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## INCORPORATING SERVICE DESIGN INTO EDUCATION OF FUTURE MANAGERS

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## INCORPORATING SERVICE DESIGN INTO EDUCATION OF FUTURE MANAGERS

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### **Abstract**

The goal of management education is to prepare the master's students to the role of the future manager. Therefore, the management education indisputably shapes the future profession. However, the manager's profession is complex. What should be included in the management education and how to bring the degree programs up to date? This paper, first, suggest management education based on the recent research and the integration of service marketing theories into management. Second, this paper posits the competence development of managers required in service economy to focus on service logics and the emerging discipline of service design. The purpose of the paper is to introduce management education, which builds competences based on the theoretical stronghold of service logics and intertwines with service design competences as execution skills. This descriptive study uses a combination of collected data, observation, discussions, and content analysis to investigate how diverse are the expectations of master's degree students for service design and how the learning outcome requirements/ competence development requirements (by EQF) differ. This paper advances identified new management competences of service marketing and service design. Preliminary findings suggest the importance of designing of the interdisciplinary curriculum; the management competence develops slowly during higher education and thus the competence requirements are fulfilled at the end of the studies.

**Keywords:** service marketing; service logics; service design; higher education; management education; management competences; case study

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## 1 INTRODUCTION

Service business dominates the global economy. As services have become the most important economic power in the world: in 2016, the world's BKT ca. 65 % came from services (The World Bank Group 2018). The growing importance of service business highlights the need for competences in service management, development and innovation. The theoretical advancements in service marketing respond to this shift to service economy. Similarly, the contemporary service economy calls for updates in competence development and consequently new management competences. The traditional way of managing firms and organizations may be replaced with newer models, new industries and new services are emerging, and thus new generations of future workforce needs to be educated. The need for supplementary education rise as lifelong learning is considered essential. The emergence of new occupations and the rapid changes in the world of work remains as a challenge to be met by the higher education. The growing complexity roots from social aspects, innovation, and service that forms the main change from twentieth –century to the 21<sup>st</sup> century (Meroni& Sangiorgi 2011). Paradoxically, both the management of service business and educating managers is still based on education depending on industrial logic (see for example Wirtz& Lovelock 2016)

Part of the complexity of the management education is attributed to the self-sustained disciplines although sharp distinction between disciplines is criticized (Gosling& Mintzberg 2004). The novel topics and more traditional topics have been taught in a vacuum in higher education (HE) and mostly been taught independently of one another, rather than interdependently (Mitroff et al. 2015). The formal education of managers provided through Master's degree programs in higher education institutes (HEIs) impact their work in future and thus needs to give them a better understanding of how to deal with novel approaches such as service research and service design. The management education programs such as MBA programs have been criticized both academics and management practitioners for their lack of relevance to practitioners and the values they impart to students (Dunne& Martin 2006). Controversially, Mitroff et al. (2015) argue that in general, the faculties of Law, Medical, and Engineering schools are generally involved with their professions' practices but most business school faculties do not practice their professions. This reality paradox is strengthening further with the organizing of the business: business schools are organized as is the business itself, and as if they were well-defined, well-structured, and well-contained.

Moreover, the literature on master's degree curriculums typically highlights only one aspect of the business world. The curriculum is focused on one subject courses in MBA curricula such as strategic management (Albert& Grzeda 2015). Recently, novel concepts are brought to curriculum such as crisis and risk management, sustainability, stakeholder management, and ethics (Mitroff et al. 2015), service innovation and design (Ferruzca et al. 2017) and design thinking (Dunne& Martin 2006, Schumacher& Mayer 2018) . This requires attention while service design is less established practice in most organizations and the management implications of service design are still not well understood (Patricio& Fisk 2012).

Design thinking and related service design has been suggested as the link between service innovation and management of service business (Dunne& Martin 2006, Glen et al. 2015, Schumacher& Mayer 2018). As business leaders have become more interested in design methods, it affects business schools as the students will need to develop competency and business schools are expected to provide education in these approaches (Dunne& Martin 2006). Service design is experience-based and practice-oriented, and thus, the academic research on service design is scarce. Expertise by experience seems to be enough. The concepts, approaches, analysis methods or the results of service design have not been established thru scientific evaluation or in academic discourse. However, the service marketing frameworks have been academically examined. The primary objective of this paper is to bridge the gap between the research streams of service marketing, service design and management education. Further, the paper explores the effect of service design on curricula.

Service design originates on multidisciplinary contributions from service innovation research and design research that are not well-integrated (Patricio& Fisk 2013 ). Thus, this paper proposes design thinking influenced service design thinking and service design method as part of the creative mindset needed in business management, but highlights the role of much more extensive change of paradigm as the reason why competences require update; namely the service logic in business.

Competency development in business management requires curricula development in HE. This paper expands the higher educational offer beyond its traditions and formats. Incorporating service design into education of future managers is proposed with some premises: the paradigm shift from industrial logic to service logic, the role of service design

in developing service offering, and third, the role of the managers in the service design work needs to be understood.

Since the industrial revolution, business organizations have operated under the dominant management thought of industrial logic. The industrial logic, also known as the analytical manufacturing logic or product logic, underscores the firm's internal capabilities to achieve competitive advantage through planned productivity and the profitability of the firm. Strategies, organizational structures and management are aimed towards that. As such, firms target their operations and organizational capabilities to the optimal exchange of mass-manufactured products through tangible resources with price (i.e. embedded value) in transactions. The industrial logic turned the perspective of the management inwards of the firm and to management of the optimal, often contractual networks. This paper recognizes the need for this viewpoint as well, but suggest an extensions to firm's and manager's worldview based on the research contributions of service marketing scholars. This paper acknowledges that the industrial and service schools of thoughts are focused on different aspects of the firm. As industrial logic draws from the firm's capabilities, the service thinking draws from focusing more on customers, their processes, and their needs. This viewpoint may be of challenge to the firms which has less managerial competences to understand the impact of the customer –centricity. The service logic may change the customer's and organization's role in value co-creation of offerings, by changing the organization's processes of value integration, or by repositioning the organization in the value constellation (Patricio and Fisk 2013). The implications of service marketing research have the potential to transform marketing from merely a function to an organization-wide attitude (Grönroos & Gummerus 2014).

An extensive and continuously growing literature on service research published in various academic journals such as *Journal of Service Management*, *Journal of Service Research*, and *Service Science* and diverse marketing journals posits the service economy, service ecosystems, service business, service development and service innovation in a significant role in today's business research. Hence, to be considered as essential part of the management education.

This paper departs traditional management education approach by taking a service marketing perspective as the baseline, integrating service marketing as the theoretical approach and conceptualization as the framework to manage business, and leaving the use of service design

methods to professional expertise level. The service-driven research has received little attention in management literature. Intriguingly, Subramony & Pugh (2015) argue that although services has a focal area within management discipline, it is still in its infancy in contrast to the field of services marketing. They continue that the field of management does not have a body of research on services commensurate to that discovered in marketing. This paper proposes to elevate the service marketing from the niche issue to management competence in business. This paper approaches the management education in HEIs from the business perspective. This choice is based on the understanding that it is still the business perspective that forms the underlying baseline for the manager's education. The competence-based master's degree program is embedded in the business setting and thus competencies educated need to be related the changes in business context. Despite the advancement of design thinking (Dunne & Martin 2006, Schumacher & Mayer 2018) or service design (Patricio & Fisk 2012) as the link between service innovation and management, this paper reframes the management education thru incorporating service marketing and service design.

The application of service marketing lens with service design method is supported (Teixeira et al. 2012). Future managers need wider knowledge on how the choices related to service design methods, processes, techniques, and tools have impact on the business on strategic, development and execution levels. To lead a firm, service business, service development or service design projects, the future manager needs to understand the business opportunities, the strategic vision of the firm, financial outcomes, impacts on organizational settings and competences, to name a few. Géczy et al (2010) suggested that HEIs should educate new managers and professionals with service-driven mind-sets. Modifying the tradition of management education is not an easy task, but the paper proposes that new insights in management competences are justified.

For the future manager, it is topmost important to understand where the interests in service design arises, what kind of solutions are looked for, and what could be done differently than just focusing on learning different tools and techniques. Value co-creation, value co-design, and profitability remain management concerns and that learning stems from the marketing rather than design. Therefore, the overarching conceptualization between various disciplines needs to be the marketing instead of service design.

Understanding and integrating multiple perspectives, and research is a starting point to develop the management education. This paper frames the multidisciplinary challenges faced by educators of managers, HEIs, curriculum designers, employers, and future managers. The empirical evidence provided in this paper is based on a single case study involving a pioneering curriculum integrating the multiple perspectives in the management education. First, the literature of management education is explored and reframed. Then, service design is introduced to reveal its role in developing service innovations. Third, the managerial impact of using service design in integration with service marketing of business is discussed.

## **2 MANAGEMENT EDUCATION THEORETICALLY REFRAMED**

The management education is a traditionally described as decision-making attitude (Schumacher and Meyer 2018). The management education refers to (IGI Global 2019): *“The act or process of imparting or acquiring knowledge to develop the members of the executive or administration of an organization or business, managers or employers collectively, or train in the techniques, practice, or science of managing, controlling or dealing, in the skillful or resourceful use of materials, time.”*. As such, the definition is influenced by the classical management theories.

### **2.1 Competence-based higher education**

This paper focuses on the subject as the competence-based education. The guidelines for HEIs and HE are defined in the European Higher Education quality standards (European Commission 2018a;b) to become more notably towards competence-based, student-centred learning and teaching. The competence definitions vary but for the curriculum development purposes, can be understood as specific to the field of study, but more abstract level than defining just the learning outcomes, and differentiated from knowledge and skills (Bergmann et al. 2015).

The European Qualifications Framework (EQF) states the competence requirements and descriptors for the education divided in three sections: Knowledge, skills, and responsibilities and autonomy (European Commission 2018b). This forms the baseline for designing of a curricula in HEI based in EU. Albeit, competencies of business management can be developed in various means, working experience, management development training programs or thru other institutions (such as army), HEIs are at the root of competence development. Thus, this paper focuses on master’s degree program, which is on the European



qualifications framework level 7 - EQF7. This paper considers only the formal degree education. Therefore, for example, the expertise by experience is not according to the EQF7 requirements for the degree-based education.

## **2.2 The approach to business management is changing**

The management education indisputably shapes the future profession. However, the manager's profession is complex and can be approached in various levels of hierarchy. The question of what to include in the management education and how to bring the degree programs up to date remains.

### **The classical management theories basis for the industrial logics**

The impact of the classical management theories (scientific management theory, administrative management theory and management bureaucratic theory), which were developed to predict and control the behavior in the organizations, achieved thru the chain of command, division of labor, top-down influence, authoritarian management styles, and prediction of behavior (Nadrifar et al. 2016) is inevitable. To simplify, the managers execute the management tasks by performing planning, organizing, staffing, directing, supervising, controlling, monitoring the progress, measuring and coordinating (the resources and tasks) with the official hierarchical positions in diverse units and in various hierarchical levels in firms. This forms the basis for the industrial- or production-driven worldview on business educated in business schools. Traditionally management consists of the process of planning, leading, organizing and controlling people and resources to achieve predefined goals. This in turn forms the baseline of management education and management competencies. Management education scholars (Gosling& Mintzberg 2004, Mitroff et al. 2015) have noted several challenges with this premise.

The impacts of the classical management theories are visible for example in organizational structures, the logic of business, and the hierarchical management system. Contemporarily, the dominant logic in managing business and in management education **is the industrial logic**, which focuses on executing the business thru the transactional exchange of mass manufactured products with price (Vargo& Lusch 2004). Thus, it is manufacturing or product oriented business.

In general, organizations are structured and hierarchy established to delineate power, responsibilities and job function. In the hierarchical management system, the levels of managerial competences are fairly established with the management positions, and the level of responsibilities. The competences and skills differ between hierarchy levels. For example, the executive level (president, CEO), the responsibilities include the long-term vision creation, development of strategy, and transition to the growth. Competencies required include the strategy management and transition skills. On senior manager level, the organizational development competences are required while the responsibilities relate to the development and monitoring the strategic plans, and managing operations (functions, units). As the middle managers coordinate and report the work within the responsible business area, their organizational management competences are in focus. The first lines of supervisors oversee the work done by the employees, i.e. professionals, and thus need to possess operational management competences. Understanding the management system hierarchy and responsibilities, the role of the service designer is positioned on the professional expertise practice and on the activity / task level. For this position, the education is typically bachelor's degree (BSc). This corresponds with the education level EQF6. As such, the service design degree programs on bachelor level prepare the students for the job of service designer, which is the professional expertise. The competences, knowledge and skills acquired thru degree programs in HEIs prepare them to use the service design methodology. However, managers need to understand this comprehensive paradigm shift and its implications to the firm and its management.

### **The service marketing and management approach in business**

The theoretical perspective of service marketing and management informs about the phenomenon of service-driven economy, explains the raise of service business, and introduces the concepts of service business. The recent academic discourse on the theoretical fundamentals of the service logic (Vargo& Lusch 2004;2008) and evolution of service research (Grönroos 2006;2008;2009) is widespread. The main theoretical approaches are service logic (Grönroos 2009, Grönroos 2011, Grönroos& Voima 2011), service-dominant logic (Vargo& Lusch 2004, Lusch& Vargo 2014), and customer-dominant logic (Heinonen et al. 2009, Heinonen& Strandvik 2015, Strandvik& Heinonen 2015). The essential conceptualizations include the customer experience (Pine II& Gilmore 1998, Heinonen et al. 2010) , service experience (Jaakkola et al. 2015), the active role of the customers as the co-creator of service (Lusch& Vargo 2014), and customer's value-in-use (Grönroos 2009).

Further, the conceptualizations of managing the co-creation of value (Payne et al. 2008), service systems (Maglio et al. 2009, Maglio et al. 2010), novel competences for service business (IfM& IBM 2008, Spohrer et al. 2010), and the service-based view on innovation (Vargo et al. 2015 , Koskela-Huotari et al. 2016) are discussed.

The 21st century **service-centred model** of exchange alters the conventional perspective and is in contrast to the viewpoint of industrial products-centred model of exchange (Vargo& Lusch 2004). The service-driven perspective consists of various approaches, which are overlapping. Differences in principles can be found as Grönroos and Gummerus (2014) argue that the SDL is more firm-driven in which the service provider drives value creation with the customer whereas SL proposes that value is created in customer processes, and thus value creation is customer-driven.

The extant service literature addresses three major changes (Vargo& Lusch 2004, Grönroos 2006, Lusch& Vargo 2006, Grönroos 2009, Grönroos& Gummerus 2014): the business strategy is replaced from the firm's capabilities, i.e. firm-centric view to the **customer-centric view**. This means collaborating with and learning from customers, and being adaptive to their individual and dynamic needs (Heinonen et al. 2010, Heinonen et al. 2013). Secondly, the new role of **the customer as active co-creator** is accepted. Thirdly, the concept of **value** becomes emphasized. In industrial logic, the mean of exchange (monetary; price) is based on costs proposing value-in-exchange. After the exchange, the value destruction begins. For the customer, the cost perspective is somewhat irrelevant while s/he is looking for the **value-in-use** of the service to her/his life (Grönroos 2006, Grönroos& Ravald 2011). Thus, the value is defined by and co-created with the customer. The customer-dominant logic is a theoretical framework that fosters a holistic understanding of the customer's life, addresses how value emerge in the customers value creation process, the experience of value through a sense-making process, and in actions in the service provider – customer joint processes (Heinonen& Strandvik 2015). The practical element of service development that aims at service innovation is included, and design is regarded as one vehicle to achieve it (Wetter-Edman et al. 2014).

The service logic modifies the customer's and organization's roles in value co-creation and creation of value offerings, the organization's processes of value integration, or repositions the organization in the value constellation (Patricio& Fisk 2012). Respectively, the service-

driven viewpoint requires a holistic change in managing a business firms and novel means to develop the business, organization, and service. The managerial implications are immense. Firms must go beyond conventional marketing: manage and organize thru service-influenced marketing with created a customer focus among all employees (Grönroos& Gummerus 2014).

### **Educational challenges**

At HEIs, the traditional and the novel topics have been taught independently of one another, rather than inter-dependently (Mitroff et al. 2015). Design thinking to change management education has been proposed ((Dunne& Martin 2006, Schumacher& Mayer 2018) and the need for design thinking in business schools (Glen et al. 2015) is brought up suggesting the management education from the design logic perspective. This may be too modern perspective for business schools and HEIs. Thus, design thinking and resultant service design thinking needs to be anchored to more commonly known tradition of business management education. This paper proposes management education, which builds competences based on the theoretical stronghold of service logics and intertwines with service design competences as execution skills.

The educational perspective in relation to the service-driven perspective lacks from this body of literature. One would assume that the extant service research – both theoretical and empirical – originated the past 15 years, would have received significant stronghold also in the literature of management education. This is not yet the case. For example, the Journal of Management Education lacks the literature on how service marketing research influences on management education. How about in management literature? Intriguingly, Subramony & Pugh (2015) argue that though services is a focal area within management discipline, it is still in its infancy in contrast to the field of service marketing. They continue that the field of management does not have a body of research on services commensurate to that discovered in marketing. The paper proposes to elevate the service marketing from the niche issue to management competence in business. Otherwise, the wholeness of the leading of the firm is incomplete.

This paper examines how the master's students perceive the new suggested management competencies. They include introduction of service research and service design into education of future managers. Furthermore, compared is with other master's student groups

to examine if there is a difference in understanding the competence expectations. A study was conducted among the master's students in a degree program at Laurea University of Applied Sciences (Laurea). The aim of the degree program is not to educate service designers, but future business professionals **for managerial positions**. The purpose of the program is to **educate leaders** for organizations adopting service-driven worldview in business. Furthermore, examined were the new expectations of two other master's students groups participating service design course. These students in other master's degree programs at Laurea, but seek to study novel competencies. The study advances scholarly discussions of the higher education and the management competence development. The contribution of the paper is to demonstrate, how emerging disciplines have been adopted to management education.

### **3 MANAGEMENT EDUCATION CALLS FOR THE SHIFT FROM EXECUTION TO MANAGERIAL LEVELS**

The premise of moving from the leader-centric management to one that is more open and participative (Dumas& Beinecke 2018) has an influence on the overall managerial and organizational understanding. It significantly influence on how the leaders and managers of organization are educated. In business management literature, little attention is given to the influence of the service research and service development into management competences. Moreover, the management education literature hardly discusses the influence of the service logic in competence development acquired thru the higher education. Accelerating knowledge creation of service logic in management and as a management competence requires understanding of the theoretical shift. The paper advances the development of management education to include new insights into it. When the focus shift from conceptualizations to implementation, service design method can orchestrate the service elements during the service development (Teixeira et al. 2012).

#### **3.1 New multidisciplinary competences of future managers**

HEIs have always had a pivotal role in transforming the society as they educate the future generations of experts and professionals. A modern management education program aims to educate future multi-competent professionals. This paper examines the management competence development from the higher education point of view. In particular, it focuses on management competences to encompass service research and relate to renewal of business due to the transformation of service economy. In higher education in Europe, the European

Qualifications Framework (EQF) provides the framework for competence development offered thru the degree programs. In this paper, we focus only **on master's level education (EQF7)**.

The degree program need to be explored based on the latest changes in society and business disciplines. The role of HEIs is to enable graduates from various disciplines to become T-shaped professionals or adaptive innovators (IfM& IBM 2008, Spohrer et al. 2010). Moreover, Géczy et al. (2010) suggested that HEIs should educate new professionals with identified service-oriented mind-sets. Likewise, Ojasalo and Ojasalo (2012) imply that education in terms of competences and the knowledge underpins service innovation competences and expertise in service economy. Recently, the master's degree education in service innovation and design was investigated (Ferruzca et al. 2016, Ferruzca et al. 2016 , Ferruzca et al. 2017) and the studies revealed that the education of service innovation and design is still relatively unstructured, unstandardized and indefinable: although there is some degree programs available, the topic has not received mainstream discipline status. It seems that this type of education is provided either in short-term trainings or individual courses embedded into diverse degree programs. Thus, the holistic view of the benefits of these competences and the business benefits may remain inadequate(Ferruzca et al. 2017).

HEIs as management educators need constantly to consider do the graduates have the competences and capabilities that business needs. Increasingly controversial services have been rapidly established, and business managers are contemplating their success and their offering to better fit with the lives of the users. Understanding of the customer's life is in the heart of the business today while the customers are more often less inclined to mass products and in-house developed services. Service logics calls for novel practical methods and tools to operationalize the theoretical constructs in practice. For example, how value is co-created with service provider, customers, users and other stakeholders requires mind-set change and new ways of developing services.

Drawing on the service research literature, the paper suggests that design thinking and service design could be built into the competency development of future managers. The next chapters discuss these competencies for managers.

### 3.2 Design thinking approach

Design Thinking (DT) is an approach originating from the design discipline to use creativity to solve complex program. In Europe, the approach of service design thinking is more widely accepted from the design field as it focuses on value in its experiential dimension, and implements an outside-in approach to service innovation (Wetter-Edman 2014, Wetter-Edman et al. 2014). In service design practice, the design thinking principles are guiding, but the context of the development practices is in service business.

Design thinking is used by growing number of companies in order to increase creativity and to facilitate innovation (Ollenburg 2018). As such, DT and its principles are applied also for the innovation of products and services for business purposes. Yet, there is vagueness what that means. Buchanan (1992) argued that the scope of design is potentially universal, because design thinking may be applied to any area of human experience. Later, Brown (2008) stated that DT is a solution-driven activity, which is human-centred, creative, iterative, and practical approach to innovation and to find the best ideas and solutions. DT reflects to the work, which designers perform thru the complex processes of inquiry and learning, making decisions, often working collaboratively on teams, and being able to communicate with each other (Dym et al. 2005). Both Brown (2008) and Kolko (2015) emphasized the understanding of the design thinking in transition towards experience-centricity. Recently, Carlgren et al. (2016) criticized the ambiguity around the DT and characterized the five principles framework of DT: user focus with empathy and understanding the needs, problem framing, visualization such as prototyping and making things tangible, experimentation as the iterative aspect of design thinking, and diversity within the teams to collaborate.

Also some issues in designers' education (DT education) have been noted. Ollenburg (2018) claims that in the most educational programs of design, design is still mainly taught as a craft, and the resulting concepts and artifacts are evaluated from a preferred artistic standpoint. The critique is that that design education focuses too much on crafting to get superficial solutions. Thus, it may be difficult to integrate this with business and management education.

How is design thinking taken into the scope of management education? Only five publications related to design thinking in the Journal of Management Education were found. Welsh and Dehler (2012) suggested the student-centred learning experience with design thinking that creates the context for collaboration. Benson and Dresdow (2014) explored the

use of design thinking practices to frame the assessment process. Zidulka and Mitchell (2018) introduced design thinking as a form of experiential learning. Only, Schumacher and Mayer (2018) brought up the linkage of DT to management studies. The fifth article dealt with the use of DT in writing and publishing teaching cases (Sheehan et al. 2018).

### **3.3 Service design thinking and method**

The European tradition of service design emphasizes the service context more than the design thinking aspect. The heritage of industrial design to service design has been noted (Wetter-Edman 2014). Service design is seen as an interdisciplinary academic field that originated from Design discipline. It integrates methods and tools from diverse other academic disciplines, such as interaction and product design, engineering, anthropology, psychology as well as various business disciplines, and service marketing and management (Stigliani& Fayard 2010, Meroni& Sangiorgi 2011, Miettinen& Valtonen 2012, Polaine et al. 2013, Wetter-Edman 2014). Since it is an emerging field of study, several of the basic concepts are still superficially defined and it is extensively tool-oriented (see for example Moritz 2005, Polaine et al. 2013, Stickdorn et al. 2018).

Drawn upon the design discipline and design thinking, the service design thinking principles commonly accepted are user-centricity; co-creation, sequencing, evidencing, and holistic understanding of the context. Thus, service design aims at creating services that are both user-centred; useful, usable and desirable from the user perspective, and simultaneously viable, efficient, effective and different from the provider perspective. The methods are also co-creative and the development work is sequenced in processes, evidenced with visualizations, prototypes, metrics, and holistic throughout the whole service. (Stickdorn et al. 2011) Little is said about the analysis of the tools for different purposes or the analysis of collected data and information to create visualizations.

Managing and leading with service design for the benefit of firm's business, is a future management competence. The service design has been suggested (Wallin Andreassen et al. 2016) as the conclusive capability to cope within the service society. The human-centred approach and the understanding customer experience to design service offerings thru service design is recognized (Teixeira et al. 2012). The service design methods bring users and user experience into the focus of service development and service innovation. The participatory and collaborative nature of service design approach is new to management competences. Yet,



it is already identified theoretically in the service marketing research. Service design practices also challenge the traditional organizational processes and can be a transformative power in organizations (Kurtmollaiev et al. 2018). How service design impacts on organization structures and management systems, for example, are not yet studied.

From the business management point of view, the use of service design in various levels of hierarchy is possible, but requires understanding of the role of service design. As service design is methodology that collaboratively solves challenges it may bring tools to discuss the issues on various levels. However, the service-driven logic in the overall management system provides the theoretical basis and explanation why the firm operates the way it does. In that perspective, the service design supports the overall approach of the firm. The collaborative and explorative nature of the service design method requires increasing resources, and managers need to be able to justify the use of the service thinking, service design, and multi-actor teams - with customers and other stakeholders - including service designers to improve the business opportunities. The return of this investment, implications of operations and management of the firms requires attention beyond the service design team.

### **3.4 Incorporating service marketing perspective with service design**

Better integration of design and management perspectives is needed for a wider diffusion of service design practice (Patricio& Fisk 2012) throughout organization. However, this needs to be achieved differently on various management levels. The managers of organizations do not require hands-on practical skills of service design techniques and tools, because it is not the core of their responsibilities. The first line of supervisors may oversee the service development and/ or design projects. Their service design competence is on managing the process and project level. Again, this level of managerial responsibilities may be acquired thru HE level EQF6. The middle managers, senior managers, and above, are typically further educated in HEIs, possessing the master's degree. As such, their competences and responsibilities are related more on understanding the business, strategic opportunities, leadership, planning and transitional issues, and their level of knowledge is responding to the EQF7. Hence, the questions when to use service design, how to organize it, how to build teams, what are the implications of service driven worldview and service design work to overall in the organization are solved.

The role of service design in management education warrants a separate argumentation and discussion. Noted is the scarcity of interdisciplinary approach between service marketing research and service design research, especially in relation to management education. Albeit the service research has been vivid in the past decades, it has mostly remained within the discipline of service marketing. Similarly, the design research – related either to the design thinking or service design – is dealt with in the design discipline. Only recently, a few attempts to incorporate these perspectives have been noted. Tossavainen (2012) suggested that the business practitioners seem to fall down on service thinking and service design capabilities, i.e. **service capabilities**. She defined service capabilities as learned and practiced know-how and competences in the field of service marketing and explained the service capabilities as the function of service thinking adoption and the use of methods that include a combination of service development and service design methods, techniques, and tools. Wetter-Edman (2014) argues that the disciplines of design and service marketing/management have been separately involved in the development of new services, and despite both knowledge areas, they have so far essentially remained unconnected. Wetter-Edman (2014) and Wetter-Edman et al.(2014) suggested to incorporating service design with Service Dominant Logic. It has a customer-oriented perspective, and understands value as the result of an experience; therefore it provides an important foundation for service design (Jaakkola et al. 2015). Recently, service design has been integrated with product-service system and solutions from manufacturing point of view (Costa et al. 2018).

Based on the literature review, from the service marketing perspective, the paper suggest the new curriculum around the competencies to compile understanding of service thinking, service design methods and tools, service design processes, strategic service management, new business model development, co-creation, and financial management in order to establish the holistic view managers need in leading and managing service innovation. The importance of understanding to which education the various topics are related is of importance. The higher-level managers require different perspective on service design than the implementation level workers.

<b>Level of hierarchy</b>	<b>Competences (general management)</b>	<b>Service-driven competences</b>
CEO	Theoretical and conceptual Strategic and visionary	Service marketing and management Service-driven approach as framework
Executives	Transition management competences Growth opportunities	Service marketing transition mindset Design thinking mindset
Senior managers	Organizational development competences	Service business management
	Management of operations	Service business models
Middle managers	Organizational management competences	Service systems and operations
	Performance management	Service innovation
	Coordination of work in functional area	Service development
Supervisors	Operational management competences	Service design methodology
	Day-to-day supervision	Service design processes and models
		Service design project management
Professionals	Professional practice	Service design techniques, Workshop facilitation
	Core management skills	Service design tools

Figure 1: Mapping of management roles, competences and service-driven competences

Figure 1 depicts the simplified mapping of the hierarchical positions, generic management competences and high-level service-driven competences. The suggested service –driven competences form the baseline for the competences for future managers. The argument of the paper is that service design needs to be anchored to one of the conventional theoretical business disciplines in order to enhance the academic reliability and to respectively include the practical orientation into business management. The toolbox thinking of service design needs to be reduced and the service design to be anchored to service marketing. In order to enhance competence development of future business managers, the emerging disciplines must be considered. Service design can be used in operationalizing the service logics.

Literature offers little information about competence development in relation to service logics and service design. The responsibilities and generic competences related to the hierarchical position, and the service-driven competences can be mapped (see the figure above). Hence, the division between various levels of education in the field – namely EQF6 and EQF7 can be identified. The master’s degree programs do not focus on service design techniques and tools, but to overall understanding of the impact of service mind-set and the use of service design as part of the other activities in achieving competitive advantage. The difference in naming the

degree programs reveals this distinction ‘service design’ (EQF7) versus ‘service designer’ (EQF6).

As the literature offers scarcely advice about how to educate novel management competences, Ferruzca et al (2017) narrowed the gap in literature in discussing the competences and available education opportunities. They found out that the service education offering is scarce. Another recent comparative analysis of wide spectrum of data on HEIs, programs and syllabi (Ferruzca et al. 2016) provides an extensive view of the current understanding of service related education. It reported that the progress of service competence offering is slow. Moreover, prior to the Laurea’s pioneering programs, service innovation, design or development studies could only be found as an individual study module or as an additional part in mainstream study units.

Wetter-Edman (2014) bridged service marketing theory with practice of design under the concept of ‘the design for service’. More specifically, Jaakkola et al. (2015) argue that the managerial and organizational impact of service experience co-creation is still scarce and fragmented co-creation is mainly discussed from two different perspectives of 1) the involvement of customers in jointly designing the new service offering, and 2) approach refers to collaboration among multiple providers to integrate the resources that form the service delivery system for service experience. For this, future managers need novel competencies, capabilities and skills that could be learned and practiced during a degree program. Managing the co-creative work of multiple actors, with differing worldviews and business objectives, requires engagement and facilitation beyond the firm’ resources.

To conclude the literature review, less is considered how service business, service innovation and service design are related to management competences. The diverse subjects of design, service design and service marketing have received an extant attention in literature, but rarely combined under inter-disciplinary study. Service development, and the aimed service innovations takes place in multidisciplinary team of various professionals, who need to understand also the business requirements, business strategies, and potential business opportunities. As such, this paper agrees the viewpoint of Polaine et al (2013), in which the service design may reflect on strategic level, not just on executional level. Yet, the literature is scarce on establishing the connection or revealing the results.

#### 4 THE RESEARCH DESIGN

In this section, the paper describes the research design, data sampling and data analysis. The industry contribution to any curriculum development and delivery is of importance as is the suggestions, feedback and expectations of the students. However, this paper focuses on exploring the student point of view in the curriculum development. For this purpose, this paper describes the means to capture the student expectations, depicts the methodology to capture the data, disclose the analysis of the data and reveal some preliminary findings. The preliminary findings are presented in the next chapter. In later phases of the study, the industry expectations are analyzed.

Robert (2015) reveals that the curriculum development in HEIs is shaped by academics' i.e. teachers' beliefs about educational and contextual influences. In order to increase the student voice in developing the curriculum and teaching, a study among the master's students were conducted. In the line of service driven logic, the expectations of the students for the management education was of interest. The development of the curricula is heavily dependent of the student feedback along with the working-life requirements. This paper focuses on the students expectations.

The examination and understanding of the students' expectations of the degree program of service design contributes to the designing of the curricula two-fold: first, the overall understanding of the degree programs content, i.e. service design vs. service designer. Second, it highlights the students' experiences and understanding of the topic. This clarifies the management system hierarchy and responsibilities in it. This analysis contributes the practical insights to the further design and development of the service offering of the master's degree program.

Laurea is a pioneering university in service design education on master's level. Laurea educates future managers in service design from the service marketing perspective. Laurea provides two masters level programs - Service Design Master's degree program since 2006 and Service Innovation and Design Master's degree program since 2009 - for part-time students with undergraduate degree and work experience. The degree is 90 ECTS credits with eligibility requirement of Bachelor's degree and a minimum of 3 years of working experience. Both programs have a competence-based yet different curriculum designed to create distinctive contemporary competences needed in society today. The degree programs

are constantly under analysis and the curricula is reformed at regular intervals. Academic research, teaching experiences, working-life contributions, alumni and student feedback form the basis for the renewal. The degree program consists of seven thematic aspects that are evaluated together with working life experts: Service marketing; service design thinking, methods and tools; service design process; strategic management, new business model development, co-creation, and management accounting.

### **Data sampling**

This paper focuses on the service design master's degree. The research data was gathered during the multidisciplinary master's degree studies in service design in 2017. This descriptive single case study uses a combination collected data (semi-structured survey), observation, discussions, and content analysis to elaborate the expectations and actual competence development of master's students.

When applying to the degree program, the information about the degree program available includes the description of the master's degree program with the compulsory courses (curriculum). The document describes the degree program, the pedagogical model of the university, the competence requirements, professional operating environment, competence development process, areas of expertise, and the study unit descriptions. This is one of the key guiding documents for selecting the HEI and the degree program.

The research data was collected during the study by a questionnaire consisting of multiple-choice and open-ended questions. The survey was created in Finnish language, i.e. the native language of the students. The responses were anonymous. The analysis was executed in Finnish language also, and the findings translated to English (for the benefit of the reader). The media of the survey was in-house digital eform (eduixReports v1.0, build: 20081113), that allows the responses to be downloaded into excel for further analysis. The response time was not limited. The approximation of time spend on the survey is 30-40 minutes. The students were instructed to respond the survey in December 2017.

The responses were unidentified, treated as anonymous responses, and the responses were content analyzed in using excel. The background information of the student respondents included prior degree, the program identification number, and executed study points (number of credits, ECTS). The questionnaire was answered by 40 Master's degree students, of whom

31 had completed less than 60 ETCS (typically 3-4 courses) and 9 students had completed at least 60 ECTS credits. The student respondents were categorized according to the executed credits. In order to evaluate the progress of the competence development, the respondents group was divided into groups A and B. Respectively, Group A less than 60 ECTS acquired and Group B at least 60 ECTS acquired. The questions in the survey included the following questions:

- Why did you apply for the Master's degree program of Service design at Laurea University of Applied Sciences?
- What are the central competences in service design in your opinion (max. 5 competences)?
- What are the potential challenges for you in studying service design competences?
- What are the central theoretical frameworks, concepts, and methods that each service design professional should learn, in your opinion?
- How is service design valued in your work organization?
- How do you see service design to develop in future?

Students were asked to evaluate their own service design competence and grade their competence related to the thematic aspect of service design (grading scale: 0 =no competence – 5 =excellent competence; 1 – poor, 2 - satisfactory, 3 – good, 4 – commendable, 5 - excellent). Note that we did not use Likert-scales in this survey, but the actual grading the students would give to themselves; to self-assess their own competence. The questionnaire was answered by 40 Master's degree students, of whom 31 had completed less than 60 ETCS (typically 3-4 courses) and 9 students had completed at least 60 ECTS credits.

Service design has acquired a widespread interest in Finland in the last years both in media and in education offerings. Moreover, the companies are publishing their interests in service design and offering variety of positions and career opportunities in the field of service design. To better understand the perceptions of the master's students – in general - around the topic service design, a smaller initiative of inquiry was carried out with a secondary group of students. This group consists of master's students participated the course of service design competences (2 groups, 33-35 students each). The responses of other master's degree students whose degree program was not service design, but who had enrolled into the service design course. The course was offered as a voluntary course.

Prior to the course of the service design the two student groups were asked to identify the service design interests by using the word cloud application (AnswerGarden.ch). The

AnswerGarden application was chosen because it is semi-structured, the students can see other students' responses, and it is less intimidating than a survey might be at this stage. The students used Finnish in their answers. Further, the anonymous answers were transferred to excel for further content analysis. And the findings were translated to English at this stage.

Both data sets were further content analyzed in excel, various statistical calculations were performed. Then the answers of the students in the master's degree program of service design (in short: DP students) were compared with students on service design courses; two separate groups of 33-35 students in each (in short: group 1 and group 2) comprising 65 respondents.

## **5 PRELIMINARY FINDINGS**

This chapter summarizes the preliminary findings of the study. Drawing from the literature and several years of education of service research, this article contributes to the domain of management education by providing greater insights of students' expectations and interests to service design. The most essential finding is that the management competence develops very slowly and competence requirements are fulfilled only when the master thesis project is accomplished.

### **5.1 Service design competences identified by the students**

The first analysis of the responses in open-end questions shows the multifaceted competences in the service design (see figure 2). This wordcloud was created based on the survey responses to demonstrate how many issues the master's students (i.e. on class) include in discussion of the key competences in the degree program. Likewise, the distinction of the sizes of the letters approximates the popularity of the topic; the bigger the letter the more it was found in the responses.





Figure 2. Wordcloud of the key service design competences identified by the master's students

In the survey, the DP students were asked to identify the key competences of service design. They identified altogether nearly 100 competences, from which the top five themes related to designing together, facilitation (of the workshops), customer insights, methods and design thinking. The wordcloud demonstrates Master's students' expectations for the degree program. It also shows that the students do not distinguish competences between managerial (EQF7) and expertise (EQF6) levels; skills, capabilities and competences in general. Neither have they divided between theoretical frameworks i.e. service logics based competences from general management competences, or between operational skills and basic skills. It seems that the students could not identify the central learning themes of the Master's degree program or interpret them as competences. The wordcloud of expectations indicate that students seem to want only to complete the expertise on execution level rather than reaching the levels of development and strategy; needed in managerial positions. A few students even go that far and state that theoretical knowledge is not needed in working life context, only practical use of the methods and tools.

In HEIs, the assumption is that the prior education i.e. bachelor level and/ or master's education, would include the basic skills in business management. The personal capabilities, working life capabilities and at least one conventional business capability are also acquired

prior degree and with the working life experiences. Based on the findings of this study, the prior degree studies hardly provide sufficient knowledge. Yet, the master's degree programs are developed under the assumption that the degree program could focus on the new competences such as service design leadership.

The expectations of master's degree students for service design differ greatly from the learning outcome requirements/ competence development requirements of the European Qualifications Framework and the national qualifications framework. The master's level education (EQF7) offers highly specialized knowledge, including critical awareness of knowledge issues in a field and at the interface between different fields. Further, EQF 7 calls for students to learn specialized problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields (European Commission 2018b).

The responses of the two diverse master's student groups were analyzed. As the AnswerGarden was answered in Finnish, the responses were transferred to excel and translated to English. The group1 identified altogether 50 topics. The most often response was customer-centricity. The rest of the responses were more scattered. In the group2, the students identified over 50 key interests in service design topics. Here, the question for what the service design can be used was the most popular.

DP	Group1 prior	Group1 after	Group2 prior	Group2 after
Co-design and participatory design	Customer-centricity	Customer-centric co-development	For what SD can be used?	Understanding customer
Facilitation	New tools	Customer-centric design of service	What is SD?	Improving service
Customer insights	Designing choices	Iterative development processes	The tools of SD	Improving service with stakeholders
Methods	Health management design	Visualization	Application of SD in my career	Customer-centric process development
Design thinking	Digitalization	Meeting the customer needs	The relationship between customer knowhow and development work	Methods

*Figure 3. The top5 identified service design themes*

The degree program students expect the methods, facilitation of the workshops (i.e. co-creation), and co-design to be the focus of learning. The figure above also shows that students in Group1 could provide more specific interests in service design compared to the group 2, which was more puzzled around the topic. This is due to the background of the students.

However, the interests and expectations found by the students on both prior and after the course seem to be more on strategic level than the execution level. The students' (two classes) expectations towards the service design competence course were closely related to the level of education, i.e. EQF7.

## **5.2 Comparing the degree students' responses based on the studies done**

The study also analyzed the degree program students' responses concerning the competence development and learning. The first analysis of the responses in open-end questions shows the multifaceted competences in the service design (see table 2) grouped around the curriculum.

The following figure 4 depicts the summary of the differences between the groups in themes educated in the degree program. Master's degree students' Class of 2017 self-assessed their own competences in the seven thematic areas. Each theme included few sub-questions. For example, "design thinking" competence is the first study unit provided when the program begins. Therefore, all the respondents should have been executed this study unit, and learned the basics of it. The survey results indicate that there is a difference between the grades in self-assessment; Group A the average is grade 3 and Group B the average grade 4. In group A, many respondents evaluated their design thinking competences poor or satisfactory (grades 1-2). In group B, the deeper analysis reveals that the respondents self-evaluate their competences with grades 3-5, which indicated well-learned competences.

To summarize the survey results, we can conclude that although the more advanced Group B were only slightly confident in their new competencies on average 1 grade (better) compared to the Group A (grades mostly 2-3), with studies of less than 60 ECTS. The biggest difference in competence evaluation was with the theme strategic management competence, in which in the Group A, 45% of the respondents were felt to have good competence to apply the strategic management in own organization. In group B, 78% estimated their competences as commendable. Strategic management refers to the service thinking and application of the service logics as the main theoretical underpinning in business

Competence area	Sub-questions	Group A (<60ECTS) – grade ave.	Group B (>60 ECTS) – grade ave.
Design thinking	Identification of principles in design thinking	3,2	3,9
	Design thinking principles application independently in development work	2,8	3,9
Service Design Process	Can identify alternative process models	2,7	3,7
	Can independently apply appropriate process models in development work	2,4	3,2
	Can assess alternative process models and suitability in dev. work	2,4	3,2
Service Design Methods and Tools	Can introduce several methods and tools	3,0	3,7
	Can independently apply appropriate methods and tools	2,5	3,3
	Can assess alternative methods and tools and suitability in dev. work	2,3	3,3
Co-creation	Can independently carry-out co-creation in workshops	2,9	3,6
	Can plan, lead, collect data and analyze co-creation workshop outcomes	3,0	3,9
	Can assess alternative co-creation methods and tools and suitability in workshop	2,6	3,7
Strategic management	understand the service thinking as strategic management orientation	2,7	3,9
	Can independently apply service thinking as strategic approach	2,4	4,0
	Can assess alternative strategic alternatives in development work	2,3	3,8
New thinking and business model development	Can identify alternative logics and business models	2,8	3,9
	Can compare and assess alternative logics and business models	2,6	3,7
	Can develop organization from service logics perspective	2,2	3,6
Management accounting	Can interpret management accounting information	2,0	3,7
	Can produce financial data for management accounting and development work	1,8	3,2
	Can interpret alternative information and reports for developing organization	2,0	3,3

Figure 4. Master's Degree students' self-assessment on the degree program

This study shows that the long-term competence development requires not only time, but also various types of exercises during the education. Management remains as a process of

strategic planning, goal setting, controlling and measuring, resource management and development of necessary human (HR) and financial assets (financial management) and for those issues the students had the most challenges.

## **6 CONCLUSIONS**

The role of HEIs is pivotal in transforming the society and educating the future generations of professionals. Learning takes time, and the teaching practices, methods and pedagogical choices require renewal as the business complexity increases. To ensure competent workforce in future, new degree programs needs to be developed and improved to meet the needs of the workforce, companies, and changing society. The contribution of this paper is to advance the new management competences combining of service marketing and service design.

Higher education is constantly re-developing itself. Yet, the traditional silos of disciplines remain unchallenged. Gosling and Mintzberg (2004) distinctively separate between six subject categories of silos. This is enforced in academia among other things with discipline specific associations on national and international arenas, institutionalized academic conferences as well as discipline specific journals. Moreover, multidisciplinary approach is suggested in academic research but seldom integrated in the curriculum.

Regardless of Kurtmollaiev et al (2018), there seems to be scarcity in literature in understanding the impacts of the service marketing and application of service design on organizations. The new management competences can intertwine service logics and service design. This paper proposes that the management education uses the theoretical background from marketing, and especially the service marketing as explanatory power and the strategic level of discussion. The executional level of implementing the fundamentals of service marketing can be achieved with service design methods. This paper disagrees with the suggestion (Patricio& Fisk 2012) that the service design formulates the center for management education, because the service design method operates on the executional level, it lacks the explanatory power of the theoretical argumentation. Further, academic research on service design is insufficient. The paper advances knowledge of the management education in modern world. The findings reveal significant expectations for education across the master's students. Consistent with our expectations, both curriculum development and time span needs to be considered.

### **Theoretical contributions**

This paper advances identified new management competences of service logics and service design. However, on EQF7 level the toolbox attitude on service design is irrelevant. Preliminary findings suggest that the management competence develops during higher education slowly and competence requirements are fulfilled only when the master thesis project is accomplished. The findings also indicate that students seem to want to complete the expertise on execution level rather than reaching the managerial levels of development and strategy. This finding suggests better communication on the competence requirements and learning outcomes.

The paper contributes to understanding and managing novel competence requirements in management education several important ways. First, we provide a conceptual framework of service marketing and management to be the basis for the management education. Second, the paper integrates service design practice with the theoretical framework. The study advances scholarly discussions of the higher education and the management competence development. The contribution of the paper is to demonstrate, how emerging disciplines have been adopted to management education and what the expectations of the master's students are. The contribution of this paper is to advance the new management competences combining of service marketing and service design. The new management competences intertwine service logics and service design. Service design is tool and technique focused, process oriented and facilitation-driven approach that operates on execution level, i.e. task activity level in organizations. That should be educated on EQF6 level. Service design needs to be anchored to one of the conventional theoretical disciplines e.g. service marketing in order to enhance the academic reliability as an emerging discipline and to have impact in business management education. This was illustrated in the mapping of competences in figure 1. The study advances scholarly discussions of higher education and management competence development. The contribution of this paper is to advocate the new management competences and posit the emerging discipline of service marketing and service design to management education.

### **Managerial implications**

The preliminary findings have several important implications for HEIs, curricula designers, teachers, and people seeking for the management education options. The mapping of roles, responsibilities, and competences is an important guideline for the educators, working life

and master's students. The service logics and service design methods bring customers and user experience into the focus of service development. Managers need to be able to justify the use of the service logics and service design with customers and other stakeholders to improve the business opportunities

We noted that the expectations of master's degree students for service design differ greatly from the curriculum and the learning outcome requirements/ competence development requirements of the European Qualifications Framework (EQF7). The competence requirements for managers and professional expertise are unfamiliar with many of the degree students. This needs to be noted in teaching, interaction and curriculum communication. However, the students majoring other than the service design, were much more familiar with the competence levels. In addition, their expectations were in line with the curriculum and course design as well as the EQF7.

The findings reveal significant expectations for education across the master's students. The new insights for management education include competencies of leading the service design projects in organizations. This requires understanding of strategic approaches, co-creation of value and related development methods: application of service design benefits from the service-driven strategy. Likewise, design thinking needs to be understood. These approaches in and with service business model development capabilities would benefit from service design process application with service design methods and tools, and co-creation procedures, only when the organizational aspects and management accounting issues such as pricing, investment calculations and cost analyses are carried out.

As service design has become highly interesting topic, its focus on practical work is strengthened. As a practice, and as a professional expertise, it has its place in the set of professional skills especially for those studying to become a service designer. However, the future service business management professionals will not become service designers or service marketing professionals; they need to have core understanding on both approaches, and master the fundamental principles and their impact on organization and operations in order to make beneficiary decisions. The degree program analyzed provides this learning opportunity. It is also flexible with voluntary courses selection to allow the master's students to develop their own learning journeys.

## **Limitations**

This descriptive single case study uses a combination of collected data (semi-structured survey), discussions, observation and content analysis to investigate, how the expectations of master's degree students and the learning outcome requirements i.e. educational competence development requirements (by EQF) differ. The study reported here was an exploratory attempt to describe the expectations of the master's students in degree programs on service design and is thus a limited sample. The secondary group of master's student included in the analysis of the expectations enlarged the sample size. Yet, the sample selection was with a one study year, and within one HEI that limits the explanation power of the findings. As the service design gains in popularity, it will be interesting to study other universities that provide education on level EQF7. Today, those curricula are scarce.

To conclude the findings reveal significant trade-offs in planning and conducting the management education on master's level: The students represent working life and the findings indicate that despite the growing importance of services, the service thinking has not been considered the strategic choice in business. The service logic is less adopted as the guiding strategic principle leading the operational level execution. Thus the students, especially in the beginning of the degree program, perceive service design as end in itself rather than operationalization of service logics as it should be. During the independent thesis work, i.e. carrying out development work, the students internalize the service logics and their implications to development and innovation work. The role of service logic as the theoretical background in education needs to be reinforced, and strengthened in order to students to perceive the unity of service logics and service design. The HEIs has a vital role in educating the management competences. The complexity of service experience co-creation and the insights on the aspects calls for managers to monitor and facilitate interaction with others (Jaakkola et al. 2015).

Little attention is paid in literature to the influence of service logics into management competences. The contribution of this paper is to advance the intertwined management competences of service logics as theoretical approach, which can be operationalized thru service design methodology. The paper increases knowledge of the management education in modern world.



Some suggestions for further research were detected based on this study. First, how the role of digitalization and technology advances the education of managers in service design competencies. Second, the role of visualization in education in contrast to the written argumentation. Thirdly, the metrics related to service design productivity from the business management point of view. The different educational backgrounds of students will have an impact on learning and competence development, which requires further research. To conclude, we envision more multidisciplinary service-driven degree programs in future.

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