

Actor's Expedience for Value Co-Creation in Learning Service Systems at Higher Education Institutions

***Farhan Azmat Mir**

Institute of Management Sciences, Bahauddin Zakariya University, PhD Scholar, University of Management & Technology, Lahore

Abdul Rasheed Kausar

University of Management & Technology, Lahore.

Naveda Kitchlew

University of Management & Technology, Lahore.

Ahmad Nabeel

Bond University, Australia

***Email of the corresponding author:** farhanmir@bzu.edu.pk

ABSTRACT

Service Dominant (S-D) logic is now considered as a trans-disciplinary theoretical contribution that warrants investigation of research interventions in the fields of management and OB. Taking into account the importance of active participation of multiple actors in the value co-creation ventures, this paper attempts to contribute towards mid-range theoretical development in the field of service science and management from a multidisciplinary frame. Adopting the service system's view, the term "expedience" is proposed that accounts for the actor's readiness as an essential ingredient for value co-creation in learning service systems. Role of social and institutional influences for value co-creation in the actor's expedience phase is also examined; in particular, with the help of a generic process-based framework that comprises of key elements related to actor's development and influence of service climate on value co-creation processes. Multiple qualitative case studies were used to explore rich experiences of actors during instances of service interactions in higher education institutions and empirical findings are generated from 37 in-depth interviews, observations and web page analysis. Results confirmed that sustainable value co-creation requires interplay of social and technological dimensions; where, educational institutions need to develop a service climate for speeding up the actor's expedience. Implications for service firms offering digital solutions are discussed at later stages of the paper to examine potential of advancing avenues for service OB.

Keywords: Value Co-creation, Multi-Actor Service Systems, Expedience, Service Climate, LMS, Higher Education Institutions

To cite this article: Mir, F.A., Kausar, A.R., Kitchlew, N. & Nabeel, A. (2022). Actor's Expedience for Value Co-Creation in Learning Service Systems at Higher Education Institutions. Competitive Social Sciences Research Journal (CSSRJ), 3(1), 228-240.

INTRODUCTION

Value co-creation is classified as an alternative perspective for modern firms that seek to capitalize on collaborative effort from the internal and external stakeholders (Ford & Bowen, 2008; Giuseppe, Scott, Marcello, & Giacomo, 2022; Gummesson, Mele, Polese, Galvagno, & Dalli, 2014b). Efforts to conceptualize the process of value co-creation continue to gain momentum among researchers (Buhalis & Sinarta, 2019; Dolan, Seo, & Kemper, 2019; Priharsari, Abedin, & Mastio, 2020; Sebastiani & Montagnini, 2020; Yan & Fang, 2020; Yoon & Lee, 2019) as empirical studies emerged within variant contexts not limited to tourism, hospitality, manufacturing, software development and many more (Gummesson et al., 2014b; Saha, Mani, & Goyal, 2020; Vargo & Lusch, 2017).

Many value co-creation initiatives tend to fail as these do focus on limited aspects of the firm's offerings, neither catering the need for greater involvement of the internal actors nor building capacity of external stakeholders including customers (Polese et al., 2017; Waseem, Biggemann, & Garry, 2018; Zhang, Lu, Torres, & Chen, 2018). Many firms, during co-creation initiatives, are unable to modify routines, norms and associated value in order to build a service climate for value co-creation (Lintula, Tuunanen, & Salo, 2017). Although a refreshed perspective of re-examining modern firms is advocated but many firms find it hard to prepare their actors for this continuous habit of creating value for themselves alongside creating value for others (Corsaro, 2019; Hein et al., 2019). It is, therefore, important to empirically examine and evaluate value co-creation initiatives to provide better conceptualization of value co-creation process; especially, the way service climate may help firms in engaging and facilitating service interactions between actors (Blaschke, Riss, Haki, & Aier, 2019; Polese et al., 2017).

From a service perspective, value is expected through realization from integration of resources within a network of service propositions (Chandler & Lusch, 2015b; Vargo & Akaka, 2012). In this attempt, therefore, service system's approach is used to examine value co-creation (Maglio & Spohrer, 2008; Maglio, Vargo, Caswell, & Spohrer, 2009; Mir, Kauser, Kitchlew, & Nabeel, 2021), which advocates a systemic view of processes (Barile, Lusch, Reynoso, Saviano, & Spohrer, 2016; Wieland, Polese, Vargo, & Lusch, 2012). This is in line with the research calls (Akaka Melissa & Vargo Stephen, 2015; Åkesson & Edvardsson, 2018) that warrant an examination of the value co-creation process and roles of entities within service systems. Service system approach emphasizes on the development of service systems that connects with each other through shared value and, hence, are best suited to co-create (Akaka Melissa & Vargo Stephen, 2015; Chandler & Lusch, 2015a). It is also central to discern that value co-creation, as proposed by Vargo and Lusch (2012), genuinely occurs not in dyadic relationships rather constantly occur in an actor-to-actor (A-A) value networks (Alexander & Jaakkola, 2011; Vargo & Lusch, 2011, 2012; Yan & Fang, 2020). This implies that multiple actors are seeking mutual benefits i.e. expected value is realized in a network of actors linked through multiple value propositions (Vargo & Lusch, 2016).

Why this paper classifies certain firms as "service firm" and not others? The answer lies in the examination of several aspects that differentiate a "Goods Dominant" approach adopted by traditional firms as compared to firms that follow a "Service Dominant" perspective (Vargo & Lusch, 2008, 2014, 2015; Vargo & Lusch, 2016). There is now a strong opinion among authors (Vargo & Akaka, 2009; Wilden, Akaka, Karpen, & Hohberger, 2017) that this shift from goods dominant to service orientation is not revolutionary in nature rather it

is an evolutionary shift i.e. firms are modifying themselves to co-create value with its customers (Grönroos, 2011; Prahalad & Ramaswamy, 2004a). Physical goods, in this novel perspective, no longer represent the whole value rather products/services are just a carrier for service propositions (Vargo & Lusch, 2008). Based on the essence of S-D logic (Vargo & Lusch, 2014), a successful service-oriented firm needs to consider the overall value estimation differently than G-D logic and place greater emphasis on operant resources (knowledge and skills and relationships) as compared to tangible resources (Vargo, Maglio, & Akaka, 2008). It is highly likely that in their transition to build on the new philosophy of S-D logic, these firms may tend to miss the important ingredient i.e., preparing all actors to actively participate in the process. Higher education institutions, classified as service firms, present a network of involved actors who are continuously engaged in educational encounters to generate sustainable performance (Sugino, Idei, Kimita, & Shimomura, 2017).

A synthesis approach is used in this attempt as concepts of value co-creation through the lens of S-D logic are integrated within the area of management and OB; such developments is expected to provide theoretical extension to functional area of organizational behavior (OB) – we may be laying down the corner stones of an emerging field like “Service OB” as advocated by Ford and Bowen (2008). It is believed that this conceptual development will open doors for ventures in the field of management and OB (Ford & Bowen, 2008); as to date very few (Lambert & Enz, 2012; Neghina, Caniëls, Bloemer, & van Birgelen, 2015; Payne, Storbacka, & Frow, 2008; Storbacka, 2012; Storbacka, Brodie, Böhmman, Maglio, & Nenonen, 2016) attempts have focused on value co-creation in the context of challenges and implication in the field of management. This attempt addresses the literature gap by offering a generic framework of actor’s speedy inclination for value co-creation. In our case studies multiple actors including students are actually required to actively contribute in value co-creation within higher education institutions and become the most important source of staging a perfect and distinctive academic experience.

LITERATURE REVIEW

Value co-creation is now recognized as a popular theme in social science research (Alqayed, Foroudi, Kooli, Foroudi, & Dennis, 2022; Priharsari et al., 2020; Sebastiani & Montagnini, 2020; Tari Kasnakoğlu & Mercan, 2020). The value creation process occurs when the internal or external stakeholders do perform a series of activities to achieve a desired outcome (Takahashi, 2022; Brodie, 2019; Payne et al., 2008). Thus, value is co-created when resources are applied by involved actors to achieve mutual benefits (Sugino, Idei, Kimita, & Shimomura, 2017). Focus on both internal and external resources for value co-creation requires a refreshed point of view within the field of management (Caputo, Garcia-Perez, Cillo, & Giacosa, 2019; Shahzad & Ishaque, 2021); which partially discusses in detail the role of employees in serving customers and the overall effectiveness of the organizations through development of various HR functions. It is the area of actor development for value co-creation (O’hern & Rindfleisch, 2010; Storbacka et al., 2016; Svensson & Grönroos, 2008) that is mostly neglected as most of the external actors like customers are classified as external element. It is, however, now important to revise the scope of many management fields in the light of service dominant logic and may bring on new yet challenges for practitioners (Storbacka et al., 2016). It will not only be about hiring, training, rewarding and retaining employees for co-creating experiences but also about these important OB activities linked to customers as they will be active partners in the value co-creating process.

Application of systems and networking theories to explain value co-creation in social sciences is now very well documented (Vargo & Akaka, 2012; Vargo et al., 2008; Wieland et al., 2012). It is advocated that systemic principles of service science can help apprehend and enable all kinds of value cocreation ventures (Spohrer & Maglio, 2008; Vargo et al., 2008). Further research is needed to address value creation in service systems that offer services not for a client, but for a value network, taking into account the interactions among multiple actors. Service Systems are classified as the unit of application of S-D Logic (Vargo & Akaka, 2009); which provides a useful mechanism to explain the subtleties of service interactions between various actors. All entities within service systems are basically working for mutual benefits; where, service is distinct as “the application of specialized competences (operant resources: knowledge and skills) through deeds, processes, and performances for the benefit of another entity, or the entity itself” (Vargo & Lusch, 2008). Within this perspective, service is viewed as a main concept in S-D logic that explains why social, economic and digital actors volunteer their resources for mutual benefits.

Gummesson, Lusch, and Vargo (2010) have emphasized the importance of a multidisciplinary approach for managing the service encounters; where, people from multiple departments need to collaborate with customers to create a memorable service experience. When observed from the lens of service systems, it is very obvious that service encounters are likely to occur in a network (Chandler Jennifer & Chen, 2016); where, actors tend to engage each other through value propositions and value realization results in generation of value at various nodes of the ecosystem (Maglio et al., 2009). Many successful firms tend to formulate cross functional teams to stage a comprehensive experience for their customers, yet, most of these customers have never worked in such team-based environments and lack team skills necessary to collaborate with other members.

In the case of customer, as an active node in the overall ecosystem, it is important to realize that the interaction mechanisms could flourish at many parts of the network (Ramaswamy & Ozcan, 2018). A customer, from the viewpoint of the service ecosystem (Vargo & Akaka, 2012), is one of the crucial nodes and must act in close proximity to ensure that the real benefits are achieved throughout the process. It is time now that the customers with potential operant resources should also be classified as an important team player (Ramaswamy, 2009; Ramaswamy & Gouillart, 2010). Theories of communities of practice, team building and management should be able to discuss the role and abilities of customer as a potential member of firm’s multi-facet teams (Payne et al., 2008; Ramaswamy & Gouillart, 2010).

service systems represent a network, where actors are performing multiple roles for value co-creation (Agrawal & Rahman, 2015; Chandler Jennifer & Chen, 2016); this requires leadership with a vision to transform their organizations for the service challenge (Ramaswamy, 2009). It requires constant support from managers who play the role of service leaders (Yong, Shirahada, & Kosaka, 2013) by advocating the importance of service values across the organization and beyond. According to (Ramaswamy, 2009) finding of leading service firms suggest that leaders continuously monitor the engagement of customer from all aspects; bringing the influences from the multiple stakeholders for designing the co-creation platforms.

It is evident that leadership needs to focus on internal aspects of co-creation first by instilling a vision for service-for-service approach; therefore, in S-D logic leadership role is to develop an environment of collaboration and active participation of all major stakeholders

(Ramaswamy, 2009). When we discuss the impact of leadership in the service-oriented organization, the success of leadership is not measured in terms of obedience shown by followers rather in terms of the effectiveness of followers in the service encounters. Customer effectiveness therefore becomes an important measure of success for service leaders. They need to continuously evaluate their role (Hagelberg & Mölsä, 2012) while leading the transformation to the new approach for co-creation and guide all actors to remain active in the co-creation encounters and empower them to enhance mutual value for themselves and for the company.

Because value creation with many actors is a different approach and requires diverse actors to actively contribute in the process; firms seeking to ensure sustainability of such collaborative initiatives need major changes in their traditional cultural norms and values (Sawhney, Verona, & Prandelli, 2005; Vargo & Lusch, 2004; von Hippel, 2017). Authors have advocated the importance of service culture with open values as firms have to adopt a collaborative mechanism with shared goal and intentionality (Ogawa & Piller, 2006; Prahalad & Ramaswamy, 2004b; Taillard, Peters, Pels, & Mele, 2016). However, companies must first analyze the various features of their culture and should ask themselves: “Do we nurture the values that are most conducive to shared value creation and how does the various actors relate to these shared values?” For firms, the starting point is to understand what constitutes a service culture and why it is different way of looking at from as service lens? We define service culture as “a set of norms and values that prevail in a service organization that are visible to service contact employees as well as co-creating customers to produce intangible service experiences”. With service leaders fostering values of mutual benefit among key stakeholders (Wirtavuori, 2018), service culture provides a constant influencing force to not only facilitate the service encounters but also remain the guiding force for actors beyond the management direct control. Service oriented culture could become a source of task direction (Ford & Bowen, 2008) and sense-making for customers and employees. The service leaders would walk and talk around employees as well as customers to ensure a smooth occurrence of a service encounter.

Along with increased openness, firms seeking to reap the benefits of customer co-creation will also likely need to adopt a more evolving and emerging management style (Mintzberg, 1994). According to Jeppesen and Molin (2003), under co-creation, “The management issue is not to enforce ideas, but to make room for them to emerge and channel them into an innovation.” This calls for a revisiting of the traditional management functions strictly which are carried out thoughtfully and systematically; rather, it calls for an alternative set of norms where customers and managers in an ongoing flux would manage the iterative process with greater flexibility.

RESEARCH METHODS

Value co-creation is phenomenon that usually occurs in socio-technical circumstances and require investigation based on insights from social practices in their natural settings (Eisenhardt & Graebner, 2007). Subjectivist stance is used with the relativist ontology (Stake, 1995). This was appropriate as co-creation of value is achieved through the involvement of actors who are expecting value within their own context so it is relative that how all actors perceive value in their own context. This allows for the collection of varied

Higher Education Institutions	Respondents Interviewed	No of Respondents in each category	Length of the interviews (Approximately)	Total Interviews and Length
<i>National University of Science & Technology (NUST)</i>				
	Program Coordinators	2	1 hour each	
	LMS Coordinators	2	1 hour & 15 each	
	Teachers	4	1 hour each	
	Students (Early & Final Semesters)	9	30 minutes each	
	IT/Network Administrator	1	45 minutes	
	Quality Assurance Officer	1	50 minutes	
				19 Interviews, 15 Hours
<i>Virtual University (VU)</i>				
	Regional Campus Head	1	1 hour & 45 minutes	
	Campus Head	1	1 hour & 45 minutes	
	Campus Managers	3	1 hour each	
	Teacher	1	1 hour	
	Tutors	4	1 hour each	
	Students	8	40 minutes each	
	IT/Network	1	1 hour & 15 minutes	
				18 Interviews, 18 Hours

Table 1. Summary of semi-structured interviews conducted at case studies

opinions and deep emotions of actors involved in the value co-creation to gain rich experiences (Kaplan & Maxwell, 2005). Exploratory multiple qualitative case study approach is used with interviews, observations and web page analysis are utilized as data collection methods (Yin, 1994). Learning management through learning management systems was explored at National University of Science and Technology (NUST) and Virtual University (VU) of Pakistan. Purposive sampling technique was adopted to identify concerned people and who were ready to provide access to relevant information. Since value co-creation builds up around a network, network analysis was carried out with 37 semi-

structured interviews, ranging from 30-90 minutes, were conducted from multiple actors who were identified to be the major stakeholders of LMS.

Table 1 elaborates the details of the actors interviewed. Questions were related to general profile, orientation to value co-creation, activities carried out at LMS, resources applied, value expected and role of LMS in generation of expected value. Interviews were properly audiotaped and systematically transcribed. Validity was ensured as respondents were properly briefed on the purpose of the research and were engaged in ongoing dialogue to allow them the freedom to speak freely without pressure. Primary researcher also preferred to access respondents at their own departments and desired places so that they feel at ease and contribute truly.

The data collection revolved around three major aspects related to LMS i.e., coursework administration, knowledge creations and sharing, and quality assurance. Selection of these three features was based on key factors attributed to value co-creation including regular interaction, active participation and communication from involved actors. Field notes, interviews were transcribed and prepared for systematic coding. A huge deluge of data resulted in enriched information from multiple actors and was managed and analyzed in NVivo version 12. Triangulation was used as a technique to compare and evaluate findings from interviews, personal observations and document/web page analysis. Course related material both online and offline were evaluated and internalization of the learning management system provided hands on feeling of multiple perspectives as a teacher as well of students.

Collected data went through a rigorous process of evaluation and findings of the thematic analysis resulted in visual description based on GIOIA methodology (Gioia, Corley, & Hamilton, 2013). Initially codes were kept free from any structure or association and with constant iteration between data and literature; these were labeled into different categories. Iteration continued until cross verification did not add anything further to established categories. The visual representation was done as per the guidelines of the GIOIA framework (Gioia et al., 2013) with first order categories gave way to second order themes and eventually aggregated to aggregate dimensions.

RESULTS:

National University of Science and Technology is one of the top ranked higher education institutions in Pakistan established in 1991 and offers recognized degrees in multiple disciplines ranging from engineering, business, economic and social sciences. Learning at NUST traditionally started physically in face-to-face settings but in 2009 management decided to upgrade its learning experience with the launch of its Moodle based LMS. Accessible at the website www.lms.nust.edu.pk, it is now a source of major academic processing and is integrated with other campus management systems to stage a complete solution for students, staff and teachers. Virtual University of Pakistan is also Pakistan's top ranked university that offers virtual learning-based degrees established by Government of Pakistan to promote ICT based remote learning throughout the country. It offers variety of online courses to students regardless of their physical presence. With programs offered in multiple disciplines through Internet, it is not able to connect to students nationally but also internationally. With a slogan of "World Class Education at Your Doorstep", VU is able to

expand with the passage of time offering campuses at remote places and greater flexibility for students to access everything from their homes at a lower cost.

LMS at both universities provides the required content and subject management throughout the semester and beyond for all major stakeholders. Course creation and management is found to be a team work as coordinators, staff are active contributor with faculty to execute key academic routines. LMS is proudly associated with academic excellence and for staging a memorable academic experience at NUST as a blended learning model (Bonk & Graham, 2006) which is also known as integrative learning, and hybrid learning. While at VU the LMS is the major tool for a virtual learning model with little interaction carried out in face-to-face approach. Following aspects of LMS were found within the case studies:

- As a tool for ongoing communication with students and all course work related content sharing without physical interaction
- Provide greater learning experience with pinpoint contents mostly designed for independent pursuit of students and at their convenient time and place
- Help execute most of the common assessment and grading activities with relative ease for teachers and students alike

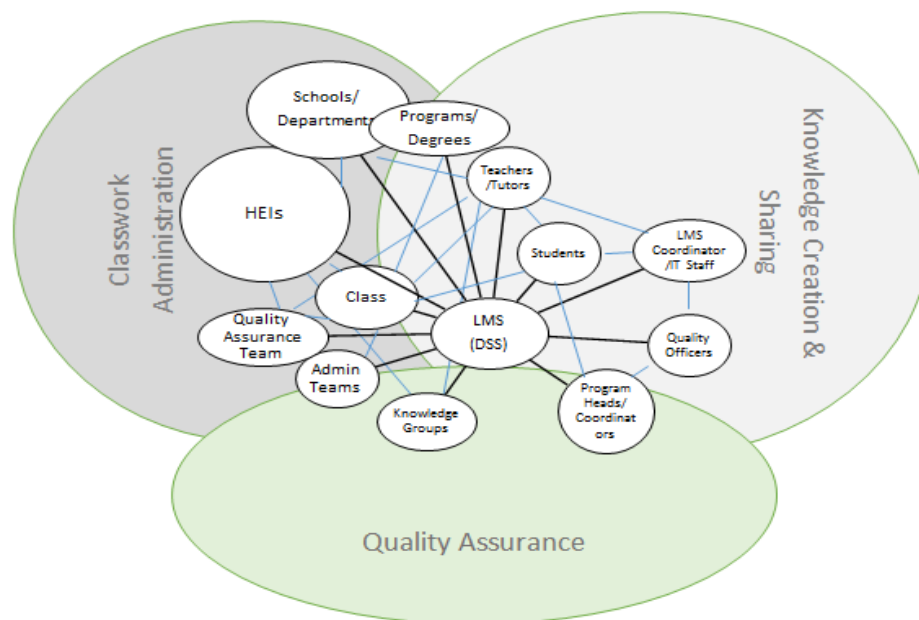


Figure 1: Systemic view of Learning Management at HEIs (Source: Authors)

Although NUST and VU share similar aspects of learning through their respective learning management systems, yet there are few differences in the models. First major focal person at NUST are the teachers and they take the responsibility of resource management and knowledge sharing activities with the help of students and staff. While at VU teacher's role is limited as they just create resources and the rest is managed by course tutors who remain attached throughout the academic progression within a course. LMS presents standard sections for the teachers and tutors to support multiple aspects of the management of their courses that include: posting course contents, management and assessment of assignments and projects, posting regular notices and course related information, initiating and facilitating

discussion, tracking and evaluation of student progression, curriculum development and also managing examinations and grading online.

There are particular sections of LMS dedicated for this purpose as it provides an easy-to-use interface to instructors and students alike at VU but at NUST knowledge sharing is more preferred within classes and few teachers use online discussions. Figure 1 provides a service system view of both HEIs and it is quite evident that the service system view provides a comprehensive perspective on learning management at HEIs and could prove an essential frame to visualize the multiple interactions between actors and could also help in visualizing key management challenges for practitioners.

Actor's Expedience

All major stakeholders including teachers, students, LMS support staff, quality assurance officers, and administration seem to not only understand the importance of working for mutual benefits but also are keen to play their active role in staging a co-created educational experience. Students and teachers who have joined NUST recently, also shared their quick transition to the new online learning approach, even they had little or no orientation to such mechanism in their past academic experience. This is attributed to NUST's ability to speed up the actor's competence, their interest and motivation for value co-creation and their willingness to participate.

To ensure everyone adds value to the co-created academic experience, NUST provides its stakeholders a range of support and training services for the smooth functionality of its LMS. A program assistant is designated for this purpose, who works in close coordination with information technology staff to solve both operational and technical issues faced by LMS users. He is also responsible for conducting regular training sessions for teachers and their support staff. A specific user interface is available for program assistants that provide immense value to them; as it is a source of user analytics and feedback on major challenges, they face during their online learning experience. Without this LMS interface he would not be able to handle wide verity of queries from multiple NUST schools. To provide structured support for all users, NUST LMS portal has a dedicated section of LMS training and alongside the physical options all actors could visit this virtual support center (<http://lms.nust.edu.pk/lmsteam/training.php>); ensuring access to supporting material on multiple features of LMS.

Service Climate

Value co-creation, at its micro level, is occurring between individual actors and LMS at HEIs; yet it is constantly been influenced by environmental factors that not only facilitate the whole process but could also hinder or slow down the value realization. In tightly coupled ecosystem like that of NUST and VU, one of the influencing factors is the great sense of compliance which is enforced through set of institutional arrangements and strong adherence to policies provided by NUST top administration. The different schools generally and NUST Business School (NBS) is particularly connects diligently to these policies. Once LMS was nominated as the major tool for learning, NBS implemented the system with great enthusiasm linking all major stakeholders and they continue to make sure that the movement towards the e-learning keeps its momentum as indicated by one of the program coordinators LC1N:

“It is pretty much important that you remain in touch with the online course pages and see if any important announcement is there and any key document is uploaded. We set very high standards at NUST and especially at NBS for quality. Faculty meetings are conducted on regular basis to ensure that teachers communicate on what they have uploaded and how much they are keeping things systematically available for students”

One of the students at VU VUS3 also indicated the importance of being in touch with LMS as a major activity as he suggested:

“It is better to daily login your LMS account but I used to check it at least thrice a week (due to my job assignments) to see weekly lecture schedules, dates for upcoming assignments, research articles and other content shared for learning, timings of interactive sessions with teacher and questions from students on online discussion boards etc. If you don’t login for week then you may miss something (assignment, quiz or interactive session) important, that can impact your grades”.

Keeping in view that students are one of the major beneficiaries of the system, their role in conducting important activities and active participation is unquestionable for success of LMS. Sentiments were expressed on similar lines was reflected by one of the recent semester students VUS3:

“It is more of a social and cultural thing as we all realize that we have to do it and comply with the guidelines; this influences us and also motivates us a lot”

Motivation among other important actors is also crucial for maximum utilization from LMS; especially, if top management expresses this during their meetings and present their vision for these technologies. During the interview one of the program head NPH1 sowed his great interest in digital technologies:

“I personally believe that if you have a distinctive interest in technology-based solutions and tends to motivate other faculty members to use these for productivity. I am very much a technology guy; I believe that if you have basic sense of technology and you understand its importance in achieving excellence at work LMS is not only an easy-to-use tool but also an efficient way of managing you course contents.”

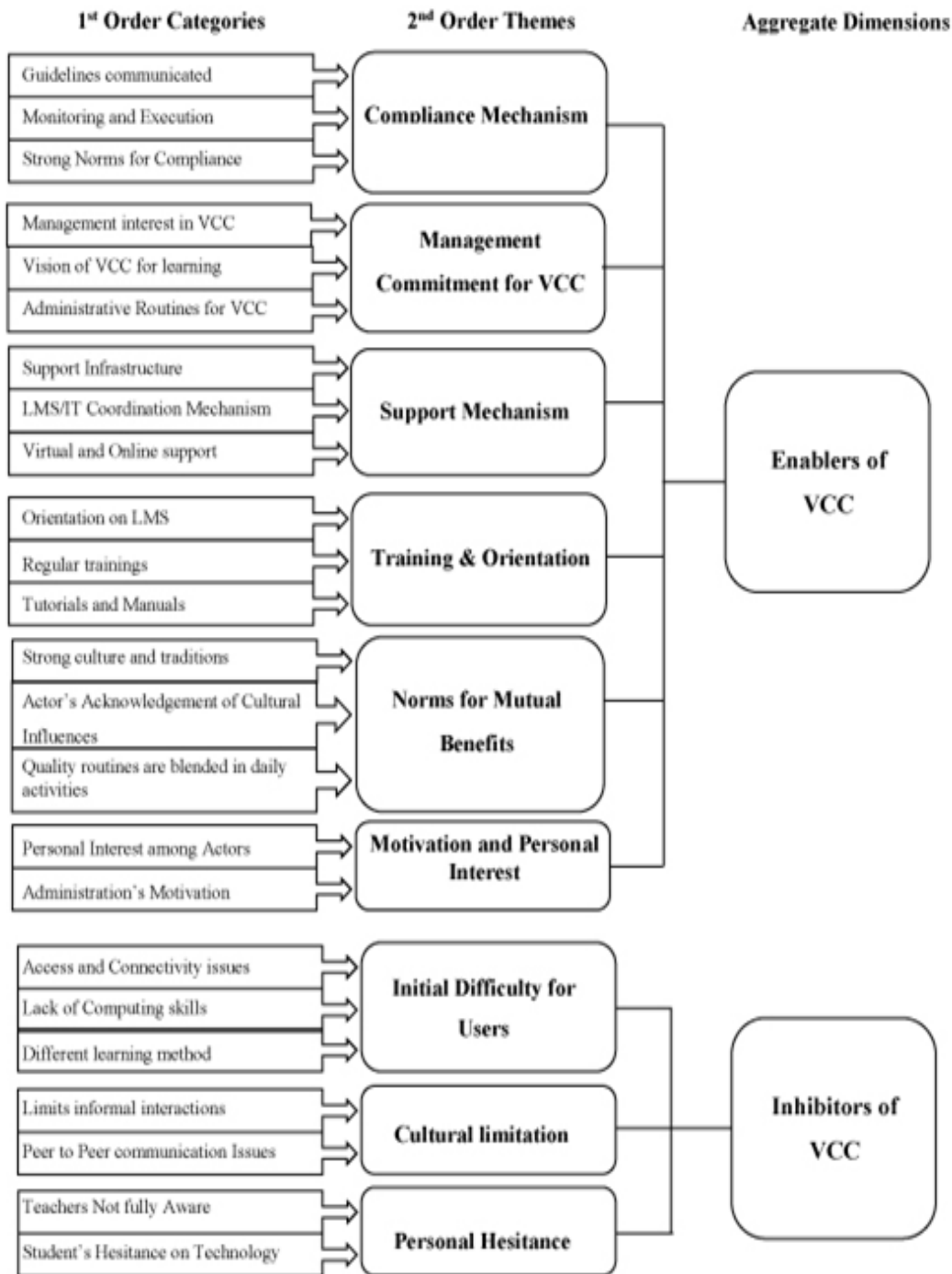


Figure 2: Data Structure of Environmental Enablers & Inhibitors for Value Co Creation based on Gioia (2013) (Source: Authors)

CONCEPTUAL FRAMEWORK

Findings from NUST and VU case studies provided multiple clues on actor's rapid development for value co-creation. It is discovered that idea of value co-creation has a durable application within higher education institutions and NUST and VU are able to

carefully understand the actor’s development process for value co-creation activities and cultivation of necessary skills required on their behalf. Generally, many service systems are visible within HEIs service ecosystems i.e.

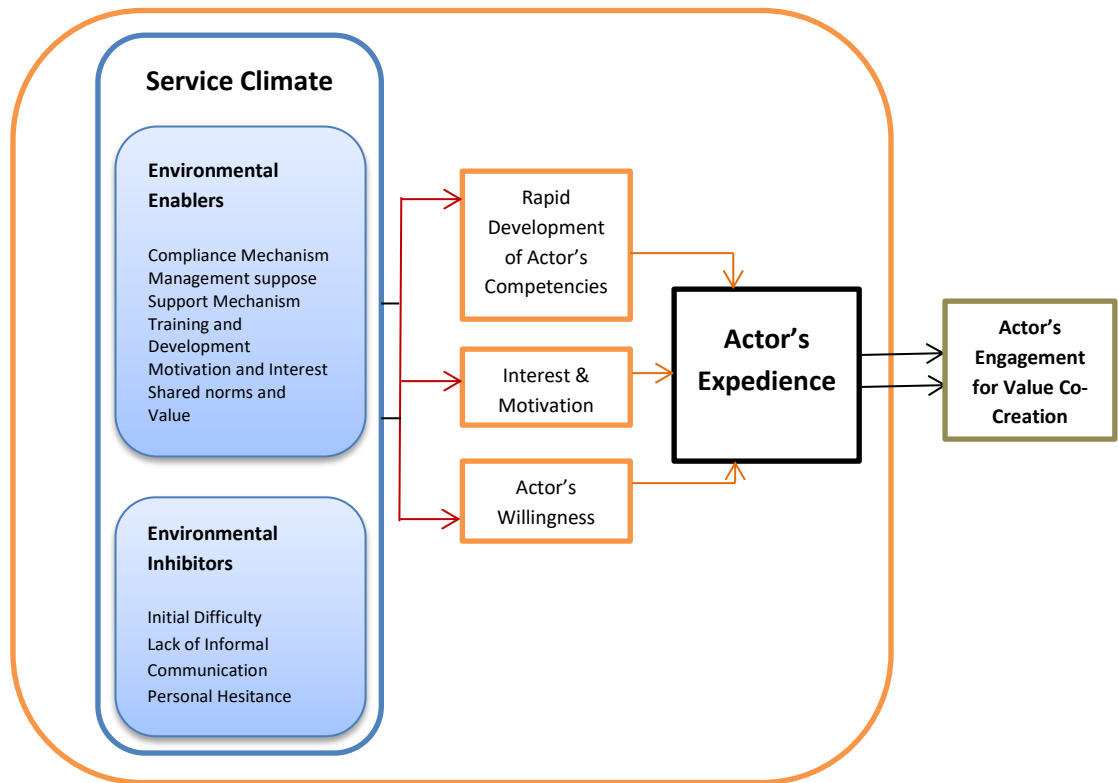


Figure 3: A Generic Framework for Actor’s Expedience for Value Co-creation (Source: Authors)

The service interactions between these actors would result in exchange of key operant resources in a collaborative environment and would require every actor to understand the service interaction processes and their active part in the process. Improved actor’s ability, role clarity and motivation levels proved to be key ingredient in the successful execution of service interactions. A better understanding on the service encounters based on interactions seems to provide clear insights on areas where actors need general and technical assistance for co-creation. Almost all actors were found in the case studies to depend on support from a systematic yet ongoing support mechanism during the co-creation of value and may entail expert advice to handle various decisions.

Value co-creation is occurring within higher education institutions in an intervened flux of interactions, not only involving established actors but also a range of new actors who are joining the academic experience; it implies that value co-creation practices require constant involvement and rapid development of actors who are ready to utilize operant resources at hand. In literature this is often referred to as “Actor’s Readiness” (Jaakkola, Helkkula, Aarikka-Stenroos, & Verleye, 2015; Storbacka et al., 2016); which indicate the importance of managing the antecedents for value co-creation. Case studies on digital service system reflected on the need for urgency in actor’s readiness; we labeled this process of speedy actor development as “expedience”. Empirical findings endorse this state of urgency among

multiple actors during the various processes nested in the online learning environment provided through LMS. As soon as students are enrolled, they have to get quick enrollments and register online for courses without much delay; LMS support staff and coordinators also need to constantly encourage and support the process to ensure that maximum students get familiarized with the value co-creation mechanism and brought in for participation at a rapid pace.

Role clarity for execution of key academic process at NUST and VU was another major reason that led to active involvement of students, teachers and staff; it advocates for the importance of understanding the roles various actors tend to play during value cocreation process as suggested by Chandler Jennifer and Chen (2016). For self service options (Åkesson & Edvardsson, 2018) HEIs need to train students on the technical skills to operate the self-service technology. Orientation and training programs developed by HEIs therefore need to build on multi-facet elements incorporating not only technical skills rather more diversified set of skills including human, conceptual and problem-solving skills. Moreover, the training programs must also focus on behavioral elements required for actors during the co-creation processes i.e., group behavior and community practices.

DISCUSSION AND CONCLUSIONS

Exploring value co-creation within learning service systems, such as higher education institutions, revealed that service firms need to rigorously focus on identifying co-creation opportunities (Ramaswamy & Guillard, 2010; Vargo, Akaka, & Vaughan, 2017). Practitioners need to mold their work around a collaborative approach involving people from multiple departments and continuously provide ample support to its actors to co-create value with them (Pera, Occhiocupo, & Clarke, 2016; Pinna, De Simone, Cicotto, & Malik, 2020). For HEIs, real productivity and output lies in the collaboration between actors from various departments with potential beneficiaries. This poses an additional challenge for leaders to change their traditional narrow mindsets of viewing beneficiaries (students in HEIs case) as passive participants to a more inclusive approach by encouraging their active role in key processes (Briscoe, Keränen, & Parry, 2012). Therefore, it requires a refreshed conceptualization of “service” as the reason of all service exchanges that shifts focus on mutual achievement of benefits by serving others (Vargo et al., 2017). For higher education institutions as service-oriented entities, in the light of S-D logic, it will be important for them to consider every actor valuable so that contribution comes from all and they could share unique ideas to create novel value.

Actor’s expedience process is found to be heavily influenced by environmental factors that seem to accelerate the development process and inhibitors that affect the pace of the expedience phase at both HEIs. Social and institutional influences (Akaka Melissa & Vargo Stephen, 2015; Vargo & Lusch, 2014) were profound in both cases studies with slight variation. A strong compliance approach at NUST was the major driving force that not only helped them successfully stage the co-created online academic experience but also to ensure its sustainability is credited to development of a powerful service climate. These factors ensure that HEIs vision for value co-creation is thoroughly transferred among all key stakeholders as advocated by Akaka Melissa and Vargo Stephen (2015). On the other hand, VU’s dependency on the virtual mode of learning with perfect execution and continuous support provided clues on how successful service firms could execute routines for actor’s experiences through a constant influence from their service climate; this includes

management's role as service leaders, deeply held and widely held service norms, active and continuous support for service competences and legitimating the process through a strong compliance process. This is very much in accordance to the discourse on influences from social and legal institutions (Edvardsson, Kleinaltenkamp, Tronvoll, McHugh, & Windahl, 2014; Ramaswamy & Gouillart, 2010; Vargo & Lusch, 2016) .

Case study analysis on LMS at NUST and VU provided useful insights on the dimension of actor's development for value co-creation and also clues on how digital service systems facilitate the buildup for value co-creation in a network of multiple actors seeking wide variety of values. Results from both case studies confirmed that by recognizing the importance of contribution of all actors and providing them ways to integrate these resources has tremendous implications for modern service organizations; especially, allowing almost all major actors to co-create within their own context as advocated by (Meynhardt, Chandler, & Strathoff, 2016) and (Agrawal & Rahman, 2015). Both HEIs have successfully followed a refreshed approach of managing its actors for efficient co-creating service encounters i.e., teachers, program heads and LMS coordinators are constantly getting involved and promoting value co-creation with students to achieve their objectives. Service firms learning from these experiences will need to establish a purposeful climate and support structure that could enable wide variety of customers to actively participate in the co-creation processes. This will have direct impact on the management practices as the new dimensions of customer's need assessment, training mechanisms and customer-based measurement outcomes will come into play.

Empirical findings also indicated that the service interactions between these actors at higher education institutions has resulted in exchange of key operant resources in a collaborative environment (Ramaswamy & Ozcan, 2018) and would require every actor to understand the service interaction processes and their active role in the co-creation process (Agrawal & Rahman, 2015; Chandler Jennifer & Chen, 2016). Actor's ability, role clarity and motivation levels will determine the overall success of these encounters. VU has a long history of stints with e-learning tools and its success is very much attributed to its LMS in executing a memorable academic experience. Launch of LMS at NUST, on the other hand, marked a transition in 2010 for the university as it paved the way for the development of a sustainable service culture and this is attributed to a better understanding on the service encounters based on interactions (Gummesson et al., 2014a) and careful analysis of areas where actors need general and technical assistance for co-creation.

Practical Implications

At both HEIs new opportunities are emerging on the surface during series of service exchange, including co-assessment within courses and meeting academic excellence for plagiarism for submitted assignment and projects. All of this is thoroughly supported by a service-oriented culture that performs the role of institutionalizing both in terms of social norms as well as a standard mechanism for progressive learning. Program heads and coordinators have played the significant role of change agents and sharing the vision of top management among all important stakeholders. A service platform in the shape of LMS provided support to actors with different needs; where, they were required to interact with other actors during service activities.

Higher education institutions are information intensive service systems and adopting a customer oriented mindset embed well with the service based orientation and digital tools offer the mechanism as well as engagement platform for multiple service interactions as proposed by Breidbach and Maglio (2016). However, there are some challenges related to web-based service-oriented firms as many actors may be less skillful as compared to institution's employees, and particularly, the student's ability to effectively co-create will depend mostly on how the website design and interaction mechanisms encourages. Research could also look in to role of digital design and implementation of user-friendly web-based interaction systems for value co-creation.

For future concern research may explore the linkage between processes of resource integration to explore linkages between actor's expedience within variety of roles, abilities and emotional dimensions of value co-creation. Since, NUST case study proves to be a success story as they are able to develop both online and offline mechanism for ongoing support for all actors including teachers, students and support staff; however, further investigation requires empirical efforts to examine the application of the framework in a variant context. Especially, if the service interactions are totally based on online mechanism like in virtual learning, it will be interesting to explore how institutions take up the daunting task of improving actor's expedience remotely.

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