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Behavioral intention and continued adoption of Facebook: An exploratory study of graduate students in Bangladesh during the Covid-19 pandemic

1. Introduction

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Coronavirus syndrome 2019 is a respiratory disease caused by an infectious virus that is formally identified as COVID-19. Launched in Wuhan, province of Hubei, China, on 31 December 2019. The virus was proven to be caused by a single kind of coronavirus on January 7, 2020. During that month, Thailand, Japan, and South Korea reported the same disease. The World Health Organization (WHO) designated the disease a pandemic on March 11, 2020, as the number of cases continued to rise rapidly throughout the world (Alam, Nazir, & Bhuiyan, 2020). This novel coronavirus illness is more easily transmitted from person to person. WHO designated the virus as SARS-CoV-2 (Alam et al., 2020). Coronavirus patients have been recorded in 209 nations and territories since then (Kamrujjaman, Mahmud, & Islam, 2020).

Bangladesh, a densely populated developing country, has also been affected by the worldwide epidemic (Alam et al., 2020). On March 8, 2020, the Institute of Epidemiology, Disease Control, and Research (IEDCR) in Bangladesh announced the first three cases of coronavirus (Alam et al., 2020). According to WHO, there were 878,804 confirmed cases of COVID-19 in Bangladesh from 3 January 2020 to 25 June 2021, with 13,976 fatalities.

A crisis is seen as any incident that may result in an unpredictable and dangerous condition that will harm a person, group, community, or society as a whole. Crises bring unfavorable changes in stability, economics, politics, society, or the environment that come suddenly and with little or no notice. It is a phrase that loosely translates to “a hard time” or an “emergency situation” (Goniewicz, Khorram, Hertelendy, Goniewicz, Naylor, & Burkle, 2020). COVID-19 has proven to be a significant task for several nations in the Asia-Pacific region, including Bangladesh, India, and China, European Union countries, Latin American countries, and also North American countries (Johnson, Gossner, Colzani, Kinsman, Alexakis, Beauté, & Ekdahl, 2020). To deal with growing difficulties, they have all devised a variety of techniques. It is now the world’s most serious public health problem and the greatest threat since World War II (Peiris, Yuen, Osterhaus, & Stohr, 2003; Zaki, Boheemen, Bestebroer, Osterhaus, & Fouchier, 2012). The virus spreads like a flood, wreaking havoc on anybody who isn’t well-prepared. People all across the world are bearing the brunt of the pandemic’s consequences, which include the loss of loved ones as well as the emotional anguish and fear experienced by nearly everyone. This isn’t only a matter of personal safety. It is a human, societal, and economic crisis. This epidemic is having major consequences for people all across the world, either directly or indirectly. WHO and all COVID-19 member countries have issued impact advisories. Isolation from the outside world is the only way to keep the sickness from spreading, which leads to sadness and anxiety, which is linked to instability, economic recessions, and severe emotional pain (Rothe, Schunk, Sothmann, Bretzel, Froeschl, Wallrauch, & Hoelscher, 2020). We are going through a period of societal pain and also it will result in social unhappiness connected with loneliness and social alienation, which relatively few of us discuss (Lillie, Samson, Li, Adams, Capstick, Barlow, & Schmid, 2020).

In the twenty-first century, persons with greater levels of anxiety indicated a proclivity for excessive social media use (Apaolaza, Hartmann, D’Souza, & Gilsanz, 2019). Social media became an essential location to engage during a period of social distance and restricted interaction with people (Turner-Musa, Ajayi, & Kemp, 2020). Social media platforms are designed to connect people,

and they have helped the globe stay connected by significantly boosting usage throughout the epidemic (Abbas, Wang, Su, & Ziapour, 2021). Many individuals have turned to social media to maintain ties and obtain entertainment to pass the time since they have been ordered to stay at home (Agle, 2020). The global public, celebrities, international leaders, and professionals have all been affected by the COVID-19 epidemic (Marino, Gini, Vieno, & Spada, 2018). Internet memes have been used to convey information and provide amusement and diversion from the pandemic. Social isolation, on the other hand, has pushed many individuals to modify their lifestyles, putting mental health at risk (Huang, Sung, Chen, Fan, Liu, Lee, & Huang, 2021). Online communication pages have become an increasingly popular online social location globally, and many people, especially young people, spend a lot of time socializing through friends' networks (Chugh & Joshi, 2020). SNS encourages users to create a profile for sharing images, personal information, general communications, and friends to participate in the meeting (Hoadley, Xu, Lee, & Rosson, 2010; Hew, 2011; Menzies, Petrie, & Zarb, 2017). Web pages appear to be regarded by users as critical to their long-term success (Ko, 2013; Lankton et al., 2010). According to Brown (2011, p.24), "we may fall in love online, form relationships, and attend parties in remote parts of the world. And, in our community, Generations Y and X are leading the way in terms of adopting new social networking sites (SNSs), without having to leave the comfort". SNSs are both user-generated and user-centered compared to other media (Zhang & Daugherty, 2009). SNS's have become popular among all parts of the industry. However, their websites have grown more importantly in social media, particularly among younger socioeconomic classes (Marshall et al., 2008). Those SNSs have been ingrained in their daily lives all across the world (Lin & Lu, 2011). Facebook is the internet's third-largest and most-visited website (Sardar, 2012; Champoux et al., 2012). Facebook is commonly seen by people from diverse ethnic and geographic backgrounds (Dhir et al., 2016). Facebook is one of the most common SNS in Bangladesh. It also helps retain friends and family ties. As Internet use in Bangladesh keeps increasing, Facebook, especially among high-school, university, and private or public educational institutions students, has become a popular place for interactions across the Internet. About 90 million internet users in Bangladesh have 30 million using Facebook (Islam & Hossin, 2016; Internet stats, 2018). According to Pempek et al. (2009, p.230), "A recent US survey on college students found that the features of the Facebook has ability to connect users with old schoolmates. Another undisputed appeal is the use of social networking to promote romantic relationships, while evidence indicates that such use would overestimate". Networking via common interests

and situations is perhaps the most successful use of this method of building relationships (Hew, 2011). Social networking has evolved into a dynamic means for young people to interact over cultural preferences and artifacts; for example, it may foster intimate online communities around the notion of self-help among patients suffering from certain medical problems (Preece & Maloney, 2005).

During the epidemic, social media platforms (such as Facebook, YouTube, Twitter, and Instagram) played a key role in relieving the stress of loneliness, sense of isolation, and depression, and Bangladesh is no exception. Bangladesh has 33 million active Facebook users, accounting for 0.9 percent of all monthly active Facebook users worldwide, and Dhaka (The capital of Bangladesh) is rated second among the cities with the most active Facebook users globally (World Population Review, 2021). Furthermore, in Bangladesh, utilizing Facebook through smartphone or internet connection is completely free. According to the World Population Review (2021), "Facebook users in Bangladesh are rising day by day in comparison to other European (Italy, German, and France), African and even some neighboring countries".

At this stage, several studies have taken place in India, Thailand, Srilanka, UAE, Jordan, Indonesia, Malaysia, the USA, Brazil, and China, and several European countries are dealing with social media (Mamun & Griffiths, 2019). To the best of researchers' knowledge, no analysis is yet performed on social media such as Facebook comprehensively during this pandemic covid-19. Most studies were conducted in Bangladesh on social media coverage of educational outcomes, the technical effect of academic performance of students, the influence of social media (Mamun & Griffiths, 2019; Afrin et al., 2017; Islam & Hossin, 2016; Jahan et al., 2019; Uddin et al., 2016). Therefore, determinants affected by behavioral intentions must be established during covid- 19 for the continuous adoption of Facebook. Given these circumstances, this study aims to determine the root causes of driving social media adoption by students in Bangladesh during the present crisis. Moreover, the present study results may provide more insights into respondents' perceptions and behaviors in Bangladesh during Covid- 19 situations. As a result, the following key research questions (RQ) are addressed in this study:

RQ1: What factors influenced the student's intention to use social media in Bangladesh during Covid-19?

RQ2: To what extent can students' behavior and attitudes explain their decision to continue using social media amid a pandemic?

RQ3: Explore the demographic profiles of students residing in Bangladesh.

2. Literature review

The outbreak of the COVID-19 pandemic triggered a global public health disaster (Bergquist, Kiani, & Manda, 2020). Because the COVID-19 worries, uncertainty, and stress were nearly impossible to control, people encountered several challenges and difficulties in resuming their usual everyday functions (Su, McDonnell, Wen, Kozak, Abbas, Segalo, & Xiang, 2021). With the first symptoms of COVID-19 illness, several nations implemented lockdowns and regional social gatherings, causing mental stress as a result of preventive measures (Masud, Hossain, Roy, Hossain, Nabi, Ferdous, & Hossain, 2021). Individuals all across the world are squandering their time as a pleasure by spending it on social media in this epidemic. They utilize social media to share their emotions and to learn more about covid-19. In this situation, social media is critical for gaining knowledge. Social networking has transformed corporate marketing and has changed the delivery and evaluation of public relations strategies and services (Matthews, 2010). Established and increased use of social media sites like Facebook has long been a global phenomenon (Nicole, 2007). According to Nicole (2007, p.1150), in particular, "Students and teens recognized the social networking platforms to contact with friends, share information, reinvent people, and highlight their social lives". Karpinski (2009, p.8) also believed that "social media has a detrimental relationship to students' academic success, much greater than the benefits of using social media channels". Nalwa and Anand (2003, p.660) advised and stated that "Technology addicts prefer the internet to abandon their personal and professional obligations and to give rise to technical challenges". It is clearly stated that the social network is a community of people linked to the same reason (Ryan, 2011a; Ryan, 2011b). There has been very little research on the history of SNSs' awareness (Coyle & Vaughn, 2008). The effective use of technology is exceptionally sexual identity-dependent as it plays a big part in using computers (Hall & Cooper, 1991; Khanra, Dhir, Kaur, & Joseph, 2021). These studies, however, have shown that the Internet uses human features and experiences, which traditionally have influenced ways of using the Network. Studies found that participation and acceptance are critical reasons behind SNS adoption (Bicen & Cavus, 2011; Mansumittrchai et al., 2012). SNS is used for delivering data on personal (Sharaf et al., 2012; Tham & Ahmed, 2011). SNS can lead to increased client satisfaction, customer engagement, civic interests, and political engagement (Valenzuela, Park, & Kee, 2009). Many studies have shown how SNS time decreases as perceptions change (Tham & Ahmed, 2011). However, people still use SNS to express ideologies, political philosophies, and adolescent studies (Pempek et al., 2009). In comparison, some other academics

found that SNS adoption does not have an age or a gender effect (Abdelraheem, 2013; Mansumittrchai et al., 2012; Hossain & Kim, 2018). The security problem is the most commonly discussed negative aspect of SNS. Besides, new or existing knowledge of SNS and people will be revealed, which would seriously harm their income, reputation, and vulnerability to extortion (Dinerman, 2011). Other negative concerns include biological and job problems, increased cybercrime, intercourse losses, low efficiency, and deteriorating academic performance of students (Tham & Ahmed, 2011), Other development time management challenges, and addiction (Heri, 2007; Stern & Taylor, 2007). Content manipulation, debt splitting, abuse, or illegal use of the intellectual property. Moreover, copyright, etc., are some of the most common problems listed (Willems & Bateman, 2011). As a result, we're trying to figure out what influenced the people of Bangladesh to use social media, either directly or indirectly. We utilized the Technology Acceptance Model to identify the true variables influencing Bangladeshi citizens' use of social media during the Covid-19 pandemic.

2.1. Technology Acceptance Model (TAM)

The TAM is also considered the most popular and most widely used paradigm of technology (Lee et al., 2011). TAM may have its origins in the theory of planned behavior. Intervention is a systematic study of actions, mood, and psychological factors (Fishben & Ajzen, 1977). The intended behavior theory concluded that the best behavioral prediction is the behavioral motive, partly established by ethical and cultural-social concepts (Ajzen & Fishben, 1980; Ajzen, 1991).

The philosophy of the actions expected in the evolution of responsible action (Ajzen, 1991). To overcome people and technology's acceptance, the technology acceptance model is used to justify action (Azjen & Fishbein, 1980). Davis identified two especially significant determinants known as Perceived Usefulness (PU) and perceived ease of use (PEU) that could affect device use (Davis, 1989). The relationship between PU and PEU is that PU intercedes for PEU's effect on the state of mind and planned execution (Kim, 2010). PU affects and utilizes directly. However, PEU has roundabout implications in terms of action and usage by PU (Davis, 1989). While the theory of planned behavior still considers that such views influence actions, TAM concludes that the PU can control both expectations and actions (Davis, 1989). As a vital activity of cognitive severity, social influence is defined in planned behavior theory (Davis et al., 1989). Several changes to TAM also expanded our perception of technology acceptance (Wixom & Todd, 2005).

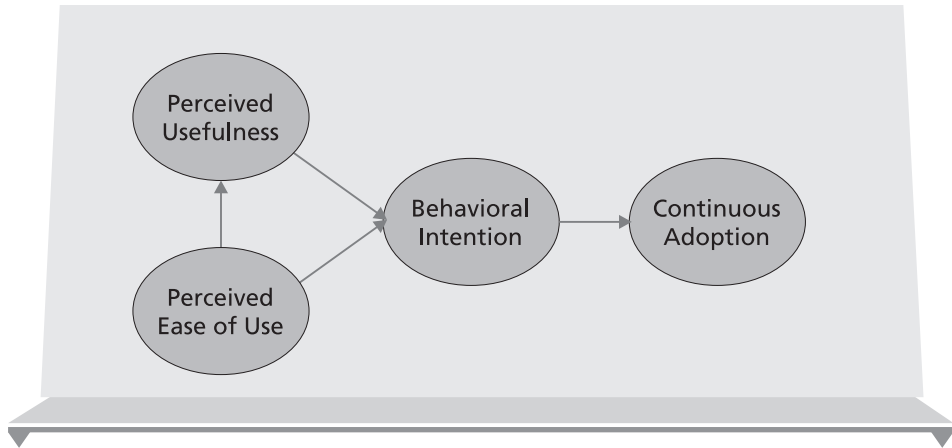


Figure 1. The first TAM published by Davis et al. (1989, p. 990)

This study aims to define the determinants that affect Facebook acceptance and to design the conceptual framework for the proposed model, based on the available literary review. Based on the previous analysis, a conceptual model is proposed, which is shown in figure 2.

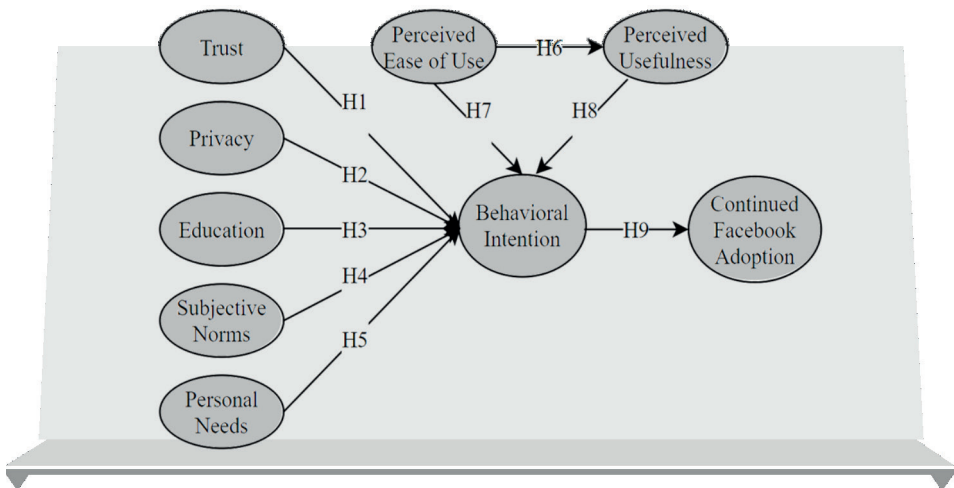


Figure 2. Proposed Model and Hypotheses published by Davis et al. (1989, p.990)

The figure illustrates the structure of seven key variables that are likely to impact the behavioral intensity of maintaining and pursuing Facebook. Below are the definitions of the study variables:

3. Hypotheses Development

3.1. Trust

The use of a virtual environment involves inherent uncertainties and risks through advancing technologies that permit social interaction over time and distance. Trust occurs when there is trust on one side that its counterpart is trustworthy and integral (Lee et al., 2011). Empirical research and verification of users' confidence in IT behavior have been carried out differently (Pavlou, 2002). Online experiments have shown that trust is not just a critical factor for users' acceptance (Pavlou, 2002). The definite behavioral aim of using the SNS is therefore essential to define, and we, therefore, suggest the following hypothesis:

H1: There is a positive relationship between trust and the behavioral intention of Facebook.

3.2. Privacy

Several researchers find a mighty determinant of online activity and practice private security information (Pavlou, 2002; Dinev & Hart, 2005). Although personal information is converted into tradable social capital and sold on global markets for different motives, some authors see social networks as a tool for surveillance and complicit risk society. SNS administrators face a difficult task in enforcing technology and rules that address user privacy concerns while allowing for the free flow of the personal presentation and information exchange (Tufekci, 2008; Acquisti & Gross, 2006). Facebook provides users with efficient and secure privacy control over their data and other internet networks (Acquisti & Gross, 2006). The decision to use Facebook privacy would also have an important part to play. Therefore, we believe:

H2: Privacy would have a positive impact on the behavioral intention of Facebook.

3.3. Educational Compatibility

New technology helps us in our everyday lives, as well as in school. In education, the Internet plays a key role. Many people use social media for their educational purposes for a few days now. In addition to social and technical factors, people more frequently learn and exchange ideas and information through social networking websites. Some use YouTube to access instructional videos, while others create a single Facebook community or join a group to strengthen their horizons of information (Social Bakers, 2011). As a social knowledge exchange for SNSs, it is seen as an educational and entertainment instrument designed primarily for entertaining and educating users. Social networks on the Internet are now standard for the networking, interaction, and communications of information. These websites allow users to connect and organize social activities (Neff, 2010). Therefore, we should expect a positive effect on behavioral intention to use social network tools on coherence with education. Consequently, we believe:

H3: Educational compatibility would have a positive influence on the behavioral intention of Facebook.

3.4. Subjective Norms

For certain conduct, subjective expectations can be described as social pressures (Ajzen, 1991). "The extent to which someone important to him feels that he or she should or should not be performing this comporment is the degree of the interpretation of subjective standard or social power", said Venkatesh and Morris (2000, p.125). In earlier research studies (Kelman, 1961; Venkatesh & Davis, 2000), two psychological mechanisms indicate that behavioral motives can indirectly affect social expectations, such as internalization and identity perception. Internalization refers to the situation when a person sees a course of action to be taken. Therefore, the person integrates into his/her framework of beliefs the assumed conviction of the referent. Identification is dependent on the actual people's sense of identity, indicating that if a user feels that a specific activity over other significant actions will improve his or her reputation and they will undoubtedly see the act embraced. Therefore, we suggest,

H4: Subjective expectations would have a positive effect on the behavioral intention of Facebook.

3.5. Personal Needs

According to psychologists, the compulsive habits of personal needs in the uncontrollable use for a range of tasks were characterized. Many people use the Internet and social media to satisfy their requirements (Alomoush et al., 2012). We will also expect personal needs to positively affect the behavioral purpose of accessing resources on social networks. Therefore, we believe,

H5: Personal needs would positively affect the behavioral intention of Facebook.

3.6. Perceived Usefulness and Perceived Ease of Use

TAM predicts two main technological variables: PU and PEU. How much the PU feels it improves the efficiency of the instrument's tasks or technology or its set of functions? The perceived process directly affects the decision to use the information system, as previously argued. PEU is defined as a way for everyone to think about simple technology (Davis, 1989; Venkatesh & Davis, 2000). TAM notes that PEU is likely to, directly and indirectly, inspire technological adoption (Wei et al., 2009). By comparison, the indirect effect is described as "The simpler technology can be used, the more successful it can be from a situation where all is equal". The second element of the research model is seen as easy to use. TAM argues that these two assumptions entirely mediate other external variables' effect on behavioral intent (Venkatesh & Davis, 2000). These relationships have been investigated and confirmed in several previous studies (Venkatesh & Davis, 1996). The behavioral purpose is a motivating factor that a person uses to formulate or execute a strategy (Ajzen, 1991). Conductual purpose is conceived as self-service technologies by consumers (Fishbein & Ajzen, 1977; Hew, 2011). The current research indicates that these two views, PU and PEU, show the direct impact of following Facebook. Therefore, we assume:

H6: The perceived ease of use would have a positive and significant effect on perceived usefulness.

3.7. Behavioral Intention

According to Venkatesh et al. (2012), behavioral intent is defined as how customers use self-service technology. It has been examined and confirmed comfortability in the technology acceptance stream as the most vital determinant of individual conduct (Ajzen, 1991; Venkatesh et al., 2012). Besides, previous literature strongly promoted customer intention as an essential driver of self-

service technology's actual usage behavior (Martins, 2014; Shih & Fang, 2004). The study, therefore, conceptualizes the substantial component of behavioral intent between the main antecedent structures and the usage of technology by customers. The following hypotheses are therefore formulated in this study:

H7: The perceived ease of use would have a positive and significant effect on the behavioral intention of Facebook.

H8: The perceived usefulness would have a direct and substantial impact on the behavioral intention of Facebook.

3.8. Continuance Adoption

Continuity refers to a type of behavior after adoption. While "post-adoption" refers to the following conduct (Rogers, 1995), including continuity, reutilization, perfusion, adaptation, and assimilation, it frequently becomes synonymous with continuity in the post-adoption literature (Karahanna et al., 1999). Post-adoptive behavior was characterized by Jaspersen et al. (2005) as an "A single user makes a plethora of decisions about the use of features, parts, and function extension activities after downloading the IT program, making it available to the user, and hiring the user to execute his or her work". According to Hong and Tam (2006), the bulk of marketing and ICT research has used ongoing intention to assess technology acceptance or user intent to continue using it. The desire of passengers to buy back is determined, for example, by their assessment of service value and the attractiveness of alternatives, according to Jen and Hu (2003). The determinants of electronic commerce service continuity were found by Bhattacharjee (2001). Therefore, this study focused on talking about the intention of continuity at the same time intention for use regarding social media. That's why we suggest:

H9: There is a strong connection between behavioral intentions and the continued Facebook adoption.

4. Research Design

4.1. Sample

To conduct research that impacted the intent and use of digital networking during Bangladesh's COVID-19 pandemic, a total of 40 statements were utilized to create the questionnaire. For collecting responses from the respondents, we created the questionnaire and conducted the survey online using Google

Form. The respondents of various universities (public and private) issued 535 self-administered questionnaires using an online google form in July 2020. Out of the 535 questionnaires, 235 (43.92%) answers were collected from the early phase. About three weeks later, 146 (27.28%) replies were received. The questionnaire was shared with selected and relevant persons through email, Facebook Messenger, Linked In, and WhatsApp, along with an opening statement describing the study's goal. An e-mail was sent after a few days, and an additional 26 (4.85%) replies were received. Ultimately, seven incomplete answers were dropped out of a total of 407 (76.07%). Therefore, the total time is taken for collecting all data from July 2020 to August 2020. The final sample size was 400, and the response rate was 74.76%. Table 1 displays the attributes of our survey respondents.

4.2. Measurement

All items were assessed using a five-point Likert range from 'strongly disagree' to 'strongly agree.' Indicators for PU and PEU were taken from approved studies utilized in past studies that also use TAM (Venkatesh & Davis, 2000). The dimensions for PEU, PU, and all constructs which have now clarified their consistency shall be adapted (Davis, 1989; Venkatesh et al., 2012). Appendix A shows details of measurement items. Cronbach's alpha test was used to ensure a sufficient degree of internal accuracy and reliability for all constructs. The maximum value was observed for personal needs (0.96), preceded by the Facebook adoption (0.94), and for the Construction of the Subjective Criteria, the lowest alpha coefficient was found to be 0.86. Therefore, all items included have satisfactory internal consistency, and the requirements for reliability are entirely satisfied. We have also checked for discriminative validity, ensuring that all the measures have shown good effectiveness (Fornell & Larcker, 1981). The hypothetical relationship was developed in the model after evaluating all structures' internal coherence, reliability, and discriminative validity.

5. Results

5.1. Respondent's Profile and Characteristics

Table 1 illustrates that 68.5% of respondents were males, and 31.5% were female. The majority was 20-25 years of age (76.5%), preceded by 25-27 years of age (20.2%), 28-30 years of age (2.8%), and more than 31 years (0.5%). Of the

participants, 42% completed their honors degree. In comparison, the majority (58%) completed the master's degree. At university time, 61.5% of respondents were from public and 38.5% from private universities. 38.5% of respondents like Facebook. On the other hand, the most common percentages are YouTube (25.1%), WhatsApp (16.8%), Twitter (9%), Instagram (7.8%), and Skype (1%). In terms of using social media, Facebook (47.7%), YouTube (21.3%), Twitter (13.1%), WhatsApp (11.3%) Moreover, Instagram (6.5%) were among the largest segments of social media. A large percentage (69%) of users had more than 500 Facebook friends, and 31% reported less than 500 friends on Facebook.

Table 1. Demographic Characteristics of Social Media Respondents

Category	Count	%	Category	Count	%
Gender			Social Media Like		
Male	274	68.5	Facebook	154	38.5
Female	126	31.5	What's App	67	16.8
Total	400	100	Twitter	36	9
Age			Skype	4	1
20 to 25	306	76.5	Instagram	31	7.8
25 to 27	81	20.2	YouTube	101	25.1
28 to 30	11	2.8	Google+	7	1.8
31 Above	2	0.5	Total	400	100
Total	400	100	Social Media Use		
Studying			Facebook	191	47.8
Honors	168	42	What's App	45	11.3
Master's	232	58	Twitter	53	13.1
Total	400	100	YouTube	85	21.3
University			Instagram	26	6.5
Private University	154	38.5	Total	400	100
Public University	246	61.5	Over 500 Friends		

Total	400	100	Yes	276	69
			No	124	31
			Total	400	100

Source: own study

5.2. Assessing Measurement Model

Internal consistency, reliability, validity, and discriminant validity are all assessed while evaluating the measurement model. The structured model has been developed when the measurement model is successfully passed, and the hypotheses are then tested.

5.2.1. Measurement Model: Confirmatory Factor Analysis

The confirmatory factor analysis model was used to validate dependent and independent measurements. The result of the Measurement model showed a good level of fit / $df = 1.436$; $GFI = 0.958$; $AGFI = 0.960$; $NFI = 0.947$; $CFI = 0.977$; $TLI = 0.978$; $SRMR = 0.031$; $RMSEA = 0.027$; $P-close = 1.00$

Table 2. Model fit indices

Fit Indices.	Measurement Model	Cut-off Point	
χ^2/df	1.436	≤ 3.000	(Alalwan et al., 2018, p. 131; Hu & Bentler, 1999)
GFI	0.958	≥ 0.900	
AGFI	0.960	≥ 0.800	
NFI	0.947	≥ 0.900	
CFI	0.977	≥ 0.900	
TLI	0.978	≥ 0.900	
SRMR	0.031	≤ 0.100	
RMSEA	0.027	≤ 0.080	
P-Close	1.000	≥ 0.010	

Source: own study

All fit indices are suitable and appropriate within their prescribed ranges. Based on the summary statistics, the measurement model showed that they are consistent with each other which represents the probability of impacting variables affecting technological change preference and behavioral intentions to utilize social media (see table 2).

5.2.2. Construct Reliability

The mean, standard deviation, internal consistency checks (Cronbach Alpha), composite reliability (CR), and average variance extracted (AVE) of each construct are used to determine the design's validity (Anderson & Gerbing, 1988). As shown in table 3, Cronbach's Alpha was above its recommended levels of 0.70 for all constructions (Nunnally, 1978) and all latent constructs serve at least 0.80 appropriate composite reliability. The AVE was also well above 0.50 (Hair et al., 2010, p.175).

Table 3. Constructs Reliability

Variable	Cronbach's Alpha (α)	Composite Reliability	Average Variance Extracted	Mean	Std.
TR	.93	.926	.745	14.95	3.11
PR	.91	.905	.731	15.28	3.25
EC	.88	.879	.658	15.23	3.18
SN	.86	.861	.680	11.65	2.25
PN	.96	.958	.795	23.19	3.66
PEU	.92	.916	.733	15.26	2.94
PU	.88	.884	.720	11.75	2.50
BI	.91	.906	.763	11.37	2.29
CFA	.94	.938	.792	15.50	2.48

Source: own study

5.2.3. Construct Validity

The factor analysis was performed to assess the estimated model's validity, as shown in table 4. Research cannot be allowed for items with factor loads < 0.5.

Table 4. Construct Validity

Constructs	Items	Factor Loading	AVE	Square Root Of AVE
Trust	TR-1	.820	.745	.863
	TR-2	.900		
	TR-3	.820		
	TR-4	.910		
Privacy	PR-1	.830	.731	.854
	PR-2	.880		
	PR-3	.860		
	PR-4	.910		
Educational Compatibility	EC-1	.840	.658	.811
	EC-2	.870		
	EC-3	.780		
	EC-4	.750		
Subjective Norm	SN-1	.880	.680	.824
	SN-2	.780		
	SN-3	.810		
Personal Needs	PN-1	.930	.795	.891
	PN-2	.910		
	PN-3	.840		
	PN-4	.890		
	PN-5	.870		
	PN-6	.910		
Perceived Ease of Use	PEU-1	.780	.733	.856
	PEU-2	.850		
	PEU-3	.880		
	PEU-4	.910		
Perceived Usefulness	PU-1	.920	.720	.848
	PU-2	.780		
	PU-3	.840		
Behavioral Intention	BI-1	.830	.763	.873
	BI-2	.880		
	BI-3	.910		

Continued Facebook Adoption	CFA-1	.880	.792	.889
	CFA-2	.860		
	CFA-3	.920		
	CFA-4	.900		

Source: own study

The standardized weights were observed for all unremoved items above the cut-off value of 0.50, and the p-values were statistically significant (Hair et al., 2010, p.178).

Table 5. Discriminant Validity

	CR	AVE	TR	PR	EC	SN	PN	PEU	PU	BI	CFA
TR	.926	.745	0.863								
PR	.905	.731	0.7860	0.854							
EC	.879	.658	0.4990	0.4720	0.811						
SN	.861	.680	0.6100	0.5100	0.4490	0.824					
PN	.958	.795	0.6640	0.6540	0.4700	0.6400	0.891				
PEU	.916	.733	0.7310	0.7020	0.5030	0.6780	0.6850	0.856			
PU	.884	.720	0.7210	0.5470	0.4430	0.4780	0.5770	0.5770	0.848		
BI	.906	.763	0.7330	0.7100	0.5360	0.6230	0.6820	0.4920	0.5920	0.873	
CFA	.938	.792	0.6500	0.6570	0.5320	0.7040	0.7310	0.6580	0.6370	0.5530	0.889

Note: Bold diagonal is the square root of AVEs

Source: own study

Table 5 demonstrates that AVE's squared root exceeded intercorrelations' estimates with other corresponding constructs for each latent variable (Fornell & Larcker, 1981). There was no interaction within constructs greater than 0.85 (Kline, 2005). That's why we can conclude that all the assessments of inter-correlation of all constructs seem to be of strong internal accuracy, thereby confirming the validity of all constructs.

5.2.4. Measuring Hypotheses

The predicted conceptual model was evaluated using AMOS version 24, which examined the relationships between all structures (see figure 3).

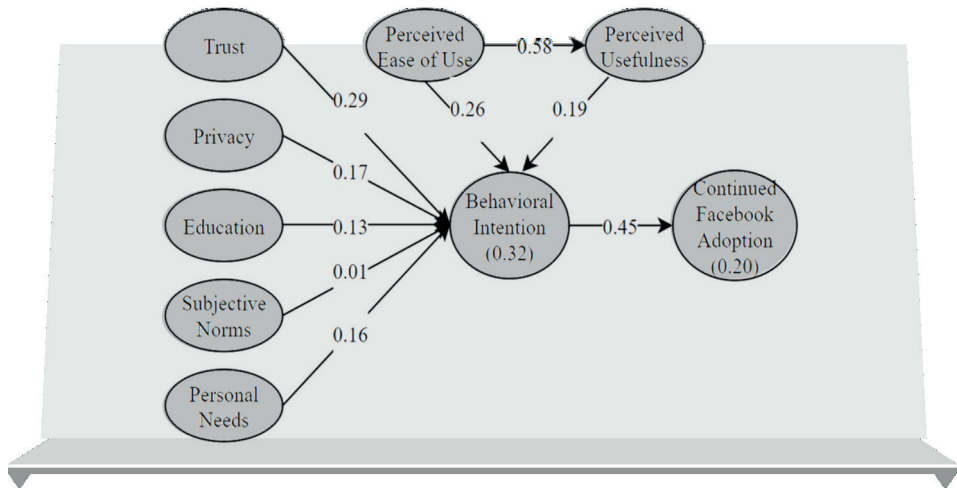


Figure 3. Structural model

Source: own study

Table 6. Results of Structural Model

Path	Path Coefficients	R ²	t-value	p-value	Results
TR----> BI	0.29	0.08	11.24	***	supported
PR ----> BI	0.17	0.03	8.02	.0070	supported
EC ----> BI	0.13	0.02	4.25	.0240	supported
SN ----> BI	0.01	.0001	0.163	.8700	Not supported
PN ----> BI	0.16	.025	6.80	.0050	Supported
PEU ----> PU	0.58	0.34	14.10	***	Supported
PEU ----> BI	0.26	0.07	10.14	***	supported

PU ----> BI	0.19	0.04	8.56	***	Supported
BI ----> CFA	0.45	0.20	12.70	***	Supported

Source: own study

The absolute value of R-square represents the strength, and higher fundamental values indicate stronger relations, as can be seen in Table 6. The Path Coefficients analysis results show a significant consideration in terms of the standardized coefficient, t-test, and p-values of each structure. Table 6 shows the findings of the checking of the hypotheses.

However, the coefficient of the subjective norms ($\gamma = 0.01$, $p > 0.05$); was recognized as non-significant for behavioral purposes. Therefore, except (SN→BI), all research hypotheses (H_{1} , H_{2} , H_{3} , H_{5} , H_{6} , H_{7} , H_{8} , H_{9}) were supported (see table 6).

6. Discussion

As presented in the previous section, the measuring model's key findings (i.e., fitness for the model creates reliability and validity) are actively supported. Both measuring models have been defined to be within their threshold values. Thus, the construction's reliability requirements could be satisfied by having a sufficient degree of internal consistency (Alpha, CR, and AVE) by all nine buildings (TR, PR, EC, SN, PN, PEU, PU, BI, and CFA). As shown in Table 6, the trust induced an 8% variation in the action plan for Facebook's ongoing usage. The findings ($\gamma = 0.29$, $p < 0.05$) showed that the relationship between trust and behavior intention for the continued adoption of Facebook is a positive and important one. The results support hypothesis 1. It can also be suggested that Bangladesh's citizens are strongly feeling safer because Facebook offers protection for their profile, messages, and trustworthy content.

Table 6 showed that privacy resulted in a variation of 3% in the behavioral intent for Facebook's continuous use. The result ($\gamma = 0.17$, $p < .05$) also showed that the relationship between privacy and behavior intention for Facebook's ongoing adoption has been positive and vital. The results are confirmed by hypothesis 2. It can also be derived that Bangladeshi people are more likely to be more eager to pursue media platforms such as Facebook because they feel that it maintains more privacy and confidentiality, competitiveness, reliability, and valuable new inventions in their lives. Table 6 appears that educational

compatibility caused variances within the Behavioral expectation to proceed with Facebook acknowledgment by 2%. The result ($\gamma = 0.13$, $p < 0.05$); appears that positive and critical connections between educational compatibility and Behavioral expectation proceed with Facebook acknowledgment. From the findings, hypothesis 3 is supported. It may then come to the inference that Bangladesh citizens can best take notes, update data, and news from instructors. They can also interact effectively by using it with classmates, educators, and others during the covid-19 crisis.

All ideas were accepted for inquiring regarding hypotheses, except for one (: Subjective criteria for behavioral intent). As appeared in Table 6, Subjective standards caused change within the Behavioral expectation to proceed with Facebook acknowledgment by 0.01%. The result ($\gamma = 0.01$, $p > 0.05$) uncovered that the Subjective standard did not practically affect Behavioral aim to proceed with Facebook acknowledgment. From the discoveries, hypothesis 4 is unsupported. In this sense, it can be inferred those individuals who are essential and whose views are valued are not affected and motivated by others' acts to use Facebook in Bangladesh. To continue with Facebook acceptance, individual needs would have a decisive and necessary influence on behavioral expectations. It was proposed that there is a supportive interaction in Bangladesh regarding personal needs and behavioral intent to continue with Facebook identification during the pandemic situation.

Table 6 illustrates those individual needs induced variations in the behavioral standard of 2.5 percent to progress with Facebook identification. The outcome ($\gamma = 0.16$, $p < 0.05$) showed a successful and impressive interaction concerning human needs and behavioral standards for Facebook acceptance to proceed. From the results, hypothesis 5 is agreed upon. In this way, it can be observed that citizens who use Facebook in Bangladesh are quickly and rapidly happy with their specific needs. They use Facebook to promote the release of loneliness, entertainment, make real friends, gather unused emotional accomplices, promote, affiliate, self-fulfillment, self-identity, beliefs, look after one another, belong, etc.

Perceived ease of access can impact perceived usefulness emphatically and jointly. Table 6 reveals that the perceived ease of usage induced a 34 % variance in perceived usefulness with Facebook's consistent. The outcome ($\gamma = 0.58$, $p < 0.05$) seems to be a vital interaction between Perceived Ease of Usage and Perceived Usefulness in Bangladesh for the continued appropriation of Facebook. From the results, hypothesis 6 is recognized. Subsequently, it can be derived that Bangladeshi individuals appear to be more persuaded to acknowledge Facebook

since they know that utilizing Facebook makes a difference in them rapidly, instantly, and cheaply secure information, interface with others, and easily associated with family individuals during the covid-19 pandemic.

Table 6 illustrates that the Perceived Ease of Usage induced a 7 percent variance in behavioral intent to proceed with a Facebook acknowledgment. The outcome ($\gamma = 0.26, p < 0.05$) shows an exemplary and vital association between the Perceived Ease of Usage and Behavioural purpose in Bangladesh to keep going with Facebook acceptance. Hypothesis 7 is approved based on the findings. In this sense, it can be inferred that Bangladeshi citizens seem to be convinced to use Facebook because they invite users' choice; they perceived that using Facebook was evident and understandable, simple to end up capable and adaptable to connections. Table 6 reveals that Perceived Usefulness induced a 4 % change in behavioral purpose to proceed with Facebook identification. The outcome ($\gamma = 0.19, p < 0.05$) revealed, it can be induced a positive and crucial interface between Perceived Usefulness and Behavioral expectation to proceed in Bangladesh with Facebook acknowledgment. Table 6 reveals that purposeful behavior induced a 20 percent variance in Facebook's constant appropriation. The findings ($\gamma = 0.45, p < 0.05$) seemed to indicate constructive and vital associations between Facebook behavioral intentions and continuing appropriation. The results confirm hypothesis 9. In this way, it can be inferred that rather than disengaging it, Bangladeshi citizens ought to use Facebook. They see that the usage of Facebook is fantastic and acceptable for them. The primary critical components here are educational compatibility, personal needs, perceived usefulness, ease of usage, privacy, and trust. In Facebook or social structures, the subjective norm is the least essential factor found by Bangladeshi individuals (see table 6).

6.1. Implications to Theory

The current study results have contributed significantly to the field of study by expanding the current understanding of these interesting critical phenomena and offering valuable insights into various prospects. This study examines and evaluates the most frequent models and theories in the field of technology acceptance critically. Significantly, almost all the theories used to explain the student's intention and use of social media were initially proposed and examined in a particular context (Venkatesh et al., 2012). This, in turn, raises concerns as to whether these theories apply to the students. Due to the TAM's specific suggestion to clarify the introduction of new systems from the perspective of the students, the theme for proposing the conceptual model of the current study has

been chosen as appropriate. Thus, the present study contributed significantly to the new technology's validity to examine students from Bangladesh as a developing country. While it has successfully established a proper perspective on clarifying students' intention and behavior towards technology, it calls for the inclusion of new factors and the modification of new relationships proposed by a model that will interpret their intention and behavior towards sensitive technology. Therefore, the TAM has been extended by some other factors. Indeed, trust, personal need, education, privacy, and subjective norms, along with TAM factors, are among the most frequently used and predictive factors proposed in the same conceptual model, which shows that it contributes significantly to expand the theoretical horizon of the TAM. This study provides new trends by investigating the effects on behavioral purposes and continued adoption of trust, personal needs, education, privacy, and subjective standards during the covid-19 pandemic.

6.2. Implications to Practice

The outcome of this research provides specialists with a few guidelines. This work contains useful information and expertise to figure out how and why individuals grasp and utilize Facebook, even to what degree it will achieve effectiveness and possible change during this crisis. Online social networking is a part of the ideals and motivations of commerce. The study's analytical results would help explain why and how people and what consequences have the most significant influence on the coming and usage of such online media platforms to help companies exploit those networks to stay successful in the global marketplace. For example, the significant influence of behavioral choice on adoptive behavior means that most respondents are more likely to continue to adopt social media such as Facebook, which could, in turn, be seen as valuable and interested adopters. Users are immensely influenced by a few crucial factors, as seen in this analysis. To do this would be a practical approach to using social media like Facebook as a channel to save time and effort while maintaining personal needs, privacy, and trust without subjective regulations. These factors played an essential role in improving the behavioral intent and using social media to adopt their plan. Indeed, the tools used in social networks (for instance, YouTube, Facebook, and Twitter) feature a higher level of accessibility (Venkatesh et al., 2012). This is in addition to the fact that people around the world take these applications extensively. This will make social media applications more manageable, more accessible, and cost-effective for a more significant number

of people (Venkatesh et al., 2012). It represents an exciting experience and saves time and cost; the conditions for facilitating adoption have been identified as key predictors of Facebook adoption. So, the government of Bangladesh will take fantastic actions or decisions from these findings to monitor or expand these. Finally, the results of the study have significant consequences for policymakers and the government. The study proposes engaging in social networking as a modern market opportunity that encourages new technologies to attract and communicate with existing and future consumers.

7. Conclusion

The number of social media users is overgrowing day by day, with one of the most popular users being Facebook. That's too authentic for Bangladesh because of a covid-19 pandemic, the people of Bangladesh are using Facebook for wasting their leisure time during the pandemic. There could be an essential social and socio-cultural change in social networking for a newly formed nation such as Bangladesh. This work gives valuable viewpoints on how individuals utilize and grasp Facebook and why they hold it. Even so, the social systems in Bangladesh have so numerous sound impacts, but at the same time, there are a few unfavorable impacts moreover. Technology changed the world into a village, and social media became a culture within the 21st century. We are blessed to have got to social media since numerous countries have been incapable of utilizing it. So, we need to use it appropriately and correctly. Men shouldn't use it in evil activities.

7.1. Limitations and Future Research Directions

When analyzing the conclusions of this report, we need to pay close attention to a few pitfalls which contributing to guidance for further inquiries. The first restriction is that data and material for this study were obtained from multiple internet sources, and while numerous documents were reviewed, it is conceivable that similar data was replicated. Because of the COVID-19 epidemic in Bangladesh, it was difficult to gauge public opinion about all crises quickly. Because the research was done during the lock-down time, it was unnecessary to contact the general public. Another drawback is that the research relies on the parsimonious TAM model, but the upgraded adaptation (UTAUT) is not included in this study. In Bangladesh, over 30 million active Facebook users are involved (Financial Express Online Report, 2018). It is difficult for a random

sample strategy to cover the whole population and execute an online survey. In expansion to these limitations, time and money for the analysts are too other sorts of impediments. This way, further experiments may be carried out using this user action in business, education, research, and other industries. The report inevitably suggests investing in SNSs as a superior business model that enables current assets to promote and interact with current and potential consumers. Potential studies can also take qualitative approaches by introducing additional aspects to the investigation process to broaden outcomes. Studies must stratify and take a random sample of each subgroup and stretch Facebook members based on interest groups (e.g., school groups, sports groups, technical groups, etc.). This sampling method will provide a more representative sample of Facebook users, and the findings must be more generalizable.

Summary

Behavioral intention and continued adoption of Facebook: An exploratory study of graduate students in Bangladesh during the Covid-19 pandemic

This study is designed to find out the fundamental reasons for students' social media adoption during the Covid 19 epidemic in Bangladesh. The research object is to build a perceptual picture of the factors that will encourage and impact Facebook's continued acceptance during this crisis. The sample was taken from 400 students from different universities in Bangladesh. Nine indicators (Trust, Perceived Usefulness, Privacy, Perceived Ease of Use, Subjective Norms, Educational Compatibility, Behavioral Intention, Personal Needs, and Continued Facebook Adoption) were used to experiment. The study results show that the fit indices of measurement model ($\text{fit}/df = 1.436$; $GFI = 0.958$; $AGFI = 0.960$; $NFI = 0.947$; $CFI = 0.977$; $TLI = 0.978$; $SRMR = 0.031$; $RMSEA = 0.027$; $P\text{-close} = 1.00$) are suitable and appropriate within their prescribed ranges. The mean, standard deviation, internal consistency (Cronbach Alpha > 0.7), composite reliability (CR > 0.8), and average variance extracted (AVE > 0.5) of each constructs are well and appropriate their recommended level which determine the designs of validity. The coefficient of all factors like Trust (0.29), Perceived Usefulness (0.19), Privacy (0.17), Perceived Ease of Use (0.26), Educational Compatibility (0.13), Behavioral Intention (0.45), Personal Needs (0.16), except

subjective norms (0.01) have a meaningful and positive effect on the behavioral intention of Facebook that satisfactorily affects continued adoption behavior during covid-19. These observations illustrate the scientific rationale and views relevant to emerging economies like Bangladesh in the context of social media. Several implications have been presented based on the results.

Keywords: *Social-media; Students; Covid-19; Technology acceptance model (TAM).*

JEL code: **M13, O14, P36**

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Appendix A. Measurement of items adopted

Constructs	Measure Items	
Privacy (Featherman & Pavlou, 2003)	PR_1_	Others share with me so much detail. I am distressed during crisis times.
	PR_2	I'm concerned I'm going to share more details than I intend.
	PR_3	I am worried I should check who's seeing my spot.
	PR_4	I am concerned about what my friends share. It would be poorly reflected upon me.
Trust (Evans, 2014)	TR_1	I trust my profile info on Facebook.
	TR_2	I trust my profile info on Facebook.
	TR_3	It also protects my profile.
	TR_4	In my Facebook messages, I feel relaxed.
Educational Compatibility (Constructed)	EC_1	The use of Facebook helps me learn more and review the news during covid-19.
	EC_2	To connect on Facebook with classmates, instructors, and others for training-related issues during the pandemic.
	EC_3	It helps to receive instant notifications, results, and the status of teachers during crisis time.
	EC_4	It helps solve university problems by building communities, pages, and blogs on Facebook during covid-19.
Subjective Norms (Venkatesh et al., 2012)	SN_1	I am helped by people who are essential to me
	SN_2	People who control my actions assume that I should keep using Facebook.
	SN_3	People I have respected prefer I am still using Facebook.
Personal Needs (Hopp, 2016 and constructed)	PN_1	I use Facebook to meet membership, membership, knowledge, achievement of goals, and self-identity, and values during covid -19.
	PN_2	With Facebook, loneliness is removed, new friends and entertainment are made.
	PN_3	I am meeting new romantic partners with Facebook during covid-19.
	PN_4	I flirt with somebody on Facebook and follow people else's trail.

	PN_5	You use Facebook to track your new or former boyfriend or girlfriend.
	PN_6	Usage of Facebook for publicity and education.
Perceived Usefulness (Davis, 1989; Agarwal, 1999; Al-Ghaith, 2015; Davis, 1989; Evans, 2014)	PU_1	Using Facebook helps me to obtain knowledge or meet more individuals in the pandemic.
	PU_2	By using Facebook, my data sharing and communication with people will increase my productivity.
	PU_3	For contact & interaction of members, Facebook is a useful app.
	PU_4	It is easier to keep updated with my friends and family by using Facebook.
	PU_5	All in all, in my personal life, I find Facebook useful.
Perceived Ease of use (Moore, 1991; Evans, 2014; Davis, 1989; Taylor & Todd, 1995; Moore, 1991)	PEU_1	It's easy for me to learn how to use Facebook.
	PEU_2	It is straightforward and knows the method of using Facebook.
	PEU_3	I cannot do something I want to get Facebook to do.
	PEU_4	Using Facebook is easy to become professional.
	PEU_5	You may communicate with it flexibly.
	PEU_6	I think it's easy to use Facebook.
Behavioral Intention (Agarwal, 1999)	BI_1	In the future, I intend to use Facebook.
	BI_2	I expect regularly and often to continue using Facebook.
	BI_3	In the next device, I predict I'd use it.
Continuous Facebook Adoption (Curran & Meuter, 2005 & 2007; Martins, 2014)	CFA_1	Instead of disconnecting, I want to use Facebook more.
	CFA_2	Instead of alternatives, I plan to continue using this Facebook.
	CFA_3	In the future, I intend to use these social networks.
	CFA_4	I think Facebook's continuous use; is adequate and suitable for me.
	CFA_5	I advised other people to use this social network.

Notes: all items on 5- point (strongly disagree / strongly agree) scale were measured