

DO IT YOURSELF: CUSTOMER SELF-DIRECTED LEARNING IN SELF-SERVICE TECHNOLOGIES

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Abstract

Modern-day customers engage with a multitude of service transactions in technological interfaces performing with Self-Service Technologies (SSTs). Nevertheless, many are not conversant with the use of technologies and are willing to use traditional physical service encounters, particularly those that live in developing countries. Since business organizations spend a vast amount of money to transform their traditional physical interfaces into technological-based self-service outlets, it is vital and necessary to make sure that customers willingly move along with this new trend. To accept SSTs, customer should feel comfortable with it, which require knowledge, skills and experiences on how to use such technologies. Since customer learning in SSTs is largely self-directed and experience-based, organizations should understand how customers naturally engage with SSTs and the role important organizations have to play in motivating customer self-learning process in SSTs.

Thus, this study aims at investigating the customer learning in self-service technologies based on Self Directed Learning Theory. Accordingly, application of motivation, self- management, and self-monitoring on customer self-learning at SSTs were investigated. Using a quantitative approach, self-administered questionnaires were distributed among 600 individuals selected, based on non-probabilistic convenience method. The Study found that customer learning at SSTs mainly influenced by their motivation and self-management skills.

This study contributes to theory by explaining the customer self-learning at SSTs, which is very limited in the literature. Further, it helps practitioners to understand how customer learning takes place at SSTs and therefore to decide on what should be the focus of the organization in designing customer communications aiming at providing a supportive learning experience to the customer.

Keywords: customer learning, self-service technologies, self-directed learning, value

Introduction

At present business organizations introduce self-service technologies with the purpose of reducing the workload of their employees, reducing customer congestion at the service premises, providing efficient and standardized service to the customer, as well as reducing the

high labor cost and achieve long term financial gains. Customer movement towards self-service technologies are on the rise mainly due to the convenience and efficient performance.

However, customer adoption to the self-service technology is not taking place at the same level everywhere and it differs from person to person. People having previous experience or are good in computer / internet knowledge are increasingly adopting SSTs.

Thus, consumer learning on how to use self-service technologies becomes a key predictor on whether he/ she accepts the technology. Though SSTs provide multitude of benefits to the customer, if customers are not conversant in using technologies, they tend to reject SSTs. Consumer learning to use SSTs may just follow few steps, thus converting first time users into regular users. However, it is a very difficult task to convert non-users into users in SSTs, because nonusers are naturally afraid of technologies and therefore tend to reject it at least without making an effort. If a person uses SSTs , he/she would be able to use that knowledge in similar scenarios.

Consumer learning at SSTs is self-directed, means mostly there is no one to teach how to use it, rather they themselves need to understand the procedure and perform the tasks (Hibbert et al., 2012b). However, with the introduction of SSTs companies can do demonstrations, illustrative advertisements, or leave service staff to help customers near the machines (eg: ATM). However, in the longer run, business organizations will let customers do the transaction on their own. However, in most of the SSTs, especially, at online based technologies, customers must perform transactions on their own with or without a formal support from organization's service staff.

Learning at SSTs is therefore largely self-directed, what this implies is that customers need to learn how to use SSTs by themselves with or without support from the Organization's service employees. Using the foundations of Self-Directed Learning Theory (SDLT), this study aims at understanding the customer learning in self-service technologies.

Literature Review

In developing the conceptual background, this study first provides the literature on self-service technologies. Next, the consumer learning in SSTs is discussed. Self-Directed Learning Theory is explained as the foundation of the study.

Self- Service Technologies

Face to face interactions with the customer and the seervice provider has been traditionally recognised as the service encounter (Solomon et al., 1985).Accordingly dyadic human interactions is the core in any service transaction. Therefore, the majority of past studies on service encounter had a limited focus, that is to study the interpersonal interactions that take place in such conventional service encounters (Meuter et al., 2000).

However, Bitner (1992) classified service encounters into three forms; self-services, interpersonal services and remote services. Among them, self-services based on technologies created a fundamental shift in the service context (Meuter et al. (2000). It can be a 'market

space' (Rayport and Sviokla, 1999,p.14) or a 'place' that provides opportunities to do transactions via self-service technologies (Meuter et al., 2000).

SSTs are identified as "technologies, provided by an organisation, specifically to enable customers to engage in self-service behaviors" (Hilton et al., 2013:862, Hilton and Hughes, 2013:3). It provides opportunities for customers to become independent (Meuter et al., 2000,p.50) while carrying out tasks effectively with less efforts (Meuter and Bitner, 1998). Many SSTs offer more interactivity (Parise et al., 2016), providing rich information and guidance to the customer to assist the process of learning. Thus, customer communication and training become a vital part in marketing SSTs (Verhoef et al., 2009).

However, the introduction of SSTs does not guarantee the customer acceptance as some customers are reluctant to accept technologies (Liljander et al., 2006). Therefore, when business organizations introduce technologies to the service encounter, it is necessary to make sure whether the customer perceives it as a pleasant experience instead of something that diminishes their value(Curran et al., 2003). People won't use SSTs, if they perceive it as uncomfortable and less beneficial for them (Meuter et al., 2005).

Customer learning in SSTs

Customer learning in self-service technologies is mostly experiential and self-directed (Hibbert et al., 2012b). Customers themselves should need to learn how to use SSTs by using different mechanisms. Sometimes they can obtain standardized assistance given by the service provider such as standard guidance, pre-designed instructions, self-help recordings, or Frequently Ask Questions (FAQ). Similarly, customers can get the support from informal sources such as friends and peers, or looking at reviews, comments of the other customers. Additionally, some organizations provide supportive staff to assist customer learning process in SSTs. However, most organizations provide call center / customer hotlines facilities to interact with the organization when customer needs organization's assistance.

Searching information is one common method of customer learning in online and internet based self-service technologies (Galdolage, 2018). If a customer wants to learn something, more than adequate amount of information is available in the internet. More accurate decision in SST-based transactions can be made, when people have early access to relevant information. Number of previous scholars recognized 'information seeking' as an important learning activity which creates value (McColl-Kennedy et al., 2012, Yi and Gong, 2013, Neghina et al., 2015).

Sharing information with others in the forms of reviews, comments, suggestions and recommendations also were recognised as important in learning such self-service technologies (Galdolage, 2018). McColl-Kennedy et al. (2012) view that 'actively seeking and sharing information' as co-learning, while the same is confirmed by Tommasetti et al. (2015).Yi and Gong (2013) identify 'information seeking' and 'information sharing' as a part of 'customer participation behaviour' which is necessary for customer collaborative learning in value creation.

'Recalling information' also was identified as important to be successful in SST transactions (Galdolage, 2018). If the customer forgets frequently needed information such as passwords, e-mails, bank account details, he/she might find it difficult to perform some SST transactions. Though it seems like a simple practice, value may diminish when vital information is forgotten. Equally, Payne et al. (2008) identify the importance of 'remembering' in customer learning.

Ability of 'following instructions' is a key practice in customer learning in SSTs. It depends on the language ability, knowledge level, experience, and the nature of the transaction (Galdolage, 2018). 'Providing feedback' to the organization on customer's experience, whether it is good or bad is also important in customer learning in SSTs. However, people provide feedback when they experience extreme conditions such as being extremely satisfied or extremely dissatisfied (Galdolage, 2018). Providing feedback, advocacy, helping, and tolerance were recognized as 'customer citizenship behaviour' which is mainly an extra or a voluntarily behaviour of a customer (Yi and Gong, 2013:12,P.80).Neghina et al. (2015)recognised 'knowing' as a precursor of learning that comprises of information seeking, information sharing and feedbacks.

Providing a similar understanding, Payne et al. (2008) identified three types of customer learning including remembering, internalising and proportioning. Further, the role of 'knowledge sharing' is recognised as vital (Higuchi and Yamanaka, 2017) while 'knowing' provides value-in-use to the customer (Ballantyne and Varey, 2008). Carù and Cova (2015) recognized 'informing' as one of the value practices in brand community. Payne et al. (2008, p. 382)recognise two perspectives of customer learning in value creation as first, 'using a sense-making, cognitive perspective', and second, 'identifying the experiences embedded in the co-creation processes'.

Self-directed Learning Theory

Self-directed learning is a fundamental theoretical concept and well-studied matter in adult learning and captures main three aspects such as self-management, self-monitoring and motivation (Brockett and Hiemstra, 1991, Long and Redding, 1991).

Self-management is involved with 'task control' issues, which focus on the use of learning intentions as well as peripheral endeavours associated with the learning process. It concerns how a person performing his/ her learning goals as well as managing the resources related to the learning (Pintrich and de Groot, 1990, Corno, 1994). Further, it includes forming the contextual conditions in the execution of goal-directed activities and it does not suggest that individuals are isolated learners. Instead, there can be facilitators helping the customer learning process by providing various assistance, guidance and standards when needed for a productive educational outcome (Prawat, 1992, Resnick, 1991). Further, self-management relates with other two dimensions and together provides a holistic understanding on learning process.

Self-monitoring ensures that the learner takes responsibility for developing a personal meaning or committed to build a meaning via essential reflection of his/her learning. It is important in assessing the quality of learning outcomes and in determining strategies for future

learning behaviours. Self-monitoring can be seen contingent with both internal and external feedbacks.(Brockett and Hiemstra, 1991, Long and Redding, 1991).

Motivation is playing a substantial role at the beginning and in maintaining efforts in learning as well as achieving goals (Howe, 1987). The motivation can be recognized in two ways; ‘entering motivation’ encourages the first step of deciding to participate while ‘task motivation’ helps to stay on task and it continues until the goal is achieved(Thompson, 1992). Motivation can be recognized as ‘commitment’ which goes hand-in-hand with attitudes, feelings, and goals (Thompson, 1992). Motivation focuses on the learning activities until it attains the determined goals (Corno, 1989).

Self-Directed Learning in Self-Service Technologies

Self-directed learning is a vital tool to understand the customer learning process in Self-Service Technologies through the theory, originally designed to study adults’ informal learning practices (Tough, 1971). However, scholarly work in the past shows the applicability of self-directed learning practices in undertaking work-related or vocational learning, and widely applied in gaining insights related to improving performance in the human resource development (Ellinger, 2004), and sales force management (Artis and Harris, 2007).

Self-Directed learning theory is recognised as a handy framework for intellectualizing consumer learning, specially to comprehend when learning takes place as an integration of resources (Hibbert et al., 2012a). In SSTs customers interact by integrating their resource (knowledge, skills, possessions such as credit/debit cards etc) with the resources provided by organisations (products, services, SSTs, websites, kiosk etc). In integrating resources, customer will not be a passive learner; instead he/she will be an active partner of the organisation. In learning such, customer’s own self-learning mechanisms including motivation, self-monitoring and self-control are essential (Hibbert et al., 2012a).

Bailey et al. (2013) used self-directed learning theory to research how the consumer learning takes place in DIY community (Do It Your-self). Similarly, in SSTs also, consumers must self-learn to use such technologies and therefore self-directed learning theory would be a great predictor of learning SSTs.

Conceptual Framework

Based on the literature review, the study was designed to examine the factors affecting self-directed learning at SSTs. Self-Directed Learning is characterized by motivation, self-management and self-monitoring. The following conceptual framework explains these relationships well.

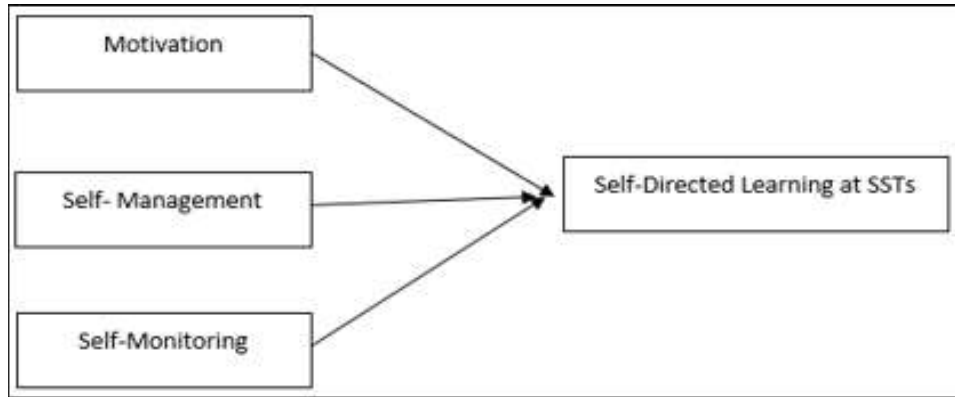


Figure 1: Conceptual Framework(Source: Developed based on literature review)

Methodology

This study aims at investigating the self-directed learning at self-service technologies. Based on the positivistic approach, the primary data were collected through a quantitative survey using a pre-determined self-administered questionnaire. Having minimum interference of the researcher, the study was conducted in a natural environment without controlling respondents' behaviours. This single cross-sectional study was carried out by distributing 600 questionnaires among individuals chosen, based on non-probabilistic convenience sampling method.

Operational definitions were developed after an extensive literature review (Sekaran and Bougie, 2016) and the same was tested through a pilot study with 40 individuals. Upon receiving the usable questionnaires, data was cleaned by treating for missing values and outliers.

Exploratory factor analysis was carried out with the data reduction purpose and by understanding uni-dimensionality nature of the variables. Validity of the instrument measured ensuring content validity, construct validity and criterion validity. Factor loadings greater than 0.5, Average Variance Extracted (AVE) greater than 0.5 and Composite Reliability (CR) greater than 0.7 ensure the convergent validity (Malhotra et al., 2006). Content validity was ensured through a rigorous literature survey (Sekaran and Bougie, 2016). Internal consistency of the items was measured using Cronbach's alpha and the alpha values of all variables were greater than 0.7. Further, Maximum Shared Variance (MSV), and Average Shared Variance (ASV) less than AVE indicates a satisfactory discriminant validity, which is ensured in this study (Hair et al., 1998).

Table 1: Exploratory factor analysis

Code	Variables	Factor Loadings				Cum %
		1	2	3	4	
MOTI1	I take the challenge to learn new things	0.758				
MOTI2	I need to know reasons for everything	0.884				
MOTI3	I critically evaluate new ideas and knowledge	0.681				
MOTI4	I would like to evaluate the level of my learning progress	0.649				
MOTI5	I would like to learn from my mistakes	0.653				67%
MOTI6	I believe in effort to improve my performance	0.764				
MOTI7	I enjoy learning new things	0.878				
MOTI8	I trust my abilities to learn new things	0.811				
MOTI9	I have positive expectations about what I am learning	0.748				
SEMA1	I am well-organized in my learning		0.835			58%
SEMA2	I set up strict timeframes to learn something new		0.742			
SEMA3	I have good management skills		0.806			
SEMA4	I set up planned solutions to solve my problems		0.928			
SEMA4	I can decide about the priority of my work		0.784			
SEMA6	I can manage pursuing my own learning		0.898			
SEMA7	I prefer to plan my own learning		0.857			
SEMA8	I am efficient in managing my time		0.879			
SEMO1	I am aware of my own weaknesses			0.815		51%
SEMO2	I can link pieces of information when I am learning			0.792		
SEMO3	I pay attention to all details before taking a decision			0.876		
SEMO4	I would like to set up my goals			0.907		
SEMO5	I correct myself when I make mistakes			0.768		
SEMO6	I am a responsible person			0.796		
SEMO7	I judge my abilities fairly			0.857		
SEMO8	I think deeply when solving a problem			0.579		

SEMO9	I prefer to set up my criteria to evaluate my performance	0.815	
SDL1	I am capable of gathering required information for my SST transactions	0.816	62%
SDL2	I share my knowledge/ information/experiences with others	0.792	
SDL3	I am good at following instructions given by SSTs	0.657	
SDL4	I am good at recalling frequently needed information for SST transactions	0.79	
SDL5	I often provide feedback to the company, whenever I am asked to do so	0.735	

Test of Validity

Validity was ensured through measuring the content validity, criterion validity, and construct validity (Sekaran, 2006, p 23). Operationalizing the variables through rigorous literature review ensured the content validity. Convergent validity was ensured by checking factor loadings, squared multiple correlations, average variance extracted, reliability etc.

Table 2: Summary of convergent validity results

Variable Name	KMO	Sphericity test for Bartlett (Sig)	Average Variance Extracted (AVE)	Composite Reliability (CR)	Cronbach's Alpha
Motivation	.893	.000	.582	.925	.896
Self- management	.884	.000	.631	.964	.903
Self- Monitoring	.883	.000	.574	.950	.912
Self-directed learning	.667	.000	.577	.922	.889

Source: Survey data

Sample Profile

As shown in Table 3, majority of the sample consisted of males (53.8%). Most of the participants belong to 23-34 years age group (26.8%) while the elderly population (above 65 years) represent the least percentage of the sample (2.6%). Most of the respondents were full time employees (56.2%) while only 2.4% were identified as retired. Considering the educational background, the majority in the sample had postgraduate degrees (30%) while the lowest proportion represented by least educated group. Sample profile is given in the table 3.

Table 3: Sample profile

Demographic	Categories	Frequency	Percent
Gender	Male	265	53.8
	Female	228	46.2
Age	18-24	66	13.4
	25-34	132	26.8
	35-44	103	20.9
	45-54	115	23.3
	55-64	64	13.0
	65above	13	2.6
	Highest level of education	GCSE level	35
GCE A/L		95	19.3
University Degree or equivalent		139	28.2
Postgraduate level		148	30.0
Other qualifications		76	15.4
Employment	Full time employed	277	56.2
	Part-time employed	90	18.3
	Self employed	31	6.3
	Unemployed	83	16.8
	Retired	12	2.4

Source: Survey data

Findings

This study aims at examining the impact of motivation, self-management, and self-control on self-directed learning at SSTs. The study hypothesized as these three factors have significant positive impacts on customer self-learning at SSTs.

A linear regression analysis was performed on the variables to check the validity of this hypothesis. According to the findings, motivation, self-management and self-monitoring together explain 21% of the self-directed learning, denoting that possibility of having other factors, which can influence learning at SSTs.

Table 4: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.467 ^a	.218	.214	.627

a. Predictors: (Constant), Unrealistic Optimism

Source: Survey Data

According to the table 5, model became significant at ($f= 45.546$, $df=4$, $p<0.05$), suggesting that analysis would generate precise findings

Table 5: ANOVA table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	109015	4	36.338	45.546	.000 ^b
	Residual	390.142	489	.798		
	Total	499.157	492			

a. Dependent Variable: SDL

b. Predictors: (Constant), Motivation, Self-Monitoring, Self-management

Table 6 suggests that motivation has the highest positive significant impact ($\beta=.580$ $p<0.05$), while self-management has a weak positive significant impact ($\beta=.195$, $p<0.05$) on self-learning at SSTs. However, this study found that impact of self-monitoring on self-learning at SSTs, is insignificant.

Table 6: Coefficients

	Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.231	.362		6.160	.000
	Motivation	.580	.070	.442	8.256	.000
	Self-Management	.195	.067	.099	1.856	.014
	Self-Monitoring	.084	.089	.055	.942	.346

Dependent Variable: SDL

Discussion

The findings of this study indicated that there is a moderate positive impact of motivation on self-learning at SSTs ($\beta=.58$, $P<.05$). Similarly, a weak positive impact of self-management ($\beta=.195$, $p<.5$) and an insignificant impact of self-monitoring were found on self-learning at SSTs.

Originally self-directed learning theory is applied in adult learning context. However, it cannot be restricted only to education, and can be applied to situations where people engage in self-learning (Garrison, 1997). The application of SDL is appropriate for consumer learning acquiring new knowledge and skills (Garrison, 1997). It is a well-known fact that customers have to self-learn (McColl-Kennedy et al., 2012) when they tend to use self-service

technologies (Hilton et al., 2013). Though customer can get formal or informal assistance, in many situations customer needs to perform their SST transactions on their own. Even though the literature is very rare on this area, that is in understanding self-directed learning at SST context, there were several scholarly works that address customer learning in different technologies.

According to Song and Hill (2007) learners may have a high level of self-direction in an area where they are familiar, or in areas which are similar to a prior experience. For example, if a customer once uses ATM, next time he/she may manage the transaction via ATM with little or no guidance, whereas people who never use it, are reluctant to do so.

SDL is accomplished by three dimensions: self-management, self-monitoring, and motivation (Garrison, 1997). According to Garrison (2003) working online, which is the mode for many SST transactions today, gives more control of the instruction given to the learners. Thus, many SSTs provide clear guidance and step wise instructions for the user to carry out the SST transaction in appropriate manner.

SST customer is expected to take self-management measures, like ability to implement own learning goals, and effectively managing the learning resources (Garrison, 1997) when using both the operant and operant resources (Vargo and Lusch, 2016). When customers create their own value at technological interfaces (Vargo and Lusch, 2008, Grönroos and Ravald, 2011) they need to acquire new knowledge and capabilities (Payne et al., 2008). Thus, it is business organizations' responsibility to educate customers (Zhao et al., 2008), in a way that they can carry out the transaction by themselves. According to Quinn et al. (1990), compared to the past, modern day customers are now expected to perform more complex tasks than simple ordinary transactions in SSTs. Thus, self-directed learning abilities would help customer self-learning at SSTs (Hibbert et al., 2012a).

As SDL assumes, customers need to understand their learning desires, and finally evaluate outcomes, although other parties may or may not support their learning (Garrison, 1997) like SST customer learn to perform in SSTs with or without having any support from the business organization (Etgar, 2008).

However, a very few literatures have examined SDL in customer learning (Evans et al., 2008) and its applications in customer education (Auh et al., 2007). Additionally few studies focused on explaining SDL in customer training (Zhao et al., 2008) and improving customer skills via communication (Hennig-Thurau et al., 2004), and understanding customer post purchase learning behavior (Mittal and Sawhney, 2001).

Conclusions, Recommendations, and Future Research Directions

This study was designed to investigate the customer self-directed learning taken place in relation to self-service technologies. The study found the importance of motivation and self-management in customer self-directed learning at self-service technologies. More importantly contrary to many studies this research has found the insignificant effect of self-monitoring on self-learning at SSTs.

Though few studies recommended SDL to investigate consumer learning, lack of empirical studies in such nature could be an obstacle in making sound comparisons. However, this study contributes to the scholarly work by investigating the application of customer self-directed learning in SST context. This study based on the notion that consumer learning at SSTs is largely self-directed, where customer need to perform many SST transaction on their own with or without formal assistance from the business organization. Thus, customers' self-motivation to learn how to use technologies, managing their skills, knowledge and resource as well as proper monitoring process until become successful in SST transaction is important.

This study recommends the business organization to assist consumer self-learning process at SSTs by means of managing their websites appropriately, provide Frequently Ask Questions (FAQ), provide stepwise guidance on SST performance in different languages etc. and this would help to enhance customer self-management skills in learning SSTs. Further, providing customer training, trials or demonstration when introducing new technologies would have a positive impact on customer adoption in new SSTs. Organization should clearly communicate benefits as well as process of using SSTs in a way that customer is self-motivated to use SSTs. Providing conclusive notes/feedbacks such as simply 'thank you', 'your transaction is successful', would help customer to self-monitor their progress at SST transaction.

There are ample avenues for future researchers to explore customer self-learning at areas such as customer education, customer training as well as customer behavioral changes such as moving to technologies.

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