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Continuance Intention to Use Facebook: Role of Perceived Enjoyment and Trust

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Abstract:

Social media have become an integral part of life of majority of the people recently. Facebook has become one of the main methods of social connection and interaction around the world recently. The paper attempts to identify the factors affecting user's continuance of Facebook. A research model is proposed on the theoretical framework of Technology Acceptance Model (TAM), The Flow theory and Information Systems Continuance Model. The sample constituted students of undergraduate and post graduate courses in Central Kerala. The study used Structural Equation Modelling (SEM) and the results indicate that the major drivers of satisfaction in using Facebook are perceived enjoyment followed by trust and perceived usefulness in using the site. The study shows that user satisfaction leads to continuance intention to use Facebook.

Key words: Social Networking Sites, Continuance intention, Satisfaction, Technology Acceptance Model (TAM), Perceived Trust, Perceived Enjoyment, Structural Equation Modelling

1. Introduction

In the last few years, social networking websites have grown rapidly in popularity, particularly among the youth. There are different social networking sites like Twitter, LinkedIn, MySpace, Facebook etc. Facebook has become the most popular site amongst the young generation for connecting with friends and relatives and also for communication of ideas. The rich entertainment functions like online games, different apps etc. Provided by Facebook has made it very popular and hence, has been rated the largest in terms of users among the other social networking sites.

This paper is an attempt to explain the continuance intention to use facebook. Though there have been several theoretical models developed to study the acceptance of technologies and information systems like the Technology Acceptance Model (TAM), Combined TAM and TPB(Theory of Planned Behaviour), Innovation Diffusion Theory (IDT), Unified Theory of Acceptance and Use of Technology(UTAUT)etc, TAM, proposed by Davis(1989) still remains the robust model to explain the same. TAM has been studied to explain the use of several information technologies and systems including e-mail (Adams et al.,1992,Gefen et al.,1997), world wide web (Lederer et al., 2000), online shopping (Gefen et al., 2003), broadband (Irani et al., 2009), and so on. Though TAM has been accepted as a robust model, there are many criticisms also stated. TAM revolves around the two beliefs: Perceived Usefulness and Perceived Ease of Use and has been used to mainly explain the acceptance of utilitarian systems. TAM originally was developed in an organizational context and in explaining systems that are voluntarily adopted by individuals, TAM stands insufficient. Hedonic systems are used by users to experience fun while using the system and Facebook clearly follows in this category. In explaining the acceptance and use of hedonic systems, the necessity of adding more variables to TAM holds. Heijden (2004) states that the perceived enjoyment overrules the effect of perceived usefulness in the case of hedonic systems. The article is arranged as follows: The first section introduces the related literature, leading to the development of the conceptual model. This is followed by the discussion on the methodology adopted. Finally the results obtained are presented followed by discussion and conclusion.

2. Literature Review

2.1. Social Network SITES

Boyd and Ellison (2007) define social networking websites as “web based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.” On joining social networking sites, users

create their profiles by including their pictures, information regarding their location, genders and other significant details. Users can create a list of friends by sending, accepting and rejecting requests to befriend other members or make friends by joining communities or create groups in the particular network sites. These social network sites offer different levels of privacy protections to users. The main motivation in using these sites is for communication and maintaining relationships, entertainment purposes such as online games and using other free applications. Some users use this as a forum for expressing their feelings, concerns about social issues. These days, social networking sites are used from a business perspective too. Organisations use them for marketing and promotional activities. Even, e-commerce activities even are done using through these sites.

Facebook, launched in 2004 initially targeted college students, later started including everyone and is one of the fastest growing and largest social networking sites in terms of users. Facebook not only allows people to connect with each other, but also includes different apps, online games etc, which attracts the young population a lot. Prior research studying Facebook was mostly associated with acceptance and usage, such as the motivations (Joinson, 2008, Gangadharbatla, 2008) and usage effects (Steinfeld et al., 2006). There are also some studies focusing on specific issues including Facebook trust and privacy issues (Dwyer et al., 2007, Shafie et al., 2011).

2.2. Information Systems Continuance Model

Expectation Confirmation theory (ECT), proposed by Oliver (1980) is widely used to study consumer satisfaction, post purchase behaviour and repurchase intentions. ECT states that consumer's intention to continue the use of a service is determined primarily by their satisfaction with prior use of that service. The ECT was further modified to suit the context of Information Systems continuance use by Bhattacharjee (2001). Bhattacharjee (2001) states that user's continuance decision in using an information system is similar to the consumer's repurchase intentions.

2.2.1. Continuance Intention

Bhattacharjee (2001) defines IS continuance intention in the ECT as an individual's intention to continue using an information system (in contrast to initial use or acceptance). Bhattacharjee (2001) has modified the Expectation Confirmation Theory (Oliver, 1980) to suit the use of information system and proposed the post acceptance model of information system continuance by the concept that "continuance usage intention of the system will be influenced by system usage satisfaction and perceived usefulness." Thong et al. (2006) has explained the continuance usage behaviour by adding perceived usefulness and perceived entertainment to the post acceptance model. Prior studies on continuance intention include those of web based learning tools (Princely Ifinedo, 2006); the continuance intention of mobile payment services (Tao Zhou, 2012).

2.2.2. Satisfaction

Satisfaction is defined as "a psychological or affective state related to and resulting from a cognitive appraisal of the expectation-performance discrepancy" (Bhattacharjee 2001). The Expectation Confirmation Theory (ECT) states that the satisfaction of use of an information system positively influences the continuance intention.

2.3. Technology Acceptance Model (TAM)

TAM, developed by Davis et al., (1986) based on the Theory of Reasoned Action (TRA) has been the most widely discussed among all the models of technology acceptance. TAM is specifically meant to explain computer usage behaviour (Davis et al., 1989). TAM was developed to predict individual adoption and use of information technology/information systems. TAM posits that an individual's behavioural intention to use information technology is determined by two beliefs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

2.3.1. Perceived Usefulness

Perceived Usefulness (PU) is defined as the user's "subjective probability that using a specific application system will increase his or her job performance within an organisational context" (Davis et al., 1989). PU has been used in non organisational contexts also like internet banking and e-commerce (Wu et al., 2004, Lallmahamood, 2007), online shopping (Wang et al., 2011), mobile services (Suki et al., 2011) etc. In this study, PU attributes to connecting with people, maintaining relationships, use facebook for apps etc. The effect of perceived usefulness on satisfaction and continuance usage has been verified in previous research (Bhattacharjee, 2001). PU has been found to be associated with satisfaction and continuance in different studies such as e-learning systems (Ho, 2010, Almahamid et al., 2011), e-shopping (Maghrabi et al., 2011), high maintenance information systems (Vahid et al., 2010). Hence the following hypotheses:

- H1: Perceived Usefulness positively affects user satisfaction of facebook
- H2: Perceived Usefulness positively affects the continuance intention to use Facebook

2.3.2. Perceived Ease of Use

Perceived Ease of Use (PEOU) is defined as the "degree to which the user expects the target system to be free of efforts" (Davis et al., 1989). Here PEOU means degree to which a person believes that Facebook is easy to use and not much effort is required. There have been many previous researches which consistently argue the positive relationship between PEOU and information technology acceptance (Dishaw et al., 1999, Gefen et al., 2000, Venkatesh, 2000)

Many studies have studied the positive association of PEOU with PU (Davis, 1989, Hsu et al., 2004, Linet et al., 2000). PEOU has been found to significantly influence the satisfaction and continuance intention to use an information system (Bhattacharjee, 2001).

The positive influence of PEOU on continuance intention to use has been explained in different studies like the intention to use e-govt website (Wangpipatwong et.al,2008),Facebook (Sibona et.al, 2012). The following hypotheses are tested.

- H3: There is a positive relationship between Perceived Ease of Use and satisfaction
- H4: There is a positive relationship between Perceived Ease of Use and continuance intention to use Facebook
- H5: There is a positive relationship between Perceived Ease of Use and Perceived Usefulness

2.4. Perceived Trust

Trust is defined as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (Mayer, Davis, and Schoorman, 1995). Trust in a website has been found to encourage website use (Gefen et al. 2003). Millions of people join facebook, adding profiles that reveal personal information. Social networking sites record all interactions, and retain them for potential use in social data mining. Hence, trust becomes a main factor in the usage of facebook. Gefen et.al (2003) suggests that initial trust on online sites leads to the belief that the site can be useful. Trust is an important factor for successful online interactions (Coppola, Hiltz, and Rotter, 2004).

- H6: Perceived trust positively affects satisfaction
- H7: Perceived trust is positively related to Perceived Usefulness

2.5. Perceived Enjoyment

The Flow theory represents a holistic sensation that people feel when they act with total involvement (Csikszentmihalyi, 1988). Hausman and Siekpe (2009) proposed that flow includes challenge, concentration, control and enjoyment. Perceived enjoyment is an intrinsic motivation that emphasizes the usage process and reflects the pleasure and enjoyment associated with the using facebook. Users expect to acquire enjoyment on using facebook and when they meet this expectation, they feel satisfied in using facebook. The effect of perceived enjoyment on user behaviour has been validated in extant research (Koufaris, 2002; Dickinger et al., 2008). Enjoyment is a major reason people use social networking websites (Hart et al. 2008). Enjoyment in using a website significantly influences the intentions to use (Davis et al.,1992,Igbaria et al., 1995). Perceived enjoyment has been conceptualized as a consequence of Perceived ease of Use in many prior studies (Davis et al., 1992, Teo et al., 1999)

- H8: Perceived Enjoyment is positively related to satisfaction
 - H9: Perceived Ease of Use is positively related to Perceived Enjoyment
- We also state the hypothesis
- H10: User’s satisfaction of using Facebook is positively associated with their continuance intention to use Facebook
- The proposed research model is shown in Figure 1. Continuance intention has been taken as the dependent variable.

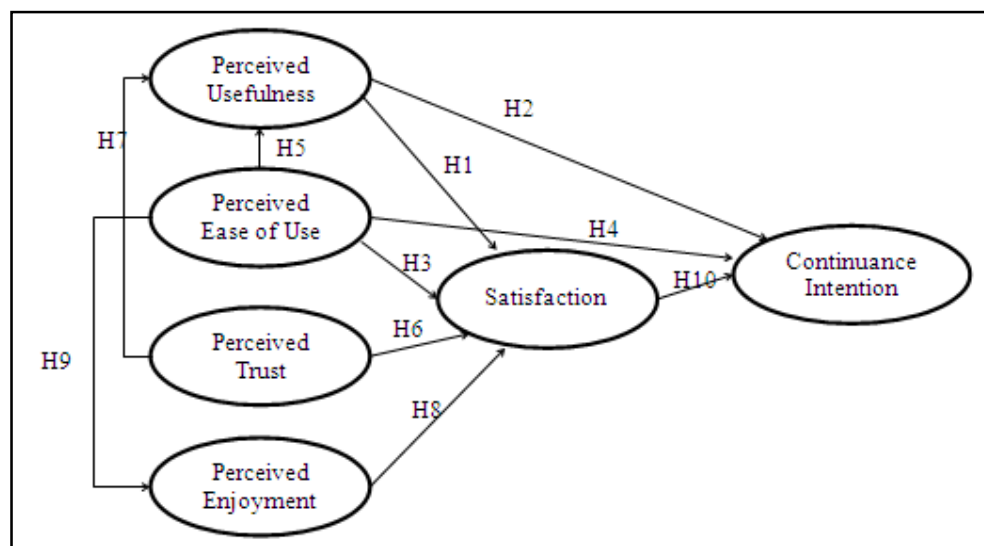


Figure 1: Proposed Research Model

3. Research Methodology

Quantitative research in the form of a questionnaire survey was undertaken to meet the aim of the research. The questionnaire was administered to 197 students, undergoing under graduate post graduate courses in colleges in Central Kerala, India. Students were chosen as sample for the study, since the major percentage of users of Facebook are students. Constructs were measured using multiple item scales drawn from prevalidated measures in information systems use and reworded to specifically relate them to the use of Facebook. Perceived Usefulness and Perceived Ease of Use were adapted from Davis et al. (1989). Items measuring perceived enjoyment were adapted from Koufaris(2002). Satisfaction was adapted from Spreng et al. (1996) and Continuance intention from Mathieson(1991) and Bhattacharjee(2001). All the items were measured using 5 point scales. The data constituted of 58% males and 42% females with a mean age of 22 years.

The reliability of measures used is estimated using Cronbach’s alpha. All the constructs had Cronbach alpha values higher than the suggested cut off of 0.707 (Nunnally and Bernstein, 1994; Gefen et al., 2000) indicating the adequate level of reliability for the scale. The Cronbach alpha values are given in Table 1.

Construct	Cronbach alpha
Perceived ease of use	0.833
Perceived Usefulness	0.720
Perceived Trust	0.770
Perceived Enjoyment	0.843
Satisfaction	0.754
Continuance Intention	0.791

Table 1: Cronbach Alpha For the Constructs

The proposed research model is tested with Structural Equation Modeling (SEM) using AMOS 4.0. SEM provides the researcher with the flexibility to (a) model relationships among multiple predictor and criterion variables (b) construct unobservable latent variables (c) model errors in measurements for observed variables and (d) confirmatory analysis. Confirmatory factor analysis (CFA) is used to confirm a factor structure beforehand.

The values of fit measures obtained for the model are; Goodness of Fit Index (GFI) =0.910; Adjusted Goodness of Fit Index (AGFI) =0.867; Comparative Fit Index (CFI)=0.940; Tucker Lewis Index (TLI) =0.929; Root Mean Square Error of Approximation (RMSEA)=0.051; Chi-Squared with 194 degrees of freedom, $\chi^2 (198) = 298.497, p < 0.05$ and Normed $\chi^2 = 1.508$. The values show an acceptable overall fit and show that the measurement model is theoretically and statistically acceptable.

For satisfaction, the value of R^2 is 0.560, which indicates that the variables explain 56% variations in satisfaction on using Facebook. For the continuance intention to use Facebook, the value of R^2 is 0.433, which means the model can explain 43% variations in the “continuance intention to use Facebook”.

The results reveal that Perceived Usefulness, Perceived Trust and Perceived Enjoyment have positive influence on Satisfaction supporting H1, H6 and H8. Perceived Usefulness was found to have an insignificant association with continuance intention and thus H2 was rejected. Perceived Ease of Use was seen to have positive association with Perceived Usefulness and Perceived Enjoyment, but not with Satisfaction, supporting H5, H9 and rejecting H3. Perceived Ease of Use was found to be positively associated with continuance intention, supporting H4. H7 was supported by finding Perceived Trust positively influencing Perceived Usefulness. Satisfaction was found to positively influence continuance intention and thus, H10 was supported.

The path coefficients are shown in figure 2.

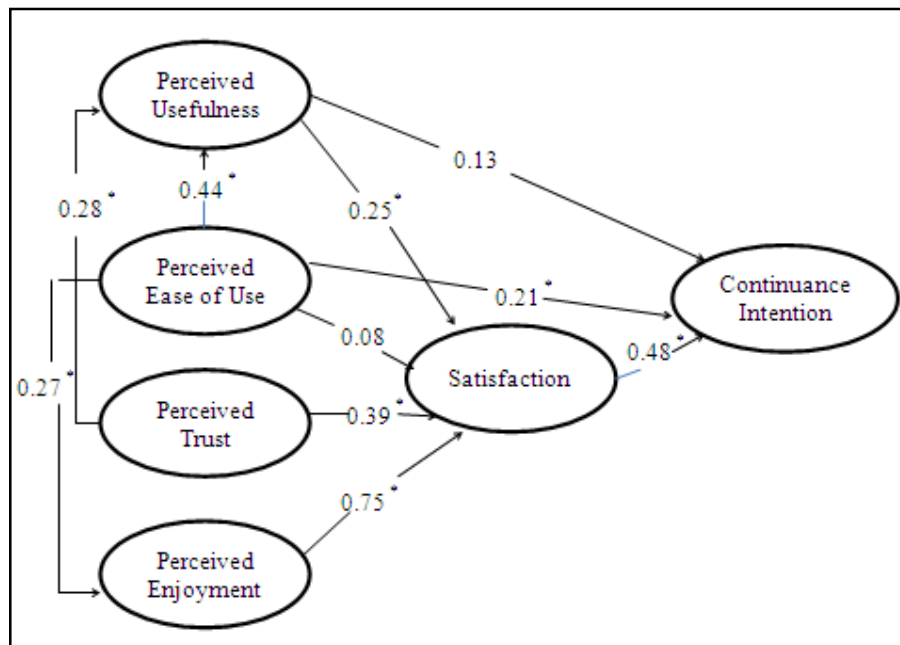


Figure 2: Structural Model with Path Coefficients

4. Discussion

The purpose of the study is to understand the fundamental factors influencing the continuance intention to use Facebook by youth. The study added two variables to the list of TAM :Perceived Trust and Perceived Enjoyment. Perceived enjoyment was seen to be the most significant factor for satisfaction in using Facebook. This shows that youngsters use Facebook mainly from an enjoyment perspective. Perceived Enjoyment plays an important role the technology acceptance by users, especially for hedonic systems (Dolen et al., 2007,Shiau et al., 2010) In this study, the results reveal the positive association of Perceived Ease of Use with Perceived Enjoyment. This stands consistent with previous studies on perceived ease of use and perceived enjoyment (Davis et al., 1992, Igbaria et al., 1995, Teo et al., 1999).

Perceived Usefulness was found to be a significant predictor of satisfaction, but insignificant on predicting continuance intention to use Facebook. People use Facebook mainly for communication and maintaining relationships. Also, Facebook serves as a forum for expression of feelings and hosts many apps that help users. These factors aid to the satisfaction on using Facebook. The positive influence of Perceived Usefulness on satisfaction coincides with previous studies on TAM (Bhattacharjee, 2001,Sebana et al.2012). The study shows that perceived usefulness was insignificant on the continuance intention to use Facebook. There are many other social networking sites competing with each other offering different services and hence the youngsters don't feel the usefulness might lead to continue using Facebook in future.

Perceived Ease of Use was found to have significant impact on continuance intention, while insignificant effect on satisfaction. Considering the level of comfort youngsters have with computer applications, ease of use is not a major factor driving satisfaction in using a website.The non-significant effect of perceived ease of use might have been because of the respondents' high expertise in using internet. Taking into consideration the other players in the social media, Facebook was found easy to use and hence yields for the continuance intention. The impact of perceived ease of use on satisfaction is indirect through perceived usefulness.This is in support of the previous researches using TAM(Davis et al, 1989,Venkatesh et al.,1996,Ramayah et al., 2005).

Perceived trust has a positive influence on satisfaction. Creating profiles on Facebook and revealing the personal information builds upon the trust users have on the site. This influences the satisfaction on using the site. This supports many of the previous researches which state a close association of trust and website usage (Zhou, 2011,Pavlou,2010,Shafie et al.,2011,Tu et al., 2012). In the study, Perceived Trust is found to be positively related with Perceived Usefulness. Trust is found to be a significant predictor of usefulness in many contexts such as online shopping, internet banking, mobile banking etc. Pavlou(2003)shows a positive impact of trust on perceived usefulness. Hallegatte et al., (2006) states that "the more one trust a website, the more he/she is likely to find it useful and to return visiting it".

Satisfaction positively affects the continuance intention to use Facebook as per this study. This is in complete tune with the IS continuance model (Bhattacharjee, 2001). The continuance intention to use Facebook by a user is primarily determined by his/her satisfaction with prior use of Facebook. Previous research has supported the relationship between satisfaction and IT continuance intention (Choi et al.,2011, Kim, 2010). The analysis results confirm the salience of user satisfaction with Facebook in forming the continuance intention to use Facebook.

5. Conclusion

The study focused on the continuance intention to use Facebook and the respondents were students of average age 22 years, who constitute the major users of Facebook worldwide. The study was on the theoretical basis of TAM and IT continuance model, extended from ECT. The findings of the study suggest that post usage satisfaction of users cannot be ignored, as this leads to the continuance intention to use Facebook. The main factor users are satisfied with Facebook is the enjoyment they perceive from the usage. The less effort in using Facebook promises the continuance intention to use the same, while the usefulness of the site in maintaining relationships and for communication gives the users satisfaction of the site. The users create their profiles and thus reveal majority of their personal information. Hence trust is found to be a significant factor in the satisfaction gained on using Facebook.

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