International Journal of Advanced Multidisciplinary Research

Research Article

How does Technostress affect students performance? An empirical investigation of social network sites on quitting intention

1. Alabi Charles Olabode (Author)

University of Science and Technology of China, Hefei, Anhui, China.
E-mail: *ahon@mail.ustc.edu.cn*
Tel: +8613075573202

2. Owolabi Justine Abayomi (Corresponding Author)

University of Science and Technology of China, Hefei, Anhui, China.
E-mail: *talk2meyommy@yahoo.com*
Tel: +861565451922

3. Sunguh Kenneth Khavwandiza (Co -Author)

University of Science and Technology of China, Hefei, Anhui, China.
E-mail: *sungukenneth@outlook.com*
Tel: +8615205694060

Abstract

Keywords

overloads,
technostress,
SOR,
social media and
quitting intention.

This study incorporate stimulus-organism-response (SOR) paradigm to propose that overloads are external induced factors on technostress. Structured questionnaire was used to collect data from the active Facebook users in various University in Nigeria and using structural equation modelling with Lisrel (0.80) software to analyse the result. Findings in this study shows the three induced factors of social network pose a higher effect on student performance via technostress which increases the chances to further quit its usage, however, communication overload is not highly significant due to the dominant role of the user to actively control of the source of their communication and the decline in students' academic performance through technostress is seen as a significant factor to quit social media use.

Introduction

Recently, the debate on quitting intention of the social network sites (SNSs) have generated a mixed feelings due to some side effects on human well-being and the society at large. In recent years, there is a rapid expansion of social network sites like an infectious ailment across the globe as a result of its prominent advantages such as MySpace, Google +, WeChat, Facebook, Instagram, and the likes are all kinds of generic platform where ideas are shared, and skills are developed. However, the social network sites encountered challenges shortly after the overwhelming achievement when its usage climaxed, its peak in 2012, users began to decline as a result of its impact on academic performance (Cannarella & Spechler, 2014), thus, reducing the numbers of an active user on the social platform. The recent trend of Global Web Index (GWI) has used social network sites induced stress to narrate the rate at which social activities were performed on SNSs (i.e. Facebook) such as sharing pictures, digital presents to friends and relatives (Zhang et al., 2016). Previously, the second largest SNSs in the world (i.e. MySpace) experience a sharp decline in 2011 (Gehl, 2012), with Tencent being the third biggest social network sites providers (Ozone) in China also experience a decline in their active usage (Copper, 2014) thus, both giant social network sites are dominated by the youths, most especially the students as an opportunity to enhance their cognitive thinking with the aids of a social platform. In order to address this occurrence, attention has been drawn by scholars to discontinue the use of SNSs due to its adverse effect on academic performance (Al-Debei et al., 2013; Liu et al., 2014), in this regards, the social network service providers have made an attempt to improve the functions by making some of the function to be users friendly and more simplified interface which enable easy navigation with the attempt to improve the user discontinues the active social media use. Notably, it seems all attempts and strategies put in place goes contrary to its expected plans. Conversely, the advancement of social network sites has sprung up numerous platforms for sharing vital information and connecting social relations that help to grow the current trend of academic pursuit (Jang et al., 2008). These social network sites have expanded the medium of communication which enables the students to propagate and progressively increase the level of their interaction as well as achieve some mutual benefits that are attached to the use of such platform(Dholakia et al., 2004). At every point in time independent users become tech savvy with online social life, IT professionals are building a sophisticated platform that can enhance students' performance among various scopes of learning. The social network sites also have different online communities that tend to improve the cognitive and psychological well-being of its users where all kinds of social activities are held (Cova & Hoskins, 1997, p. 301). Therefore, the quitting intention of social network sites (SNSs) must result from external effects, rather than adopting an application.

Turel (2015), explored some of the past predecessors such as the feeling of guilt, self-efficacy, and addiction and the behavioural use (i.e. quitting response), more so,Maier, Laumer, Eckhardt, et al. (2015)reflected that quitting social network usage and some alleviating strategies as a result of technostress. This negative experience as a technology-induced in social network use leads quitting behavioural response; moreover, several studies have attempted to better the understanding on the user's withdrawal intention which solely concentrates on the psychological and social impact such as information, communication, and social overload and the technological aspect of the social network site. However, previous studies have largely overlooked the adverse consequences of external state on SNSs with regards to the psychological processes on academic performance leading to quitting response on social network.

The motivating factors that enable individuals to actively participate in the use of social network sites under this umbrella is termed as "external factor", thus, because they are social in nature due to its support and its influence on the well-being of users interaction, it also provides users to assess up-to-date information and from the perceived enjoyment point of view (i.e. entertainment)(Madge et al., 2009). Therefore, the self-evaluated feelings of tiredness which are subjective from the excessive use of SNS (information, communication and social overloads) are all termed as a dark side influenced by social media. In this wise, the users (students) are at liberty to encourage the discontinuance in the use of such online platform, more importantly, when they perceived that its usage is contrary to the stipulated purpose in terms stress avoidance(Beaudry & Pinsonneault, 2005). Based on this occurrence, users can assume the possible step in the termination process and the decision to discontinue SNS use. Nevertheless, such trend has a vital consequence on the SNS providers and users, thereby enabling easy access to solve some of the subsequent predicament that may arise(Blancero et al., 1996).

Quitting response by the users are determined after a due outcome of the perceived feelings of technostress, therefore investigation users quitting intention on a social network is vital from the psychological stress context. However, there is no clear idea in the previous literature as to what leads to quitting intention among its users mostly the students. In the extant literature, technostress is viewed in an exchange process between the users and the external stimuli (Lazarus, 1990). In view of this, the Stimulus-Organism-Response (S-O-R) paradigm enable a parsimonious structure in which it allows exploration of some of the technical attributes as user's experience some external stimuli on their behaviour to discontinue social network usage (Koo & Ju, 2010). Thus, there are fewer researchers who have mainly concentrated on the feedback of SNS processes (Alam & Wagner, 2013; Furneaux & Wade, 2011). The effect of technostress on students' performance has been largely overlooked in previous studies which compel this research attempt to fill the research gap: "Does technostress affect academic performance through excessive use of SNS and ultimately leading to Facebook quitting intention?

The core aims of this study in to explore some influential and consequential factor that influences the quitting intention of social network sites. However, this study enables the users to examine the psychological stress on the process of how quitting response emanates as a result of perceived enjoyment, source of information gathering and the creation of cordial social relations leading to stress situation. The application of Stimulus-Organism-Response Paradigm will enable this study to specifically focus on Facebook active users in relation to cognitive processes after SNS usage. This social network sites are seen as a fascinating platform which enable its active user to perform different kind of social obligations, pleasure or fun seeking etc. Firstly, this study stimulates our understanding by offering some factual contribution to the social media induces stress, declining students' performance, therefore, there is a need for extra investigation due to some effects on SNS consequences. Secondly, this study further expands the theoretical and practical scope of how quitting intention as a result of frequent use of social network sites contributes to the decline in student performance in higher education learning. Lastly, the three kinds of overloads are perceived as antecedents of stress creator on social network sites which are largely undermined by its users but slow down the rate of their performance. The following chapters are

organized as follows: chapter two, focuses on the theoretical framework and the literature review,and the hypothesis formulation. Chapter three, description of research method and detail our results and discussion with our findings. Lastly, we detail our theoretical and practical implication with the limitation for future study.

Theoretical framework

The framework of Stimulus-Response-Organism (SOR) paradigm proposed by (Mehrabian & Russell, 1974a) from environmental psychology perspective, which was later reformed by Jacoby (2002) and applied as a basis for theoretical foundation to back up the interactive framework in this study. S-O-R paradigm opined that the external condition has a huge impact on how users emotional state are determined which compel some behavioural action(Donovan et al., 1994). However, Stimulus Organism Response application is well extended to another area of specializations ranging from advertisement and marketing(Olney et al., 1991) computer usage practice(Eroglu et al., 2003), online users knowledge (Mollen & Wilson, 2010), and consumer behaviour (Reitz, 2012; Rose & Dhandayudham, 2014). The importance of the study is to incorporate the S-O-R paradigm with the education and learning context. The relevance of stimulus organism response in this study is in two folds. (i) The S.O.R paradigm is well grounded according to the previous studies on education context (Grace et al., 2015; Liu et al., 2014; Zhang & Xu, 2016). Wang et al. (2011) have examined the effect of internal states on consumer online store and their subsequent roles on their behavioural experience, whereas Koo and Ju (2010) explored the users' emotional intentions that are affected through the external features. (ii) The use of S-O-R paradigm gives a strong consideration on an external factor affecting the social network sites and provides a structures manner on users' virtual experiences to examining the effects of environmental stimuli. Thus, this study focuses on social network (i.e. Facebook) as to examine the users' responses and the outcome such response effect.

Literature review

Social media induced features as Stimuli (S)

Stimulus can be defined as those factors that are characterized as an impediment which affect internal states through the stimulation of some certain

influence (Eroglu et al., 2001, p. 179). (Bagozzi et al., 1992), stimulus in the virtual learning environment is characterised by the external state with social network sites that influences the users' internal state (Mollen & Wilson, 2010). In this study, our attention focuses on the social media, environmental factor which includes; information, communication and social overload. The important of S-O-R paradigm are based on the factors that influence pleasure seeking, such as entertainment, and arousal, feelings, thus activate the psychological feeling and user's behavioural intention. To further understand the purpose of this research, this study focus on a major social media that contain imperative elements (i.e. Facebook) that enhances that social life, improve communication and the likes (Huang, 2010; Wang & Zhang, 2012). Three kinds of overloads were identified as a induced factor of social media by the traditional and user gratification such as excessive information, communication and social use (Katz et al., 1973; Rubin, 2009). Therefore, the three categories of overloads have gain some substantive and enormous support from previous studies on use social network (Ali-Hassan et al., 2015; Brandtzæg & Heim, 2009; Papacharissi & Mendelson, 2010; Quan-Haase & Young, 2010; Raacke & Bonds-Raacke, 2008; Shao, 2009; Whiting & Williams, 2013). In this study, our major attention is on the mediating effect of technostress on student academic performance and the users response, we therefore considers information overload as the abilities of the users to unable to process too many information simultaneously (Chen et al., 2009; Jacoby et al., 1974; O'Reilly III, 1980), however, there exist various kinds of information such as personal life stories, gossips, news and the likes(Shao, 2009; Whiting & Williams, 2013). Communication overload refers to the excessive demand of users' communication abilities on social platform which affects the psychological thinking such as messages, sharing ideology and experience, (Cho et al., 2011). According to(McCarthy & Saegert, 1978), social overload refers to as negative consequence of social media as a result of overcrowding population which proposed in the sociological context. However, this shows that users improve their relationship through the creation of social interaction, maintain social participation with the persistent rise in the population rate which serially results to users' psychological and mental distress.

SNS Internal experiences as organism (O)

Organism is an internal state that mediate between external state of the users, therefore propagating

a responsive decision and action, however, this intervening procedure and arrangementcomprises of physiological, perceptual thinking activities' and emotion (Bagozzi et al., 1991) Previous researchers examined these constructs as a double edge sword(Beatty & Ferrell, 1998; Verhagen & van Dolen, 2011), Therefore, users are in their freedom to decide the outcome of their behavioural response based upon their usage perception (Mehrabian & Russell, 1974b). Technostress as a type of virtual experience which is refers to as an illness caused by frequent use of information system (Ayyagari et al., 2011), "the new era of ailment of acceptance triggered the inability of the users to deal effectively with trending technologies in a healthy manner" (Brod, 1984). Recently there are steady increase of social media active users, which completely create technostress as a psychological state within the scope of stimuli (Brillhart, 2004). However, the current situation is in line with the assumption the excess use of social network can lead to technostress and feelings of psychological and behavioural symptom. With the application of the stimulus organism response paradigm, previous research have explore some of the technology induced effects, and users quitting response (Tarafdar et al., 2011).(Kim & Johnson, 2016) examine user generated content through the application of SOR paradigm to promote customers response which are related to product identity.

SNS Quitting intention as Response (R)

The recent upsurge in social media has escalated many kinds of technology functions which increases students' experience, users' profiles, SNS exhaustion, techno-invasion and technostress which all have a consequence of users' response their active participation on the social network. However, there is an indication that to measuring users behavioural response difficult, therefore previous studies provide a substitute for the measurement of users' behaviour which has been proved to be valid predictor (Ayyagari et al., 2011; Ragu-Nathan et al., 2008). Thus, quitting behavioural response in this study is incorporated in the paradigm because of the lassitude users experienced with social media, which create the disposition of users to discontinue owing some of dynamic elements, which includes visiting too many social media sites, multitasking, sending and receiving to many friend request, surfing the internet for long hours, guiltiness due to excess social support many from online contacts. Given the above explanation, it can be deduced that excess information overload

through social media might spring up stress and affect students' academic performance which leads to a behavioural response of quitting intention.

Hypothesis development and Model

We adopt the stimulus-organism-response (SOR) framework as a theoretical foundation to identify the

social network features which influence others. Information overload on social media occurs when users access knowledge as a means of gaining a new ideology. Communication overload is pleasure seeking platform filled with various forms of interaction. Social overload enables users to establish social relationships through an interactive platform.
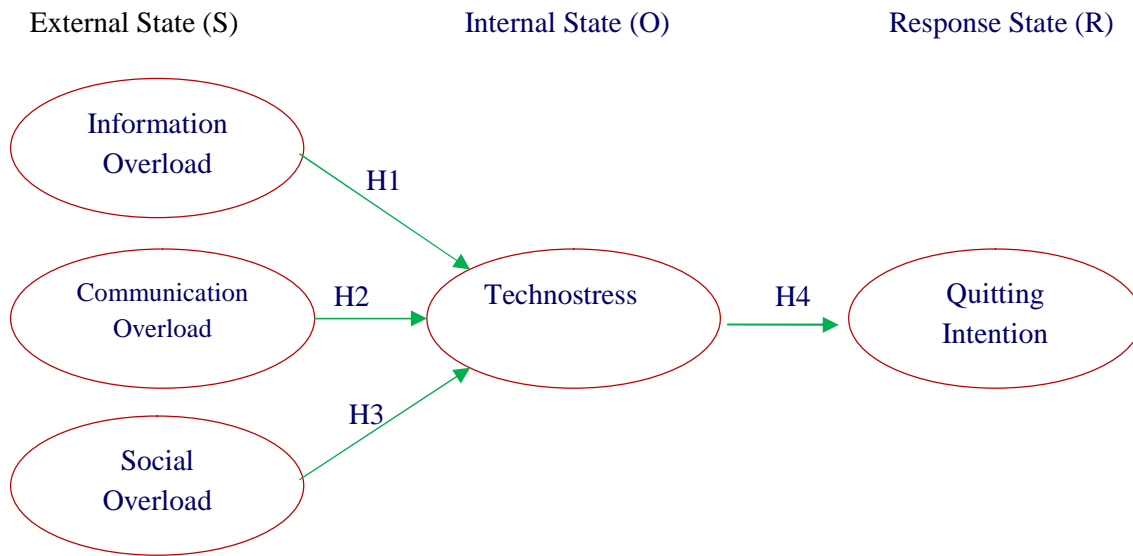
External State (S)   Internal State (O)   Response State (R)

Fig. 1 Research Model

External state and social media experiences (S)

Information overload and technostress

The development of information overload has been tagged as "interaction" which have allowed students to effectively access all various forms of information as never in the past in a way of increasing their level of academic performance, conversely, that adverse effect as a result of this overload of information have attracted the attention of the scholars.Mislevy (2006), examined the quantity of information the user cognitive capacity are able to process is 7 within the range of short-time which was later remodified to 4 according to (Hopf et al., 2008). Information overload in the social media is referred to as a process of sharing online experience, engagement in a debatable interaction, content creation, posting and viewing photographs which are often shared among other users'

results to information overloads (Brandtzæg & Heim, 2009; Papacharissi & Mendelson, 2010; Raacke & Bonds-Raacke, 2008; Shao, 2009). The aforementioned features of information overload, users experience induced technostress as it causes anxiety, feelings of distress, emotional and mental fatigue, which all affect the students' performance who are active user on Facebook as it allows large amount of postings on the wall of its users, however, considering these effects, the digital age have enabled the user to experience what is called "information anxiety" (Wurman, 1989), According to Lee et al. (2016) which have recently provided a support that there exist anaffirmative relationship between the overload of information and technostress. Thus, we envisage that:

H1:   there exist a significant positive relation between information overload and Technostress

Communication overload and technostress

Communication overload refers to the overwhelming demand of communication among social relation through social media, which distract users' attention(Zhang & Xu, 2016). The social media features have expanded communication rate due to its usability or perceived usefulness which decreases the effort of learning, which induces technostress and create some imperfection communication request and the cognitive capacity of the user. Therefore, communication is another source that distracts students academics and their schedule of duty, however, the on-going advancement of communication as a social media features (i.e. Facebook) yields instant gratification, but reduces the users persistence activities and decline the volitional control as a result social network induced factor referred to as technostress (Thambusamy et al., 2010). For instance, it took approximately more than ten minutes for the students to gain control after experiencing communication overload(Ou & Davison, 2011). Therefore, this indication has greatly posed a serious threat with the continual use of Facebook, when such overload consequences arise, the effect on psychological well-being and stress are more pronounced, which induces the internal state (i.e. Technostress) (Matusik & Mickel, 2011). Thus, we can envisage the following hypothesis that, excessive communication via social media (i.e. Facebook) can result to technostress.

H2: there exist a positive relation between communication overload and Technostress

Social overload and technostress

The expansion of social media has greatly expanded communication, enable its active users to be easily connected to embedded social media to create with others, gain support from he/her in relationships, anywhere and anytime (Manago et al., 2012) . Previous research from sociological point of view, social overload has been highly connected to the receiving enormous quantity of unwanted message through intensive social interaction (Evans & Lepore, 1993; Gomez-Jacinto & Hombrados-Mendieta, 2002). According to(Dunbar, 1992), Users (i.e. students) feel exhausted whenever they are filled with excessive social support that it can processed due to their cognitive limit, however, this may occur through virtual social demand, which predominantly exceed the stipulate Dunbar's number which is about 150, in

order to control a stable relationship. Previously, examine social overload as a factor that contributes to stress and feelings of (Lee et al., 2016; Maier, Laumer, Eckhardt, et al., 2015a & b). Technostress is a social media induced factor through social media which demand more energy requirements to influence the feelings of technostress through communication overload (Ragu-Nathan et al., 2008). Thus, we hypothesis the following that, SNS enable the users to gain experience through excessive use of Facebook leading to technostress.

H3: there exist a significant positive relation between social overload and Technostress

Internal state (O) and Response (O)

Technostress and quitting intention

In the context, psychological strain which emanates from excess use of SNS is referred to technostress of quitting (Ragu-Nathan et al., 2008), also characterized by inducing excessive use of technology (Ayyagari et al., 2011). SNS quitting intention could be defined as the temporary or permanent act of the user to discontinue or drastically reduce the intensity of SNS (Maier, Laumer, Weinert, et al., 2015; Ravindran et al., 2014). However, investigating the empirical evidence of SNSs and quitting intention have attracted scant attention, therefore, some studies have tried to investigate empirically the significant association between technostress and quitting intention of social media (i.e. Facebook), for example, Zhang and Xu (2016)) examine the positive association between technostress and quitting response with the use of qualitative method, and the result shows that users who are encountering social media fatigue would be willing to discontinue such social media use. Previous research has provided some empirical support that users who perceived technostress are likely to adopt coping measure to avoid emotional and psychological discomfort (Sonnentag & Frese, 2003). According to (Maier, Laumer, Eckhardt, et al., 2015), opined that there is a higher chances for users who experience induced technostress on social media have that tendency to quit the social network usage. Thus, we can envisage the hypothesis as follows:

H4: there exist a significant positive relation between social overload and Technostress

Methodology

Research design and data collection

This study examine the effect of technostress on students' academic performance and quitting intention. In this study, measuring items were adapted fromprevious work. In this study, information overload has four (4) items adapted from Lin and Lu (2011). We adapted Five (5) items for communication overload from(Cho et al., 2011; Zhao et al., 2016). We adapted Five (5) items for social overload and four (4) items for technostressfrom (Maier, Laumer, Weinert, et al., 2015). We adapted three (3) measuring items for quitting intention from (Maier, Laumer, Weinert, et al., 2015; Ravindran et al., 2014). We measured all items using a 7-point Likert scale from (1) strongly disagree, (4) Neutral and (7) strongly agree. The measuring item adapted was remodified to fit-in current scope of study. Therefore, structured questionnaire was distributed to the students who are active users on Facebook in order to evaluate the suitability, readability, and ambiguity of the proposed items, however, little modification was made according the suggested feedback.

Samples of the study

The total number of 324 questionnaire were distributed to the active users on Facebook through a URL link on other social network platform, such as WhatsApp, LinkedIn, Facebook and WeChat users. After the successful completion of the questionnaires the total number of 295 was accurately filled and submitted, which falls below the range of accepted requirement for further analysis. Nigeria has the second largest users of Facebook in Africa which are dominated by the youths and most especially the students because they are social network savvy (Nadeem et al., 2015). Facebook social network sites are very rich in features which enrich user social interaction and the users gradually diminish as a result from its negative effect leading to quitting behavioural intention. After scrutinizing the user's response, no method of bias was found.

The figures shown in table 1.Represents the descriptive result of the demographic variables. The percentage of the male is 55.6% and female respondents is 44.4%. The age of the most active Facebook users ranged from 25 and 44. The highest percentages of users' experience were 37.3% and 46.1%, most of the Facebook users spent between 1 hour and 4 hours, respectively.

Table 1 *Demographic samples of the respondents*

Variables		Frequency	Percentages (%)
Gender	Male	164	55.6
	Female	131	44.4
Age	19-24	57	19.3
	25-34	131	44.4
	35-44	107	36.3
User's experience (years)	1-2	49	16.6
	3-5	110	37.3
	5-8	136	46.1
Daily hours spent	> ½ an hour	41	13.9
	½ to 1 hour	57	19.3
	1 to 2 hours	70	23.7
	2 to 4 hours	79	27.8
	> than 4 hours	48	16.3
Frequency in Facebook usage	Hourly	37	12.5
	Many times per day	74	24.7
	Once a day	56	19.0
	Many times per week	77	26.1
	Once a week	52	17.6
Number of friends	100-149	32	10.8
	150-199	31	10.2
	200-249	49	16.6
	250-299	61	20.7
	More than 299	128	41.4

Interpretation of result

This study employ structural equation model (i.e. Lisrel 8.80) software. Lisrel is a powerful techniques which help to perform psychometric test and keep informative measure in the analysis of confirmatory factor analysis, estimate measurement and structural model simultaneously (Hair et al., 2012). The minimum level of threshold of Cronbach alpha and Composite reliability (CR) is 0.70 while Average variance extracted (AVE) is 0.5 according to previous studies, values are extracted using SPSS (Karaiskos et al., 2010), respectively. This shoes that the convergent validity is acceptable.

Table 2 Shows the result of CFA, CR and the AVE.

Construct	Cronbach alpha	Factor loading	Items	CR	AVE
Information Overload	0.933	0.95	IO1	0.94	0.83
		0.87	IO2		
		0.91	IO3		
Communication Overload	0.916	0.86	CO1	0.92	0.68
		0.79	CO2		
		0.80	CO3		
		0.83	CO4		
		0.86	CO5		
Social Overload	0.951	0.90	SO1	0.95	0.80
		0.92	SO2		
		0.86	SO3		
		0.89	SO4		
		0.89	SO5		
Technostress	0.966	0.94	TS1	0.97	0.88
		0.93	TS2		
		0.95	TS3		
		0.93	TS4		
Quitting Intention	0.928	0.94	QI1	0.93	0.82
		0.87	QI2		
		0.90	QI3		

Note: $*P<0.5$ and $***p<0.001$ level.

Table 3. Show the (AVE) square

Constructs	IO	CO	SO	TS	QI
Information overload	**0.91**				
Communication overload	0.450	**0.82**			
Social overload	0.564	0.529	**0.89**		
Technostress	0.594	0.452	0.581	**0.94**	
Quitting intention	0.540	0.456	0.472	0.403	**0.91**

Note: The bold figures shown in the diagonal indicate the AVE square root

The bold face diagonal matrix and AVEs in the above tables shows they are greater than the corresponding correlation coefficients, which shows that the discriminant validity have a very good scales(Fornell & Larcker, 1981)

Measurement and Structural model

The next is to validate our measurement and structural model analysis using structural equation modelling (SEM) with Lisrel 8.80 as a useful tools which enable researchers in the field of social and management science and other related disciplines have continually

adapt this method to support the outcome of their research (Hooper, Coughlan, & Mullen, 2008). This study examine the goodness of fit indices such as 2/df, AGFI, GFI, CFI, TLI, NFI and RMSEA. According to Barrett (2007) and Hu and Bentler (1999) gave the recommended values fitness for chi-square should not be lower than 2.0 or greater than 5.0 based on the sample of the data collected (Tabachnick & Fidell, 2007). The value for RMSEA lower than 0.10 (Anderson & Gerbing, 1988) and according to Steiger (2007), 0.07 is the upper limit or <0.80McQuitty (2004), AGFI, GFI values can be higher than 0.90 and 0.80 (Arbuckle, 2003), respectively. Hu and Bentler (1999) and Arbuckle (2003) suggest the value of CFI AND TLI can be higher than 0.90 and 0.95. Therefore, chi-square, AGFI, GFI, CFI, NNFI, NFI and RMSEA are tabulated below.

Table 4. Measurement model

Model	2/df	GFI	AGFI	CFI	NFI	RMSEA
Base	1.280	0.94	0.92	1.00	0.99	0.028

Table 5. Structural model goodness fit

Model	2/df	GFI	AGFI	CFI	NFI	RMSEA
Base	1.729	0.92	0.89	0.99	0.98	0.046

Fig. 2 Result of the Model Test

In fig. 2, the result in our path coefficient of information overload and technostress (b=0.38, p<0.001) supports H1, indicating that information overload positively enhances technostress. The relationship between communication overload and technostress at H2 is significant (b=0.13, p<0.05), and H3 have a positive relationship between social overload and technostress which are statistically significant at (b=0.31, p<0.001). Internal state, technostress indicates a significant positive factor that enhances quitting intention (b=0.45, p<0.001) supports H4, this shows that the decrease in academic performance via technostress leads to users quitting intention, therefore, the analysis in the study supports our hypotheses.

Discussion and findings

This research study explore the social network effect on student academic performance with technology induced factor (i.e. technostress) leading to quitting behavioural intention via the environmental factors by considering information, communication and social overload as their excessive usage affect the psychological and cognitive capacity of users' well-being. With regards to the outcome of the tested hypothesis, the results show when users received too much information and social related activities more than what he/she can processed simultaneously, such effect leads to technostress which decline student performance. Communication overload shows that there exist a relationship with technostress, but not highly significant because individuals can decide independently to control communication pattern (such as, filtering or blocking unwanted messages) the information that he/she receive as to whether to reply to such messages or not, thus, users with great experience will be less affected with technostress. Therefore, we investigate empirically by employing stimulus-organism-response (SOR) paradigm to explore some of the consequences involved in the excess use of social media and the related effect on psychological response. However, the summary is presented in the subsequent table below, showing the level of support in all the proposed hypothesis.

Table 6. Summary of Results

Path coefficient	Hypothesis	Result
Information Overload – Technostress	H1	Supported
Communication Overload – Technostress	H2	Supported
Social overload – Technostress	H3	Supported
Technostress – Quitting intention	H4	Supported

Theoretical and Practical implication

In this research, there are several contributions to both theoretical and practical implication. Firstly, this research explores and identifies social media characteristics such as information, communication and social as a double edge sword in the context of overload, extending the previous research on dissatisfaction and technostress. However, previous research have examined the discontinue use of SNSs process, but its effect on students' performance through technostress has been largely overlooked, which this study has explored as part of what constitute quitting behavioural response. Secondly, the drastic decline of students' academic performance via technostress as a result of excessive use of social network sites (i.e. Facebook) as an overwhelming phenomenon that empirically contributes to the applicability of stimulus-organism-response (SOR) paradigm which captures the social media antecedents. Lastly, this assumption that technostress has a significant impact user quitting intention have been empirically investigated in this study, showing the significances of the social network-induced factors as a prime motivator to discontinue intention (Turel, 2015). Practically, it is particularly important to control the social network-induced source of information, communication and social activities on social platform which will rejuvenate users ability to determine what kinds of chats, messages, news and entertainment they should subscribe for, but controlling such source through navigation of settings (i.e. declining social request, control notification, unsubscribe message alert and setting a silent mode) all which allow the user to restore physical and emotional state, accelerate work status and healthy condition.

Research limitation

This sample of the study were collected data from both active Facebook users among the university students in Nigeria, generalizing such result will be defective, but future study can also explore the most affect gender of the social network as to fully generalize the resulting outcome. Secondly, future research should also consider comparing how social media usage affects gender in a different multi-culture domain which will further enrich the generalization of this study.

Declaration of Conflict of interest

I have no conflict of interest to declare.

Acknowledgment

References

Al-Debei, M. M., Al-Lozi, E., & Papazafeiropoulou, A. (2013). Why people keep coming back to Facebook: Explaining and predicting continuance participation from an extended theory of planned behaviour perspective. *Decision Support Systems, 55*(1), 43-54.

Alam, M. M., & Wagner, C. (2013). Facebook distress": A model to investigate discontinuation of social networking site use. *PACIS 2013 Proceedings. Paper, 179*.

Ali-Hassan, H., Nevo, D., & Wade, M. (2015). Linking dimensions of social media use to job performance: The role of social capital. *The Journal of Strategic Information Systems, 24*(2), 65-89.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin, 103*(3), 411.

Arbuckle, J. (2003). *Amos 5.0 update to the Amos user's guide*: Marketing Department, SPSS Incorporated.

Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: technological antecedents and implications. *MIS quarterly, 35*(4), 831-858.

Bagozzi, R. P., Davis, F. D., & Warshaw, P. R. (1992). Development and test of a theory of technological learning and usage. *Human relations, 45*(7), 659-686.

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative science quarterly*, 421-458.

Barrett, P. (2007). Structural equation modelling: Adjudging model fit. *Personality and Individual differences, 42*(5), 815-824.

Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: Modeling its precursors. *Journal of retailing, 74*(2), 169-191.

Beaudry, A., & Pinsonneault, A. (2005). Understanding user responses to information technology: A coping model of user adaptation. *MIS quarterly*, 493-524.

Blancero, D., Johnson, S. A., & Lakshman, C. (1996). Psychological contracts and fairness: The effect of violations on customer service behavior. *Journal of Market-Focused Management, 1*(1), 49-63.

Brandtzæg, P. B., & Heim, J. (2009). *Why people use social networking sites.* Paper presented at the International conference on online communities and social computing.

Brillhart, P. E. (2004). Technostress in the workplace: Managing stress in the electronic workplace. *Journal of American Academy of Business, 5*(1/2), 302-307.

Brod, C. (1984). *Technostress: The human cost of the computer revolution*: Addison Wesley Publishing Company.

Cannarella, J., & Spechler, J. A. (2014). Epidemiological modeling of online social network dynamics. *arXiv preprint arXiv:1401.4208*.

Chen, K. G., Valencia, J. C., Gillet, J. P., Hearing, V. J., & Gottesman, M. M. (2009). Involvement of ABC transporters in melanogenesis and the development of multidrug resistance of melanoma. *Pigment cell & melanoma research, 22*(6), 740-749.

Cho, E., Myers, S. A., & Leskovec, J. (2011). *Friendship and mobility: user movement in location-based social networks.* Paper presented at the Proceedings of the 17th ACM SIGKDD international conference on Knowledge discovery and data mining.

Copper, J. F. (2014). *Historical Dictionary of Taiwan (Republic of China)*: Rowman & Littlefield.

Cova, B., & Hoskins, S. (1997). A twin-track networking approach to project marketing. *European Management Journal, 15*(5), 546-556.

Dholakia, U. M., Bagozzi, R. P., & Pearo, L. K. (2004). A social influence model of consumer participation in network- and small-group-based virtual communities. *International journal of research in marketing, 21*(3), 241-263.

Donovan, R. J., Rossiter, J. R., Marcoolyn, G., & Nesdale, A. (1994). Store atmosphere and purchasing behavior. *Journal of retailing, 70*(3), 283-294.

Dunbar, R. I. (1992). Neocortex size as a constraint on group size in primates. *Journal of human evolution, 22*(6), 469-493.

Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of business research, 54*(2), 177-184.

Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology & Marketing, 20*(2), 139-150.

Evans, G. W., & Lepore, S. J. (1993). Household crowding and social support: A quasiexperimental analysis. *Journal of Personality and Social Psychology, 65*(2), 308.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing research*, 382-388.

Furneaux, B., & Wade, M. R. (2011). An exploration of organizational level information systems discontinuance intentions. *MIS quarterly*, 573-598.

Gehl, R. W. (2012). Real (Software) AbstractionsOn the Rise of Facebook and the Fall of MySpace. *Social Text, 30*(2 (111)), 99-119.

Gomez-Jacinto, L., & Hombrados-Mendieta, I. (2002). Multiple effects of community and household crowding. *Journal of Environmental Psychology, 22*(3), 233-246.

Grace, D., Ross, M., & Shao, W. (2015). Examining the relationship between social media characteristics and psychological dispositions. *European Journal of Marketing, 49*(9/10), 1366-1390.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science, 40*(3), 414-433.

Hopf, W. H., Huber, G. L., & Weiß, R. H. (2008). Media violence and youth violence: A 2-year longitudinal study. *Journal of Media Psychology, 20*(3), 79-96.

Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal, 6*(1), 1-55.

Huang, C. (2010). Internet use and psychological well-being: A meta-analysis. *Cyberpsychology, Behavior, and Social Networking, 13*(3), 241-249.

Jacoby, J. (2002). Stimulus-organism-response reconsidered: an evolutionary step in modeling (consumer) behavior. *Journal of Consumer Psychology, 12*(1), 51-57.

Jacoby, J., Speller, D. E., & Kohn, C. A. (1974). Brand choice behavior as a function of information load. *Journal of Marketing research*, 63-69.

Jang, H., Olfman, L., Ko, I., Koh, J., & Kim, K. (2008). The influence of on-line brand community characteristics on community commitment and brand loyalty. *International Journal of Electronic Commerce, 12*(3), 57-80.

Karaiskos, D., Tzavellas, E., Balta, G., & Paparrigopoulos, T. (2010). P02-232-Social network addiction: a new clinical disorder? *European Psychiatry, 25*, 855.

Katz, E., Haas, H., & Gurevitch, M. (1973). On the use of the mass media for important things. *American sociological review*, 164-181.

Kim, A. J., & Johnson, K. K. (2016). Power of consumers using social media: Examining the influences of brand-related user-generated content on Facebook. *Computers in Human Behavior, 58*, 98-108.

Koo, D.-M., & Ju, S.-H. (2010). The interactional effects of atmospherics and perceptual curiosity on emotions and online shopping intention. *Computers in Human Behavior, 26*(3), 377-388.

Lazarus, R. S. (1990). Theory-based stress measurement. *Psychological inquiry, 1*(1), 3-13.

Lee, A. R., Son, S.-M., & Kim, K. K. (2016). Information and communication technology overload and social networking service fatigue: A stress perspective. *Computers in Human Behavior, 55*, 51-61.

Liu, M., Scordino, R., Geurtz, R., Navarrete, C., Ko, Y., & Lim, M. (2014). A look at research on mobile learning in K–12 education from 2007 to the present. *Journal of research on Technology in Education, 46*(4), 325-372.

Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009). Facebook, social integration and informal learning at university:'It is more for socialising and talking to friends about work than for actually doing work'. *Learning, media and technology, 34*(2), 141-155.

Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2015). Giving too much social support: social overload on social networking sites. *European Journal of Information Systems, 24*(5), 447-464.

Maier, C., Laumer, S., Weinert, C., & Weitzel, T. (2015). The effects of technostress and switching stress on discontinued use of social networking services: a study of Facebook use. *Information Systems Journal, 25*(3), 275-308.

Manago, A. M., Taylor, T., & Greenfield, P. M. (2012). Me and my 400 friends: The anatomy of college students' Facebook networks, their communication patterns, and well-being. *Developmental psychology, 48*(2), 369.

Matusik, S. F., & Mickel, A. E. (2011). Embracing or embattled by converged mobile devices? Users' experiences with a contemporary connectivity technology. *Human relations, 64*(8), 1001-1030.

McCarthy, D., & Saegert, S. (1978). Residential density, social overload, and social withdrawal. *Human Ecology, 6*(3), 253-272.

McQuitty, S. (2004). Statistical power and structural equation models in business research. *Journal of business research, 57*(2), 175-183.

Mehrabian, A., & Russell, J. A. (1974a). *An approach to environmental psychology*: the MIT Press.

Mehrabian, A., & Russell, J. A. (1974b). A verbal measure of information rate for studies in environmental psychology. *Environment and Behavior, 6*(2), 233.

Mislevy, R. J. (2006). Cognitive psychology and educational assessment. *Educational measurement, 4*, 257-305.

Mollen, A., & Wilson, H. (2010). Engagement, telepresence and interactivity in online consumer experience: Reconciling scholastic and managerial perspectives. *Journal of business research, 63*(9-10), 919-925.

Nadeem, W., Andreini, D., Salo, J., & Laukkanen, T. (2015). Engaging consumers online through websites and social media: A gender study of Italian Generation Y clothing consumers. *International Journal of Information Management, 35*(4), 432-442.

O'Reilly III, C. A. (1980). Individuals and information overload in organizations: is more necessarily better? *Academy of management journal, 23*(4), 684-696.

Olney, T. J., Holbrook, M. B., & Batra, R. (1991). Consumer responses to advertising: The effects of ad content, emotions, and attitude toward the ad on viewing time. *Journal of consumer research, 17*(4), 440-453.

Ou, C. X., & Davison, R. M. (2011). Interactive or interruptive? Instant messaging at work. *Decision Support Systems, 52*(1), 61-72.

Papacharissi, Z., & Mendelson, A. (2010). 12 Toward a new (er) sociability: uses, gratifications and social capital on Facebook. *Media perspectives for the 21st century, 212*.

Quan-Haase, A., & Young, A. L. (2010). Uses and gratifications of social media: A comparison of Facebook and instant messaging. *Bulletin of Science, Technology & Society, 30*(5), 350-361.

Raacke, J., & Bonds-Raacke, J. (2008). MySpace and Facebook: Applying the uses and gratifications theory to exploring friend-networking sites. *Cyberpsychology & behavior, 11*(2), 169-174.

Ragu-Nathan, T., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information systems research, 19*(4), 417-433.

Ravindran, T., Yeow Kuan, A. C., & Hoe Lian, D. G. (2014). Antecedents and effects of social network fatigue. *Journal of the Association for Information Science and Technology, 65*(11), 2306-2320.

Reitz, A. R. (2012). *Online consumer engagement: Understanding the antecedents and outcomes.* Colorado State University. Libraries.

Rose, S., & Dhandayudham, A. (2014). Towards an understanding of Internet-based problem shopping behaviour: The concept of online shopping addiction and its proposed predictors: Akadémiai Kiadó, co-published with Springer Science+ Business Media BV, Formerly Kluwer Academic Publishers BV.

Rubin, A. M. (2009). Uses-and-gratifications perspective on media effects *Media effects* (pp. 181-200): Routledge.

Shao, G. (2009). Understanding the appeal of user-generated media: a uses and gratification perspective. *Internet Research, 19*(1), 7-25.

Sonnentag, S., & Frese, M. (2003). Stress in organizations. *Comprehensive handbook of psychology, 12*, 453-491.

Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual differences, 42*(5), 893-898.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*: Allyn & Bacon/Pearson Education.

Tarafdar, M., Tu, Q., Ragu-Nathan, T., & Ragu-Nathan, B. S. (2011). Crossing to the dark side: examining creators, outcomes, and inhibitors of technostress. *Communications of the ACM, 54*(9), 113-120.

Thambusamy, R., Church, M., Nemati, H. R., & Barrick, J. (2010). *Socially Exchanging Privacy for Pleasure: hedonic Use of Computer-Mediated Social Networks.* Paper presented at the ICIS.

Turel, O. (2015). Quitting the use of a habituated hedonic information system: a theoretical model and empirical examination of Facebook users. *European Journal of Information Systems, 24*(4), 431-446.

Verhagen, T., & van Dolen, W. (2011). The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information & management, 48*(8), 320-327.

Wang, C., & Zhang, P. (2012). The evolution of social commerce: The people, management, technology, and information dimensions. *CAIS, 31*(5).

Wang, Y. J., Minor, M. S., & Wei, J. (2011). Aesthetics and the online shopping environment: Understanding consumer responses. *Journal of retailing, 87*(1), 46-58.

Whiting, A., & Williams, D. (2013). Why people use social media: a uses and gratifications approach. *Qualitative Market Research: An International Journal, 16*(4), 362-369.

Wurman, R. (1989). Information anxiety: What to do when information doesn't tell you what you want to know: New York: Bantam Books.

Zhang, B., & Xu, H. (2016). *Privacy nudges for mobile applications: Effects on the creepiness emotion and privacy attitudes.* Paper presented at the Proceedings of the 19th ACM conference on computer-supported cooperative work & social computing.

Zhang, S., Zhao, L., Lu, Y., & Yang, J. (2016). Do you get tired of socializing? An empirical explanation of discontinuous usage behaviour in social network services. *Information & management, 53*(7), 904-914.

Zhao, Q., Chen, C.-D., & Wang, J.-L. (2016). The effects of psychological ownership and TAM on social media loyalty: An integrated model. *Telematics and Informatics, 33*(4), 959-972.

Access this Article in Online	
	Website: www.ijarm.com
Quick Response Code	Subject: Public Affairs
DOI:10.22192/ijamr.2019.06.02.006	