Exploring Customers’ Co-Learning Practices in Co-Creating Value with Self-Service Technologies

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DOI: http://doi.org/10.4038/sljmuok.v8i1.85

ABSTRACT

Value co-creation is becoming a prominent business practice, particularly in the service sector, demarcating a diversion of business strategies to produce mutually valued outcomes. Self-service technology, as a technology-based service encounter, allow customers to perform many service transactions independently. Customers’ collaborative learning becomes essential to successfully co-create value in self-service technologies since they perform service transactions on their own without the support of organizations’ service employees. However, scholarly attention given to understanding customer co-learning in value co-creation at SSTs are sporadic. Therefore, this study aims at exploring customer co-learning in self-service technologies. Aligning with the research objectives, qualitative methodology has been adopted. Accordingly, semi structured interviews were conducted, and data were analyzed using Thematic analysis approach. The study identified five customer co-learning practices in self-service technologies; searching information, sharing information, recalling information, following instructions, and providing feedback. Further, the study extended to categorize customers based on their co-learning abilities and performance at SSTs and three types of customer groups were recognized as ‘Dire performer’, ‘Fair performer’ and ‘Full performer’. Business organizations can effectively use this understanding to provide customer learning, conduct training programs, and design communication and promotional programs targeting different customer groups, ensuring superior customer experiences in self-service technologies.

Keywords: Co-Learning, Co-Production, Customer Experience, Self-Service Technologies, Value Co-Creation

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1. INTRODUCTION

The development of service economies resulted in the discontinuation of the customer-producer separation, which was the main barrier to transaction-oriented marketing (Knote et al., 2021). In the traditional firm-centric business perspective, the customer is kept out of the value creation process (Prahalad & Ramaswamy, 2004). However, current business practices appreciate the concept of ‘value co-creation,’ which allows customers to actively participate in planning, designing, creating, producing, and delivering value to the customer (Akter et al., 2021).

Customer engagement with organizations has grown increasingly widespread, particularly in the service industry (Shirazi et al., 2021). While customers are often inactive in the manufacturing sector and used to receive product output as a passive value receiver, they become very active in the service production process and interact with the service organization. Healthcare, hospitality, education, banking, and insurance are classic examples of client involvement in the service production process. Customer presence and active engagement with service providers, particularly in high-involvement services, are expected to affect the success of the outcome (Jayalath & Galdolage, 2021).

However, with the advancement of technology, most service providers attempt to provide all or a portion of their services via technological platforms, allowing clients to perform the service independently of the organizations’ staff (Zhang et al., 2020). E-channeling, online banking, automated teller machines, and self-checkout at supermarkets and airports are examples of this transformation. However, at first, self-service technologies were limited to routine and straightforward transactions. Customers are now expected to complete various complex transactions at self-service locations (Quinn et al., 1990). This approach provided customers with convenience and time-based utility by enabling them to do service transactions at their convenient locations or at their fingertips, rather than visiting service organizations during business hours (Dabholkar, 1996; Hsieh, 2005). Similarly, the service staff's workload is reduced, allowing them to focus on other objectives by avoiding numerous clerical, primary, and routine chores since clients execute their service (Castro et al., 2010).

This movement significantly altered customer behavior. Traditional physical service interactions were mediated by service professionals, allowing customers to speak with service employees and resolve issues through interactions. It enables people to widen their awareness of services and confidently conduct service transactions with the assistance of service employees. When traditional service interactions are changed into self-service technology, clients are expected to complete services without the aid of service employees. In such cases, the success or failure of the service performance is mainly determined by the customer learning on the SSTs.

Given that the customer is self-performing the service via technological interfaces, mainly in online-based self-service technologies, it is the service providers’ responsibility to give proper understanding
to the customers through providing rich information and instructions to carry out the service transactions (B. S. Galdolage, 2021c). Additionally, the customer learning process should be participatory and collaborative, emphasizing resolving customer concerns associated with learning how to use self-service technology. Similarly, no two customers are identical when it comes to learning on SSTs; hence their performance may differ as well. However, client co-learning in co-creating value using self-service technology is very rare in the literature. As such, this study aims at exploring customer co-learning in self-service technologies and then expand to recognize disparities among SST customers against their co-learning capacity and performance in self-service technologies.

The paper next discusses the conceptual underpinnings of the investigation, followed by an explanation of the study's methodology, before providing the findings and discussion. Finally, the study's contributions are explored, as well as its shortcomings and future research objectives.

2. LITERATURE REVIEW

2.1. Value Co-Creation in Services

Despite the fact that several terms are used, such as customer participation, value co-production, engagement, and value co-creation (Bovaird, 2007), it refers to a process in which end value is enhanced through the customers’ involvement with the organization and the tailoring of products/services to their expectations (Kristensson et al., 2008). Customer involvement is defined as "the extent to which the customer is involved in the production and delivery of the service" (Dabholkar, 1990:484). Bitner et al. (1997) classified customer participation as low, moderate, or high. The low level requires merely consumer participation in service delivery, whereas the intermediate level requires customer participation in offering customer inputs. The participation of the client as a co-producer is acknowledged as the highest degree. Dong et al. (2008) assert that an enhanced level of participation increases the customer’s proclivity to be a co-creator. The literature highlighted customers' active participation with businesses (Ind & Coates, 2013) by being cooperative, diligent, and making suggestions (Bettencourt, 1997).

The active role of customers in co-production (Cova & Dalli, 2009) was discovered decades ago (Gronroos, 1978; Lovelock & Young, 2010). B. Galdolage (2021) emphasizes the necessity of customers participating actively in co-creating value with self-service technologies, highlighting the importance of having a firm grasp on the unique role they are expected to play in various SSTs. It reflects the relationship between client participation and the development of the organization's core offering (R.F. Lusch & S.L. Vargo, 2006). Auh et al. (2007:361) defined co-production as "constructive customer participation in the service creation and delivery process," with an emphasis on service process standards that include corporative and meaningful contributions. Co-production is a significant concept in service literature (Bendapudi & Leone, 2003), implying a concurrent process of service
production and consumption (Lovelock & Wirtz, 2004). It develops into a competitive strategy for commercial organizations (Prahalad & Ramaswamy, 2000), in which the consumer assumes the role of a partial employee (Carù & Cova, 2015), doing responsibilities usually performed by service workers (Cova & Dalli, 2009). Coproduction may emerge as a result of co-design, collaborative production of related items, or shared incentives (Robert F. Lusch & Stephen L. Vargo, 2006), while acknowledging as a subset of co-creation (Vargo & Lusch, 2007). The nature of collaboration in the development of value is disclosed as co-creation, and the inclusion of customers in the offering's production is inextricably linked with it (Vargo, 2008). Despite the fact that the concepts of value co-creation and co-production are distinct, they share comparable meanings (Robert F. Lusch & Stephen L. Vargo, 2006). Etgar (2008) and Terblanche (2014) identified co-production as a stage-specific process and a component of value co-creation.

Echeverri and Skalen (2011) argue that rather than quantifying value objectively, it should be subjectively determined by the client and provider. Prahalad and Ramaswamy (2000, 2002, 2004) have identified various strategies to turn firm-based value creation into an alliance between the consumer and the firm, dubbed value co-creation at the time (Cova et al., 2011). Gummesson and Mele (2010) established value co-creation due to the integration of resources and interactions. According to Grönroos and Ravald (2009), the firm does not create ready-made value; rather, the value creators are regarded as the customers for whom the firm produces simply resources. Additionally, they have argued that "value is not generated; it is created and produced" (Grönroos & Ravald, 2011:7). As a result, the persistent concept that customers acquire the value created by producers became untenable (McColl-Kennedy et al., 2009). According to the new argument, there is no distinction between service creation and consumption (McColl-Kennedy et al., 2009). As B. S. Galdolage (2021a) noted, however, failures in the value co-creation process are widespread, causing challenges and discouraging customers from freely participating in the collaborative value creation process.

2.2. Value Co-Creation in Self-Service Technologies

Self-service has become more prevalent due to rapid technological advancements in mobile phones, personal computer terminals, and the internet (Gebauer et al., 2010:516) and can be considered the next frontier in service excellence (Safaeimanesh et al., 2021). At the moment, customers have an infinite number of options for interacting with, engaging with, and talking with technologies in the process of value generation (Hoyer et al., 2010). The expansion of self-service technology has made a significant contribution to the development of the World Wide Web (Hilton et al., 2013), while virtual co-creation has achieved success through multimedia-rich online interactions (Füller et al., 2009). Yu and Sangiorgi (2017) emphasize the fact that smart technology, referred to as 'supporting tools,' can aid customers in using their own skills and resources, hence facilitating the value co-creation process.
The internet's inherent features, which include persistence, adaptability, interaction, speed, and reachability, make it an excellent platform for client engagement (Sawhney et al., 2005). Virtual customer communities and networked organizations have the potential to be significant drivers of value co-creation (Romero & Molina, 2011). Virtual customer communities add substantial value in the areas of overall brand experience, communication, marketing, and design (Romero & Molina, 2011). Online communities allow a broader range of chances for value co-creation (Cova & Paranque, 2012) while also serving as a relational tool (Gambetti & Graffigna, 2014). Saarijärvi et al. (2013) describe how resources are co-created in networks, service systems, and dyadic relationships between people, technology, and value propositions.

Payne et al. (2008) discovered that co-producing services with self-service technologies result in the establishment of unique experiences with the firm. Due to connectivity, network ubiquity, specialization, and open standards, all entities, including individuals, organizations, and homes, can now accomplish a great deal with less effort (Lusch et al., 2007). Information technology helps the reduction of time and effort waste during the process of creating customer value. Sawhney et al. (2005) identified the internet as a rapidly growing platform that offers internet-based collaborative strategies for new product development, hence increasing user involvement in the process of product innovation. The internet provides advanced chances for businesses to leverage consumers' ‘innovative potential and knowledge' throughout the value chain (Kohler et al., 2011). Sandström et al. (2008) expounded on the prospects presented by websites that demonstrate the value-in-use of technology-based services as the new peak in service development. S. Galdolage (2020) identified ten critical elements influencing customer choice of SSTs and classified them into three important domains: technology, customer, and situational/social effects. Zhang et al. (2018) identified customer engagement as a mechanism for online value co-creation, where positively valanced engagement behaviors may occur in scenarios where customers are thrilled and experience reciprocity. Kamalasena and Galdolage (2020) emphasize the importance of enjoyment in the value co-creation process.

At the moment, smart solutions comprised of more frozen knowledge represent a novel mode of client connection (Etgar, 2008). It consists of the employees' skills and expertise (operant resources) and provides them to the customer in a more participatory manner during the value co-creation process. As a result, even clients with limited skills in executing their services gain confidence due to well-developed SSTs (Michel et al., 2008). Payne et al. (2008:383) demonstrate options to engage in trials, information sharing, and self-service through service encounters that are ‘action-supportive,' notably through the ease of use of mobile phones and personal computers. Performance and the convenience associated with such SSTs are the primary reasons why customers prefer SSTs over in-person service experiences (B. S. Galdolage, 2021a).
Grönnroos and Ravald (2011) explored the benefits of self-service technologies in terms of time savings and stress reduction. Füller et al. (2011:261) identified crowdsourcing platforms, democratized innovation methodologies, and online concept and design competitions as means of including customers in the co-creation process. Dahan and Hauser (2002) identified the importance of virtual customer interaction in product development. Cognitive or educational benefits, hedonic benefits, personal integrative benefits, and social integrative benefits are all characterized as anticipated or perceived benefits that are critical for engaging customers in virtual customer environments (Nambisan & Baron, 2009). With multimedia-rich interaction and cost-effective options provided by the internet, virtual co-creation has emerged as an appropriate method of producing value (Füller et al., 2009). In their exploration of co-creation techniques in the context of virtual technology, Bonsu and Darmody (2008) emphasized the empowerment of consumers. Teo and Oh (2010) examined hybrid service organizations in relation to customer value co-creation, focusing on information quality and service convenience as essential determinants of consumer value. Through an investigation of customer perspectives on their roles in SST encounters, Kelly et al. (2017) identified six roles in the process of value creation that result in either positive or negative consequences. B. S. Galdolage (2021b) demonstrates the importance of self-service technology of customer value co-creation intentions, behaviors, and experience.

Kelly et al. (2017:11) examined the customer's participation in value co-creation in self-service technologies from the perspectives of a motivated worker, an unskilled worker, a convenience seeker, a help provider, an imposed worker, and a judge. They have classified the positions in a dichotomous fashion according to the power the party wields, distinguishing between voluntary and imposed roles. In the case of an imposed worker, the service provider exerts excessive control by compelling them to execute certain activities without their consent, which may ultimately end in unhappiness, switching intents, and failure. As a result, customer experiences could be pleasant or weak depending on the customer role.

2.3. Co-Learning in the Use of Self-Service Technologies

Customers' education is critical in using self-service technologies, as they are frequently required to complete service transactions without the assistance of an organizations’ service staff. This is a collaborative procedure in which service providers provide relevant instructions and guidance via interactive technological platforms that enhance customers’ understanding of how to successfully complete their SST-based service transactions. Customers are also expected to update their knowledge on technological enhancements, which supports them to perform various transactions in technology platforms.

McColl-Kennedy et al. (2009) recognized customer co-learning in the context of value co-creation in hospitals, emphasizing the significance of active customer engagement in finding and sharing information from other sources such as the internet, other personal sources etc. Additionally, they
acknowledge the usefulness of information collation as a value co-creation activity that focuses on sorting and assorting data and managing data for future purposes. Tommasetti et al. (2015) examined value co-creation and confirmed the findings of McColl-Kennedy et al. (2012) while incorporating 'feedback' as an extra component of co-learning. Additionally, Neghina et al. (2015) identified 'knowledge' as a precondition for value co-creation.

As 'knowledge sharing' results in increased trust, the attainment of win-win situations, and the establishment of long-term relationships, it is regarded as critical in co-creation (Higuchi & Yamanaka, 2017). Additionally, value-creating activities like 'knowing', 'relating', and 'communicating' result in favorable outcomes for the customer during the collaborative value creation process, confirming the product's great value-in-use (Ballantyne & Varey, 2008). Additionally, communication has been identified as critical in the co-creation of service innovation (Gustafsson et al., 2012).

According to Prahalad and Ramaswamy (2004), the DART model introduced four co-creational building blocks: 1. Dialogues (created shared meaning), 2. Access (ownership is not required, but access is desirable in value creation), 3. Risk reduction (duties and responsibilities of the firm and consumers in risk management), and 4. Transparency. Albinsson et al. (2016) augment the DART model by demonstrating a thorough grasp of how the organization's structures, rules, and procedures facilitate or obstruct customer/partner/or firm interactions in the process of value co-creation. Galdolage (2018) emphasized the importance of co-learning in co-creating value with self-service technologies, while B. Galdolage (2020) notes that since learning in SSTs is mainly self-directed, customers' motivation, self-management, and self-monitoring become critical for learning to perform well in SSTs.

3. METHODOLOGY

In accordance with the research objectives, which aimed to investigate customer co-learning at self-service technologies, an exploratory style of research activity was carried out, which included qualitative inquiries (Malhotra & Birks, 2007; Sekaran & Bougie, 2016). The case in favor of qualitative methodology was supported by the fact that there was a scarcity of established research work in this area. As Turner (2010) suggests, preparation for the interview is essential; thus, one pilot interview was conducted to identify the understandability of questions, any repetitions or problems with the interview flow, and determine how long a typical interview takes. Piloting aided the improvement of the interview protocol by rearranging a few questions to improve the flow of the questioning process.

Recruiting individuals for the study was done via a non-probabilistic purposeful sampling strategy, with the goal of hiring information-rich cases (Abrams, 2010). To ensure that sufficient and high-quality data were collected, semi-structured interviews were conducted utilizing an interview guide that allowed for some flexibility in probing (Rowley, 2012). The interviews were done in a non-contrived context (Sekaran & Bougie, 2016), solely for the respondents' convenience in terms of interview
location. The discussions began with a brief exchange of pleasantries and an explanation of the research, including the significance and use of respondents’ information. Before starting the interviews, a formal consent sheet was used to gain the respondent’s consent to participate willingly in the research. Additionally, information sheets containing a research brief and the researcher’s contact information were distributed to respondents. An interview guide was created as the research instrument to facilitate a simple, smooth, and focused interviewing process. According to Creswell (2013), an interview protocol consists primarily of opening remarks, responder instructions, interview questions, follow-up questions, and a closing statement. The interviews were conducted in the style of a conversation and lasted between 30 and 45 minutes per respondent.

The study was limited to twenty-five participants due to the fact that the data had reached saturation (Lincoln & Guba, 1985; Palinkas et al., 2015; Silverman, 2010). The interviews were audio-recorded with the consent of the participants and transcribed into word documents when they were completed. The researcher looked over the transcriptions several times, underlining the phenomena that were thought to be significant. Data collection and analysis took place simultaneously so that the researcher could transcribe and evaluate the concluded interviews while also doing more data-gathering interviews. Ideas that arose over the course of the analysis were noted in memos and filed in chronological order. The approach of thematic analysis was utilized to determine the various ‘themes’ (Joffe, 2011; Lacey & Luff, 2009). Rather than simply extracting themes from qualitative research, it should strive to connect them in order to create models based on the findings (Bazeley, 2009). Finally, a compelling argument for selecting the themes must be developed, primarily through reading related literature (Aronson, 1995).

4. STUDY FINDINGS


According to this study, co-learning is defined as “collaborative learning through the use of technologies and human interactions, enabling the enhancement of knowledge of individuals and society.” The study discovered five (05) co-learning practices in self-service technologies through qualitative interviews: "seeking information, sharing information, recalling information, following instructions, and providing feedback.” As the study found, despite the ‘feedback,’ all four other factors are extremely important in customer value co-creation in SSTs. The reason for this is that failures in the customer value co-creation process with self-service technologies may result from a lack of competencies in these learning practices. Further, as the respondent revealed, different service organizations provide different levels of support for the customer co-learning process. As they pointed out, organizations’ initiatives in providing interactive self-service technological platforms have proven
to be very beneficial in the customer learning process. According to some respondents, the most common causes of unexpected service failures are their inability to find the most relevant information for correct decision-making and their inability to follow instructions. Providing customer feedback is recognized as a rare practice that occurs most often in situations where customers are highly dissatisfied or delighted with the service.

**Seeking information:** This research discovered that ‘seeking information’ is an essential learning practice when using SSTs, particularly when performing service transactions on online platforms. The expansion of the World Wide Web has created fantastic opportunities for searching for information. Respondents appreciate the new technologies due to their ability to search for information from multiple sources at the same time, as well as the ability to compare them for better decision-making. Some of the technological platforms that provide such comparative information analysis have also been mentioned as helpful in customer decision-making. However, one of the main reasons for failures in value co-creation at self-service technologies is customer inability and inefficiency in identifying the most relevant information for better decision-making.

“We have many opportunities to learn about the products we intend to purchase...because we have manuals for everything. You can look things up on the internet and read reviews from other people. If you are looking for simple questions and answers, you can visit Frequently asked questions... you may see examples of it in the photographs... It is simple to compare it to other alternatives. As a result, I make it a point to gather facts before making any decisions...

This place offers an incredible number of options.” (38 years, male).

**Sharing information:** The study discovered two types of 'information sharing' that must be successful in self-service technologies. One type is recognized as sharing required information with service providers such as passwords, bank account information, address, telephone numbers, and so on, which is needed to complete service transactions at SSTs. However, the study identified it as customer collaboration with the service providers rather than any learning outcomes. The other type of information sharing includes practices like sharing perspectives, perceptions, and experiences with friends, peers, or other social communities in physical or virtual settings. According to the study, the younger generation is not afraid to share their information/experiences with others, whereas the older generation is. Furthermore, some respondents stated that before purchasing something important online, they would read other people's reviews and comments on the product.

“I occasionally write product reviews since I understand that doing so is similar to providing verdicts and read other people’s reviews before purchasing something. It is quite beneficial in providing me with a realistic representation of the goods. That is absolutely correct. They are not advertising; instead, they are sharing their own personal experiences. So, I suppose that what I write might be of assistance to someone.” (43 years, male).
Recalling information: Though it appears to be a simple learning exercise, recalling frequently needed information required to perform SST transactions such as pin numbers, passwords etc. were identified as very important. According to the study, the majority of respondents could recall frequently required information. However, some respondents revealed a few instances of service failures as a result of forgetting relevant information.

“Simple pieces of information such as passwords and PIN numbers are all that is required to be remembered. It's nothing because it's already registered in my brain. Occasionally, though, they (bankers) would request that we change our passwords after three or six months. This is a major inconvenience. As a result, it's a little perplexing. Sometimes the passwords required are complicated, containing both capital and lowercase letters, numbers, and symbols. As a result, it can be difficult to remember. I used to keep track of all of my passwords in a tiny notebook.”. (22 years, female).

Following instructions: According to the study's findings, following instructions is regarded as the most critical and important learning task when using self-service technologies. In most SST settings, the customer completes the service transaction without the assistance of service employees. As a result, the instructions and guidance provided in SSTs must be precise, clear, and sequential. Some of the SSTs that provide information and instructions in multiple languages are well-liked by respondents (e.g., checkouts at airports). Despite the fact that the majority of respondents described self-service technologies as providing clear and step-by-step information, some of them criticized SSTs for inviting errors by providing confusing instructions.

“It is all about following instructions. Everything is shown on the screen. Step by step, we can complete the transaction. You know... pressing buttons, typing a little information, selecting things we want, it’s clear for me. I guess we can follow nicely. Sometimes it seems like the given instructions are not clear. We struggle with what to do next. Using SSTs is nothing more than following instructions”. (45 years, female).

Providing feedback: According to the study, even if organizations encourage customers to provide feedback, it is recognized as a very rare practice among people. According to the study's findings, feedback is mostly limited to situations in which customers are extremely satisfied or dissatisfied with the service.

“It all boils down to following the directions. Everything is displayed on the computer screen. We will be able to execute the transaction step by step. You know, hitting buttons, typing a few pieces of information, and picking items that we want to use... it's all very simple to me. I believe we will be able to follow up beautifully. It appears that the instructions provided are
not always understandable. We are at a loss as to what to do next. Following the guidelines for using SSTs is all there is to it.” (35 years, female).

The figure (figure 1) below summarizes customer co-learning practices in co-creating value with self-service technologies.

*Figure 1: Customer co-learning practices in co-creating value at self-service technologies*

4.2. Differences among Customers with The Co-Learning Ability

The study acknowledges that people's co-learning abilities are varied. Similarly, not everyone feels equally at ease performing at SSTs. The study discovered a link between SST users’ ability to co-learn and their level of performance. Based on their level of learning and performance at SSTs, three types of customer groups were identified as ‘Dire performers,’ ‘Fair performers,’ and ‘Full performers.’

According to the study, the majority of the ‘Dire performers’ lack needed skills and are poor at learning abilities. They are recognized for their inability to search for relevant information and make the necessary comparisons to maximize the value of the outcome. Furthermore, these customers perceive SSTs as a risk and are sometimes unwilling to share essential information with the organization. When performing SST-related service transactions, they require additional assistance from service staff or other people. They are also identified as having a lack of ability to generalize their knowledge to similar SST settings. They lack the ability to follow instructions and comprehend their specific role. Furthermore, they were identified as rarely providing feedback to service organizations despite encountering service failures.

“I am bit afraid of technologies. Its difficult for me to learn. I dont know what suppose I do. The other thing is who belive it. Havent, you heard some frauds in ATMs and internet. I dont...
want to share my PIN number with them. I am not very well in understanding their terms and what should I do." (38 years, male)

In SSTs, ‘Fair customers’ have good co-learning skills. When performing SST transactions for the first time, they may require assistance from organization staff or other individuals. After they have used SSTs, they will be able to apply that knowledge and use similar types of SSTs on their own. They have a good understanding of searching for and comparing information to find suitable options for them. They are good at following instructions, and even when mistakes occur, they try to use various mechanisms to prevent or mitigate the impact of problems.

“Sometimes I need support. But once I used it, I can manage for the next time. there are some issues when working with machines. But any how I recover them. I can understand what should I do there” (48 years, female)

‘Full performers’ are known to be excellent at learning to use SSTs. They can apply their technological knowledge in a variety of SST settings. Despite being entirely new technologies, they are capable of following instructions and performing well in SSTs. They were identified as cautious and risk-averse customers. They are eager to learn on their own and to observe how others act. They are self-assured in their abilities and recognize technology as a hobby.

“Technology is my passion. I quickly catch-up whats in it. Even though it is a totally new technology; I carefully observe first and do it. I am very good at following steps. As I feel. all the machines are quite same. If you have basic knowledge, you can apply the same in everywhere” (57 years, female)

Figure 2 depicts the three different types of customers in SSTs and their impressions of SSTs based on interview quotes.

Figure 2: Customer classification based on customer co-learning abilities and performance in SSTs

- Full performers are very good in co-learning at SSTs and enthusiastic to learn and use SSTs.
- Fair performers have considerable amount of co-learning ability and can manage service transactions via SSTs.
- Dire performers are poor in learning about SSTs and cannot perform many SSTs without the support from someone.
5. DISCUSSION

The study identified co-learning as a critical practice in value co-creation, outlined as collaborative learning with interactions between technologies and humans that drive the development of knowledge and performance at the individual and societal levels. The five essential practices of co-learning related to SSTs were discovered to be sharing information, seeking information, providing feedback, following instructions, and recalling information. Furthermore, the study revealed that failures in value co-creation (value co-destructions) could occur if competencies in the aforementioned practices fall short.

Respondents indicated that seeking information was mostly done through online and internet-based self-service technologies. With the abundance of information available on the internet, this practice has many opportunities. Failures may occur when customers are unable to gather the most relevant information, preventing them from making the best decision in SST-based transactions. Sharing information is analogous to the need to share the requested information with the service provider and the sharing of perceptions and related experiences with other customers via review, etc. Nonetheless, the need to share personal information with service providers such as postal address, credit/debit card details, email address, and passwords was recognized as cooperative behavior on the part of customers. Recalling information entailed remembering frequently used information such as bank account numbers, e-mail addresses, and passwords, among other things. Despite the fact that this practice appeared to be simple, it was identified as a critical cause of service failures. Following instructions was regarded as a critical practice in the value creation process in SSTs. This is primarily determined by the nature of the transaction, which reflects the transaction's simplicity or complexity with more customizations, as well as the customers' previous experiences. Feedback was recognized as a rare and optional practice depending on the customer's experience in value co-creation, such as their experiences under extreme conditions reflecting whether they are extremely satisfied or dissatisfied. Furthermore, the study identified three types of customer groups based on their ability to co-learn and perform in SSTs as ‘Dire performers,’ ‘Fair performers,’ and ‘Full performers.’

These study findings are supplemented by a number of previous research findings. Information seeking is discussed as a co-creation practice (McColl-Kennedy et al., 2012; Neghina et al., 2015; Yi & Gong, 2013). Furthermore, Yi and Gong (2013) identified ‘information seeking’ and ‘information sharing’ as factors of ‘customer participation behavior,’ whereas ‘feedback’ was identified as a factor of ‘citizenship behavior,’ which is considered voluntary in customer co-creation. Similar to this study, Yi and Gong (2013) proposed ‘providing feedback’ as a rare and optional practice in customer value co-creation through the use of SSTs. This study backs up McColl-Kennedy et al. (2012), who defined co-learning as ‘actively seeking and sharing information,’ while Tommasetti et al. (2015) confirmed the same with the addition of another component of co-learning known as ‘feedback.’ Furthermore, the current study agrees with Neghina et al. (2015), who identified ‘knowing’ as a prerequisite for value co-creation,
which includes information seeking, information sharing, and feedback. Payne et al. (2008) reached a similar conclusion by identifying three types of customer learning: proportioning, internalization, and remembering. Furthermore, ‘knowledge sharing’ has been recognized as playing an important role in co-creation (Higuchi & Yamanaka, 2017), with the fact that it provides the customer with value-in-use (Ballantyne & Varey, 2008). According to Carù and Cova (2015), ‘informing’ plays a significant role as a value practice in relation to brand communities. Payne et al. (2008:382) identified the two aspects of customer learning in co-creation as ‘sense-making, cognitive perspective' and identifying the experiences embedded in the co-creation processes.

The study acknowledges that all the customers are not equally confident in performing with SSTs. Based on their ability in co-learning in SSTs the study classified them into three groups; Full performers, Fair Performers, and Dire performers. Given the inequality of customers’ ability, Kelly et al. (2017:11) argued that SSTs should be voluntary, and forcing weak performers to use SSTs could end in unhappiness, switching intents, and failures. In a similar note, Chan et al. (2010) mentioned that persuading customers to engage with co-creation is a double-edged sword, which can increase the stress of both the customers and the employees based on their ability to adopt them.

6. THEORETICAL CONTRIBUTIONS

Despite the fact that the literature widely covers value co-creation in traditional physical service interactions controlled by service employees, scholarly attention on value co-creation research is mostly focused on understanding technological interfaces. Additionally, though customer learning is a critical component of value co-creation in SSTs, the prior literature has failed to fully explain it. With this context in mind, this study bridges the theoretical gap by examining customer collaborative learning as a necessary condition for successful value co-creation in self-service technologies. This study contributes to the literature on co-learning, co-creation, and self-service technology contexts by identifying five co-learning practices at SSTs: requesting information, sharing information, following instructions, recalling information, and offering feedback. Additionally, the study established three consumer groups depending on the capacities of SSTs for customer co-learning and co-creation: full performers, fair performers, and dire performers. This classification takes into account the inequalities in how SST users earn and practice in the SST context.

7. PRACTICAL CONTRIBUTIONS

In practice, the study advises businesses on how to maximize consumers’ collaborative learning, resulting in successful value co-creation through self-service technology. Service providers can leverage this understanding to aid customers in their learning process by maintaining information-rich, frequently updated websites, tutorials/videos on how to use self-service options, hotlines for assistance from service staff, and managing Frequently Asked Questions (FAQs) on web pages. According to the
study, many SST users discuss their experiences on a variety of online and offline venues, particularly as reviews, and they also examine other users' reviews before purchasing items or services. Thus, it is critical for service firms to manage a great client experience in order to increase positive word-of-mouth communication. Additionally, SST users regard following instructions as the most frequently employed co-learning approach. Thus, the study proposes that businesses provide clear and step-by-step instructions in a language that customers can comprehend. Additionally, letting clients to select their chosen language enhances their ability to learn in SSTs. While the study acknowledged that providing feedback is a rare form of learning among SST users, occurring only in extreme circumstances such as extreme happiness or unhappiness, business organizations can still use various strategies to encourage customer feedback in order to gain a clear understanding of their service experience at SSTs.

8. FUTURE RESEARCH DIRECTIONS

According to the findings of the study, customer learning in SSTs is primarily self-directed. For this reason, the findings of this study indicate that additional research be conducted into customer "co-learning” in SSTs, with a particular emphasis on the motives of consumers for self-directed learning, which can be theoretically supported by self-directed learning theory. Furthermore, because the study found that the customer learning process is enhanced by the customer experience, researchers can investigate how the customer learning process can be enhanced by the customer experience. Further, this study requests empirical researchers to validate the findings of this qualitative investigation that identified consumer co-learning in SSTs. This research also looked at common self-service technologies. However, results may differ slightly between different SST types, such as online-based SSTs, interactive kiosks, telephone-based SSTs, and so on. As a result, future researchers can consider specific SST types or conduct comparative analyses.

9. ACKNOWLEDGEMENT

The author would like to thank the anonymous reviewers for their excellent reviewer suggestions in completing this study.
10. REFERENCES


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