Key Competencies for Promoting Service Innovation: What are Implications for the Health Sector?

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ABSTRACT

The aim of the paper is to identify the essential competencies required to promote service innovation. The paper is based on a systematic literature review of published studies on service innovation competencies, from which seventeen competencies which aided service innovation were identified. A framework was then developed in which the competencies are classified into five organisational practices: knowledge management, employee engagement and user empowerment, cooperation and collaboration, effective leadership and agility. The paper discusses the implications of the findings for the health sector and future research.

***Keywords*:** service innovation, competencies, systematic literature review, health sector

Introduction

The health sector represents almost 10 percent of the global economy and comprises a variety of stakeholders, including patients, regulators, providers, payers and suppliers (Kennedy and Berk, 2011). The challenges facing this sector are growing, especially because when the aging population increases, more people will need sustainable healthcare. The reduction of expenditure in the public sector has affected healthcare financing, leading to an inadequate health budget for current population levels. In addition, healthcare consumers have increasing expectations. Other problems facing the health sector are variable patient needs, skills shortages, variations in treatment options, cost and quality (Varkey, Horne and Bennet, 2008; Omachonu and Einspruch, 2010).

Innovation has been identified as a key step towards addressing the existing problems of healthcare (Govindarajan, 2007). However, most innovation in the health sector is focused on clinical products and medical technology. Medical research has brought about extraordinary advances in diagnosis and treatments (Grose, 2008). For example, the advent of various smart medical technologies means that doctors can detect major illnesses earlier without facing the risk of complications. In addition, the use of computerised equipment has made it possible to deliver home based treatments for patients with major illnesses such as hypertension, stroke and renal diseases (Clark, 2008).

Despite the fact that policy makers are paying increasing attention to innovation in the health sector, service innovation is a critically neglected area of healthcare research (Adams,

2003). This may be due to the fact that product and technological innovation has captured the attention of researchers. Unlike product innovation, service innovation is less radical and tends to implement incremental changes in organizational processes (Bernardt, 2000: Menor et al., 2002). Considering the aging population and reductions in health budgets, service innovation is a necessary response to the diverse challenges facing the health sector (Peckham, 2000).

Successful service innovation has been associated with organisational competencies and capabilities (Stevens and Dimitriadis, 2005). According to Schilling (2011), competencies supporting service innovation can be defined as a combination of the knowledge, skills and organisational procedures which would assist individuals to perform their tasks collectively. The aim of this paper is to identify some fundamental competencies and practices that are used to promote service innovation in the literature.

Based on this, lessons and suggestions will be drawn for the health sector. The following questions will be addressed: (1) Which competencies are referred to in the literature as supporting service innovation? (2) Which management or organisational practices are related to these competencies? (3) What are the implications of these competencies and their corresponding management practices for the health sector?

The paper is structured as follows. Initially, we will conduct a systematic review of the literature to identify the competencies and capabilities of service innovation. We will then summarise these competencies into five key practices or areas of focus for promoting service innovation. Our paper concludes by identifying implications for practice and future areas of research.

Methodology

This paper is based on a systematic literature search of service innovation studies. We review existing published works to identify the different competencies that support service innovation in organisations. In view of the unique features of different services, we adopt the approach advocated by David and Han (2004) for analysing literature. This method enables an assessment and synthesis of published literature in a quantitative manner. Our literature search is based on articles collected between 2000 and 2011 in *Google Scholar* and *EBSCO Host* databases. In order to include appropriate articles in the review process, the title, abstract or keywords had to have the word "innovation" or "service innovation" or "innovative service" or "service development" or "service delivery". To remove any articles which were irrelevant, the abstracts, titles or keywords also had to include the terms "competencies", "capability" or another word or phrase explaining competencies in organisations. A list of the key words used in the search is provided in Table1.

Several hundred hits occurred using these search terms. We filtered the results further in order to include only articles published in journals. As a result, working papers, seminar papers and conference presentations were excluded. Books and dissertations, as well as articles that are not published in the English language, related to innovation in service firms, or published before 2000 were excluded.

Table 1: Keywords Employed in Database Search

Keywords associated with Service Innovation	*innovation, service innovation, innovative service, service development and service delivery.*
Keywords associated with Competence	*capability*, know-how, skills, knowledge, expertise, process*, proficiency, ability, practice*, behaviour*, productivity, performance, attitude**

Source: Authors

N.B. The asterisk stands as a place holder for 'capability/capabilities', 'process/processes', 'practice/practices', 'behaviour/behaviours', and 'attitude/attitudes'.

Useful articles were extracted after screening the titles, abstracts, keywords and full text of the remaining articles. Table 2 shows the total number of articles remaining after each stage of the review.

Table 2: Number of Articles Remaining After Each Stage

STAGE	MEASURE	NUMBER OF RESULTS		
		Google Scholar	EBSCO	TOTAL
1	Articles with keywords around Service Innovation	11,300	5,534	**16,834**
2	Articles with keywords around Competence	4,538	2,134	**6,672**
3	Articles published in journals only	1,823	836	**2,659**
4	Articles available for full download	215	312	**527**
5	Suitable articles after screening of titles	134	121	**255**
6	Suitable articles after screening of abstracts	68	54	**122**
7	Suitable articles after reading full text	31	23	**54**
8	Articles included in the final analysis and discussion	19	21	**40**

Source: Authors

The residual sample of the articles, i.e. 40 articles, was analysed based on the evidence in the literature concerning competencies supporting service innovation. These were the most relevant articles identified as appropriate for analysis with regards to the scope of the literature review. Following the final selection of the articles, the full manuscripts were analysed and the various premises from which to discuss the competencies for service innovation were discovered. Appendix 1 includes a table which summarises the themes that emerged, their sources (i.e. journals), year of publication and corresponding authors. A wide variety of journals have published articles on the topic of service innovation competencies; these focus on diverse subject areas. A list of the reviewed journals and their corresponding field of study is presented in Table3.

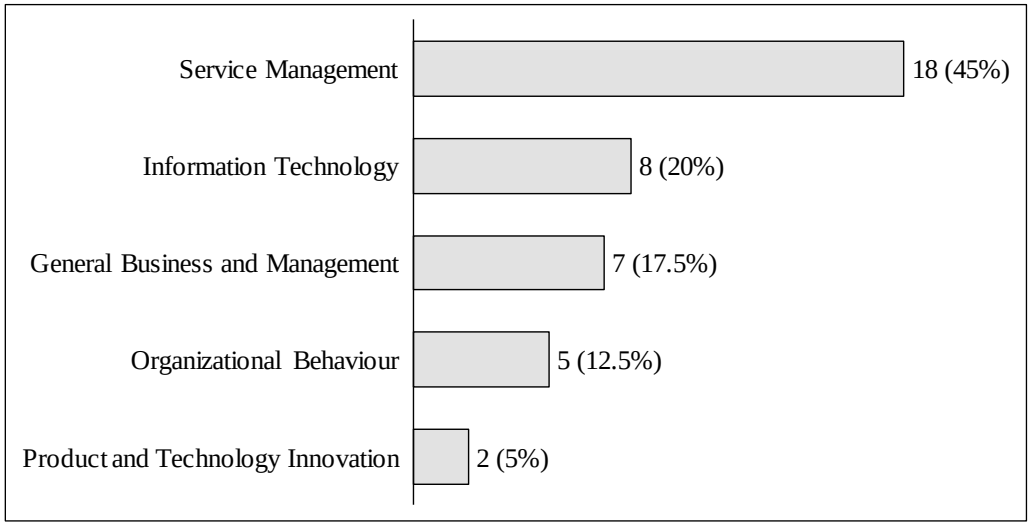
Table 3: Scientific Journals Included in the Literature Review and their Domains

Subject Area	Scientific Journals
Service Management	• *International Journal of Service Industry Management* • *Journal of Service Management* • *The Service Industries Journal* • *Journal of Service Research* • *Managing Service Quality* • *European Journal of Innovation* • *Management* • *Academy of Management Review* • *Journal of Product Innovation Management* • *International Journal of Project management* • *Journal of hospitality and Tourism Research*
Information Technology	• *IBM Systems Journal* • *Industrial Management & Data Systems* • *Information Systems Research* • *Journal of Enterprise Information Management* • *Journal of Management Information Systems* • *MIS Quarterly*
General Business and Management	• *Harvard Business Review* • *International Journal of Value Chain Management.* • *Journal of Business Research* • *Journal of Management Accounting Research,* • *Journal of Management Studies* • *Journal of Managerial Psychology* • *MIT Sloan Management Review*
Product and Technology Innovation	• *Gallup Management Journal* • *International Journal of Technology Management*
Organizational Behaviour	• *Decision Sciences* • *Organizational Behaviour and Human Decision Processes* • *The Leadership Quarterly*

Source: Authors

Whilst Table 3 shows the list of journals per subject area, the absolute and relative share of articles published per specific subject area is illustrated in Figure 1. In the identified articles, all study falls within the subject areas of: service management (45%), information technology (20%), general business and management (17.5%), product and technology innovation (5%) and organisational behaviour (12.5%). The implication of this is that research on the competencies supporting service innovation is an area of concern for the service sector and other academic disciplines.

Figure 1: Distribution of Articles Published in Each Subject Area



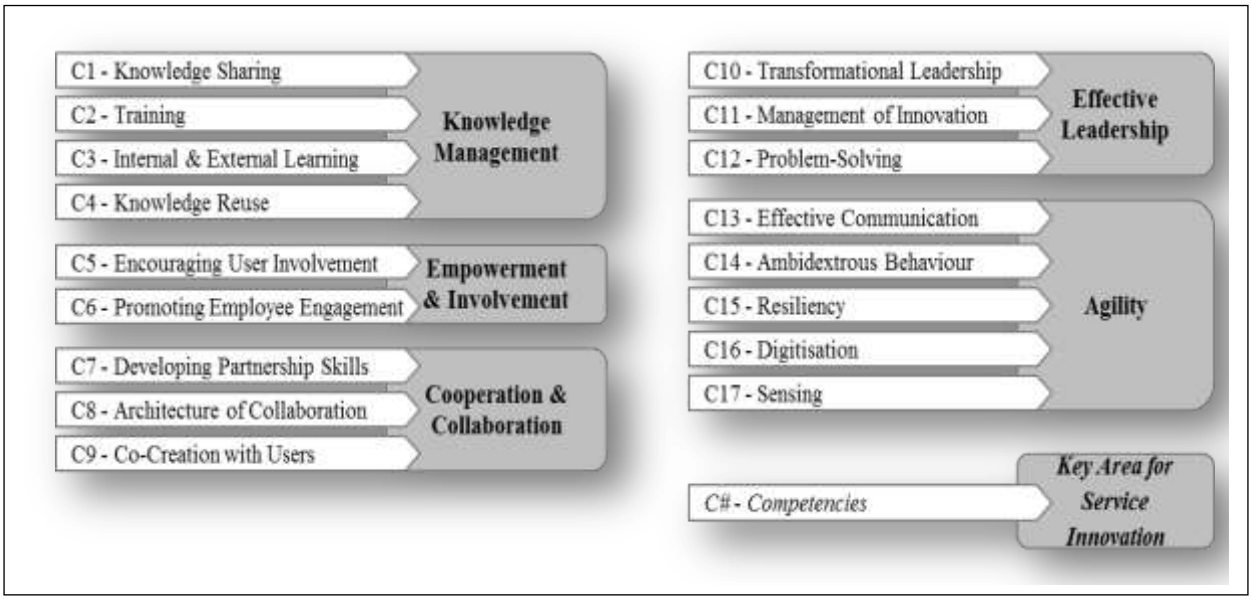
Source: Authors

Competencies for Service Innovation

In this section, the most frequently mentioned competencies for service innovation will be explained. A total number of seventeen competencies were discovered to have influenced service innovation: (C1) Knowledge Sharing, (C2) Training, (C3) Internal & External Learning, (C4) Knowledge Reuse, (C5) Encouraging Users Involvement, (C6) Promoting Employees Engagement, (C7) Developing Partnership Skills, (C8) Architecture of Collaboration, (C9) Co-Creation with Users, (C10) Transformational Leadership, (C11) Management of Innovation, (C12) Problem-Solving, (C13) Effective Communication**,** (C14) Ambidextrous Behaviour, (C15) Resiliency, (C16) Digitalisation, and (C17) Sensing.

According to Danneels (2002), a firm's strategic survival is not only based on new knowledge and skills but on how these competencies can be reconfigured to realise innovation. Service innovation only materialises through certain processes, practices and strategies which are embedded into the organisation over time (Helfat et al., 2007; Zollo and Winter, 2002). Competencies must thus be deployed under certain organisational practices to guarantee successful service innovation. We propose a classification framework (see Figure 2) to create better understanding and discussion of the various competencies for service innovation. The framework describes the key areas that require special consideration by any company aiming to successfully achieve service innovation: knowledge management, employee engagement and user empowerment, cooperation and collaboration, effective leadership and agility.

Figure 2: Five Key Areas for Realising Service Innovation



Source: Authors

Knowledge Management

Several studies have discovered that to be successful in service innovation, companies need to adopt knowledge management practices. These can influence some of the competencies discussed below:

C1 - Knowledge Sharing: Many studies have recognised that knowledge sharing culture contributes to the success of innovation in organisations. According to Hu et al. (2009), knowledge sharing and innovation performance go hand in hand. Their study shows the influence of knowledge sharing on service innovation performance. They discovered that team relationship sustains the link between knowledge sharing and service innovation performance. From a knowledge-based perspective, Chen and Huang (2009) also confirm the relationship between the knowledge sharing capability of a firm, its employee management strategy and innovation performance. This implies that service organisation with innovative intent should develop knowledge sharing values by leveraging on existing relationships amongst team members.

C2 - Training: Ottenbacher (2007) explored the prerequisites for service innovation and discovered that training and capacity development are critical to innovation success. Training is an important medium for internal development within a firm, facilitating the learning process of the organisation as a whole. It also results in the integration of external sources of innovation in order to create a competitive advantage. In a similar study, it was discovered that the introduction of intermittent training and increased employee awareness of quality assurance leads to service improvement in organisations (Chow et al., 2000). Service innovation therefore requires an organisational ability to develop new processes and competencies via training.

C3 - Internal and External Learning: Radical service innovation requires combining various internal and external sources of knowledge (Aranda and Molina-Fernandez, 2002). A firm can exploit service innovation opportunities by developing the capability to connect external knowledge with internal expertise. Shang et al. (2000) refers to this process as "dynamic knowledge management capability". Their research further explains that the integration of external knowledge with in-house knowledge will not only lead to new processes being established but can also have a positive impact on profitability. This includes the ability of employees to learn new ways of doing things, unlearn non-value added techniques and develop the skills to manage change.

C4 - Knowledge Reuse: The literature confirms that organisations can improve service offerings and innovation by reusing existing resources across business functions (Argote et al., 2000). Thus, a firm can improve service flexibility and responsiveness to customer needs by reprocessing information, re-applying captured knowledge and business processes. This theory was used to explain how written and computer-based records could be accessed, recycled and reused (Markus, 2001).

Employee Engagement and User Empowerment

One of the most dominant themes in service innovation literature is the need to engage with customer service design and development. Several articles emphasise the fact that organisations can tap into the wealth of experience that their employees possess. Some of the key points discovered in the literature search on the benefits of empowerment and engagement are discussed below.

C5 - Encouraging User Involvement: According to Melton and Hartline (2010) companies introducing new services into the marketplace should involve service users at the initial stages of planning and development. This will enable them to obtain invaluable ideas about market potential and user needs which can be used to inform the development of the new services. . In addition, they also suggest that customer involvement by means of market research and focus groups is an essential component of successful service innovation. Magnusson (2003) compared services recommended by customers with services recommended by experts. While the services recommend by the experts were less difficult to create, it was found that the services recommended by customers were more innovative and valuable than those suggested by experts. Carbonell et al. (2009) examined the influence of customer involvement on the performance of new services. It was established that customer involvement is positively related to innovation speed, quality and technological innovation. This implies that managers should include customer involvement throughout all service development phases.

*C6 - Promoting Employee Engagement***:** Evidence from the literature indicates that engagement culture benefits mutual relationships between employee and employer and can pave the way to organisational innovation (Saks, 2006). Krueger and Killham (2007) explored the impact of employee engagement on service innovation. They noticed that higher level of employee engagement led to greater innovation. Therefore, engaging employees on an inter-departmental basis would promote service innovation (Slåtten and Mehmetoglu, 2011).

Cooperation and Collaboration

Collaboration is vital to successful service innovation (Chesbrough, 2011; Hurmelinna-Laukkanen and Ritala, 2010). Several papers have established the need for cooperation and collaboration in promoting innovation in firms. Collaboration involves working with a wide range of stakeholders and partnerships. Organisations frequently adopt collaboration as a strategy to create and deliver new services. The points described below show some of the ways in which service innovation is promoted by means of cooperation and collaboration

C7 - Developing Partnership Skills: According to Agarwal and Selen (2009), some new services can only be developed by partnering because they cannot be delivered by individual organisational competencies. They discovered that organisations can develop higher levels of dynamic capabilities by partnering with their stakeholders. Furthermore, partnering and mutual relationships skill sets are needed for enabling successful service innovation. The deployment of such skills enables the flexible and effective delivery of services. However, the basis for partnership must be mutual so that it provides added value to all parties involved. Any company will welcome the ideas of collaboration if it increases profitability, reduce risks and reduce costs (Walters and Rainbird, 2007).

C8 - Architecture of Collaboration: According to Simatupang and Sridharan (2007), joint value creation in the innovation process is influenced by certain factors which can be referred to as the architecture of collaboration. These include relationship, communication and partnership skills. Managers are encouraged to develop information sharing, joint decision making and process integration with their partners to facilitate value creation. Chen et al (2009) noted that architecture of collaboration boost greater performance accountability between partners and drives value creation. Thus, organisations should provide a platform for evaluating the collaborative skills of their partners before and during the service innovation process (Simatupang and Sridharan, 2007).

C9 - Co-Creation with Users: Many companies collaborate via open service frameworks which enable co-creation with their customers (Chesbrough, 2007). Open service innovation promotes interaction between an organisation and their customers during an innovation process. Similarly, Kuusisto and Riepula (2011) explored the roles and strength of customer interaction on new service development. The findings show that customers act as catalysts for service development, provide essential feedback for service improvement and help to facilitate the marketing of innovative services afterwards. Lusch et al. (2008) discovered that an organisation can innovate based on resource reconfiguration and resource combination. Service innovation emerges when the diversity of resources belonging to suppliers, customers and partners are integrated for a unique purpose of value creation. Social networking platforms play important roles in linking the partners via the internet (Basole and Rouse, 2008). The network enables the organisation to access the creativity of their partners and exchange ideas for creating mutual value. Jennie and Magnusson (2009) found that the quality of innovation ideas created is directly proportional to the level at which the partners are connected in a network. The greater the number of connections within the network results in a higher proportion of high quality ideas. This implies that a higher number of innovation ideas are generated when the people working together are closely

linked. Organisations looking for ways to promote service innovation should support and encourage activities that enhance customer engagement.

Effective Leadership

There is a wealth of literature on the influence of leadership on organizational innovation. Specifically, transformational leadership plays an important role in creating an enabling environment which promotes idea generation and the management of innovative services. The circumstances under which a leader can influence service innovation in the organisation are numerous. This includes the ability to create an organisational climate that encourages problem solving and critical thinking processes for new service development opportunities (Zhou and George, 2001). The types of leadership which influence service innovation are discussed below:

C10 - Transformational Leadership: Gumusluoglu and Ilsev (2009) investigated the impact of transformational leadership on innovation at both the individual and corporate level. The result shows that transformational leadership influences the creativity of individual employees within an organisation. Likewise, organisational innovation is enabled by transformational leadership practices. A transformational leader in the service innovation context can be characterised as someone who is able to influence idea creation, mentor employees, experiment and search for opportunities to improve the service. To promote service innovation, leaders should establish organisational climate for innovation and champion the management of associated changes.

C11 - Management of Innovation: The management of innovation is an important source of competitive advantage for leaders who want to run successful service innovation schemes. Birkinshaw et al. (2008:9) define management innovation as "the generation and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals". Vaccaro et al. (2012) investigated leadership behaviours as a precursor to management innovation. Their findings revealed that executives have the ability to greatly influence the management of innovation by applying transformational and transactional leadership approaches. While transactional leadership aided the management of innovation in a small enterprise, transformational leadership was appropriate for a big organisation considering their size and complexity. Leaders have a critical role to play in promoting and pursuing management innovation.

C12 - Problem-Solving: One of the major leadership skills for effective leadership is creative problem solving. Innovation problems require creative solutions and leaders who find these can give their business a competitive advantage. Creative problem solving for service innovation requires the identification of the problem, the search for ideas to improve the situation and making sense of the diverse ideas identified. Top management and executive support is needed to motivate employees' commitment in order to achieve a successful innovation programme. According to Palmona and Illies (2004), leaders must first understand the resources required for problem solving activities. This can be achieved by examining the thinking process that will guide the problem-solving activities and create an enabling atmosphere to achieve it.

Agility

The concept of agility has long been established in the manufacturing sector. The aim of agile manufacturing is to enable the makers of goods and products to compete, despite unpredictable changes in the market place, by responding quickly to varying market needs (Tsourveloudis and Valavanis, 2002). Although agility is not frequently used in the service domain, scholars have argued that certain best practices in manufacturing could be adopted in relation to services (Vargo and Lusch, 2006). A good example is the service-dominant logic which enables the transition from a commodity-based economy to a service-oriented economy (Rai and Sambamurthy, 2006). Some of the competencies identified in the literature search which focus on how agility enhances service innovation are summarised below:

C13 - Effective Communication: Sambamurthy, Bharadwaj and Grover (2003) realised that organisations can increase their entrepreneurial intelligence by adopting electronic platforms which facilitate robust communication. This enables effective coordination of activities and digitalised interactions between the customers and employees. Information about the current status of service and any delays is passed across the value chain. In these circumstances, information technologies are used to pass operational information across to customers in a transparent manner.

C14 - Ambidextrous Behaviour: Sustainable innovation in service firms requires a balance between exploration and exploitation activities (Benner and Tushman, 2003). Ambidexterity has been defined as a mechanism to support the attainment of equilibrium as organisations chase both exploration and exploitation within non-integrated departments and amongst experts with divergent responsibilities (Gupta et al., 2006). Firms must be able to separate their explorative and exploitative tasks in order to attain credible ambidexterity. Leadership plays a significant role in this context. According to Rosing et al. (2011) a leader requires a flexible propensity towards exploration and exploitation activities in order to achieve successful innovation. The author recommended the utilisation of flexible leadership behaviours in addressing the complex and changing characteristics of the innovation process. This type of ambidextrous leadership is useful in dealing with the multifaceted nature of service innovation, bearing in mind the varying criteria for idea generation and idea selection in the innovation project.

C15 - Resiliency: Organisations address their vulnerability to market instability by investing in resiliency. This enables firms to manage their exposure to changes and other unexpected events which may arise in the process of service delivery. In a fast changing terrain, firms must adopt practices that enhance resilience and consequently increase their ability to manage change. Organisations with a high adaptive capacity can easily cope with unexpected changes in the market environment (Christensen and Overdorf, 2000). This flexible capability will enable them to cope with the intimidation arising from the introduction of new services by their competitors.

C16 - Digitalisation: According to Wheeler (2002), an organisation can create new service pathways to the market place by using digitalised business processes via ICT deployment. Digitalisation enables supply chain integration and helps open up new channels for accessing customers. This includes the ability to release operational cost efficiency and

delivering innovative services. ICT is not a competence for service innovation but a facilitator of service innovation performance (Bygstad and Lanestedt, 2009)

C17 - Sensing: This refers to the ability of an organisation to manage diverse sources of information to address unmet service needs of the customer. This capability enables firms to quickly discover the challenges in service delivery and translate them into innovation projects. Sensing aids the conceptualisation of new service solutions (den Hertog et al., 2010).

Discussion of Findings and Implications for the Health Sector

Service innovation has been linked to organisational competencies and capabilities (Stevens and Dimitriadis, 2005). The previous study on service innovation discusses competencies based on the role of service workers (Schilling and Werr, 2009), the dynamic capability of the firm (Helfat et al., 2007), organisational practices (Schilling, 2011), and organisational learning (Salter and Tether, 2006). They describe how corporate organisations develop and combine sets of competencies for competitive advantage. Whilst this present study is restricted in its focus, it extends beyond the findings of those cases mentioned above. We advance and extend findings from previous studies by examining the implication of service innovation competencies in the health sector.

Firstly, the vast knowledge that is available within and outside the healthcare system can be integrated to produce new ways of service delivery. The health sector is knowledge driven because it relies on evidence based decision making procedures. Knowledge management supports evidence based practice for medical doctors and other clinicians (Chaudhry et al., 2006). Medical experts perform their tasks effectively using documented evidence and the best knowledge available. The combination of expert knowledge of the clinicians and the experience of patients with regards to specific health conditions can offer an opportunity for developing creative methods in health service delivery. The distribution of knowledge amongst these participants can be leveraged to develop and deliver new healthcare services. It should however be noted that confidentiality issues and the security of patient information can potentially obstruct the implementation of knowledge management practices in the healthcare setting (Guah and Currie, 2004).

Usually, the development of new services is led by clinicians such as physicians, nurses, pharmacists and medical scientists. However, the promotion of innovative health services will involve several participants and partners. An example is the use of information technology platforms such as health 2.0 in facilitating interactions between clinical experts, researchers and patients (Eysenbach, 2008). Health 2.0 involves the application of internet tools such as blogs, podcasts and tagging by participants in health care, for networking, communication and collaboration purposes (Hughes et al., 2008). Health 2.0 also provides a platform for patients' empowerment by enabling patient to patient interaction with regards to treatment outcomes.

Furthermore, there is substantial evidence on the lack of collaborative relationships amongst professionals in the health sector (Kuo et al., 2006; Mbwili-Muleya et al., 2000). Collaboration appears to be one of the tools for tackling the challenges of healthcare services delivery. It can facilitate the development of novel approaches to public health needs assessment

and make available various evidence-based resources for clinicians and social marketing (Valaitis et al., 2008). The potential participants in the health sector innovation setting include: health regulators, health service providers, patients, stakeholders (public/private funding bodies) and medical product suppliers. The health sector can partner with these groups for service problem identification, new service development and innovative service delivery. In addition, collaborative innovation in the health services requires leadership support and motivation.

The achievement of sustainable health service delivery will depend on leadership practices that support innovation. While the literature has acknowledged the influence of leadership on effective healthcare management, inadequate attention is given to leadership competencies that might support the emergence of innovative health services (Ewens, 2002). Leaders in the health sector must be able to capture and advance exceptional suggestions in addition to promoting "institutional memory usage" of previously utilized initiatives (Hargadon and Sutton, 2000). If leadership can acknowledge new ideas from individuals, it will be easy to influence organisational wide innovation projects (Snowdon et al., 2010).

Lastly, the health sector operates in a rapidly changing environment. The changing needs of patients reinforce the demand for flexible healthcare services. This involves the development of a variety of clinical services to cater for the diverse expectations of patients. To adopt the concept of agility in the health sector, healthcare providers must embrace business performance transformational initiatives. For example, there must be an increased investment in information technology systems which facilitate engagement in health service delivery. This will offer opportunities for the development of a quick response to patient needs, while providing new ways to optimize health service delivery processes.

Conclusion

This paper explores the competencies for service innovation in literature and conceptualises the findings within a framework. The findings in this study describe how an organisation can promote service innovation by deploying certain competencies. Seventeen competencies were identified in the literature in terms of service innovation. These are captured in a framework depicting five management practices for promoting service innovation in firms. The framework describes the key areas that require special consideration, if a business is to successfully realise service innovation. These are: knowledge management, employee engagement and user empowerment, cooperation and collaboration, effective leadership and agility

The framework presented in this paper will be useful in discussing the essential organisational practices for improving service performance in organisations. As service innovation research is still evolving in the health sector, there is a need for reconfiguring existing skills, learning and deploying new competencies in order to deal with the vast difficulties facing the health sector globally. While this study discusses the implications of findings in the context of the health sector, the proposed framework can also be applied to investigations into service innovation in other sectors. Although this framework is not statistically tested, it offers insights into the prerequisite for realising service innovation in any firm. Our research findings will guide future investigation and practice in the field of service innovation.

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Appendix 1: Summary of Findings

	Competencies	Summary of Findings	Author(s) and Year
C1	**Knowledge Sharing**	– Knowledge sharing culture enhances creativity – Knowledge sharing capability enhances firm's innovation performance.	Hu et al. (2009) Chen and Huang (2009) Darr and Kurtzberg (2000) Hargadon (2002)
C2	**Training**	– Training is critical to innovation success – Training aids knowledge transfer activities	Ottenbacher (2007) Chow et al. (2000)
C3	**Internal & External Learning,**	– Organisational ability to learn new process and competencies – Service innovation requires the combination of knowledge from multiple participants – Service innovation in driven by firms ability to link external knowledge with internal resources	Aranda and Molina-Fernandez (2002) Shang et al. (2000)
C4	**Knowledge Reuse**	– Innovation by reusing existing resources across business functions – Knowledge reuse helps in solving innovation problems.	Markus (2001) Argote et al. (2000)
C5	**User Involvement**	– Encouraging user involvement at the early phases of planning and development. – Services recommended by customers were more innovative and valuable than those suggested by the experts. – Customer involvement is positively related to innovation speed and quality – In-depth understanding of customers requirement is needed for successful service innovation	Melton and Hartline (2010) Magnusson (2003) Carbonell et al. (2009) de Brantini (2001)
C6	**Promoting Employees Engagement**	– Employee engagement paves the way to organisational innovation – Employee's innovative skills can be enhanced via engagement accomplishments. – Higher level of employee's engagement led to greater innovation.	Saks (2006) Krueger and Killham (2007) Slåtten and Mehmetoglu (2011)
C7	**Developing Partnership Skills**	– Partnering and mutual relationships skill sets are needed for enabling successful service innovation. – Organisations will embrace partnership opportunities so far as it increases profit, and reduce costs	Agarwal and Selen (2009) Walters and Rainbird, (2007)
C8	**Architecture of Collaboration**	– Joint value creation in the service innovation process is influenced by architecture of collaboration. – Individual creative skills are influenced by collaborative approaches – The majority of innovations in service firms materialise through cooperation between partners, customers and suppliers	Simatupang and Sridharan (2007) Vence and Trigo (2009) Chen et al (2009)

C9	**Co-Creation with Users**	– Interactions via open service frameworks which enables co-creation with the customers – customers act as catalyst of service development, – Co-creation by leveraging on social networking platforms – Innovative services emerge from the engagement of customers networks	Chesbrough, 2007) Kuusisto and Riepula (2011) Lusch et al. (2008) Basole and Rouse, (2008) Björk and Magnusson (2009)
C10	**Transformational Leadership**	– – Transformational leadership influences the creativity of individual employee of an organisation. – Ability to influence ideas creation, mentor employees, experimenting and searching for opportunities	Ilsev and Gumusluoglu (2009)
C11	**Management of Innovation**	– Ability to generate and implement new process, structure, or technique – Top management executives influence management of innovation	Birkinshaw et al. (2008) Vaccaro et al. (2012)
C12	**Problem-Solving**	– Creative problem solving for service innovation requires the identification of problem, ideas searching and sense making – Leaders must first understand the resources required for problem solving activities.	Palmona and Illies (2004)
C13	**Effective Communication**	– Organisations can increase their speed of response and entrepreneurial intelligence by adopting robust communication systems. – Consistent communication with customers increases flexible service delivery	Sambamurthy et al. (2003) Ordanini et al. (2011)
C14	**Ambidextrous Behaviour**	– Flexible propensity towards exploration and exploitation actives for successful innovation. – Sustainable innovation in service firms requires a balance between the exploration and exploitation activities – A mechanism to support the attainment of equilibrium in pursuing both exploration and exploitation tasks	Rosing et al. (2011) Benner and Tushman (2003) Gupta, Smith and Shalley (2006)
C15	**Resiliency**	– Invest in resiliency to address environmental turbulence and operational disruptions that may arise during service delivery	Christensen and Overdorf (2000)
C16	**Digitalisation**	– Creating new service pathways to the market using digitalised business processes. – Service innovation and market growth in the service sector is influenced by ICT application	Wheeler (2002) Bygstad and Lanestedt (2009)
C17	**Sensing**	– Ability to manage diverse sources of information – Sensing external impulses for service innovation – Ability to perceive existing gaps between market requirements and service delivery	den Hertog et al. (2010) Shulver (2005)

Source: Authors