



Customer Cooperation and Organizational Support in the Adoption of Self-Service Technologies

B. S. Galdolage^{a*}

^a Department of Marketing Management, Faculty of Management Studies and Commerce, University of Sri Jayawardenepura, Sri Lanka.

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/JSRR/2022/v28i130494

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/85363>

Original Research Article

Received 20 January 2022
Accepted 25 March 2022
Published 26 March 2022

ABSTRACT

Traditional service encounters have been transformed by technological advancements into Self-Service Technologies (SSTs), in which customers are expected to perform services independently. Customer collaboration with SSTs and organizational support determine how quickly these technological interfaces are adopted. Since the existing literature does not adequately explain this phenomenon, this study explores customer cooperative behaviour at SSTs and investigate customer perceptions of organizations' support for SST adoption. Additionally, it seeks to distinguish distinct customer experiences based on customer cooperativeness and organization's support. To accomplish these research objectives, a qualitative approach was used, conducting semi-structured interviews with 25 SST users from a range of demographic backgrounds. The analysis was conducted using a thematic approach. This study identified five critical customer cooperative behaviours at SSTs: adhering to fundamental requirements, accepting terms and conditions, accepting responsibility, changing habits, and tolerating failures. Additionally, the study identified four distinct customer experiences based on the extent to which customers cooperate with SSTs and the organizational support they receive: Tired experience, Pleasant experience, Distressed experience, and Inoperative experience. The study contributes new knowledge by identifying consumer cooperative conduct in SSTs, a phenomenon that is rare in the previous literature, and contributing to the marketing theory by developing a typology to explain customer experience in SSTs based on customer cooperation and organizational assistance. Businesses can leverage this expertise to effectively foster consumer cooperation and deliver exceptional customer experiences through self-service technologies.

*Corresponding author: E-mail: sandamali@sjp.ac.lk;

Keywords: Customer cooperation; self-service technologies; organization support; customer experience.

1. INTRODUCTION

The arrival of new technology has caused business organizations to rethink their traditional ways of doing business [1]. This transformation has not been limited to the organizations' internal business procedures but has also extended to interfaces between the firm and its customers via self-service technologies [2, p.61]. It converts the traditional service encounters described as "*the dyadic interaction between a customer and service provider*" [3, p.87] that used to practice face-to-face interactions by service employees into self-service technologies. It alters the roles and responsibilities of the customers as well as the organization staff. Customers become active partners who generate the service on their own. Service providers become 'facilitators' providing resources and guidance required by customers for their collaborative service production process. SSTs are a result of technological advancement [4] and are now used in many businesses to perform tasks more efficiently and with fewer resources [5].

SSTs provide a wide variety of benefits to the customer. Foremost, it provides a convenience that customers had never experienced in traditional service premises [6]. Customers can use SSTs any time in the day, during 24 hours, without restricting to a few hours of service operations that take place at traditional service encounters. It reduces customers' dependence on others and provides greater freedom of work.

The adoption of SSTs requires many changes in consumer behavioural patterns. Though the provision of SSTs makes customers' lives easy, it is not sure that customers are cooperative with SSTs and ready for this change [7]. Since SSTs are becoming a trend in today's service context, customer cooperation in adopting SSTs become important. Similarly, everybody will not be equally confident in moving to SSTs. Therefore, organizations' support is also essential in promoting SST adoption. Currently, it is visible that some service organizations allocate their service employees for customer assistance at self-service outlets.

Though there has been a significant expansion in the practice of SSTs, academic research has not explored the potential for consumer collaboration with SSTs. Many researchers pointed out a lack

of scholarly work in the SST context as follows: a lack of research focus on technological interfaces [8], a dearth of research on the technology interface in service encounters [9,10], consumer assessments of self-service technology alternatives [1], co-creation of customer value in SSTs [11] and customer experience at SSTs [12,13]. Similarly, the introduction of SSTs does not guarantee customer acceptance because some customers are unwilling to adopt SSTs [14]. Customer cooperation becomes critical when introducing technology into the service experience. Thus, the purpose of this research is to explore customer cooperation and their evaluation of organizational support in SST adoption.

2. LITERATURE REVIEW

2.1 Self-Service Technologies

As Meuter, Ostrom [8] note, self-service represents a sea change in the service context, whereas technology-enabled service interactions are viewed as critical to service transactions. In today's service sector, the term 'market space,' rather than 'marketplace,' receives hyperbolic attention and is described as "*a virtual realm where products and services exist as digital information and can be delivered via information-based channels*" [15, p.14]. These market-space transactions include SSTs [8].

SSTs are defined as "*technologies, provided by an organization, specifically to enable customers to engage in self-service behaviors*" [11, p.862, 13, p.3]. Meuter, Ostrom [8, p.50] recognize SSTs as "*technological interfaces which enable customers to produce the service independent of direct service employee intervention*". SSTs have advanced the service encounter by enabling customers to conduct service operations through technological interfaces with little or no interaction from a firm representative [5, 12]. The critical component of service operations has turned out to be how the organizations oversee the interpersonal care has changed being substituted with an alternative option as; 'do it yourself' with the development of technological interfaces [16]. In the recent future, the technology-based service frontline experiences would be enabled through 'humanoid robots' confirming the 'automated social presence' in customer engagement [17].

An opportunity to consume or produce service or a component of the service would be provided by the self-service technologies to the customers via electronic platforms without direct interaction with the firm's employees [18]. A continuous change in the role of firms and customers could be observed with the advances in technology and shift in managerial mindsets where much focus is driven towards creating value, which is a criterion in being competitive in the market [19]. Self-service options have been recognized as an extreme by Bitner, Faranda [20, p.197] through which the customer produces a full service as a 'full participator' either with little interaction or support from the employees of an organization. Examples of self-service technologies may include automated hotel checkouts, automated airline ticketing, online banking, supermarket checkouts, self-scanning at retail shops, automated teller machines (ATM), self-service fuel pumps, and self-check-in at airports etc. [8]. More than half of all banking transactions now occur through Automated Teller Machines (ATMs), without a teller's assistance [8].

Many digital technologies offer rich information added with more interaction to customers in a highly personalized environment [21]. Technology-based services are turning out to be a key component in marketing at present [12] while a growth could be observed in the number of customers who create their own service outcome through technologies [8]. Without limiting themselves, customers are happy to support other customers using self-serving options that have made them called 'working customers' [22]. SSTs have now accompanied the performance of more non-routine and complex work compared to the routine and straightforward transactions performed through them at the initial stages. Inexperienced people have also been provided with the opportunity to perform very sophisticated tasks quickly with the effectively designed self-service technology [23].

2.2 Customer Experience in SSTs

The customer's experience with SSTs is unique due to their unique interactions with the technologies. Four distinct types of customer co-creation have been identified in virtual environments: usability experience, pragmatic experience, hedonic experience, and sociability experience [24]. The offer of information related to the products and underlying technologies is recognized as the pragmatic experience, whereas customers being given the opportunity

to perceive themselves as partners of the community is defined as sociability experience. The usability experience is ensured with quality in the offered computer-customer interactions, while hedonic experience is confirmed with the mental relaxation, pleasures, enjoyment and entertainment being provided [24]. The customer value co-creation experience has been explored by Dennis, Bourlakis [25] concerning online and offline retail shopping with the use of 'utilitarian' and 'hedonic' components revealing that there weren't any notable differences between traditional and online channels in relevance to co-creation experience. Zhang, Hu [26] described the online brand community's co-creative experience using three dimensions: social, informational, and emotional, and found positive correlations between customer engagement and social presence as well as co-creation.

Self-service has become more noticeable with technological innovations and reach the customer via personal computer terminals, mobile phones, and the internet [27, p.516]. A sense of empowerment sided with limitless opportunities in communicating, accessing and engaging with the technologies leading to the success of value creation [28]. According to Yu and Sangiorgi [29], customer value co-creation is facilitated through the assistance provided by the 'supporting tools', including the smart technologies that enable the application of an individual's own resources and skills in the process of value-creation. Payne, Storbacka [30] have declared that unique experiences with the organizations are created with self-service technologies. Because of the convergence of connectivity, network ubiquity, specialization, and open standards, all entities, including individuals, organizations, and households, now have the opportunity to do anything they could before with the current changes in information technology [31]. This enables the reduction of waste in time and effort in the process of value creation [32].

According to Sawhney, Verona [33], the internet is a growing platform that provides internet-based collaborative mechanisms for new product development, allowing customers to be more involved in product development. Businesses can take advantage of consumers' "innovative potential and knowledge" throughout the value chain thanks to the internet [24]. Sandström, Edvardsson [34] elaborated on the opportunities offered by websites by highlighting the value-in-

use of technology-based services as the new climax in service development.

'Smart offerings' comprising more frozen knowledge is the new perspective through which customer engagement with the service organization takes place at present [35]. This complements SSTs, that leverage the organization's employees' talents and expertise (operant resources) in a more collaborative manner with customers during the process of value co-creation. Hence, even the customers who possess low skills in performing their services are provided with confidence through well-developed SSTs [36]. Similarly, Payne, Storbacka [30, p.383] reveal the way in which opportunities to take part in activities such as 'trials, knowledge sharing, self-service etc are provided to the customers through the service encounters being 'action-supporting'.

2.3 Customers SST Adoption and Cooperation

The customer acceptance of technologies has been studied using established models such as Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) though they are not specifically in the context of SSTs [37]. According to TAM some factors notably 'perceived usefulness' and 'perceived ease-of-use' influence the decision on how and when an individual will use a new technology [38, p.277]. Venkatesh, Morris [39] proposed the UTAUT model comprising the four core variables of; social influence, performance expectancy, facilitating conditions, and effort expectancy with the four moderating variables of experience, the voluntariness of use, gender, and age in understanding the intention and actual use of a technology. Apart from the above-established models, the SST Attitude-Intention Model [40] reflects the impact of multiple attitudes of SSTs on the behavioral intention of customers in the selection of SSTs. Lee and Lyu [41] have revealed 'personal values' and 'consumer traits' as determinants of the intentions to use SSTs through attitudes. E-servicescape dimensions have been recognized by Wu, Quyen [42] to influence trust and consumer attitudes toward websites significantly.

Liljander, Gillberg [14] have found different technological readiness levels among the SST users and non-users. Lin and Hsieh [43] found that technological readiness influences customer

satisfaction and behavioral intentions in self-service technologies, whereas Lin and Hsieh [44] further complemented the prior findings. Further, the richness of the information and instructions in SSTs encourages customer choice of SSTs [45]. A negative effect of user's technology anxiety has been recognized to influence the use and evaluations of SSTs [46]. Wang, Barua [47] found that unwillingness to use SSTs and dissatisfaction is caused by the anxiety and lack of trust in an individual towards technology. A negative disposition towards SSTs may arise due to the need to interact with the service employees [1]. Lee [48] shows a negative relationship between the need for interaction with service employees and the intention to use self-service technologies. Similarly, Anton [49] recognizes an adverse effect of seeking more human interaction during the service encounter on the customer acceptance of SSTs.

According to Wang, Harris [50], there is a role of situational influences in the choice of SSTs, specifically in self-scanning at supermarket stores. Further, their findings revealed the perceived complexity of the task, the influence of companions, and perceived waiting time at the queue as the influential situational factors on the customer's choice among the interpersonal service and use of SSTs. Demoulin and Djelassi [51] further found that situational factors including basket size, time pressure, queue length at the SSTs, coupons, and staffed checkouts may have an influence on the actual use of SSTs. Galdolage [52] found nine primary factors that are significant in customer choice of SST kiosks and classified them into three conceptual domains as factors related to 'self-service technologies', 'individuals' and 'society'. In relevance to SST adoption, the experience of similar technology and habits has also been recognized as important [51]. Similarly, Wang, Harris [53] recognized the key determinant of SST usage as a prior habit, whereas Castro, Atkinson [4] argued on the fact that when the technology is new previous experience in using SSTs is vital.

Customer cooperation with SSTs become prominent in successful value creation [54]. McColl-Kennedy, Vargo [55] recognized cooperation as an activity in creating value in the healthcare context. In addition, Tommasetti, Troisi [56] also identified the significance of cooperative customer behavior, including 'responsible attitude' and 'compliance with basics'. Further, customer cooperation is viewed

in terms of 'tolerance' and 'responsible behavior' [57]. Ind and Coates [58] identified active customer participation with Organizations through the means of being cooperative and conscientious. Nevertheless, customer cooperation in adopting to SSTs has not been properly brought forward in the self-service technology context.

3. METHODOLOGY

Aligning with the research objective of exploring customer cooperation at self-service technologies, exploratory research was carried out with qualitative inquiries [59,60]. Non-availability of established research work in this context and the need for being familiar with the research context become the key reasons to choose a qualitative methodology. The study was conducted in North East of United Kingdom. The judgmental sampling technique was used in hiring participants for the study with the purpose of reaching information-rich cases [61]. A proper sample size for a qualitative study is attained when adequate answers to the research topic have been gathered [62]. Therefore, the sample size is rarely defined [63], as qualitative researchers are typically unclear about the level of theoretical saturation [64] or when further data collection would stop [65]. The sample size was limited to twenty-five respondents since it reached data saturation at that level [64-66]. To find out how probing works in practice, how long a typical interview takes and whether the interview covers all the information requested, two pilot interviews were conducted which helped to improve the interview protocol.

Semi-structured interviews were conducted using an interview guide to collect data [67], which generally range from 30 to 45 minutes per respondent. The interview protocol mainly includes opening comments, instructions for the respondent, interview questions, follow-up questions, and a closing statement. Information sheets also were provided with a research brief and the contact details of the researcher. The interviews were done in a natural (non-contrived) atmosphere [59], where the respondents felt comfortable. The interviews began with a brief introduction of the research, emphasizing the value and use of respondents' input. A formal consent sheet was produced before the interview to obtain the respondent's voluntary participation in the research.

With the permission of the respondents, the interviews were audio-recorded and later

transcribed into word documents. The thematic analysis approach was used following six; transcribing data, organising data, familiarizing with data, coding, generating themes and ensuring rigour to identify the final outcomes of the study [68, 69]. As the final step, the study attempted to build valid arguments for chosen themes comparing with the related literature [70].

4. RESULTS

4.1 Customer Cooperation with SSTs

This study outlines customer cooperation as "*adherence to the prerequisites and preparation for collaborative work.*" Accordingly, *conforming to basic requirements, accepting terms and conditions, taking responsibility, changing habits, and tolerating failures* were identified as five components of customer cooperation with SSTs. Furthermore, this study found that a lack of customer cooperation leads to service performance failures at SSTs.

Conforming to requirements: Conforming to requirements means meeting the basic conditions required for the customer to perform SST transactions. The majority of respondents state that having proof of identities, such as a permanent home address, phone numbers, national identity card numbers, email addresses, and owning bank accounts and credit/debit cards, are essential requirements for performing SST transactions. Some respondents point out the situations where they couldn't complete service transactions due to not confronting such basic conditions.

They (service providers) need to make sure if we use another person's cards or enter incorrect information. Have you aware of people who cheat on cards?. So, we need I have all of the evidence with us. Bank accounts, credit cards, email, and everything else that I produce are all my own personal property. It is acceptable to request that we verify them. Otherwise, fraud may occur. (45-year-old male)

It occurred while I was on vacation in a different country. I had planned to take a taxi. These places were completely unknown to me before I came across them. I tried to hire it via online. It was requested that I provide my phone number, a legal requirement had to be met. I could only use WhatsApp. They refused and were unable to accept that number. (A 36-year-old male)

Accepting terms and conditions: When it comes to self-service technologies, accepting terms and conditions is recognized as a must. The vast majority of online self-service options are inaccessible unless the user agrees to the terms and conditions. According to the study's findings, many people accept these terms and conditions without fully understanding them. As they show, sometimes these terms and conditions are given in separate documents with lengthy legal terms such that it is not quickly accessible and understandable to the reader. Many respondents stated that they agree to the terms and conditions because they cannot proceed without them. In contrast, only a few respondents indicated that they read them before proceeding with the transactions.

Obviously, from my personal perspective, there are times when it (term and conditions) is written somewhere, even if we are unaware of it, so we must carefully read and understand what is being said, and then accept the terms and conditions. Most of the time, it keeps you standing. (50-year-old male)

Like me, I'm sure you all agreed to these terms without reading them properly. I'm not sure if anybody read out it... Actually, it's hard to read all and understand them. We simply agree to them since we can't proceed without doing so. However, in the end, we don't know for what we consented to. When something goes wrong, they (company) will question us, asking haven't you seen this condition before?. Since it was all our fault, we have no action to take. (Male, 38 years old)

Taking responsibility:As respondents pointed out, the outcomes of SST transactions are entirely self-generated. As a result, attitudes toward taking responsibility for one's own service transactions have emerged as an important cooperative behavior in SSTs. However, some respondents saw it as an unnecessary burden and attempted to have service transactions such as money deposits in banks handled by service staff. The younger generation, in particular, is recognized as cooperating with SSTs in order to gain responsibility for their actions. It was recognized as being contingent on one's comfort with SSTs and knowledge of preventing and recovering from errors that frequently occur in SST settings. Some of the respondents were aware of the various mechanisms that can be used to prevent fraud in online transactions,

which ultimately leads to them being more responsible when it comes to SST purchases.

Once again, we must have faith in ourselves to take responsibility because it is a result of my involvement. My experience has taught me that if we do it correctly, it literally works. Anyway, don't worry if you get something wrong. it is possible to change it or choose another option in the future. (Female, 25 years old)

I can't tell for sure if I've done everything correctly until the train ticket arrives or something is confirmed. My mobile train ticket booking was delayed because their system hadn't been updated. This was not sent to me. Consequently, I had to cancel it and buy another one instead. I had to wait a few days for my refund to be credited to my account. I'm a little concerned about accepting that accountability. It is preferable for me to go to the station and take it, then I don't want to wait and see. (Male, 58 years old)

Changing habits: Customers' willingness to move from traditional service encounters managed by service employees to technology-based service encounters operated independently has been identified as an important cooperative behavior. According to the study, the younger generation is recognized as more cooperative and willing to change their lifestyles and preferences toward adopting SSTs than the older age groups. They recognized SSTs as a social trend with which acceptance is expected, as well as a sign of societal development. However, some respondents stated that they prefer traditional service encounters managed by employees, claiming that SSTs are a threat to society because they reduce human relationships and, more importantly, job opportunities in the future.

Previously, I did not use them. Using self-service checkouts felt strange to me. However, after using it once, I realized there is nothing special about it other than doing a simple task. It is the trend today. We have to move with these developments. Now I'm part of the craze. (Male, 38 years old).

Technology evolves on a daily basis. I still have a lot to learn. Actually, I'm not interested in learning or doing anything new. This is more than enough for me. See how many people lose their jobs because of machines. What happens to

relationships. I don't value these kinds of changes. (Female, 67 years old).

Tolerating failures: The study recognized that 'Tolerating failures' as an essential cooperative behavior of SST users when engaging in service transactions with self-service technologies, mainly when there are delays or failures in service. According to the findings, unexpected service delays and failures cause people to become stressed and irritated.

What you require is patience... Have you ever seen someone become perplexed by a machine? The machine instructs you to do many things. It says scan your items, scan your card and point card, get your balance so on. Then, people look everywhere and see where I have put my card? All pockets and handbags are being checked. Certain users are becoming irritated with the SSTs. In my personal opinion, 'Patience' is critical when work with machines. (45-year-old female)

When you use it, I believe than any happy moments, there is more stress. Just because you do something on your own... Quite often, no one is dealing with you. If it takes longer than expected, it can be extremely inconvenient. It's extremely stressful. (Male, 48 years old)

The Fig. 1 summarizes five key forms of cooperative customer behavior at SSTs.

4.2 Customer Evaluation of Organizational Support

The study also sought to comprehend customer evaluations of organizations' support for SST adoption. Respondents have different views on the support they receive in using SSTs and categorized as 'supportive' and not-supportive'.

Supportive: Though customers are expected to be independent at SSTs, they require the assistance of service employees, particularly during the early adoption period and when they encounter unexpected service failures. Many respondents were pleased with the assistance received by service providers when they confronted problems or service failures in SSTs.

"I was initially apprehensive about using self-service machines. However, they (service personnel) are extremely attentive. They're always hanging around the premises, as I've noticed. If you have any problems, they will come to your aid right away. It's perfectly fine if you're new; they'll assist you". (Female, 26 years old).

Not Supportive: However, some respondents were dissatisfied with the help received by organization staff. Respondents described some service organizations as irresponsible, at the very least without responding to a customer call. Others criticized automated voice recordings given as responses to customer inquiries, stating that they are incredibly irritating.



Fig. 1. Elements of customer cooperation with SSTs

“These machines irritate me at times. Because we contact them (staff) whenever there is a problem with the machines. They play another pre-recorded message. It makes no difference. We require a personal response and immediate resolution to the problem” (Male, 45-years old)

4.3 Customer Experience Based on Their Cooperation and Organizations' Support

The study attempted to recognize differences in customer experiences based on customer cooperation with SSTs and organizational support received by them during the early adoption stage of the SSTs and when confronting service failures. Accordingly, when the customer cooperates with SSTs and the organization's staff becomes supportive, the customer has a **"pleasant experience,"** positively impacting SST use. Customers who have a pleasant SST experience appreciate SSTs, stating that they provide an excellent opportunity to improve their quality of life. They shared additional positive experiences such as greater convenience associated with SSTs that they would not have had in more traditional service encounters. Further, they value high performance and the personalized environment provided by SSTs. They are satisfied with the assistance provided by the organizations' service staff when they require help with SST transactions.

Usually, I'm making my way through self-checkout lanes. Using technologies is my passion. I am extremely pleased with the service staff. At least few staff members were always near the machines. When it says 'beep,' they arrive and resolve the problem. I've asked for their help numerous times when I couldn't do it on my own. I enjoy working with self-service checkouts at supermarkets, since service staff is watching how we do and help us (Female, 35-years old).

In contrast, when both customer cooperation and organizational support are low, the customer has a **"distressed experience,"** which negatively impacts their adoption process. These customers had negative feelings about SSTs and saw them as a risk. Some of them pointed out that it is the responsibility of the service staff to provide such services because they are compensated for doing so. They were hesitant to share their data with SSTs, especially on online platforms. They are dissatisfied with the assistance provided by

service personnel. They blame the service organization and staff for service failures and delays rather than accepting responsibility for these transactions.

“I dislike working with machines. I'm not sure what it's for. I don't like giving machines my personal information. It strikes me as a risk. The other issue is that there is no one to assist you if something goes wrong. So, what do you do at that point? It's always a source of concern for me” (Male, 54 years old).

When a customer is cooperative but does not receive adequate support from the service staff, they have a **"tired experience."** They value SSTs and are willing to use them because of their superior benefits. They do, however, share their unpleasant experience as a result of not receiving necessary support from service staff, particularly when they encounter problems with service performance.

“Working with machines makes me sad and tired. It makes no difference how good you are. The machines are untrustworthy. It could be an internet, network, or server issue. Employees will assist you if you meet them. When you work with machines, however, no one looks into your situation. When you try to contact them, you will receive voice recordings in response. I'd had enough of that service experience” (Female, 50 years old)

High	Customer Cooperation	Tired Experience	Pleasant Experience
		Distressed Experience	Inoperative Experience
Low		Low	High
		Organization Support	

Fig. 2. Customer SST experience (customer cooperation Vs organizations support)

According to the study, even when the organization provides necessary assistance, some customers may become uncooperative, resulting in an **"inoperative experience."** Some respondents were identified as unwilling to accept SSTs, believing that employees should

perform these services. Despite the fact that service providers are willing to assist, these customers do not wish to follow this trend.

“Why should I bother? They are being paid to do this for me. Why should I bear the brunt of the blame if something goes wrong? I usually go to the cashier and do it that way” (Female, 60 years old).

This customer classification is depicted in Fig. 2.

5. DISCUSSION

According to this study, five components of cooperation in SSTs are 'conforming to basic requirements,' 'accepting terms and conditions,' 'taking responsibility,' 'changing habits,' and 'tolerating failures.' Having one's own bank accounts, ability of providing verifications of identification (permanent address, telephone numbers, email addresses etc), and the having credit cards/debit cards/accepted coins were identified as the fundamental requirements for SST performance, though the requirements may vary depending on the type of SST. 'Terms and conditions' are recognized to be used in many of the transactions performed by SSTs, especially on the internet-based and online self-services and some interactive kiosks' etc. As pointed out by the respondents either the terms and conditions are hidden or for the sake of continuing with the service transaction the customers agree to them without carefully reading and understanding them. Hence, it was highlighted by the respondents that such situations may have an adverse effect which would result in failures. Another cooperative behavior of customers which was recognized is taking responsibility for the successes or failures in the transaction made through SSTs as it is a self-generated service outcome. Interpersonal interactions are more preferred by the older people as they fear taking responsibility for SST performance. The shift of the habits from having interactions with physical service encounters to using self service technologies was also recognized as customers' cooperative behavior and viewed as higher among younger generations. Finally, tolerating failures in SSTs is also recognized as customer cooperative behavior. Nevertheless, some people revealed the fact that they are feeling stressed and nervous regarding SST failures.

The findings of the study are complementing with McColl-Kennedy, Vargo [55] where they

recognized cooperation as an activity in creating value highlighting 'compliance with basics', 'changing ways of doing things', and 'accepting information from the service provider,' though it was not specifically in relation to self service technologies. In addition, Tommasetti, Troisi [56] identified 'responsible attitude' and 'compliance with basics' as two key variables in terms of cooperation confirming the presented view by McColl-Kennedy, Vargo [55] while recognizing them as 'change management' and 'pragmatic adaptation'. Further, 'tolerance' has been revealed to be one of the elements of 'customer citizenship behavior' whereas 'responsible behavior' has been recognized under 'customer participation behavior in value co-creation' which is another similarity to the study [57]. Furthermore, Ind and Coates [58] identified customer active participation with organizations through the means of being supportive and attentive and providing suggestions [71] in the co-creation process. In addition, Bendapudi and Leone [72] and Harris, Lois [73] have recognized that there is a low potential for blaming the service organization in terms of self-service technologies because the customer is having self-responsibility in the transaction they perform.

Kelly, Lawlor [74] analyze the consumers' role of value co-creation in self-service technologies as a 'convenience seeker, motivated worker, judge, enforced worker, unskilled worker, and support provider,' which aligns with the customer classification in this study. Based on the dominance of the party, they divide consumer positions into two categories: 'voluntary roles' and 'imposed roles.' An 'enforced worker' is defined as someone who is overly managed by a service provider and is 'forced' to execute certain duties in SSTs against their will, resulting in failures, unhappiness, and plans to switch. As a result, customer experiences in regard to various customer roles might be either beneficial or negative. 'Pragmatic experience, sociability experience, usability experience, and hedonic experience' are four forms of consumer co-creation experiences in virtual environments that have been discussed [24]. Dennis, Bourlakis [25] used 'hedonic' and 'utilitarian' features to investigate consumer experience in online and offline retail buying. Zhang, Hu [26] used three categories to characterize consumer experience in online brand communities: social support (informational and emotional support), social presence, and flow, and discovered favorable relationships between experience and customer engagement.

6. CONCLUSION

In summary, this study revealed five essential customer cooperative behaviors at SSTs: adhering to fundamental requirements, accepting terms and conditions, accepting responsibility, changing habits, and tolerating failures. Customers had both positive and negative experiences with the organization's support for adopting SSTs. Based on the customer evaluation on their cooperation and organization's support in SST adoption, the study classified four distinct customer experiences: Tired experience, Pleasant experience, Distressed experience, and Inoperative experience.

7. THEORETICAL CONTRIBUTIONS

This study contributes to the body of knowledge on self-service technologies, customer collaboration, and experience. Additionally, it fills a void in the literature by identifying five distinct types of customer cooperative behaviors associated with SST adoption: conforming to requirements, accepting terms and conditions, accepting responsibility, changing habits, and tolerating failures. Additionally, this study investigates how customers perceive organizations' support for SST adoption. The study identified diverse customer experiences and developed a typology to explain customer experience at SSTs based on customer evaluations of their cooperativeness and organizations' support. Four distinct customer experience categories have been identified: Tired experience, Pleasant experience, Distressed experience, and Inoperative experience. Due to the fact that this study adds new knowledge to the theory, the findings fall into the category of 'revelatory' in terms of originality [75].

8. PRACTICAL CONTRIBUTIONS

The cooperative behaviors of customers identified in this study provide insight for business organizations on how to increase customer cooperation toward the adoption of technologically based self-service solutions, which in turn enables service providers to reduce crowding and the cost of maintaining traditional service encounters. Additionally, some respondents express dissatisfaction with the organizational support they receive, particularly when dealing with SST-related solutions. They expressed their dissatisfaction via voice recorded messages provided by service providers in lieu of

attending to SST failures personally. Thus, the study recommends that service providers establish customer support centers linked to SST-based services and offer personalized solutions to customers who encounter service/process failures in SSTs. As the study discovered, service providers can ensure that customers have a 'pleasant experience' by providing necessary customer support.

9. FUTURE RESEARCH DIRECTIONS

Following a qualitative investigation that identified consumer cooperation in SSTs, this study seeks to validate the findings through empirical research. Additionally, by identifying four distinct customer experiences, this study enables future researchers to focus on customer experience disparities, most notably how customers integrate SST failures and recovery efforts. Additionally, this study evaluated common self-service technologies. However, results may vary slightly between different types of SSTs, including online-based SSTs, interactive kiosks, and telephone-based SSTs. As a result, future researchers can focus on specific SST types or conduct comparative analyses.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Dabholkar PA. Consumer evaluations of new technology-based self-service options: An investigation of alternative models of service quality. *International Journal of Research in Marketing*. 1996;13(1):29-51.
2. Meuter ML, et al. Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies. *Journal of Marketing*. 2005;69(2):61-83.
3. Surprenant CF, Solomon MR. Predictability and personalization in the service encounter. *the Journal of Marketing*. 1987;86-96.

4. Castro D, Atkinson RD, Ezell SJ. Embracing the self-service economy; 2010.
5. Meuter ML, Bitner MJ. Self-service technologies: Extending service frameworks and identifying issues for research. in American Marketing Association. Conference Proceedings; 1998. American Marketing Association.
6. Galdolage BS. Interplay between performance and convenience in customer choice of self-service technologies. *Current Journal of Applied Science and Technology*. 2021;80-91.
7. Galdolage BS. Barriers for entering the digital world: Exploring customer value co-destruction in self-service technologies. *FIIB Business Review*. 2021;23197145211022016.
8. Meuter ML, et al. Self-service technologies: understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*. 2000;64(3):50-64.
9. Bitner MJ, Brown SW, Meuter ML. Technology infusion in service encounters. *Journal of the Academy of marketing Science*. 2000;28(1):138-149.
10. Parasuraman A. Technology Readiness Index (TRI). *Journal of Service Research*. 2000;2(4):307-320.
11. Hilton T, et al. Adopting self-service technology to do more with less. *Journal of Services Marketing*. 2013;27(1):3-12.
12. Verhoef PC, et al. Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*. 2009;85(1):31-41.
13. Hilton T, Hughes T. Co-production and self-service: The application of Service-Dominant Logic. *Journal of Marketing Management*, 2013;29(7-8):861-881.
14. Liljander V, et al. Technology readiness and the evaluation and adoption of self-service technologies. *Journal of Retailing and Consumer Services*. 2006;13(3):177-191.
15. Rayport JF, Sviokla JJ. Exploiting the virtual value chain, in *Creating value in the network economy*. Harvard Business School Press. 1999;35-51.
16. Galdolage BS, Do It Yourself: Customer self-directed learning in self-service technologies. *Sri Lanka Journal of Management Studies*. 2020;02(2).
17. van Doorn J, et al. Domo Arigato Mr. Roboto: Emergence of automated social presence in organizational frontlines and customers' service experiences. *Journal of Service Research*. 2017;20(1):43-58.
18. Galdolage BS. Customers' role in co-creating value at self-service technologies: From role theory perspective. *Sri Lanka Journal of Marketing*. 2021;7(1).
19. Saarijärvi H, Kannan PK, Kuusela H. Value co-creation: theoretical approaches and practical implications. *European Business Review*. 2013;25(1):6-19.
20. Bitner M, et al. Customer contributions and roles in service delivery. *International journal of service industry management*. 1997;8(3):193-205.
21. Parise S, Guinan PJ, Kafka R. Solving the crisis of immediacy: How digital technology can transform the customer experience. *Business Horizons*. 2016;59(4):411-420.
22. Reider K, Voss G. The working customer - an emerging new type of consumer. *Psychology of Everyday Activity*. 2010;3(2):2-10.
23. Quinn JB, Doorley TL, Paquette PC. Beyond products: Services-based strategy. *Harvard Business Review*. 1990;68(2):64-68.
24. Kohler T, et al. Co-creation in virtual worlds: The design of the user experience. *MIS Quarterly*. 2011;35(3):773-788.
25. Dennis C, et al. Value co-creation through multiple shopping channels: The interconnections with social exclusion and well-being. *International Journal of Electronic Commerce*. 2017;21(4): 517-547.
26. Zhang ML, et al. Understanding relationships among customer experience, engagement, and word-of-mouth intention on online brand communities The perspective of service ecosystem. *Internet Research*. 2017;27(4):839-857.
27. Gebauer H, Johnson M, Enquist B. Value co-creation as a determinant of success in public transport services. *Managing Service Quality: An International Journal*. 2010;20(6):511-530.
28. Hoyer WD, et al. Consumer Cocreation in new product development. *Journal of Service Research*. 2010;13(3):283-296.
29. Yu E, Sangiorgi D. Service design as an approach to implement the value cocreation perspective in new service development. *Journal of Service Research*. 2017;1094670517709356.
30. Payne AF, Storbacka K, Frow P. Managing the co-creation of value. *Journal of the*

- Academy of Marketing Science. 2008;36(1):83-96.
31. Lusch RF, Vargo SL, O'Brien M. Competing through service: Insights from service-dominant logic. *Journal of Retailing*. 2007;83(1):5-18.
 32. Galdolage BS. Customer value co-creation intention, practices, co-destruction and experience in self service technologies. *Journal of Scientific Research and Reports*. 2021;12-26.
 33. Sawhney M, Verona G, Prandelli E. Collaborating to create: The Internet as a platform for customer engagement in product innovation. *Journal of Interactive Marketing*. 2005;19(4):4-17.
 34. Sandström S, et al. Value in use through service experience. *Managing Service Quality: An International Journal*. 2008;18(2):112-126.
 35. Etgar M. A descriptive model of the consumer co-production process. *Journal of the Academy of Marketing Science*. 2008;36(1):97-108.
 36. Michel S, Brown SW, Gallan AS. Service-logic innovations: how to innovate customers, not products. *California Management Review*. 2008;50(3):49-65.
 37. Blut M, Wang C, Schoefer K. Factors influencing the acceptance of self-service technologies: A meta-analysis. *Journal of Service Research*. 2016;19(4):396-416.
 38. Venkatesh V, Bala H. Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*. 2008;39(2):273-315.
 39. Venkatesh V et al. User acceptance of information technology: Toward a unified view. *MIS quarterly*, 2003;425-478.
 40. Curran JM, Meuter ML, Surprenant CF. Intentions to use self-service technologies: a confluence of multiple attitudes. *Journal of Service Research*. 2003;5(3):209-224.
 41. Lee HJ, Lyu J. Personal values as determinants of intentions to use self-service technology in retailing. *Computers in Human Behavior*, 2016;60(1):322-332.
 42. Wu WY, Quyen PTP, Rivas AAA. How e-servicescapes affect customer online shopping intention: the moderating effects of gender and online purchasing experience. *Information Systems and E-Business Management*. 2017;15(3):689-715.
 43. Hsieh CT. Implementing self-service technology to gain competitive advantages. *Communications of the IIMA*. 2005;5(1):9.
 44. Lin JSC, Hsieh PL. The influence of technology readiness on satisfaction and behavioral intentions toward self-service technologies. *Computers in Human Behavior*. 2007;23(3):1597-1615.
 45. Galdolage BS. Prominence of information richness in accepting online based self-service technologies. *Archives of Current Research International*. 2021;31-42.
 46. Meuter ML, et al. The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research*. 2003;56(11):899-906.
 47. Wang AM, Barua Z, Uddin MA. The impact of technology trust and technology anxiety on customer satisfaction with self-service technologies. *Proceedings of the 13th International Conference on Innovation and Management, Vols I & II*, ed. R. Yusof, K. Kaminishi, and W. Amin. 2016;258-263.
 48. Lee HJ. Personality determinants of need for interaction with a retail employee and its impact on self-service technology (SST) usage intentions. *Journal of Research in Interactive Marketing*. 2017;11(3):214-231.
 49. Anton J. The past, present and future of customer access centers. *International Journal of Service Industry Management*. 2000;11(2):120-130.
 50. Wang C, Harris J, Patterson PG. Customer choice of self-service technology: The roles of situational influences and past experience. *Journal of Service Management*, 2012;23(1):54-78.
 51. Demoulin NTM, Djelassi S. An integrated model of self-service technology (SST) usage in a retail context. *International Journal of Retail & Distribution Management*. 2016;44(5):540-559.
 52. Galdolage BS. Customer choice of self-service kiosks in service transactions. *South Asian Journal of Marketing*. 2020;1(2):98-137.
 53. Wang C, Harris J, Patterson PG. Modeling the habit of self-service technology usage. *Australian Journal of Management*. 2017;42(3):462-481.
 54. Galdolage BS. Value co-creation intention, practices and experience in self-service technologies. *Business School, University of Hull: Hull*. 2018;405.
 55. McColl-Kennedy JR, et al. Health care customer value cocreation practice styles.

- Journal of Service Research. 2012;15(4):370-389.
56. Tommasetti A, Troisi O, Vesce M. Customer value co-creation: A conceptual measurement model in a Service Dominant Logic perspective, in Naples Forum on Service; 2015: Naples.
 57. Yi Y, Gong T. Customer value co-creation behavior: Scale development and validation. Journal of Business Research. 2013;66(9):1279-1284.
 58. Ind N, Coates N. The meanings of co-creation. European Business Review. 2013;25(1):86-95.
 59. Sekaran U, Bougie R. Research methods for business: A skill building approach. Wiley; 2016.
 60. Malhotra NK, Birks DF. Marketing research: An Applied approach. Prentice Hall/Financial Times; 2007.
 61. Abrams LS. Sampling 'hard to reach' populations in qualitative research. Qualitative Social Work. 2010;9(4):536-550.
 62. Marshall MN. Sampling for qualitative research. Family Practice. 1996;13(6):522-526.
 63. Robinson OC. Sampling in interview-based qualitative research: A theoretical and practical guide. Qualitative Research in Psychology. 2014;11(1):25-41.
 64. Silverman D. Doing Qualitative research. SAGE Publications; 2010.
 65. Lincoln YS, Guba EG. Naturalistic inquiry. SAGE Publications; 1985.
 66. Palinkas LA, et al. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. Administration and Policy in Mental Health. 2015;42(5):533-544.
 67. Rowley J. Conducting research interviews. Management Research Review. 2012;35(3/4):260-271.
 68. Joffe H. Thematic analysis, in qualitative research methods in mental health and psychotherapy. John Wiley & Sons, Ltd. 2011;209-223.
 69. Lacey A, Luff D. Qualitative research analysis. The NIHR RDS for the East Midlands / Yorkshire & the Humber; 2009.
 70. Aronson J. A pragmatic view of thematic analysis. The Qualitative Report. 1995;02(01):1-3.
 71. Bettencourt LA. Customer voluntary performance: Customers as partners in service delivery. Journal of Retailing. 1997;73(3):383-406.
 72. Bendapudi N, Leone RP. Psychological implications of customer participation in co-production. Journal of Marketing. 2003;67(1):14-28.
 73. Harris K, Lois AM, Kenneth LB. Online service failure, consumer attributions and expectations. Journal of Services Marketing. 2006;20(7):453-458.
 74. Kelly P, Lawlor J, Mulvey M. Customer roles in self-service technology encounters in a tourism context. Journal of Travel & Tourism Marketing. 2017;34(2):222-238.
 75. Corley KG, Gioia DA. Building theory about theory building: What constitutes a theoretical contribution? Academy of Management Review. 2011;36(1):12-32.

© 2022 Galdolage; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

*The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/85363>*