.com

AJIBOLA, Faidat Omolara

Department of Home Science & Management, Federal University of Agriculture,
Abeokuta 110124, Nigeria.

ADEBAYO, Emmanuel

Adolescent Health Unit, Institute of Child Health, College of Medicine, University of
Ibadan,
Ibadan, Nigeria.

SOETAN, Olatunbosun Jonathan

Department of Agricultural Extension & Rural Development, Federal University of
Agriculture, Abeokuta 110124, Nigeria.

Abstract

This study assessed the types and frequency of use of virtual communication tools and its perceived influences on interpersonal relationship of undergraduates of a tertiary institution in Ogun-State, Nigeria. The research adopted a cross-sectional design. A four-stage sampling technique was utilized in selecting a sample size of 325 from a population of approximately 15,000. Data were analyzed using descriptive and inferential statistics. The major types of virtual communication tools used by the respondents were Facebook (99.1%), WhatsApp (98.8%) and Instagram (71.7%). 65.8% of the respondents used at least one form of virtual communication tool every day of the week. Most respondents (92.6%) agreed that virtual communication had a positive influence on their interpersonal relationships. There was a significant association between virtual communication and interpersonal relationship. Further, there was a significant association between the pattern of use and interpersonal relationship. Conclusively, virtual communication had a positive significant association with interpersonal relationship among undergraduates, and can be a progressive tool for their educational development and for communication with their peers and family. Educational policymakers, technocrats and curriculum development should encourage the use of virtual communication in teaching and learning for young adults.

Keywords: Virtual communication, Interpersonal relationships, Communication, Young adults, Social networking sites, Relationship

Introduction

The capacity to effectively communicate is probably one of the most important life skills. Communication is important for tie formation and socialization (Lengyel, Varga, Ságvári, Jakobi & Kertész, 2015). The formation of ties and its preservation mandates investment and mutual commitment from every individual while long distance is a foremost hindrance of maintaining connections among other factors (Vitak, 2014). Connection among individuals may be poorly sustained and may require additional force in order to be strongly established when physical space becomes longer (Lengyel *et al.*, 2015). The utmost and adequate way to sustain contacts is a direct form of exchanging ideas that could be extremely limited by communication gap (Drago, 2015). However, there are increasing evidences that the effects that physical space has on the effectiveness of communication is gradually reducing due to the introduction of new methods of sharing information such as typesetting, as well as information technology in this new age (Lengyel *et al.*, 2015). Modern information communication technology influences our social behaviour especially as related to the way we communicate. Consequently, it has to have a major effect on the structure of social networks (Subramanian, 2017).

Information is a vital element that aids human survival and makes interaction meaningful. People they communicate with one another to inform, to persuade, to influence relationships, to discover and reveal information (Shraddha, 2018). The way people communicate today has evolved from what was observed many years back (Subrahmanyam, & Greenfield, 2008). The internet has gained the description of interactivity, so an innovative social platform has emerged that individuals can communicate with enmass (Eginli & Tas, 2018). The internet creates the possibilities of expansion of ones social networks and to facilitate communicating with wider audiences in the world (Subramanian, 2017). Hence, people do not necessarily have to come face to face to interact since the advent of virtual communication (Baym, Zhang, Kunkel, Lin & Ledbetter, 2007). Most interactions have now shifted to the online setting. Moreso, social media, which is moulded by communication technologies, has emerged into the individuals' daily life as a new element of interpersonal relationship (Valkenburg & Peter, 2011, Eginli & Tas, 2018). The extent of communication between individuals who hitherto cannot interact in their daily life has improved owing to the virtual environments (Eginli & Tas, 2018). The use of social media websites amongst today's children and adolescents have become very widespread and commonplace. Sites like Facebook, Twitter, MySpace, YouTube, gaming sites, Yahoo messengers and blogs are visited by the youths (Boyd & Ellison, 2008).

Owing to proliferation of virtual communication tools such as Facebook and WhatsApp among adolescents and young people, several researchers have looked into the association between the use of these tools and different aspects of the lives of young people. Gapsiso and Wilson (2015) examined the affiliation between internet participation and teenager's face-to-face communication. The study revealed that the use of the internet has selected impression on direct contact between teenagers and their acquaintances and moreover, appears to sap the ties that fasten them with relations and colleagues. Their findings showed that online network use by youngsters has decreased their engagement in offline communication with their friends due to its high extent of use. Also, Mwangi (2013) determined the degree to which young persons were exposed to virtual communication tools. The findings indicated that teenagers utilized some virtual communication tools every day. For instance, Facebook was the most visited with 75.1% of teenagers visiting it daily and it was closely followed by WhatsApp with 63.5% frequenting it daily. On time spent on social networking sites (SNS), Facebook (FB) was the top-ranked with 45.1% of respondents spending at least one hour daily on it. The research also revealed that virtual communication tools had several impacts on the interpersonal relationships among young people. Larger percentage of the respondents (80%) admitted to finding it simpler to

relate or keep in touch with their mates on the internet than face-to-face and other respondents find it effortless to communicate with online than talking offline.

Shields-Nordness (2015) analysed how young person's retain connections while utilizing the SNS. The research adopted a qualitative design in which young persons within the age bracket of 18-24 years were questioned about their participation on social media. He analysed the data and came up with seven themes from the respondents' responses including: simplicity of information transfer; remaining linked; non-verbal communication; space to come up with a feedback; intimacy; significant connections; and loneliness. The study revealed that young people within the age range of the respondents would rather text or make use of the internet as their principal mode of communication and indicated that social media keep them connected to peers, family, relationships and latest updates. Also, 50% of the participants concluded that conversation was simpler and more significant when offline due to the fact that the recipient's gestures can be seen, the expression of the face, as well as other non-verbal communication forms can also be seen. About half of the participants discussed about using SNS to interact because it enabled them to come up with a feedback. Respondents reported that closeness and meaningful relationships with peers or family using social media depend on their pattern of use and finally, almost all of the respondents acknowledged that social networks did disconnect people depending on the pattern of use. Alassiri, Muda, Ghazali, and Ahamefula (2014) showed that virtual communication was now an essential method of information exchange that was used and appreciated by organizations, students and governments across all levels to provide less costly and efficient services. They revealed that virtual communication tools, especially Facebook, provide a lot of benefits for their users such as interaction with relations at a very low cost when they are unable to meet physically, meeting new people and provision of access to a huge number of people globally.

Not all researchers felt participation in SNS was good for young persons. Subramanian ((2017) assessed and highlighted the growing influence of social media in the communication process between individuals. The study revealed that it was hard to hold or restrict adolescents from using social media platforms, which offered a diversity of conveniences, changed the way in which people communicate, and the face-to-face connections reduced. Vevere (2015) investigated the problem of social media communication and its impact on everyday communicative behaviour, especially on the ways we speak and write. Majority of the respondents who participated in the survey admitted that the manner in which they conducted themselves online affected their everyday interaction. They found out that there are meaningful connections between the pattern in which Facebook (FB) is utilized and direct contact with relations and friends, and the extent or length of hours of FB usage and direct contact with relations and colleagues. They revealed that FB use enables people to interact with other people. Nevertheless, the use of FB alters their face-to-face or direct interaction with their relations in that it aids the reduction of interpersonal communication among the selected families. Moreover, Vevere (2015) declared that the development of the internet and advancement in technologies had totally transformed our way of interaction and made us to be subject to the internet assuming interdependency, mutuality, and responsibility. In addition to this, there were other opposing determinants which included excessive interactivity, the inability to live a private life, public withdrawal, and reliance problem. Baruah (2012) analyzed the impact of internet as a means of sharing information. The study revealed that the internet had a meaningful impact in bringing people together, irrespective of distance barrier, within a very short time and its resultant improvement of relationship between people and the community at large. The dynamics in communication has improved social connection mostly among young adults who are the major users of the internet. The growth of the internet has revealed some advantages as well as disadvantages. These include; sharing

of ideas, serving as a communication tool, cost-effectiveness, lesser time consumption, intrusion into privacy among others, and redefinition of our value systems more narrowly and dangerously (Olaniran, 2014).

Purpose of the Study

These studies and several more point to the advantages and disadvantages of the involvement of adolescents and young people in virtual communications. Overall, it is evident that participation in virtual communication will have some form of influence on their interpersonal relationships. Virtual environments provide an alternative avenue of expression for young adults and allow individuals to dramatically alter their self-representation. However, these online expressions and representations have been documented to influence physical interactions. It was found that the behavioural changes stemming from the virtual environment transferred to subsequent face-to-face interactions (Yee & Bailenson, 2007). Many young adults, especially students, have become addicted to some virtual communication tools. This has in turn affected their academic performance and their overall performance in life. This study sought to move from hearsay to proper documentation of the association between undergraduates's participation in virtual communication and their interpersonal relationships in Urban Nigeria

Research Questions

This study was guided by the following research questions:

- (i) What types of virtual communication tools are used by undergraduates (in Ogun State, Nigeria)?
- (ii) What is the frequency of use of each virtual communication tool by undergraduates (in Ogun State, Nigeria)?
- (iii) What is the pattern of use of virtual communication by undergraduates (in Ogun State, Nigeria)?
- (iv) What are the perceived influences of virtual communication on interpersonal relationships among undergraduates (in Ogun State, Nigeria)?

Research Hypotheses

This study examined the level of significance of four null hypotheses that were tested at $p < 0.05$.

H₀1: There is statistically no significant relationship between socio-demographic characteristics (age and years of usage of social media) and perceived influence of virtual communication on interpersonal relationship.

H₀2: There is statistically no significant association between types of social media use and perceived influence of virtual communication on interpersonal relationship.

H₀3: There is statistically no significant association between the frequency of social media use and perceived influence of virtual communication on interpersonal relationship of young adults.

H₀4: There is statistically no significant relationship between the pattern of use and perceived influence of virtual communication on interpersonal relationship of young adults.

Methodology

The research adopted a cross-sectional study design. The study setting was the Federal University of Agriculture, Abeokuta (FUNAAB). This institution was purposively selected as it has the highest

number of young adults within Ogun-State. According to Adebambo (2019), FUNAAB has over 15,000 undergraduate students spread across its ten (10) colleges, each having a minimum of 4 departments and over 1,640 postgraduate students.

The population of this study was 15000 undergraduates (young adults) in the institution within the age range of 15 – 24 years. This age range is classified as youths in the Nigerian age classification (Federal Ministry of Youth and Sports Development, 2019). This population are very active and versatile with the use of virtual communication tools. Shield-Nordness (2015) recorded that people within the age range of 18-24 years would rather text or make use of the internet as their principal mode of communication. This further reiterates the reason for the selection of the age group for this study.

Multistage sampling procedure was used to select the respondents. Stage one involved the selection of five colleges out of a total of ten within the University through simple random sampling by balloting. Stage two involved the selection of two departments from each of the selected five colleges through simple random sampling by balloting. Stage three involved the purposive selection of Year One (100 level) and Year Two (200 level) students due to their age. Stages four involved the selection of respondents through systematic sampling by the use of their class list with 65 selected respondents from each of the five Colleges.

The instrument for eliciting responses was Assessment of the Influence of Virtual Communication on Perceived Interpersonal Relationship Among Young Adults Questionnaire, with Cronbach alpha reliability of 0.82. There were four sections in the questionnaire: Section A- Socio-demographic characteristics of the respondents (young adults); Section B- Frequency of Use of Virtual Communication Tools; Section C- The Pattern of Use of Virtual Communication; and Section D- Perceived Influence of Virtual Communication on Interpersonal Relationship. Pattern of use of virtual communication was measured on rating scale of 4 to 1 for ‘All the time’ to ‘Never’ respectively, while five-point Likert type scale of Strongly Agree (5), Agree (4), Undecided (3), Disagree (2) and Strongly Disagree (1) was used to measure perceived influence of virtual communication. The categorization was dichotomized using score range between minimum and maximum obtainable scores. The average score for individuals was calculated by adding up all the scores across their responses. Individuals whose total score fell within lower score range were classified as low while those whose score fell within higher score range were regarded as high.

Data were analysed using percentages, mean, standard deviation, Pearson Product Moment Correlation (PPMC) and Chi-square.

Results and Discussion

Table 1: Socio-demographic characteristics of respondents

Variable	F (%)	Mean	SD
Gender			
Male	154 (47.4)		
Female	171 (52.6)		
Age (years)			
At most 18	50 (15.4)		
19-24	275 (84.6)	21	2.048

Years of using virtual communication tools			
At most 5	133 (40.9)		
6-10	181 (55.8)		
More than 10	11 (3.3)	6	2.437

Table 1 presents data related to the socio-demographic attributes of the 325 respondents that participated in the study. More than half of the respondents 171 (52.6%) were females and the average age of the respondents was 21±2.05 years. This corresponds with reports of the average age of undergraduate students in higher institutions across Nigeria.

Research Question One: What type of virtual Communication tools are used by undergraduates in Ogun State?

Table 2: Types of virtual communication tools used by respondents

Variable	F (%)
Use any form of social media	
Yes	324 (99.7)
No	1 (0.3)
Social Media use*	
Facebook	323(99.4)
Instagram	233(71.7)
Twitter	153(47.1)
WhatsApp	321(98.8)
Others**	13 (4.0)

**multiple responses **Others include Eskimi, Badoo, Yahoo messenger, LinkedIn*

Virtual communication tools used by the respondents in this study are presented in Table 2. Most (99.7%) of the respondents had used at least one form of virtual communication tools. Facebook (99.4%) and WhatsApp (98.8%) were the most used virtual communication tools. Vitak (2008) reported that 97% student respondents overwhelmingly picked Facebook as their SNS. This finding corroborates the study of Mwangi (2013) who indicated that young adults made use of some virtual communication tools, of which Facebook and Whatsapp were the top-ranked.

Research Question Two: What is the Frequency of use of each virtual communication tool by young adult?

Table 3: Frequency of use of virtual communication tools

S/n	Days of Use Tools	0 F (%)	1 F (%)	2 F (%)	3 F (%)	4 F (%)	5 F (%)	6 F (%)	7 F (%)
1	Facebook	7 (2.1)	21 (6.5)	24 (7.4)	22 (6.8)	46 (14.1)	55 (16.9)	50 (15.4)	100 (30.8)
2	Instagram	90 (27.7)	30 (9.2)	16 (4.9)	31 (9.5)	39 (12.0)	48 (14.8)	16 (4.9)	55 (16.9)

3	Twitter	172 (52.9)	12 (3.7)	15 (4.6)	24 (7.4)	26 (8.0)	28 (8.6)	17 (5.2)	31 (9.5)
4	WhatsApp	4 (1.2)	5 (1.5)	1 (0.3)	5 (1.5)	17 (5.2)	39 (12.0)	40 (12.3)	214 (65.8)

Note: F represents frequency

Table 3 presents data on the frequency of use of virtual communication tools among the respondents. The findings indicated that young adults visited some virtual communication tools every single day. WhatsApp (65.8%) was the most visited, followed by Facebook (30.5%). This finding corroborates that of Mwangi (2013) and Burrus (2010) who indicated that teenagers visited some virtual communication tools every day with Facebook as most visited followed by WhatsApp. The top-ranked according to the time spent daily on social media were WhatsApp and Facebook. This finding also concurs with Ellison, Steinfield and Lampe (2007) who reported that Facebook subscribers spend between 10 and 30 minutes on average using Facebook on daily basis. It is interesting however, that despite the reports that most young people in the United States have shifted from Facebook to YouTube, Twitter and Instagram (Anderson & Jiang, 2018), several of the respondents in this study still report frequent use of Facebook which may be due to lack of access to smart phones.

Research Question Three: What is the pattern of use of virtual communication by young adults?

Table 4: Pattern of use of virtual communication by respondents

S/n	Responses Pattern of Use	All the time F (%)	Most times F (%)	Sometimes F (%)	Never F (%)	\bar{X}	Rank
1	Lecture materials and other important information are more easily accessible.	169 (52.0)	95 (29.2)	53 (16.3)	8 (2.5)	3.34	1 st
2	For carrying out my assignment and enriching class notes	155 (47.7)	116 (35.7)	50 (15.4)	4 (1.2)	3.31	2 nd
3	Browsing/surfing the internet	143 (44.0)	129 (39.7)	48 (14.8)	5 (1.5)	3.26	3 rd
4	Informed about every little thing that occur all the time and almost instantly.	134 (41.2)	129 (39.7)	59 (18.2)	3 (0.9)	3.23	4 th
5	Connected with my relations and friends	141 (43.4)	111 (34.2)	68 (20.9)	5 (1.5)	3.19	5 th
6	Group information and messages created with friends	129 (39.7)	102 (31.4)	70 (21.5)	24 (7.4)	3.03	6 th
7	Allows one to conveniently talk to people one has not seen before	99 (30.5)	134 (41.2)	75 (23.1)	17 (5.2)	2.99	7 th
8	Mobile phone for texting and I text a lot	96 (29.5)	100 (30.8)	121 (37.2)	8 (2.5)	2.87	8 th

9	Post status; photographs and videos by using Twitter, Facebook, Instagram, and Whatsapp	74 (22.8)	100 (30.8)	145 (44.6)	6 (1.8)	2.74	9 th
10	Talking with virtual mates on the internet	77 (23.7)	88 (27.1)	136 (41.8)	24 (7.4)	2.67	10 th
11	Meet and add to my list of friends	69 (21.2)	76 (23.4)	126 (38.8)	54 (16.6)	2.49	11 th

Table 4 presents the pattern of use of virtual communication by the respondents. More than half of the respondents (52%) agreed that virtual communication has made lecture materials and other important information more easily accessible all the times. This ranked as the highest reason for the use of virtual communication among the respondents. This is not so surprising as anecdotal reports from within the University shows that most students have online groups where they communicate lecture time, assignment due dates and other information pertinent to their schooling. This correlates with the findings of Olaniran (2014) whose study showed that students made use of virtual communication tools as a medium for academic works, forming and maintaining social relationships with friends and admired personalities. It also concurs with Baruah (2012) who posits that the growth of virtual communication has revealed some advantages which include sharing of ideas and relevant information. It also agrees with the findings of Alassiri et al., (2014) who indicate that virtual communication has become an essential platform which is highly valued and utilized by people to supply inexpensive communication service.

Moreover, 44% of the respondents enjoyed browsing/surfing the internet, while 43.2% were enabled to stay connected with their relations and friends through the use of virtual communication and 41.2% feel they are kept informed about every little thing that occur all the time and almost instantly. These findings agree with the study of Shields-Nordness (2015) who indicated that young adults prefer to use texting or social media as their main means of communication, and that social media keep them connected to peers, family, relationships and latest updates. The findings also concur with Joo and Teng (2017) who indicate that virtual communication tools like Facebook (FB) were perceived as a useful means of interaction that can bridge the gap among relations and people generally. The findings negate that of Veveve (2015) that though FB enables people to interact with other people, it alters their face-to-face or direct interaction in that it aids the reduction of interpersonal communication among selected families for the study.

Also, Table 4 showed that most of the respondents have groups with their friends where they post messages to each other. This finding concurs with Li, Bernoff, Pflaum and Glass, (2007) assertion that students' activity on SNS centres on communicating with one another, and that virtual communication had numerous effects on young people's interpersonal communication.

Another finding was that respondents make use of their phones for chatting and that always with online friends and meet with other people through the use of virtual communication always. This finding concurs with Lasode and Mbah (2017) who found that students' use of social media to chat with their friends ranked first.

Moreover, this study revealed that most students find it simpler to communicate with their friends on social network than those in real life while the rest find it easier to speak their minds online than offline. It also agrees with Baruah (2012) who revealed that the internet has truthfully had a meaningful impact in bringing people together irrespective of distance barrier within a very short time and this has improved the relationship between people and the community at large. It

also correlates with Alassiri et al., (2014) whose study revealed that virtual communication tools especially Facebook provide a lot of benefits for their users such as interaction with relation at a very low cost when they are unable to meet physically, meeting new people and provision of access to a large number of people globally.

Table 5: Categorisation of pattern of use of virtual communication by young adults

Variables	Status	Score range	F (%)
Pattern of use of virtual communication by young adults	Low	11-27	53 (16.3)
	High	28-44	272 (83.7)

Table 5 presents the categorisation of pattern of use of virtual communication by the respondents. Results show that 83.7% of the respondents are high users. This implies that most of the respondents make use of virtual communication always. This correlates with the findings of Shields-Nordness (2015) who concluded that conversation is simpler more simple and more significant when offline because the recipient's gestures can be seen, expression of the face, as well as other non-verbal communication forms can also be seen. Burrus (2010) noted that young adults are dependent on social networking sites like FB and Twitter to gain the most recent news about peers and to sustain their connection with colleagues and family. Ukwueze and Okafor (2018) noted that most students (80%) use social media for interpersonal communication with colleagues because it is user-friendly and economical rather than voice calls and text messages.

Research Question Four: What are the perceived influences of virtual communication on interpersonal relationships?

Table 6: Perceived influences of virtual communication on interpersonal relationships

S/n	Variables	SA F (%)	A F (%)	U F (%)	D F (%)	SD F (%)	\bar{X}	Rank
1	Social media helps me keep in touch with friends I cannot see regularly	161 (49.5)	136 (41.8)	15 (4.6)	6 (1.8)	7 (2.2)	4.35	1 st
2	It helps me to meet new friends	128 (39.4)	154 (47.4)	19 (5.8)	23 (7.1)	1 (0.3)	4.18	2 nd
3	It helps me to socialize with people I would not have been able to communicate with	145 (44.6)	125 (38.5)	29 (8.9)	22 (6.8)	4 (1.2)	4.18	2 nd
4	I can express myself easily using virtual communication	118 (36.3)	160 (49.2)	20 (6.2)	21 (6.5)	6 (1.8)	4.12	4 th
5	Compared to other methods, it enables me to receive replies more quickly	121 (37.2)	150 (46.2)	28 (8.6)	22 (6.8)	4 (1.2)	4.11	5 th
6	It helps me connect with people whom I share common interest	113 (34.8)	157 (48.3)	26 (8.0)	27 (8.3)	2 (0.6)	4.08	6 th

7	It helps me get to know other students at school better	119 (36.6)	128 (39.4)	51 (15.7)	23 (7.1)	4 (1.2)	4.03	7 th
8	It reduces offline communication	104 (32.0)	129 (39.7)	43 (13.2)	39 (12.0)	10 (3.1)	3.86	8 th
9	I keep in touch easier with friends online than real life	96 (29.5)	135 (41.5)	53 (16.3)	31 (9.5)	10 (3.1)	3.86	9 th
10	Using it, I engage in some activities with my friends that I do not usually engage in daily life	76 (23.4)	128 (39.4)	53 (16.3)	57 (17.5)	11 (3.4)	3.62	10 th
11	It helps me in socializing with friends and family	72 (22.2)	109 (33.5)	35 (10.8)	90 (27.7)	19 (5.8)	3.38	11 th
12	It feels like i'm closer to my mates who use it than to others who don't	88 (27.1)	106 (32.)	35 (10.8)	75 (23.0)	21 (6.5)	3.51	12 th
13	I share my private life with my friends freely using it	51 (15.7)	69 (21.2)	53 (16.3)	106 (32.6)	46 (14.2)	2.92	13 th

Note: SA- Strongly Agree; A-Agree; U-Undecided; D-Disagree; and SD- Strongly Disagree

Table 6 revealed that, among the perceived influences of virtual communication, *it helps to keep in touch with friends one cannot see regularly* ranked first (mean=4.35) while *it helps to socialize with people* ranked second (mean=4.18). These findings imply that the respondents exploit virtual communication for different intents. This is in line with Rutherford (2010) who posited that young adults utilize social media for different goals such as gathering of information, and chatting with peers and parents.

Also, Table 6 indicates that virtual communication *helps respondents to express themselves* ranked 4th (mean=4.12), *it enables one to receive replies more quickly* ranked 5th (mean=4.11) while *it helps respondents connect with people whom they share common interest* ranked 6th (mean=4.08). These findings suggest that young adults are familiar with using messages (chat and text) to enrich their interpersonal relationships. This is line with Bagley and Shaffer (2015) who assert that young adults increasingly utilize chat to relate with one another.

Other findings from Table 6 reveal that respondents agreed that *virtual communication reduces offline communication*, that they *keep-in-touch easier with friends online than in real life* and *it feels like they are closer to their mates who use virtual communication than to others who don't*. The findings of this study indicate that virtual communication among young adults has decreased their engagement in offline communication with their friends due to its high extent of use. These findings agree with results of Gapsiso and Wilson (2015) that the use of the internet has selected impression on direct contact between teenagers and their acquaintance and appears to weaken the ties that fasten them with relations and colleagues who rely on offline communication. It also supports the study of Reid and Reid (2004) who revealed that users of virtual communication are prone to revealing their true self. However, it appears that the use of virtual communication by young adults helps them to strengthen their interpersonal relationships with peers and family members who use this means of communication, which is an evidence of the positive effects of technology on interpersonal relationships.

Table 7: Categorisation of extent of the perceived influence of virtual communication

Variables	Status	Score range	F (%)
Perceived influence of virtual communication on interpersonal relationships of young adults with peers and family members	Low	13-38	24 (7.4)
	High	39-65	301 (92.6)

Table 7 presents the categorisation of extent of the perceived influence of virtual communication on interpersonal relationships by young adults with peers and family members. Table 7 revealed that there is a high extent of the perceived influence of virtual communication on most of the respondents (92.6%). This finding supports the result of Olaniran (2014) concludes that social media has changed the face of human relationships and the conventional human interaction in its original form drastically and has also redefined our value systems more narrowly and dangerously. It negates that of Alassiri et al., (2014) who posited that details used by people for online communication are not well managed due to problems associated with security and this has exposed a lot of people to loss of privacy. It also negates the findings of Veveve (2015) that negative factors that come forth with the use of virtual communication are the loss of privacy, the over-communicativeness, social alienation and dependency issues.

Tests of relationship and association

H₀1: There is statistically no significant relationship between socio-demographic characteristics (age and years of usage of social media) and perceived influence of virtual communication on interpersonal relationship.

Means and standard deviations of the age of respondents, the perceived influence of virtual communication on interpersonal relationship, years of usage of social media and perceived influence of virtual communication on interpersonal relationship were subjected to Pearson Product Moment Correlation (PPMC) test. Results are summarised in Table 8.

Table 8: PPMC Test of the relationship between socio-demographic characteristics and the influence of virtual communication on interpersonal relationship

Variables	Mean	SD	r-value	p-value	Decision
i) Age	21	2.048	0.173	0.002	Significant
Perceived influence of virtual communication on interpersonal relationship	50.194	7.290			
ii) Years of use of social media	6	2.437	0.115	0.038	Significant
Perceived influence of virtual communication on interpersonal relationship	50.194	7.290			

Decision criteria: Reject null hypothesis if $p \leq 0.05$, accept if $p > 0.05$

Table 8 shows that there is a significant relationship ($p \leq 0.05$) between age of respondents ($r=0.173$) and perceived influence of virtual communication on interpersonal relationship. Also, there is a statistically significant relationship between years of use of social media by respondents ($r=0.115$) and perceived influence of virtual communication on interpersonal relationship. Hence, this

null hypothesis was rejected which signifies a statistically significant relationship exists between age as well as years of use of virtual communication tools and its perceived influence on interpersonal relationship. This agrees with Shields-Nordness (2015) that young people within the age range of 18-24 years would rather text or make use of the internet as their principal mode of communication and Subramanian (2017) whose findings reveal that it is hard to contain or restrict youngsters from using social media platforms, which offer a variety of conveniences.

H₀2: There is no significant association between types of social media use and perceived influence of virtual communication on interpersonal relationship.

Table 9: Chi-Square Test of association between type of social media use and perceived influence of virtual communication on interpersonal relationship

Variables	χ^2 -value	Df	p-value	Decision
Facebook	12.497	1	0.000	Significant
Twitter	0.016	1	0.899	Not significant
Instagram	0.009	1	0.923	Not significant
WhatsApp	10.754	1	0.001	Significant

Decision criteria: Reject null hypothesis if $p \leq 0.05$, accept if $p > 0.05$

Table 9 shows that there is a significant association ($p \leq 0.05$) between Facebook ($\chi^2 = 12.497$) and perceived influence of virtual communication on interpersonal relationship. Also, Table 9 shows that there is a significant association between WhatsApp ($\chi^2 = 10.754$) and perceived influence of virtual communication on interpersonal relationship. Hence, this hypothesis is rejected which implies that there is a statistically significant association between use of Facebook, use of WhatsApp, and perceived influence of virtual communication on interpersonal relationship. This corresponds with the findings of Vevere (2015) that there are statistically significant relationships between the use of Facebook and interpersonal interaction with the family and peers.

Also, Table 9 reveals that there is no significant association ($p \leq 0.05$) between the use of Twitter ($\chi^2 = 0.016$), the use of Instagram ($\chi^2 = 0.009$) and perceived influence of virtual communication on interpersonal relationship. Hence, this hypothesis is accepted which implies that there is no statistically significant association between use of Twitter, use of Instagram, and perceived influence of virtual communication on interpersonal relationship.

H₀3: There is statistically no significant association between the frequency of social media use and perceived influence of virtual communication on interpersonal relationship of young adults.

Table 10: chi-Square Test of association between frequency of social media use and perceived influence of virtual communication on interpersonal relationship among young adults

Variables	χ^2 value	Df	p-value	Decision
WhatsApp	17.180	7	0.016	Significant
Twitter	9.317	7	0.231	Not significant
Facebook	9.895	7	0.195	Not significant

Instagram	2.793	7	0.903	Not Significant
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Decision criteria: Reject null hypothesis if $p \leq 0.05$, accept if $p > 0.05$

Table 10 shows that there is a significant association ($p \leq 0.05$) between WhatsApp ($\chi^2 = 17.180$) and perceived influence of virtual communication on interpersonal relationship of young adults. Hence, this hypothesis is rejected which implies a statistically significant association exist between WhatsApp and perceived influence of virtual communication on interpersonal relationship.

Table 10 also shows that there is no significant association ($p \leq 0.05$) between Twitter ($\chi^2 = 9.317$), Facebook ($\chi^2 = 9.895$), and Instagram ($\chi^2 = 2.793$), and perceived influence of virtual communication on interpersonal relationship among young adults. Hence, this null hypothesis is accepted which implies that there is statistically no significant association between Facebook, Twitter, Instagram and perceived influence of virtual communication on interpersonal relationship. This negates the findings of Veveve (2015) that there are statistically significant relationships between the number of hours of using Facebook and interpersonal interaction with the family members and peers.

H₀4: There is statistically no significant relationship between the pattern of use and perceived influence of virtual communication on interpersonal relationship of young adults.

Table 11: PPMC Test of the relationship between the pattern of use and perceived influence of virtual communication on interpersonal relationship of young adults

Variable	Mean	SD	r-value	p-value	Decision
Pattern of use of virtual communication	33.151	5.766			
			0.573	0.000	Significant
Perceived influence of virtual communication on interpersonal relationship	50.194	7.290			

Decision criteria: Reject null hypothesis if $p \leq 0.05$, accept if $p > 0.05$

Table 11 shows that there is a significant relationship ($p \leq 0.05$) between the pattern of use of social media ($r=0.573$) and perceived influence of virtual communication on interpersonal relationship of young adults. Hence, this hypothesis is rejected which implies a significant relationship exist between the pattern of use of virtual communication and perceived influence of virtual communication on interpersonal relationship. This correlates with Shields-Nordness (2015) that respondents report that closeness and meaningful relationships with peers or family using social media depends on their pattern of use and almost all of the students who partake in the survey acknowledge that social networks do disconnect people which actually is based on the pattern of use. The findings also correlate with that of Baruah (2012) that virtual communication has enough capacity to basically transform people's interpersonal relationships and changes in interaction patterns, and social connections are already evident among young people. The relationship established in this study concurs with the theory of social network dependency (DeFleur, 1989; Wang, Lee & Hua, 2015) which shows that people exhibit more dependency on social media to satisfy their desires when the media appear to be very important for that specific person.

Conclusions

Social media have gradually become the primary means of sharing information with increasing online interaction, this research sought to identify the types and assess the frequency of use of virtual communication tools, to highlight the pattern of use and examine the perceived influence of

virtual communication, on interpersonal relationship of young adults among their peers and family members. This research concluded that nearly all (99.7%) of the respondents make use of either one or more of the measured virtual communication tools including Facebook use (99.4%), WhatsApp use (98.8%), Twitter, and Instagram among others. Whatsapp (65.8%) and Facebook (30.8%) have also emerged as the most used on a daily basis. Also, it can be concluded that the respondents make use of virtual communication to a high extent (83.7%) with majority of young adults using it for carrying out assignment and enriching learned materials and that virtual communication has a high perceived influence on interpersonal relationship for most of the respondents (92.6%).

Moreover, the study found that there is a significant relationship between age as well as years of use of usage of social media, and perceived influence of virtual communication on interpersonal relationship; there is a significant association between the use of Facebook as well as WhatsApp, and perceived influence of virtual communication on interpersonal relationship while no association was established between the use of Twitter as well as Instagram, and perceived influence of virtual communication on interpersonal relationship. There is also significant relationship between the pattern of use and perceived influence of virtual communication on interpersonal relationship among young adults. The study established that virtual communication has a positive perceived influence on undergraduates in helping with their studies and relationship with peers and can be concluded that virtual communication has a substantial influence on interpersonal relationship. Given the importance of virtual communication for the educational development of the undergraduates and their frequency of use, it is evident that social media is a progressive tool. It is also evident that the use of virtual communication tools helps young adults communicate better with their peers and family.

Recommendations

Educational policymakers, technocrats and curriculum develops should encourage the use of virtual communication in teaching and learning for young adults. Further research is recommended to study the addictive effects of social media on young adults and the impacts on their academic performance. Moreover, considering the amount of time respondents spend across different virtual communication tools, we recommend that other studies be conducted to consider prevalence and correlates of problematic internet use among young adults (20-24years).



REFERENCES

- ▶ Adebambo, O. A. (2019). *The days of a small beginning*. Nimbe Adedipe Library: FUNAAB. p. 111. ISBN 9789785600612.
- ▶ Alassiri, A. A., Muda, M. B., Ghazali, R. B., & Ahamefula, U. C. (2014). Usage of social networking sites and technological impact on the interaction enabling features. *International Journal of Humanities and Social Science*, 4(4), 46-61. <https://www.ijhssnet.com/journal/index/2325>
- ▶ Anderson, M., & Jiang, J. (2018). Teens, social media and technology. *In Pew Research Center (Internet & Technology)*, <https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/> (Accessed on May 21, 2020).
- ▶ Baruah, T. D. (2012). Effectiveness of social media as a tool of communication and its potential for technology enabled connections: A micro-level study. *International Journal of Scientific and Research Publications*, 2(5), 1-10. http://www.ijsrp.org/research_paper_may2012/ijsrp-may-2012-24.pdf

- ▶ Bagley, E. A., & Shaffer, D. W. (2015). Stop talking and type: Comparing virtual and face-to-face mentoring in an Epistemic Game. *Journal of Computer Assisted Learning* (31), 601-622. <https://doi.org/10.1111/jcal.12092>
- ▶ Baym, N., Zhang Y.B, Kunkel A.D., Lin M. C., & Ledbetter, A. (2007). Relational quality and media use in interpersonal relationships. *New Media & Society*, 9, 735-752. <https://doi.org/10.1177/1461444807080339>
- ▶ Boyd, D. M., & Ellison, N. B. (2008). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230. DOI: 10.1111/j.1083-6101.2007.00393.x
- ▶ Burrus, L. (2010). Let's talk about social media dependency. Retrieved on May 21, 2020 from <http://www.mediaoutreach.com/2010/09/lets-talk-about-social-media-dependency/>
- ▶ DeFleur, M. L. (1989). *Theories of Mass Communication*. New York: Longman.
- ▶ Drago, E. (2015). The effect of technology on face-to-face communication. *The Elon Journal of Undergraduate Research in Communication*, 6(1), 13-19. <http://www.inquiriesjournal.com/articles/1137/the-effect-of-technology-on-face-to-face-communication>
- ▶ Eginli, A. T. & Tas, N. O. (2018). Interpersonal communication in social networking sites: An investigation in the framework of uses and gratification theory. *Online Journal of Communication and Media Technologies*, 8(2), 81-104. <https://doi.org/10.12973/ojcm/2355>
- ▶ Eke, H. N., Omekwu, C. O., and Odoh, J. N. (2014). The use of social networking sites among the undergraduates of the University of Nigeria, NSUKKA. *Library Philosophy and Practice (e-Journal)*, 1195. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1195>.
- ▶ Ellison, N. B., Steinfield, C., & Lampe C. (2007). Benefits of Facebook ‘friends’: Social capital and College students’ use of online social network sites: *Journal of Computer-mediated communication*, 12(4), 1143-1168 <https://doi.org/10.1111/j.1083-6101.2007.00367.x>
- ▶ Federal Ministry of Youth and Sports Development (2019). National Youth Policy (2019-2023), Available at <https://www.evanigeria.org/download/national-youth-policy-2019-2023/> (Accessed on 21 May, 2020).
- ▶ Gapsiso, N. D. & Wilson, J. (2015). The impact of the internet on teenagers’ face-to-face communication. *Journal of Studies in Social Sciences*, 13(2), 202-220. <https://doi.org/10.12973/ojcm/2355>
- ▶ Joo, T-M. & Teng, C-E. (2017). Impacts of social media (Facebook) on human communication and relationships: A view on behavioural change and social unity. *International Journal of Knowledge Content Development & Technology* 7(4), 27-50. <https://doi.org/10.5865/IJKCT.2017.7.4.027>
- ▶ Lasode, A.O. and Mbah, C.J. (2017). Social Media Usage by Undergraduate Students in Ogun State, Nigeria and Perceived Potentials for Communicating with Parents. *Global Journal of Education*, 5, 15-24. <https://doi.org/10.5865/IJKCT.2020.10.2.019>
- ▶ Lengyel, B., Varga A., Ságvári B., Jakobi Á. & Kertész, J. (2015). Geographies of an online social network. *PLOS ONE*, 10(9): e0137248. <https://doi.org/10.1371/journal.pone.0137248>
- ▶ Li, C., Bernoff, J., Pflaum, C., & Glass, S. (2007). How consumers use social networks, Retrieved on 16th June 2020 from <https://www.forrester.com/report/How+Consumers+Use+Social+Networks/-/E-RES41626>
- ▶ Moreno, M. A. & Koff, R. (2016). Media theories and the Facebook influence model. In Giuseppe Riva, Brenda K. Wiederhold, Pietro Cipresso (Eds.), *The Psychology of Social Networking: Personal Experience in Online Communities*. Warsaw/Berlin: De Gruyter Open Ltd
- ▶ Mwangi, A. W. (2013). *Impact of Social Networking Sites on Interpersonal Relationships among Teenagers*. Unpublished Master of Arts Degree in Communication Studies, University of Nairobi, Kenya.

- ▶ Reid, D. J. & Reid, F. J. (2004). Insights into the social and psychological effects of SMS text messaging. Pp. 1-11. Retrieved from http://www.ebusinessforum.gr/old/content/downloads/Reidetal_SocialEffectsOfTextMessaging.pdf
- ▶ Rutherford, C. (2010). Using online social media to support pre-service students' engagement. *MERLOT Journal of Online Learning and Teaching*, 6 (4), 703-711. https://jolt.merlot.org/vol6no4/rutherford_1210.pdf
- ▶ Shields-Nordness, E. (2015). Social media, relationships, and young adults. Retrieved from Sophia, the St. Catherine University repository website: https://sophia.stkate.edu/msw_papers/514
- ▶ Shraddha, B. (2018). "Interpersonal communication," in *Businessstopia*. Retrieved from <https://www.businessstopia.net/communication/interpersonal-communication-examples>.
- ▶ Subrahmanyam, K. & Greenfield, P. (2008). Online communication and adolescent relationships. *The Future of Children*, 18(1), 119-146. https://futureofchildren.princeton.edu/sites/futureofchildren/files/media/children_and_electronic_media_18_01_fulljournal.pdf
- ▶ Subramanian, K. R., (2017). Influence of social media in interpersonal communication. *International Journal of Scientific Progress and Research*, 38(02), 70 – 72. https://www.ijSpr.com/citations/v38n2/IJSPR_3802_2069.pdf
- ▶ Ukwueze, C. A. & Okafor, E. G. (2018). Convenience or nuisance? Social media engagement and UNIZIK students' interpersonal communication among peers. *IOSR Journal of Humanities and Social Science*, 23(2), 71-84. <http://www.iosrjournals.org/iosr-jhss/papers/Vol.%2023%20Issue2/Version-8/G2302087184.pdf>
- ▶ Valkenburg, P. M. & Peter, J. (2011). Online communication among adolescents: An integrated model of its attraction, opportunities, and risks. *Journal of Adolescent Health*, 48(2), 121–127. DOI: [10.1016/j.jadohealth.2010.08.020](https://doi.org/10.1016/j.jadohealth.2010.08.020)
- ▶ Vevere, V. (2015). Impact of social media on interpersonal communication patterns. *Societal Studies*, 7(1), 124-138. <https://www3.mruni.eu/ojs/societal-studies/article/view/4240/3969>
- ▶ Vitak J. M., (2008). Facebook friends: How online identities impact offline relations. Master of Arts Thesis in Communication, Culture and Technology, Georgetown University, Washington, D.C. USA. Available at <https://repository.library.georgetown.edu/handle/10822/551561>
- ▶ Vitak, J. (2014). *Facebook makes the heart grow fonder: Relationship maintenance strategies among geographically dispersed and communication-restricted connections*. CSCW '14: Proceedings of the 17th Association of Computer Machinery Conference on Computer supported cooperative work & social computing, February 2014, 842–853. <https://doi.org/10.1145/2531602.2531726>
- ▶ Wang, C., Lee, M. K.O. & Hua, Z. (2015). A theory of social media dependence: Evidence from microblog users. *Decision Support Systems*, 69, 40-49. <https://doi.org/10.1016/j.dss.2014.11.002>
- ▶ Yee, N., & Bailenson, J. (2007). The Proteus Effect: The effect of transformed self-representation on behavior. *Human Communication Research*, 33(3), 271-290. <https://doi.org/10.1111/j.1468-2958.2007.00299.x>