

Personalization Aspects Affecting Users' Intention to Revisit Social Networking Site

Dr. Darshana Desai

Associate Professor & HOD, Indira College of Engineering & Management, Pune, Maharashtra, India

ABSTRACT

Personalization features are adopted to reduce information overload, to attract users and leveraging business by online social networking web portals in recent years. Still, less attention has been paid to design aspects of website personalization and its influence on users' decision making. To address this gap, the study draws a model based on Stimulus-Organism-Response theory and proposes a personalization model for users information processing and decision making. Different personalization aspects induce cognitive and hedonic user's experience during interaction with websites which in turn generates satisfaction and effects on users' decision making to revisit the personalized social networking website. Research identifies personalization aspects used in social networking websites, proposes a research model and validates it empirically. Exploratory Factor Analysis (EFA) identifies seven factors like information, navigation, presentation personalization, cognitive, hedonic experience, satisfaction and intention to revisit a personalized website. Personalization Model is tested with 541 valid responses out of 600 valid responses collected through convenience sampling from social websites. Confirmatory Factor Analysis (CFA) result shows the interrelation of constructs information, presentation, navigation, cognitive, hedonic experience, satisfaction and intention to revisit. Equation Modeling result indicates a correlation between personalization aspects and users' satisfaction, intention to revisit through cognitive and hedonic experience. Research shows different design aspects of a personalized website plays an important role in forming user's positive cognitive experience induce perceived ease of use, usefulness, enjoyment, the hedonic experience of control leading higher satisfaction level and revisit of social networking website.

KEYWORDS: Cognitive experience, Control, Enjoyment, Hedonic experience Information Personalization, Navigation Personalization, Presentation Personalization, , Satisfaction, Perceived ease of use, perceived usefulness, Web Personalization

I. INTRODUCTION

Social networking websites have been an integral part of users' interaction with the outside world for information exchange and social interactions for users and E-tailors. Diversity of users need, heterogeneity of data upload and complexity of web application leads to information overload and one-size-fits-all issue. Cognitive limitation of user information processing lead to lost users in the world of information and result into inefficiency in decision making. Website personalization has emerged as an effective solution to overcome this problem of information overload in recent years. Personalized services are provided by E-tailors with online websites to attract the users, retain existing customers and to be competitive in the business environment. Social networking website like Facebook.com offers recommendations and personalized information sharing to retain users. In the context of website, personalization fulfils users' needs by upholding the sense of transferring website to "my website", providing unique treatment, supporting effectiveness of user's activities, and provide relevance through personalizing the appearance through interface, information and structure of the website.

Social network website (e.g. Facebook.com, gmail.com, Yahoo.com etc.) update website design frequently with providing different personalization strategies implemented and keep user noted of their revision. Web personalization has become a pervasive phenomenon in a wide range of web applications, e.g. Internet banking, e-commerce etc. Customers have become increasingly aware of these personalization features and have learned to demand them (Oulasvirta and Blom 2008). Accordingly, a boom in research on real-world implementation of personalization features has been witnessed recently, and typically focusing on the impact of isolated, one-dimensional personalization features on users. These studies have focused on one or two dimensions of web personalization adopted in websites and its effect on user with respect to information processing and affective reaction with customer retention (Kwon et al. 2012, Liang et al. 2009, and Wang et al. 2010). In general, it has been recognized that necessary and well-designed personalization features facilitate the effectiveness, perceived usefulness, perceived ease of use and efficiency as well as the feeling of enjoyment, control and satisfaction

How to cite this paper: Dr. Darshana Desai "Personalization Aspects Affecting Users' Intention to Revisit Social Networking Site"

Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-4 | Issue-1, December 2019, pp.612-621, URL: www.ijtsrd.com/papers/ijtsrd29631.pdf



Copyright © 2019 by author(s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



while using a website. Such features have become increasingly diverse and multifaceted in Information System (IS) and Human Computer Interaction (HCI) Research. In light of this, and in view of a continuing gap in the contemporary literature, this research different personalization aspects, the role played by these aspects of personalization used in Social Networking website design and how they impact the user intention to revisit or reuse the website. We would also like to study personalization design aspects of Social Networking websites and its impact on user information processing and aspects related to it.

Different design aspects of personalization impact differently on user's perception, and fulfil different kinds of user requirements. However in previous literature, studies often have focused on only one or more aspects of personalization, e.g. information personalization (Dabholkar and Sheng 2012, Kwon et al. 2012, May Wang 2009, Komiak and Benbasat 2006, Liang et al. 2006, Tam and Ho 2006) or visualization (Blom and Monk 2003, Nadkarni and Gupta 2007) but little is researched on effectiveness of the design aspects of personalization. Few studies investigate the roles played by multiple dimensions of personalization (May Wang 2010). In fact, the existing literature has serious deficit in actionable guidance on personalization design issues and effective personalized web design. To address these gaps in research, this study comprehensively reviews literature in personalization and develops methodologically constructed model for personalized website design and test the impact of different aspects of personalization. Based on environmental psychology theory and TAM, this paper investigates the different roles played by dimensions of personalization, i.e. information personalization, presentation personalization, and navigation personalization. This research is focusing on interdisciplinary nature of personalized website design and its effect on users intention to revisit the website from the field of IS and HCI. This paper is organized as follows: section II discusses previous studies on various personalization dimensions. Section III represent Research model derived from previous studies and corresponding hypotheses. Section IV describes research methodology, research design and data collection with analysis. Section V summarizes the results of the data analysis with EFA, CFA, and SEM. Results are discussed with major findings, theoretical and practical contributions, limitations, and possible directions for future work in section VI.

II. PERSONALIZATION RESEARCH

Personalization is the process of catering tailored content, website structure and look & Feel of Website with presentation by identifying users' implicit and explicit needs (Desai 2019, Desai 2017). Personalization has been researched by large community of researchers from diverse fields; research in personalization can be classified into three streams (Oulasvirta and Blom 2008) of research on personalization in the information systems area. The first stream focuses on examining different types of personalized services and their potential applications in different marketing domains (e.g., Brusilovsky et al, 2007). The second is dedicated to designing technologies for personalized services with an emphasis on the receiver's profile, and then matching the personalized service with the receiver's needs by using tools such as data and text mining (Shahabi and Banaei-Kashani, 2003; Zhang et al, 2007). The third category evaluates the effect of personalized services

on the receiver's' attitudes and acceptance of recommendation intention (Komiak and Benbasat, 2006; Liang et al., 2006; Tam and Ho, 2005; Tam et al, 2006).

Previous research has approached personalization from several dimensions in last few decades, which, in summary answers the questions 'what', 'who', 'how' 'to whom', 'to what extent', 'when' and 'based on what' in personalization research. , Kwon et al. 2012 studied personalization in dimensions of object (What should be personalized), subject (Who does) and (to what extent) level with respect to customer retention. (May Wang 2009) studied What to personalize, its cognitive effect and affective reaction on users. (Wu et al. 2003) scored level of personalization based on the breadth and depth of the personalization options on offer. The "what" to personalize represents objects to be personalized i.e. information/content, website interface, structure/functionality/navigation. (Bunt et al. 2004) also classified Personalization as static or dynamic based on when personalization can be enacted according to the object/objects for which personalization has been designed to individual or group. Personalization can also be examined based on the degree to which personalization is automated and (implicit or explicit) user involvement (Bunt et al. 2007; Fan and Poole 2006).

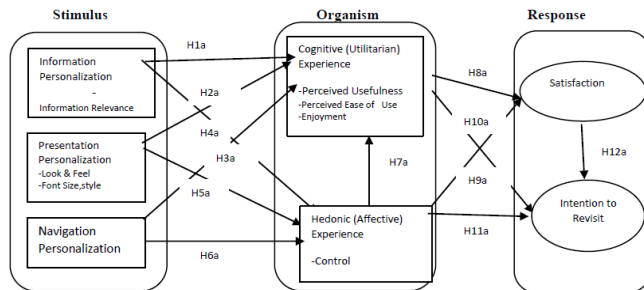
Among all the issues pertaining to personalization, "what" to personalize is the most fundamental problem researched for the effective personalized website design. Different design aspect of personalization may have different impact on users' information processing and decision making. Moreover, the different roles played by different personalization features in website design have not been comprehensively investigated. User experience design principle (Garrett 2003) shows functionality design of system at different level with interface, navigation and information model design. So webs consider only navigation, interface and information model design. Navigation plays an important role in website conceptual and architectural design. Therefore, we classify website design in three components for personalization, i.e. Information/Content, presentation/interface and navigation design.

III. RESEARCH MODEL

Research model is derived based on previous literature review and identified, firstly various personalization design aspects i.e. information personalization, presentation personalization, and navigation personalization used in websites which are web stimuli, secondly impact of personalization aspects (Web Stimuli) on hedonic, utilitarian state of user, thirdly its effect on user's behavioral response and satisfaction. Moreover, interaction among cognitive/hedonic experience, utilitarian/affective state, satisfaction and intention to revisit are also explored, which is missing in prior literature.

The proposed research model is derived from the environmental psychology theory, S-O-R (Stimulus-Organism-Response) theory, TAM3 (Technology Acceptance Model) (Venkatesh, and Bala 2008) and Information System success model. Impact of different aspects of personalization effects on decision making process, is described with cognitive/ hedonic and utilitarian experience of user like perceived ease of use, perceived usefulness, enjoyment and control. User with positive hedonic and utilitarian

experience has more satisfaction and is likely to revisit / reuse the personalized websites. More specifically, this study focuses on how user perceives personalization aspects and their influence in decision making to reuse the website. Hypotheses are proposed to address the research questions. Quality of information is one of the parameters to measure information overload, Quality of information measured with relevance of information and validity of information which is included questionnaire.



[Figure 1: Personalization Stimulus Organism and Response Model]

Personalization and Cognitive/Utilitarian Experience:

User experiencing perceived usefulness of information and ease of use of the website are more likely to enjoy using website and creates positive surfing experience. So we can say that users' cognitive/utilitarian experience is associated with perceived usefulness, ease of use and enjoyment with relevant and quality information. Personalization Content refers to the degree to which customers are provided with uniquely tailored information on the basis of their own individual needs as gathered from the consumer's interaction with the provider (Chellappa and Sin 2005; Liang et al. 2007; Tsekouras et al. 2011). Personalized content decreases the cognitive effort needed in order to assess the information. Therefore, we propose hypotheses:

H1a: Users' Cognitive Experience is positively associated with Information personalization.

The perceived ease of use of the website layout influences consumers' internal states and behaviour (Manganari et al. 2011, Egle et al. 2013, Desai 2019). Wang 2009 posit that Navigation personalization is positively related to user's cognitive state perceived usefulness and ease of use. Navigation personalization facilitates users with system initiated personalized structure that reduces users efforts for information search. Also, it provides quick links to minimize navigations, result cognitive load reduction so user feel enjoyment and increases cognitive experience with perceived ease of use and usefulness. User initiated personalization can be produced by explicitly providing users' choice of quick links and producing personalized website structure. So we propose hypothesis:

H2a: Users' Cognitive Experience is positively associated with presentation personalization.

User interface customization options presented to personalize website help users' reduce information processing complexity, increases effectiveness and efficiency. (Kamis et al. 2008). When there are more choices in modifying the presentation feature, e.g. layout and background, the higher level of personalization will give more flexibility in alleviating the complexity. Therefore, more presentation personalization facilitates the user task effectively. Personalized interface induce positive cognitive feeling in user with improved aesthetics, finds ease of use

and enjoy operating with the personalized system (Monk et al. 2007). So we posit hypothesis:

H3a: Users' Cognitive Experience is positively associated with navigation personalization.

Personalization and Hedonic experience

Personalization provided with the choices to users generates high level of perceived control and users experience flow with personalization process (Koufaris 2002) are more likely to have comfort level and enjoy (Manuel and Joaquina 2004) while interaction with the website. So we postulate hypotheses

H4a: Users' Hedonic Experience is positively associated with information personalization.

Information relevance and quality of information presented to users induces more hedonic experience. Structure of information presentation and navigation positively influence the consumer's perception of being in control during the online shopping episode (Éthier 2008). So, we propose:

H5a: Users' Hedonic Experience is positively associated with presentation personalization.

H6a: Users' Hedonic Experience is positively associated with navigation personalization.

Greater customer control of the shopping experience increased the pleasure of shopping (De Wulf et al. 2006). Users with a high level of perceived control are likely to feel more a high comfort level with the activity. Thus, they would be more inclined to feelings of joy using the website more frequently (Manuel and Joaquina 2004). Studies in Human Computer Interaction also found that more control correlates with enjoyment (Lindley and Monk 2008). Therefore, we propose that:

H7a: Users' Cognitive Experience is positively associated with hedonic experience.

DeLone and McLean (1992) reported that user satisfaction has been widely employed in practice as a surrogate measure of information systems effectiveness. So, we posit:

H8a: Users' satisfaction is positively associated with cognitive experience using personalized website.

Prior research suggested that emotions mediate the impact of environment on user intention (Kaltcheva and Weitz 2006; Lee et al. 2008). We expect the effects of website environmental cues on user during interaction with Web Portal to be similar. If the users enjoy their experience during web site interactions, they are more likely to visit the Web Portal again. Echoing TAM3 research study which argues that the degree to which the website is perceived to be easy to use affects the perception of the usefulness and the intention to continue to use this website (Chau and Lai 2003).

H9a: Users' intention to revisit is positively associated with cognitive experience using personalized website.

Research shows that relevant information personalization reduces information overload, increases user involvement with increase efficiency, performance and satisfaction (Liang et al. 2007, Kwon et al. 2012, Thongpapanl et al. 2011, Desai 2016, Desai 2019). User with positive hedonic experience of control with personalization features like user interface, information, and navigation over website with involvement

using website is more satisfied and likely to revisit the personalized website. So we propose hypothesis:

H10a: Users' satisfaction is positively associated with hedonic experience (Control) using personalized website.

H11a: Users' intention to revisit website is positively associated with hedonic experience (Control) using personalized website.

DeLone & McLean's (1992) identified satisfaction and usage of system to measure the Information system success which is found as an antecedent of information and system quality. DeLone & McLean's (2003) in Updated IS Success Model states that user's intention to reuse the system is highly associated with Satisfaction. So we propose hypothesis as:

H12a: Users' intention to reuse/revisit the personalized website is positively related to user satisfaction.

IV. RESEARCH METHODOLOGY

This research is descriptive research with qualitative nature of study as we investigate the effect of personalization on user's behavioral intentions and satisfaction. Non-Probability sampling method convenience sampling is used for data collection after pilot study of 50 users. The purpose of the pilot study was to check for the reliability of the questionnaire items construct to finalize for actual study.

Responses from fifty users were collected through questionnaires by asking them about their general online shopping experiences with personalized websites, their perceptions and attitudes towards different personalization aspect when using Social Networking websites. Questionnaire for survey had all construct items used as five point Likert scale and adopted from previous literature (Wang 2009; Kamis et. al.2008, Mc Lean 2003).

We collected 600 responses from users of Social Networking websites like Facebook.com in India. Before proceeding with the final analysis data was cleaned by removal of incomplete and inconsistent data from both responses of Social Networking website out of which 541 valid responses were used from Social Networking. Incomplete and inconsistent data from responses were cleaned with data screening process. After initial screening of data, further responses were also removed with less standard deviation (i.e. below .30) to get valid responses. The Cronbach's Alpha coefficient for assessing reliability of survey items(variables) and analysis result indicate that all survey items were in the range of 0.70~0.93, indicating a high level of internal consistency for the scales of questionnaire items used within this survey. According to Nunnally (1978), reliability coefficients of 0.70 or more are considered as a criterion for an internally consistent scale constructs of survey items. Thus, all survey items in Table were reliable and appropriate to use in an actual research study.

Table 2: Reliability Coefficients of Constructs

Web Portal	Constructs	No. of items	Cronbach's Alpha
Social Networking Websites	Information Personalization	6	0.856
	Presentation Personalization	6	0.841
	Navigation Personalization	5	0.777
	Utilitarian/Cognitive Experience (Perceived Ease of Use, Perceived Usefulness, Enjoyment)	9	0.883
	Hedonic Experience(Control)	2	0.964
	Satisfaction	2	0.977
	Intention to Revisit	3	0.972

V. RESULTS & FINDINGS

We used factor analysis technique to summarize data, to interpret the relationships and understand the patterns of variables. This technique is used to regroup the variables in set of clusters based on their shared variance. We used exploratory factor analysis (EFA) to identify the number of factors with group of variables and named that factors or constructs. Confirmatory Factor Analysis (CFA) is used to find interrelationship among constructs. In this study, EFA is needed to explore different aspects or dimensions of personalization and items of satisfaction. We used maximum likelihood method of extraction as it gives correlation between factors in addition to factor loadings and promax oblique rotation technique is used because it is relatively efficient in achieving a simple oblique structure. The larger the sample size, smaller loadings are allowed for a factor to be considered significant (Stevens, 2002). Factor loading score of variable above 0.32 is statistically significant for sample size above 300 (Tabachnick & Fidell 2007). The factor loadings in the above table of Social Networking websites show fairly desirable factor loadings above 0.32.

EFA for Social Networking website:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy plays an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0.6. Results shown in table below depict KMO value 0.926 which is above 0.6 showing good sampling adequacy for our research.

Table 3: KMO and Bartlett's Test(Social Networking Website)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.929
Bartlett's Test of Sphericity	Approx. Chi-Square	11929.356
	Df	496
	Sig.	0.000

In Figure 2 Total Variance Explained for Social Networking websites, Communalities show the proportion of each variable's variance that can be explained by the factors (e.g., the underlying latent continua). It is also noted that Chi-Square can be defined as the sum of squared factor loadings for the variables. Initial maximum likelihood factoring, the initial values on the diagonal of the correlation matrix are determined by the squared multiple correlation of the variable with the other variables.

Kaiser's criterion suggests retaining all factors that are above the Eigenvalue of 1 (Kaiser, 1960) which is a rule of thumb. Exploratory Factor analysis explores number of factors based on total variance explained table which mentions factors, Eigen values, percentage of variance and cumulative percentage with extraction and rotation sum of square loadings (Desai 17). Table shows 67.940 % of cumulative variance for seven factors.

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	12.093	37.790	37.790	6.545	20.455	20.455	9.842
2	2.553	7.979	45.769	3.020	9.437	29.891	7.897
3	2.296	7.175	52.944	2.904	9.074	38.965	6.152
4	1.406	4.393	57.337	3.457	10.805	49.770	7.238
5	1.243	3.883	61.221	1.831	5.721	55.491	7.075
6	1.174	3.669	64.890	1.100	3.436	58.927	5.734
7	1.093	3.416	68.306	.860	2.689	61.615	5.824
8	.787	2.461	70.767				
9	.744	2.326	73.093				
10	.653	2.040	75.133				
11	.595	1.860	76.993				
12	.590	1.844	78.837				
13	.563	1.760	80.597				

Figure 2: Total Variance Explained for Social Networking websites

Table 4 states factor loadings of through pattern matrix generated with maximum likelihood extraction method and promax rotation method. Pattern matrix result gives all the factors, their loadings with items with similarity in exploratory factor analysis. Appropriate name of the factors were given based on nature of the questions and measuring variables falling under each factors. We were able to derive seven factors and named factors as information personalization, navigation personalization, presentation personalization, cognitive\utilitarian experience, hedonic experience (control), satisfaction and intention to revisit. Table 4 below mentions factor loadings of variables with underlying constructs of Social Networking web portals' personalization design aspects and its interrelationship with users cognitive experience, control, satisfaction and intention to revisit.

Table 6.11: Factor loadings with social networking website

		Factors						
Constructs	Variables	1	2	3	4	5	6	7
Cognitive Experience	SNENJ1	.818						
	SNPEU4	.796						
	SNPEU3	.794						
	SNPEU2	.742						
	SNENJ2	.698						
	SNPEU1	.594						
	SNPU1	.531						
	SNPU2	.528						
Presentation Personalization	SNPU3	.339						
	SNPP4		.766					
	SNPP2		.763					
	SNPP3		.727					
	SNPP5		.721					
	SNPP6		.664					
Information Personalization	SNPP1		.659					
	SNIP1			.783				
	SNIP3			.773				
	SNIP4			.719				
	SNIP2			.718				
	SNIP6			.625				
	SNIP5			.590				

Intention to Revisit	SNINT2				.940			
	SNINT1				.933			
	SNINT3				.900			
Navigation Personalization	SNNP3					.778		
	SNNP1					.760		
	SNNP2					.726		
	SNNP4					.639		
Satisfaction	SNSAT1						.980	
	SNSAT2						.945	
Control	SNCON1							.982
	SNCON2							.902
Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization.								
a. Rotation converged in 7 iterations.								

Residuals are computed between observed and reproduced correlations in exploratory factor analysis with maximum likelihood extraction method. There are 20 (4.0%) non-redundant residuals with absolute values greater than 0.05. A model that is a good fit will have less than 50% of the non-redundant residuals with absolute values that are greater than .05 which is true for our example. We can also compare the Reproduced Correlation Matrix with the original Correlation Coefficients Matrix. If the model is a good fit, we should expect small residuals between the two matrices. Our research shows 4% of residual which shows good model fit of factors.

SNPP4	.027	.028	.007	.010	.046	.005	-.021	-.036	-.029	-.004	.011	-.004
SNPP5	-.011	.001	-.012	.001	-.017	.018	-.005	-.009	.029	-.011	.002	.005
SNPP6	.027	.002	-.019	.001	-.024	-.008	.059	.007	-.017	.006	.002	-.006
SNCON1	-9.311E-05	1.696E-05	-6.005E-06	-2.353E-05	2.115E-05	2.410E-05	4.689E-05	5.628E-05	-6.249E-05	2.587E-05	3.582E-05	-3.160E-05
SNCON2	.012	-.003	.002	.001	-.003	-.003	-.008	-.005	.010	-.004	-.005	.005
SNSAT2	.011	-.007	.002	-.003	-.003	-.004	.004	.005	.000	-.002	.005	-.002
SNSAT1	-.001	.000	.000	.000	.000	.000	-8.796E-05	.000	.000	.000	.000	7.895E-05
Extraction Method: Maximum Likelihood.												
a. Reproduced communalities												
b. Residuals are computed between observed and reproduced correlations. There are 17 (3.0%) nonredundant residuals with absolute values greater than 0.05.												

Figure 3: Non redundant Residuals with Social Networking website

Factor Correlation Matrix							
Factor	1	2	3	4	5	6	7
1	1.000	.607	.482	.662	.567	.574	.601
2	.607	1.000	.446	.426	.657	.403	.437
3	.482	.446	1.000	.401	.469	.298	.361
4	.662	.426	.401	1.000	.431	.506	.445
5	.567	.657	.469	.431	1.000	.404	.386
6	.574	.403	.298	.506	.404	1.000	.400
7	.601	.437	.361	.445	.386	.400	1.000
Extraction Method: Maximum Likelihood.							
Rotation Method: Promax with Kaiser Normalization.							

Table 5: Factor Correlation Matrix

Above table 5 shows correlation matrix of all seven identified matrix with good correlations amongst factors. Information, navigation, presentation personalization is highly correlated with cognitive, hedonic experience, satisfaction and intention to revisit.

Confirmatory Factor Analysis:

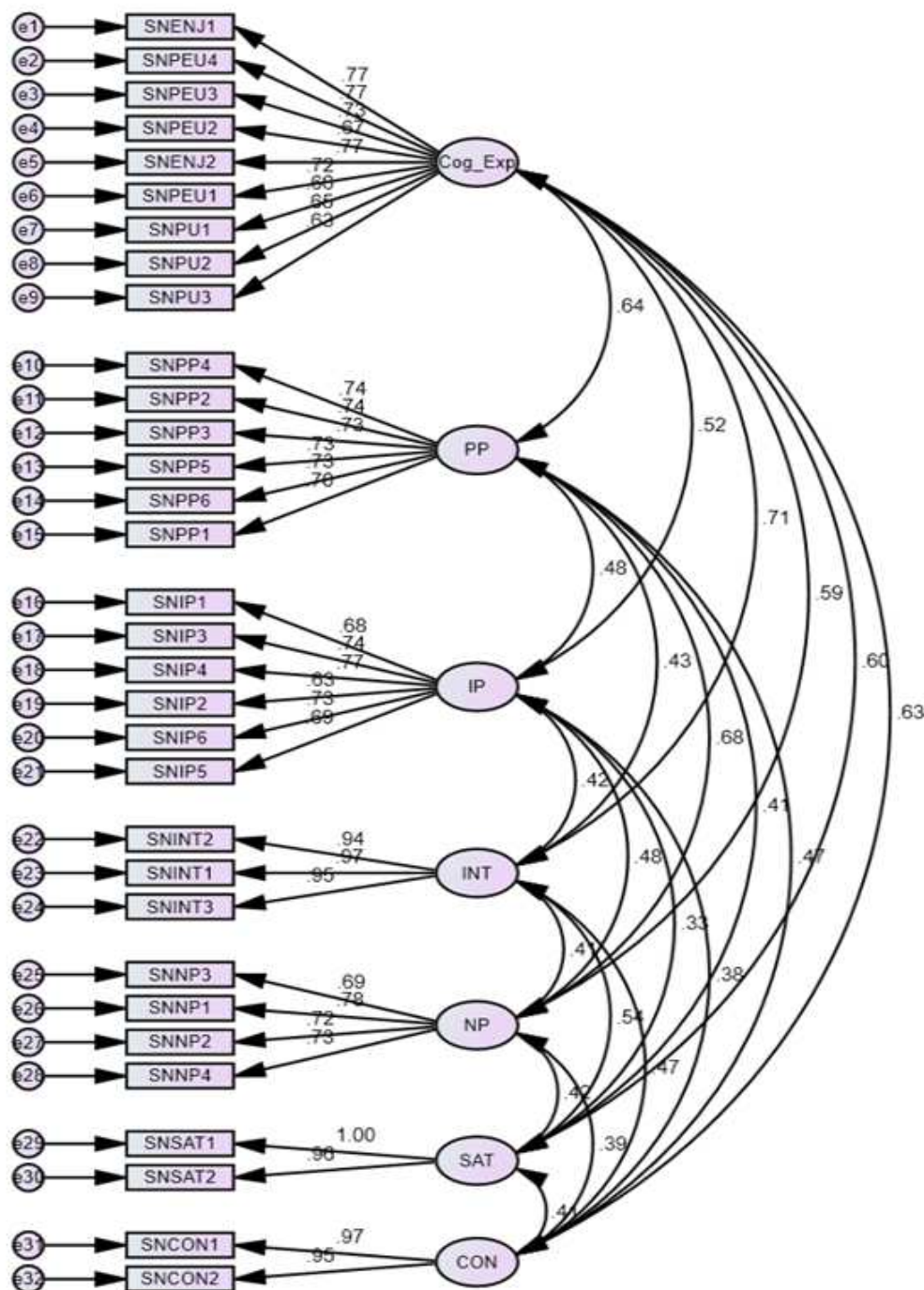
A Confirmatory Factor Analysis (CFA) was done with SPSS AMOS 21.0, it used to validate Measurement model by establishing acceptable levels of goodness-of-fit for the measurement model and finding specific evidence of construct validity. The CFA would also provide evidence that all items are properly aligned with the correct latent variables within the general construct being measured.

Our result of CFA for Social Networking website shows Minimum Discrepancy which is chi-Square divided by degree of freedom i.e. CMIN/DF 2.393 which should be less than 5 so my parsimonious model is fit. All NFI, RFI and TLI are nearer to 0.9 which is good. RMSEA is 0.051 which is less than 0.06 so the model is having good fit. The Root Mean Square Error of Approximation (RMSEA) is related to the residuals in the model. RMSEA values range from zero to one with a smaller RMSEA value indicating better model fit. Good model fit is typically indicated by an RMSEA value of 0.06 or less (Hu & Bentler, 1999).

Table 6.22: Fit Statistics of Measurement Model for social networking website

Fit statistics	Recommended	Obtained
CMIN	-	1105.057
DF	-	443
CMIN Significance	$p \leq 0.05$	0.000
CMIN/DF	< 5.0 (Bentler and Bonnett, 1980)	2.494
GFI	> 0.80 (Joreskog & Sorbom, 1981)	0.888
AGFI	> 0.80 (Joreskog & Sorbom, 1981)	0.867
NFI	> 0.90 (Bentler and Bonnet 1980)	0.913
RFI	> 0.90 (Bollen, 1986)	0.902
CFI	> 0.90 (Hu and Bentler 1999)	0.946
TLI	> 0.90 (Tucker and Lewis, 1973)	0.939
RMSEA	< 0.06 (Browne and Cudeck, 1993)	0.052
RMR	<0.02 (Hu and Bentler 1999)	0.028

The results of the model estimation are shown in Figure below. The confirmatory factor analysis showed an acceptable overall model fit and hence, the theorized model fit well with the observed data. It can be concluded that the hypothesized factor CFA model fits the sample data very well.

**Figure 7: CFA model for Social Networking websites**

SEM result for Social Networking website:

Structural Equation Modeling (SEM) technique tests the models where causal relationships are hypothesized to exist between latent variables. Structural Equation Modelling of Social Networking website data shows that all the hypotheses are supported. This indicates that personalized Social Networking website has positive effect on users satisfaction and intention to revisit website through positive cognitive and hedonic experience.

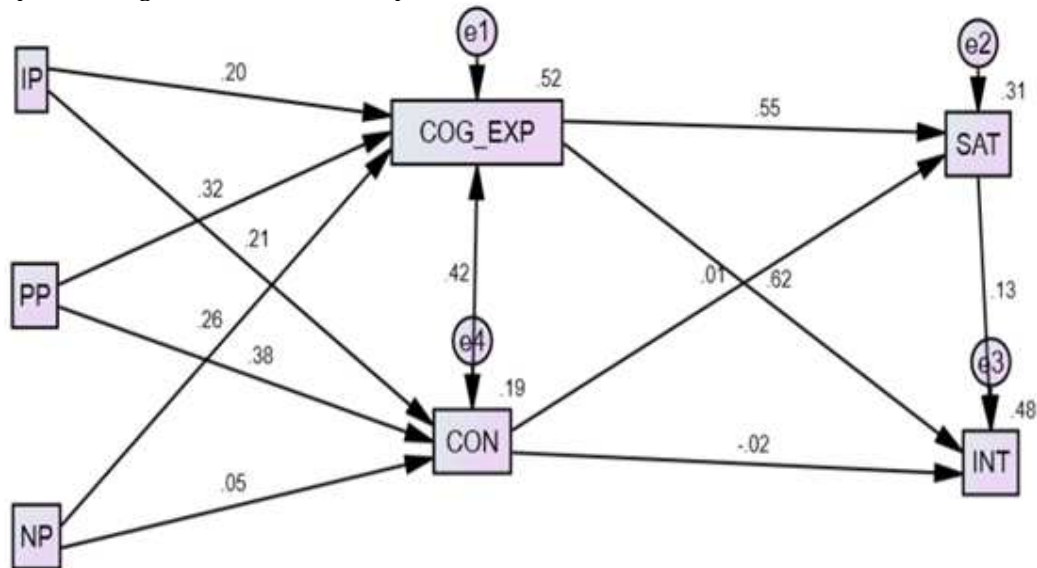


Figure 4: SEM for personalized Social networking website

SEM Model for Social Networking website personalization shows that different dimension of personalization plays a different role in the decision making process by placing different impact on cognitive experience and hedonic experience of control which further lead to satisfaction and intention to revisit. The R^2 values ranges from 0.37 to 0.56. In PLS analysis, examining the R^2 scores and the structural paths assesses the explanatory power of a structural model. In this study, the model accounts for 37 to 56 percent of the variances (R^2).

Table 6.24: Hypothesis testing result with SEM for social networking website

Hypotheses	Estimate	S.E.	C.R.	P Value	Hypothesis Testing Result
CON<--- IP	0.268	0.05	5.328	***	Significant
CON<--- PP	0.571	0.057	9.93	***	Significant
CON<--- NP	0.07	0.056	1.24	0.215	Not Significant
COG_EXP<--- IP	0.152	0.024	6.47	***	Significant
COG_EXP<--- PP	0.28	0.029	9.809	***	Significant
COG_EXP<--- NP	0.222	0.026	8.593	***	Significant
COG_EXP<---CON	0.247	0.02	12.571	***	Significant
SAT<---COG_EXP	0.954	0.077	12.447	***	Significant
SAT<---CON	0.011	0.046	0.245	0.807	Not Significant
INT<---COG_EXP	0.947	0.067	14.218	***	Significant
INT<---CON	-0.016	0.035	-0.454	0.65	Not Significant
INT<---SAT	0.116	0.033	3.528	***	Significant

VI. CONCLUSION

Our results suggest that different design aspects of personalization play a different role in this decision making process. Users experience greater enjoyment when the level of presentation personalization is perceived to be higher. Users also appreciate information, presentation and navigation personalization very much since it enhances the perceived usefulness, perceived ease of use of a website, enjoyment and give users the experience of control. Among all the decision variables, cognitive experience with perceived ease of use, perceived usefulness and enjoyment are found to be the most important antecedent factor determining the decision to continue using a website. Information personalization and navigation personalization are high task relevant since they directly improve user effectiveness and efficiency in retrieving information. Presentation personalization adjust the layout of user interface and provide content with good look and feel in the

form of personalized themes, font and background color generating ease of use and enjoy while browsing personalized Social Networking and social networking websites. Result shows that information, presentation and navigation personalization increases Perceived Usefulness, Perceived Ease of Use and enjoyment inducing positive cognitive experience with Social Networking website. Our result supports finding by Koufaris 2002 that have an impact on enjoyment and control as user may experience flow during the personalization process. Eroglu et al. (2001) found that the presence of low task relevant cues positively affect the organism, e.g. pleasure, our results Therefore, the presentation personalization can arouse the enjoyment. Personalization has been defined as a process that changes the functionality, interface, information content, or distinctiveness of a system to increase its personal relevance to an individual (Blom and Monk 2008) and this finding is in line with our research findings.

Major findings of our research show that personalization reduces cognitive efforts of user by personalized information provided which, in turn, decreases search time of user and increases efficiency. Also, relevant personalized information induces perceived usefulness with increased ease of use and enjoyment, user experience flow using personalized Social Networking and social networking websites. Also, users feel satisfied with positive cognitive experience with personalized websites and likely to revisit the website, and this finding is consistent with similar findings in earlier research (Eroglu 2003, Koufaris 2002, and Wang 2009). In accordance with previous research findings this study finds that user with higher satisfaction is likely to revisit the personalized websites. Result in this research reveals that users who experience satisfaction with personalization features through positive cognitive and hedonic experience, intend to return with personalized Social Networking and social networking websites.

FUTURE SCOPE RESEARCH:

Future research can be conducted in several directions. First, different methodology can be applied to cross-validate the findings in current study. Longitudinal study is expected to investigate the changing role of personalization features as user gains more experience. Second, other dimensions of personalization from different perspective are also interesting and may be the subject of investigation, e.g. personalization strategies. Then, more mediating and moderating factors could also be taken into consideration.

REFERENCES

- [1] Benbasat, Izak;Komiak, S. (2006). The Effects Of Personalization And Familiarity On Trust And Adoption Of Recommendation Agents,1, 30(4), 941-960.
- [2] Blom, j.o., and monk, a.f. (2003). "Theory of personalization of appearance: why users personalize their pcs and mobile phones," human-computer interaction (18:3), pp 193-228
- [3] Chellappa, R. K., & Sin, R. G. (2005). Personalization versus privacy: An empirical examination of the online consumer's dilemma. *Information Technology and Management*, 6(2-3), 181-202.
- [4] Dabholkar, P. a., & Sheng, X. (2012). Consumer participation in using online recommendation agents: effects on satisfaction, trust, and purchase intentions. *The Service Industries Journal*, 32(9), 1433-1449.
- [5] DeLone, W. H., & McLean, E. R. (2013). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information Systems / spring*, 8(4), 9-30.
- [6] DeLone, W., & McLean, E. (1992). The Quest for the Dependent Variable. *Information Systems Research*, 3(1), 60-95. <http://doi.org/10.1287/isre.3.1.60>
- [7] Desai D.(2019) Personalization and User Decision Making Model with cognitive and hedonic experience", *International Journal of Emerging Technologies and Innovative Research* ISSN:2349-5162, Vol.6, Issue 6, page no. pp123-135, June 2019
- [8] Desai D. (2019) An Empirical Study of Website Personalization Effect on Users Intention to Revisit E-commerce Website through Cognitive and Hedonic Experience. In: Balas V., Sharma N., Chakrabarti A. (eds) *Data Management, Analytics and Innovation. Advances in Intelligent Systems and Computing*, vol 839. Springer, Singapore
- [9] Desai D. (2017). "A Study of Design Aspects of Web Personalization for Online Users in India" PhD Thesis, Gujarat Technological University.
- [10] Desai D.(2016). "A study of personalization effect on users' satisfaction with ecommerce Websites" *Sankalpa- Journal of Management & Research*" ISSN No. 2231-1904.
- [11] Desai D. Kumar S. (2015). "Web Personalization: A perspective of design and implementation strategies in Websites" *Journal of Management Research & Practices* ISSN No: 0976-8262.
- [12] 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.
- [13] Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). "Empirical Testing of a Model of Online Store Atmospherics and Shopper Responses." *Psychology and Marketing*, 20(2), 139-150.
- [14] Éthier, J., Hadaya, P., Talbot, J., & Cadieux, J. (2008). "Interface design and emotions experienced on B2C Web sites: Empirical testing of a research model." *Computers in Human Behavior*, 24(6), 2771-2791.
- [15] Gie Yong, A., & Pearce, S. (2013). *A Beginner's Guide to Factor Analysis: Focusing on Exploratory Factor Analysis*. *Tutorials in Quantitative Methods for Psychology*, 9(2), 79- 94.
- [16] Kamis, Arnold; Marios, k. S. T. (2008). Using an attribute-based decision support system for user-customized products online: an experimental investigation. *MIS quarterly pp.*, 32(March), 159-177.
- [17] Kobsa, A. (2007). Privacy-Enhanced Web Personalization. *Communications of the ACM*, 50(8), 628-670.
- [18] Koufaris, M. (2002). Applying the technology acceptance model and flow theory to online consumer behavior. *Information Systems Research*, 13(2), 205-223
- [19] Kwon, K., & Kim, C. (2012). How to design personalization in a context of customer retention: Who personalizes what and to what extent? *Electronic Commerce Research and Applications*, 11(2), 101-116.
- [20] Lai, j.-y., wang, c.-t., and chou, c.-y. (2008). "how knowledge map and personalization affect effectiveness of kms in high-tech firms," *proceedings of the hawaii international conference on system sciences*, mauihi, p. 355
- [21] Lee, H.-H., Fiore, A. M., & Kim, J. (2006). The role of the technology acceptance model in explaining effects of image interactivity technology on consumer responses. *International Journal of Retail & Distribution Management*, 34(8), 621- 644
- [22] Liang, T. P., Yang, Y. F., Chen, D. N., & Ku, Y. C. (2008). A semantic-expansion approach to personalize knowledge recommendation. *Decision Support Systems*, 45, 401-412.

- [23] Liang, T.-P., Li, Y.-W., & Turban, E. (2009). Personalized Services As Empathic Responses: the Role of Intimacy. PACIS 2009 Proceedings. Retrieved from <http://aisel.aisnet.org/pacis2009/73>
- [24] Liang, T.-P., Chen, H.-Y., Du, T., Turban, E., & Li, Y. (2012). Effect of Personalization on the Perceived Usefulness of Online Customer Services: a Dual-Core Theory. Journal of Electronic Commerce Research, 13(4), 275–288. Retrieved from <http://www.ecrc.nsysu.edu.tw/liang/paper/2/79> Effect of Personalization on the Perceived (JECR, 2012).pdf
- [25] Monk, a. F., & Blom, J. O. (2007). A theory of personalization of appearance: quantitative evaluation of qualitatively derived data. Behavior & Information Technology, 26(3), 237–246.
- [26] Montgomery, A. L., & Smith, M. D. (2009). Prospects for Personalization on the Internet. Journal of Interactive Marketing, 23(2), 130–137
- [27] Nunnally, J. C. (1978). Psychometric theory, 2nd edition. New York: McGraw-Hill.
- [28] Oulasvirta, A., & Blom, J. (2008). Motivations in personalization behavior. Interacting with Computers, 20(1), 1–16.
- [29] Tam, K. Y. & Ho, S. Y. (2006). Understanding the impact of web personalization on user information processing and decision. MIS quarterly, 30(4), 865–890.
- [30] Thongpapanl, N., Catharines, & Ashraf, A. R. (2011). Enhance Online Performance Through Website Content and Personalization. Journal of Computer Information Systems, 52(1), 3–13.
- [31] Tsekouras, D., Dellaert, B. G. C., & Li, T. (2011). Content Learning on Websites: The Effects of Information Personalization. SSRN eLibrary.
- [32] Wang, May;Yen, B. (2010). The effects of website personalization on user intention to return through cognitive beliefs and affective reactions. PACIS 2010 Proceedings., 1610–1617
- [33] Ying, W. (2009). The Effects of Website Personalization on User Intention to Return through Cognitive Beliefs and Affective Reactions. The University of Hong Kong.
- [34] Hu, L.T. and Bentler, P.M. (1999), "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives," Structural Equation Modeling, 6 (1), 1-55.
- [35] Venkatesh, V., and Bala, H. 2008. "Technology Acceptance Model 3 and a Research Agenda on Interventions," Decision Sciences (39:2), pp 273-315.

